



**INDUSTRY  
COMMISSION**

**PORT AUTHORITY SERVICES  
AND ACTIVITIES**

**Report No. 31  
31 May 1993**

Australian Government Publishing Service  
Canberra

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ISBN 0 644 29379 9

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Printed in Australia by A. J. LAW, Commonwealth Government Printer, Canberra

31 May 1993

The Honourable JS Dawkins MP  
Treasurer  
Parliament House  
CANBERRA ACT 2600

Dear Treasurer

In accordance with Section 7 of the *Industry Commission Act 1989*, we submit to you the report on Port Authority Services and Activities.

Yours sincerely

Roger G Mauldon  
Presiding Commissioner

Keith J Horton-Stephens  
Commissioner

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## ABBREVIATIONS

AAPMA	Association of Australian Ports and Marine Authorities
ACS	Australian Customs Service
AMSA	Australian Maritime Safety Authority
AQIS	Australian Quarantine and Inspection Service
ATAC	Australian Transport Advisory Council
BIE	Bureau of Industry Economics
BTCE	Bureau of Transport and Communications Economics
CSO	Community Service Obligation
DMH	Department of Marine and Harbors, South Australia
DWT	deadweight tonnage
EDI	Electronic Data Interchange
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
GRT	gross registered tonne
IPLF	Integrated Port Labour Force
ISC	Inter-State Commission
MSB	Maritime Services Board, New South Wales
NRT	net registered tonne
PBA	Port of Brisbane Authority
PMA	Port of Melbourne Authority
PSA	Prices Surveillance Authority
SAFMA	State Authorities Financial Management Act, Tasmania
SIRA	Shipping Industry Reform Authority
TEU	Twenty foot Equivalent Unit
TPC	Trade Practices Commission
WIRA	Waterfront Industry Reform Authority
WWF	Waterside Workers Federation

[Note: Western Australian Port Authorities refers to the Joint Submissions from the Port Authorities and the Dept of Transport (WA)]

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## GLOSSARY

break-bulk cargo	non-bulk cargo that is not containerised, for example, cars or crates of onions
bulk cargo	cargo such as coal, ore, sand or oil, that is carried loose, taking up the shape of the ship's hold
cabotage	policy which restricts foreign shipping from competing with local vessels in the coastal trades
common-user	port facilities owned by the port authority to serve all port users and not restricted to particular operators
community port	small, publicly administered ports servicing domestic and business needs of small communities in outlying areas
comprehensive port authority	provides <i>and</i> operates certain port facilities and equipment
conference	an association of liner shipping companies which act together to offer common prices and to schedule sailings over defined routes
conservancy	charges levied by port authorities on behalf of state governments to cover the cost of navigation aids for entry into the port, the inner port and local and inshore traffic
container depot	a facility at which goods belonging to different shippers and making up less than a full container load are consolidated and packed into, or separated and unpacked from, shipping containers
container terminal	a facility at which containers are loaded onto or discharged from a vessel
<b>contestability</b>	<b>the degree of ease with which firms can enter or leave a market. In a contestable market the threat of new entrants causes the incumbent firms to operate at levels approaching that expected in a competitive market</b>
conventional stevedore	stevedore of non-containerised cargo
'core' activities	activities such as providing safe access and harbouring for ships; and planning, providing and allocating port infrastructure such as channels, breakwaters, navigation aids and berths
<b>cross-subsidisation</b>	<b>using revenue from one source to reduce price below marginal cost elsewhere</b>
CSOs	community service obligations arise when a government requires a public body to carry out activities which it would not do on a commercial basis or at the required price

dedicated ports	ports that have one or two bulk commodity operations in export-oriented industries such as coal and mineral ores. They provide little, if any, general cargo facilities
DWT	deadweight tonnage is the total load of cargo, fuel, stores and ballast that a ship can carry
<b>economies of scale factors</b>	<b>which cause the average cost of producing a commodity or service to fall as the firm produces more of it. For example, a firm enjoying economies of scale would less than double its costs if it doubled its output</b>
<b>economies of scope factors</b>	<b>which make it cheaper to produce a range of related products than to produce each of the individual products on their own</b>
freight forwarder	enterprise engaged in the consolidation and arranging of the door-to-door or door-to-container terminal/depot movement of freight
general cargo	break-bulk or container cargo
GRT	gross registered tonne expresses the total capacity of a vessel in tonnage units of 100 cubic feet
harbour dues	charges levied by the port authority to cover the cost of providing certain port facilities and services
integrated ports	publicly administered ports which incorporate a broad mix of public and private sector investment and service general cargo, bulk cargo, recreational and passenger vessels
integrated port labour force	port authority employees who provide both port authority and stevedoring services for the entire port
landbridging	substitution of a sea transport link with a land transport link as part of an international cargo movement
landlord port authority	limits its activities to 'core' activities
mass tonnes	cargo unit of weight measurement
mooring	securing a ship in a particular place by means of chains or ropes, fastened either to the shore or to anchors
<b>natural monopoly</b>	<b>occurs when economies make it possible for one firm to supply the entire market more cheaply than a number of firms</b>
NRT	net registered tonne represents the earning capacity of the ship and is obtained by deducting certain non-revenue earning spaces from GRT
pan-Australian freight rates	the charging of equivalent freight rates at each port of call in Australia
pilotage	charges levied on ships using the services of a pilot to navigate in ports and their approaches

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port authority	agency responsible for control and management of a port and its facilities. They are usually public bodies in Australia
<b>price discrimination</b>	<b>charging different prices to different users for the same service or facility</b>
private ports	ports in which all the land side facilities and services including port planning and construction are operated by private companies. Navigation and safety may or may not be the responsibility of the private port operator
regional ports	publicly administered ports which service major regional areas and may be dominated by several bulk commodities supplemented by a mix of general and/or container cargo and tourist, recreation and maintenance facilities
revenue tonnes	the greater of mass or the volume of a cargo. The difference between mass and volume is usually low with bulk cargo and high with general cargo
Ro-Ro	<b>Roll-on Roll-off. A type of vessel for which cargo is driven on and off</b>
shipper	a person or body having a commercial arrangement with a shipping organisation for the shipment of cargo—the sender or final receiver of cargo
shipping agent	(or ship's agent) a licensed agent who transacts a ship's business for the owner
stevedoring	process of loading and unloading ships
TEU	Twenty foot Equivalent Units. An internationally recognised standard conversion basis enabling the number of containers to be compared. A standard shipping container measures 20 feet by 8 feet by 8 feet
tonnage	charges levied by the port authority based on the tonnage of the ship for the provision of certain port facilities
towage	operation whereby tugs assist the movement of ships in ports and their approaches
transhipment	process of transferring cargo, commonly from one ship to another
vertical integration	the extent to which successive stages in production and distribution are placed under the control of a single enterprise
wharfage	port authority charge on shippers based on the volume or weight of cargo that is loaded or unloaded in port

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## TERMS OF REFERENCE

I, JOHN SYDNEY DAWKINS, in pursuance of Section 7 of the Industry Commission Act hereby:

1. refer the operation of port authority services and activities for inquiry and report within twelve months of the date of receipt of this reference;\*
2. specify that the Industry Commission report on institutional, regulatory and other arrangements subject to influence of governments in Australia that lead to inefficient resource use or inhibit the efficiency of port users, and advise on courses of action to reduce or remove such inefficiencies and impediments;
3. without limiting the scope of the reference, request that the Commission give priority to areas where greatest efficiency gains are in prospect, and areas where early action is practicable, having regard to:
  - (a) the importance of port authority services and activities to the international competitiveness of Australian industry;
  - (b) the scope for improving the efficiency of port authority services and activities including through changed management and work practices, pricing, the removal of structural impediments, and investment in new technology;
  - (c) the importance of adopting international best practice for the provision of port authority services including, but not limited to, areas of work coverage, training, skills development and industrial/human resource relations;
  - (d) implications for port authority services and activities of regulations, charges and arrangements affecting various modes of transport; and
  - (e) the effects on users and non-users of improved efficiency of port authority services and activities;
4. specify that the Commission is to avoid duplication of recent and current substantive studies undertaken elsewhere and, in particular, have regard to the report by the Australian Transport Advisory Council on waterfront reform and the inquiry into land transport interfaces with sea ports being conducted by the House of Representatives Standing Committee on Transport, Communications and Infrastructure.

JOHN DAWKINS

19 March 1992

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\* In January 1993, at the Commission's request, the reporting date was extended to 31 May 1993.

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## OVERVIEW AND RECOMMENDATIONS

Port authorities have a vital influence on Australia's ability to compete on international markets through the many ways they affect the cost, speed and reliability of sea transport.

A port authority provides services to a specific port or group of ports. As a minimum, it controls the use of the waters and lands within port boundaries; provides safe access and harbouring for ships; and plans, provides and allocates port infrastructure such as channels, breakwaters, navigation aids and berths. Port authorities which are limited to core activities such as these are said to follow the landlord model. But many Australian port authorities do much more—and many have both a facilitative and regulatory role.

Most of Australia's port authorities are public agencies, and most of these are statutory bodies constituted under state or territory legislation.

The impact of port authorities extends far beyond their share of transport costs. For example, many provide services and activities which private enterprise could supply; and they set the terms and conditions of port leases. In so doing they influence the efficiency of port users and operators.

This inquiry is an integral part of the maritime industry reform process which has been underway since 1984 for shipping and 1989 for the waterfront. It focuses on improving efficiency—on the appropriate institutional framework for port authorities and how best to deliver the various services and activities which port authorities now provide.

The Commission recognises that the performance of many port authorities has improved as a result of reforms in the last few years, but there is a long way to go. The rest of the world is not standing still and Australia cannot afford to do so.

### **Role of the port authority**

In setting future directions for port authorities, the priority is to determine the most appropriate role for each port authority, and the steps needed to get there.

The Commission has concluded that the landlord model for port authorities has much to commend it. Many Australian port authorities follow this model, or are moving towards it. They provide only core functions, avoiding provision of services and activities that would otherwise be undertaken by private enterprise. However, in some regional ports it may be cost effective for the port authority's role to encompass some non-core activities such as cargo handling.

The Commission recommends:

- 1. As a priority, State and Territory Governments determine which functions can be most efficiently carried out by each of their port authorities. In most cases, this will mean following the landlord model. However, in some regional ports it may be more efficient for the port authority to undertake some non-core port activities. (See Section 8.1)**

Governments need to consult with users in considering the appropriate role and functions of each of their port authorities. The final determination, however, lies with governments as the owners of the authorities. Their decisions, and the reasons leading to them, should be made public.

With the regional ports qualification, there would be efficiency gains in identifying and divesting non-core activities. Private enterprise faces greater efficiency incentives and disciplines than public port authorities in the supply of non-core services and activities.

Port authorities should also explore the possible benefits of contracting out particular core services and activities. With contracting out, services and activities are supplied to the authority by private enterprise rather than by the port authority's own employees. The Commission recommends:

- 2. Where governments follow the landlord port model, non-core activities be identified and divested to private enterprise. The supply of core services and activities should be contracted out wherever that is cost-effective. (8.2.2)**

## **Corporatisation**

Irrespective of the particular services and activities which a public port authority provides, the institutional framework in which it is placed and the requirements imposed on it by government can have an important influence on whether it operates efficiently.

The incentives for port authorities to become more efficient would be increased if they were placed in a 'corporate' environment. The Commission therefore recommends:

- 3. The following initiatives be implemented for all public port authorities without delay:(8.3)**
  - they be constituted as statutory bodies, which are separate from the departmental structure of government; (3.2.3)**

- **board members be appointed on the basis of individual experience, knowledge and skill, and not as representatives of interest groups; (3.2.3)**
- **boards be accountable to the parliament through the relevant minister(s); (3.2.3)**
- **all directions issued by government be in writing, and tabled in the parliament; (3.2.3)**
- **boards be set appropriate financial and non-financial targets, including target rates of return on assets; (3.2.4)**
- **governments clearly specify and make public the community service obligations they expect port authorities to satisfy. Their costs should be funded by direct budgetary payment; (3.2.2)**
- **port authorities not regulate non-core activities in which they themselves are engaged. An exception might be where it can be shown that there are cost savings from the one organisation performing both functions; (3.2.5)**
- **they be liable for taxes and government charges; (3.2.6)**
- **they be liable to pay a dividend out of any after-tax profit. The amount of any dividend should be recommended by the board to government for decision; (3.2.7)**
- **they be made subject to the Trade Practices Act and no longer be excluded from the coverage of the Prices Surveillance Act; (3.2.9) and**
- **they be free to determine their terms and conditions of employment, not subject to the constraints of government employment policies and practices. (7.4.5)**

## **Competition between ports**

A number of physical, demographic and market factors, which are largely outside the control of port authorities, limit the scope for competition between ports and port authorities in Australia.

Even so, there are some opportunities for competition between ports which many Australian port authorities endeavour to exploit. The scope for competition is greater in Tasmania than on the mainland, and Tasmanian port authorities do compete strongly. Competition between ports would be enhanced by the corporatisation initiatives recommended above.

Maritime regulations primarily serve safety and environmental goals. Because the basis of some levies and charges which support maritime regulation differ from state to state and discriminate against particular categories of vessel, the regulations can impact on competition between ports. The Commission therefore recommends:

- 4. The Australian Transport Advisory Council review maritime regulations to ensure that they are reduced to a minimum, consistent with appropriate safety and environmental needs. (4.3.2)**

### **Efficiency within ports**

The operations of port authorities can have a significant effect on the efficiency of other providers of services within a port. Stevedoring, towage and pilotage are three key port service activities over which port authorities have some control, through their leasing and licensing policies.

Container terminal operations and towage are likely to be natural monopolies in many ports; that is, the service can be supplied by one operator at lower cost than by any combination of two or more operators. In cases of natural monopoly where barriers to entry are large, there is scope for the operator to exploit market power. General monitoring and surveillance bodies, such as the Trade Practices Commission and the Prices Surveillance Authority, could guard against the abuse of market power or this could be the responsibility of a port authority through its leasing and licensing policies.

The Commission believes that the appropriate bodies to regulate the behaviour of industries within ports are those that apply to firms in all sectors. It recommends:

- 5. Responsibility for guarding against the abuse of market power by port service providers rest with non-industry-specific bodies such as the Trade Practices Commission and the Prices Surveillance Authority. (5.2.1)**

Even though terminal operation and towage are likely to be natural monopolies in many ports, the Commission's strong preference is to allow market forces to determine how many private operators provide a particular service within a port, and who they should be. In the case of stevedoring, this requires sites to be made available for lease to potential entrants and for leases to be tradeable. The Commission therefore recommends:

- 6. Port authorities offer through public tender any available port-zoned land when interest is expressed in its commercial development. Incumbent operators should be eligible to tender. Leases should be:**
  - tradeable;**

- **for any length of time to be negotiated commercially between the lessee and the port authority; and**
- **awarded on the basis of the highest commercial benefit to the port authority, with the minimum acceptable bid being the lease value of the site in its alternative use, consistent with the port plan. (5.2.1)**

The right to provide some port services is regulated through a licence rather than a lease. The Commission considers that, in most circumstances, exclusive licences represent an undesirable impediment to entry. If exceptions are made, they should be for only a short term in order to inject a degree of serial competition. The Commission therefore recommends:

- 7. Subject to ensuring a satisfactory standard and level of service, port authorities issue only non-exclusive, tradeable licences for towage, pilotage and other port services. Any exclusive licence should be issued for only a short term (say, three years) through public tender. (5.3.2)**

## **Pricing**

In seeking to achieve their rate of return targets, port authorities should aim to improve their own productivity rather than—because of their natural monopoly status—raise prices. Removal of the exemption of port authorities from coverage of the Prices Surveillance Act should help in that respect.

Setting target rates of return raises a number of issues. Of particular significance are the treatment of non-performing assets, land held for future use, assets funded by users, and the valuation of channels and breakwaters. How these issues are resolved can have an important influence on the efficiency of capital investment and the level of prices, as well as the measured performance of the port authority. The Commission recommends:

- 8. As a general principle, port authority assets be required to return at least their opportunity cost over their useful lives. But in the application of this principle:**
  - **under-performing assets should be written down if they have no better commercial use; (6.3.1)**
  - **the value of land held for future use should be excluded from the asset base used to determine the level of charges for current port users; (6.3.1)**
  - **when a port authority assumes ownership of assets explicitly funded initially by users, the value of those assets should be taken into the authority's balance sheet, but the credit given in exchange to users should also be properly accounted for; (6.3.2) and**

- **long-lived non-depreciating assets such as channels should be valued at zero, but their capital cost should be recovered from users rather than the community at large. (6.3.1)**

The way in which prices are structured can also affect efficiency. It is inefficient to use revenue from non-port activities to subsidise port activities, to subsidise one port from the revenue from others, or to supply services and activities below marginal cost. The Commission therefore recommends:

- 9. Subsidisation between non-port and port activities, subsidisation between ports, and the supply of any services and activities to any users at below marginal cost, be eliminated. (6.4.1)**

The costs of providing a service should be recovered from those who directly receive the service. The Commission therefore recommends:

- 10. Port authority services be charged only to those who have a direct commercial relationship with the port authority. (6.4.4)**

This approach would directly and most efficiently provide pricing information to all involved in shipping cargo through ports.

At present, port authority charges are not consistent between ports in terminology, structure or level. Although there is no reason for structure and level to be the same from port to port, the lack of standard terminology adds to shippers' costs, and to the difficulty in comparing charges between ports. The Commission therefore recommends:

- 11. Standard charging terminology in Australia be developed by the Australian Transport Advisory Council in consultation with the Association of Australian Ports and Marine Authorities, port authorities and port users. The terminology should include the nature of each charge, and the basis for its calculation. (6.5)**

Further, transparency would be facilitated if all port authorities were to set up formal liaison mechanisms with port users to discuss costs and prices, as well as other matters of mutual interest.

## **Management and work practices**

With governments requiring port authorities to improve their efficiency and operate more commercially, port authorities have had to become more productive in their use of labour. They have done this in several ways: withdrawing from non-core activities; contracting out various services and activities; taking advantage of new technology; improving management and workforce relations;

implementing better management and work practices; and placing greater emphasis on training, multiskilling and workforce flexibility.

Although valuable progress has been made, inefficient work practices still remain. The Commission therefore recommends:

- 12. In consultation with their employees and port users, port authorities persevere in identifying all remaining inefficient work practices. Once identified, such practices should be removed. (7.4.1)**

Some ports have established integrated labour forces which combine, in the employ of the port authority, the former port authority and stevedoring workforces. Integrated labour forces could reduce costs and improve efficiency. Whether an alternative approach, such as casualisation, would bring greater gains is not something the Commission can come to a judgment about. Case-by-case analysis would be needed. However, the Commission recommends:

- 13. Port authorities allow independent operators to compete for and supply waterfront services even if they establish integrated port labour forces. Port authorities should not subsidise their waterfront activities from revenues received from other activities. (7.4.2)**

As part of the rationalisation process of unions and awards, a Maritime and Stevedoring Federation of two amalgamating groups of unions has been formed. The new federation will extend the influence of the Waterside Workers Federation into port authority workforces. The Commission recommends:

- 14. Terms and conditions of port authority employment be negotiated in the workplace by the parties concerned. It is inappropriate to extend the terms and conditions of stevedoring employment generally to all port authority employees. (7.4.3)**

Training and multiskilling of port authority employees has been emphasised in recent years. The Commission considers that this should continue.

## **Privatisation**

In limiting the role of a public port authority to the landlord model, consideration needs to be given to identifying and divesting non-core activities and contracting out core activities.

Another option, for some ports, would be to divest the core activities to private enterprise: the entire port could be privatised. This has the potential to introduce incentives for efficiency that do not accompany public ownership: for example, public port authorities remain immune from takeover and insolvency and the type

of performance monitoring implicit in changing share prices. And there always remains the possibility of political interference.

In the Australian situation, where significant competition between ports is generally not possible, it may be that privatisation would transfer market power from public to private hands. And a private operator might have an incentive to expand from the landlord role and consequently reduce competition within a port.

As any gains from private ownership could be offset by the costs arising from any extension of private market power (and any extra costs which might arise from regulating such market power), a general conclusion about the merits of privatisation is not possible. However, there are some cases where it is likely to be beneficial, and these deserve full consideration. The Commission therefore recommends:

- 15. Governments consider the opportunities to increase efficiency which might be offered by fully privatising ports that face competition from other ports (as in Tasmania), or that are dominated by a few large bulk users. (8.5.1)**

## **A national approach**

All states are moving to make their port authorities more commercial and accountable. However, much remains to be done. Any delay in implementing corporatisation initiatives (see Recommendation 3) would postpone the benefits to both port users and the wider Australian community. And the considerable differences remaining between states in the institutional and regulatory settings they establish for their port authorities can affect the degree of competition between ports.

For these reasons, the Commission considers that a national approach to coordinating port authority reform would be useful, particularly in hastening those states and territories that are slow. The Commission recommends:

- 16. The Australian Transport Advisory Council prepare and make public a comprehensive program and firm timetable for ongoing port authority reform. ATAC should then monitor the progress of reform and its effects, and submit an annual public assessment to the Council of Australian Governments. (8.6.1)**

Full implementation of the corporatisation recommendations would go a long way to ensuring more efficient port authority operations, and resolving any conflict between state and national objectives in ports. Port authority boards that are accountable for their decisions, required to earn appropriate rates of return,

and pay taxes and dividends would be discouraged from making unsound investments. The Commission therefore recommends:

**17. Investment decisions be a responsibility of individual port authorities acting in a fully commercial manner. There should be no national control or planning of their investment. (8.6.2)**

Moreover, if their owner governments direct port authorities to undertake any investment, the direction should be put in writing and tabled in the parliament (see Recommendation 3). This would open the direction to full public scrutiny.

## **Implementation**

The Commission's recommendations should be implemented without delay, so that port users and the Australian community as a whole get the benefits as soon as possible.

The priority for governments is to determine the role and functions of each of their port authorities, and to move them to a corporate environment as quickly as possible. That is where the greatest efficiency gains will come.

Governments also need to consider, as part of the reform process, the opportunities to increase efficiency by fully privatising certain ports (see Recommendation 15).

## **Other issues**

The Commission draws attention to its comments on:

- the importance of port authority services and activities to the **international competitiveness** of Australian industry (Sections 2.3 and 2.4);
- the need to dismantle as rapidly as possible any **land transport regulations** which prevent competition between various modes of transport (Section 4.3.3);
- the need to discontinue the policy of **cabotage** on the Australian coast (Section 4.3.4);
- the effect of **pan-Australian freight rates** on competition between ports (Section 4.3.5);
- the potential for governments to tax port users through the **licensing of pilots** (Section 5.3.1);
- the circumstances in which **price discrimination** by port authorities may improve efficiency (Section 6.4.2);

- the need to investigate the merits of nationally coordinated **training** of port authority employees (Section 7.4.4); and
- **international best practice** for the provision of port authority services (Section 7.5).

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# 1 THE INQUIRY

Efficient transport arrangements are crucial to Australia's ability to compete on international markets. Port authorities have a vital influence on this ability through the many ways they affect the cost, speed and reliability of sea transport.

This inquiry focuses on the role and objectives of Australian port authorities, the efficiency with which they provide services and activities, and on the wider impact of port authority operations on port users and the Australian community.

The inquiry is an integral part of the maritime industry reform process undertaken since 1984 for shipping and 1989 for the waterfront. It provides the opportunity to review progress made in port authority reform since the Inter-State Commission made a series of recommendations in 1989.

## 1.1 Scope of the inquiry

The role of port authorities, their objectives and functions, accountability, their influence on competition between and within ports, their leasing and pricing arrangements, and management and work practices are all important inquiry issues. But the inquiry also encompasses the interface between port authorities and other port operators such as shipping lines, stevedores, terminal operators and companies providing pilotage and towage. The Commission has been asked to give priority to areas where greatest efficiency gains are in prospect, and areas where early action is practicable. The full terms of reference are set out on the page facing the Overview.

A 'port authority' is interpreted as being any organisation providing 'core' services to a specific port or group of ports. Port authorities control the use of the waters and lands within port boundaries; provide safe access and harbouring for ships; and plan, provide and allocate port infrastructure such as channels, breakwaters, navigation aids and berths. But the services and activities provided by many Australian port authorities extend well beyond those core activities—and many port authorities have both a facilitative and regulatory role.

So defined, port authorities cover private organisations operating about 15 private ports in Australia. But the majority, and collectively by far the most important, of Australia's port authorities are public agencies. Of these, the majority are statutory bodies, constituted under state or territory legislation.

Over the last few years a variety of inquiries, studies and reports have considered many issues relevant to port authority operations (see References

and bibliography). Where appropriate, the Commission has drawn upon the information and analyses contained in those documents.

Two recent reports are specifically mentioned in the terms of reference.

- An October 1991 Australian Transport Advisory Council (ATAC) report reviews progress in waterfront and port authority reform. ATAC concluded (p. 5) that ‘the changes taking place within the stevedoring industry and to the structure and operations of port authorities, as well as those in the shipping industry, will lay the basis for significant efficiency gains’.
- An April 1992 report from the House of Representatives Standing Committee on Transport, Communications and Infrastructure deals with container cargo through major ports. The report concluded that the main onus of ensuring the efficiency of the interface between seaports and land transport falls on the users of waterfront related services, but that port authorities have a supporting role to play in facilitating the efficient movement of cargo.

A December 1992 draft report from the Trade Practices Commission deals with the leasing policies of port authorities. It covers a range of relevant issues and sets out a number of draft recommendations designed to induce competition and efficiency on the waterfront.

## **1.2 The Commission’s approach**

In this, as in all its inquiries, the Commission has taken an economy-wide approach to the issues in line with the policy guidelines set out by the Commonwealth Government for the Commission (see Box 1.1). The approach recognises that actions or policies of a particular port authority, or a particular state port authority system, may ultimately affect not only particular regions or users but the entire Australian community. Even where a port authority manages its affairs competently and cost effectively within the constraints of its institutional and regulatory settings, the community’s overall welfare can be adversely affected if those settings are less than optimum.

Taking an economy-wide viewpoint also raises the issue of whether some nationwide coordination or planning of port authority services and activities would be beneficial in Australia.

### **Box 1.1: General policy guidelines for the Commission**

In reporting on industry matters referred to it, the Commission ‘must have regard to the desire of the Commonwealth Government:

- (a) to encourage the development and growth of Australian industries that are efficient in their use of resources, self-reliant, enterprising, innovative and internationally competitive; and
- (b) to facilitate adjustment to structural changes in the economy and to ease social and economic hardships arising from those changes; and
- (c) to reduce regulation of industry (including regulation by the States and Territories) where this is consistent with the social and economic goals of the Commonwealth Government; and
- (d) to recognise the interests of industries, consumers, and the community, likely to be affected by measures proposed by the Commission.’

Source: Industry Commission Act 1989, s. 8.

## **1.3 Consultations, submissions and hearings**

During the course of the inquiry, the Commission held discussions with a wide range of organisations including port authorities, stevedoring companies, unions, shipping groups and cargo interests. It also consulted government organisations, port authorities, and private port operators in brief visits to Europe, North America, Singapore and New Zealand. A list of the people and organisations visited is at Appendix A.

An Issues Paper was released in June 1992, and initial public hearings were held in all states between August and October 1992.

Further public hearings were held in April 1993 at Sydney, Canberra and Melbourne to receive comment from interested parties on the Draft Report which was released in February 1993.

A total of 153 submissions from 90 participants were received during the inquiry. A list of those who made submissions is given in Appendix A.

## **1.4 Structure of the report**

Chapter 2 presents background information about Australia’s ports and port authorities, prior to discussion and analysis of inquiry issues in succeeding chapters.

The central issue is the appropriate role for port authorities, and how they affect the efficiency of resource use. This raises several important questions which are addressed in Chapters 3, 4 and 5:

- Should a port authority be restricted to core activities; should it supply cargo handling equipment, such as bulk loaders and container cranes, for others to use; or should it provide services such as cargo handling services in competition with private operators?
- Should a port authority be involved in regulation?

- In carrying out its services and activities, should a port authority aim to maximise trade through the port, maximise 'profit', or achieve some other goal?

After reviewing the nature of port authority services and activities, Chapter 3 begins to explore such questions. That chapter concludes by examining the institutional settings which are most likely to maximise the efficient performance of the public port authorities.

Chapter 4 deals with the involvement of port authorities in encouraging competition between ports and discusses what changes in the institutional and regulatory settings would enhance such competition.

In Chapter 5, the Commission investigates what role, if any, port authorities should have in promoting efficiency in industries within ports. Leasing and licensing arrangements subject to port authority involvement are examined.

To many participants, pricing of port authority services and activities was a main concern. Pricing issues are covered in Chapter 6. This considers both the level and structure of prices, as well as transparency and terminology issues.

In Chapter 7, human resource issues such as management and work practices, training and skills development are considered. This chapter discusses the importance of adopting international best practice.

Chapter 8 draws together the Commission's conclusions about the appropriate role for public port authorities, and suggests how their efficiency could be enhanced. The chapter also addresses privatisation issues and the scope for national coordination and planning.

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## **2 AUSTRALIA'S PORTS AND PORT AUTHORITIES**

This chapter presents basic information about ports and port authorities in Australia. It outlines the importance of seaports to the national economy and describes the various operators within ports and what they do. Far reaching reforms on the waterfront have been made in the last few years. Those changes are outlined in this chapter, as are the expected gains from waterfront reform.

The chapter goes on to examine the structure and accountability of port authorities, their objectives and functions, the services and activities they provide, their community service obligations, the financial requirements imposed on them by governments, and their performance.

In aggregate, port authority activities account for only a small proportion of the costs of moving cargo. However, because of their facilitative and regulatory role, they influence Australia's international competitiveness more than direct costs indicate.

Finally, it is noted that Australia's ports and port authorities appear to be more costly than in many other countries. Although there are some justifiable reasons for this, the differences emphasise the need for Australia to improve the efficiency of its port system.

### **2.1 Australia's ports**

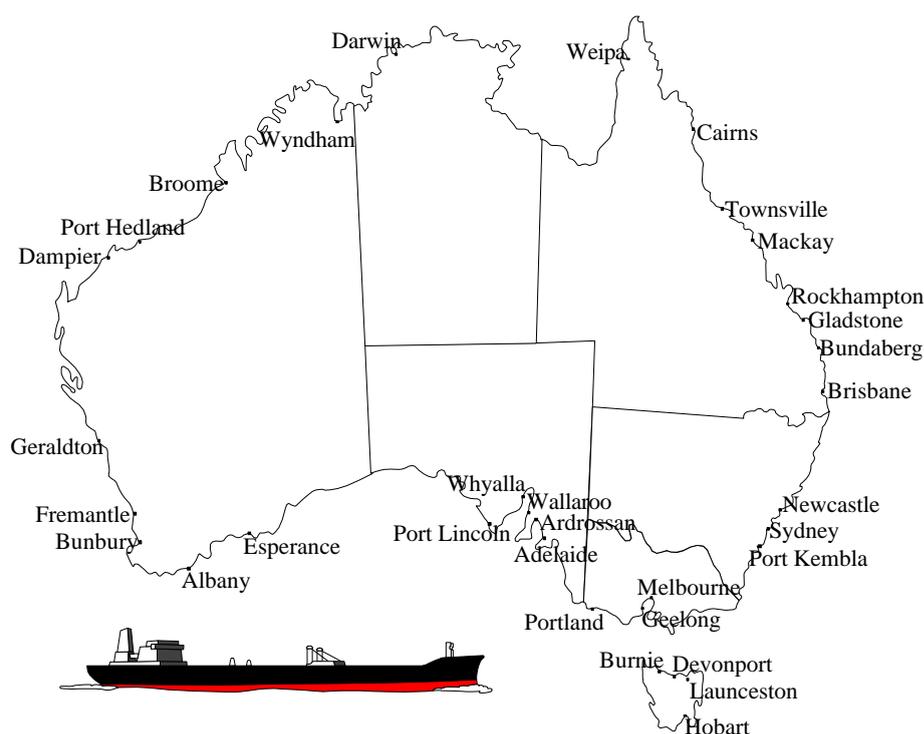
Over 99 per cent by volume of Australia's international cargo passes through its seaports (see Appendix Table B1). In 1991-92 that trade totalled over 350 million tonnes. An additional 88 million tonnes of cargo was shipped as coastal trade (Appendix Table B2).

The significance of seaports is further indicated by the value of international cargo passing through them—some \$80 billion in 1991-92. This compares with Australia's GDP in that year of \$386 billion.

#### **2.1.1 Different port types**

About 80 commercial and semi-commercial ports are located around the Australian coastline and on its surrounding islands. Figure 2.1 shows the locations of some of the ports referred to in this report.

**Figure 2.1: Australia's ports**



Not all Australian ports aim to serve the cargo trade. Some are maintained for the benefit of local communities, the fishing industry and/or recreational boating. To indicate the differences between ports, Box 2.1 classifies some of Australia's ports into the broad categories of integrated, regional, dedicated and community ports.

The majority of ports fall under the day-to-day control of the public port authorities, but about 15 ports are 'private'—see Box 2.2. Private ports include two each in the Northern Territory and New South Wales, three of commercial significance in South Australia and six in Western Australia.

Australian ports have a range of throughputs (see Appendix Table B3). The largest, in volume terms, is Dampier. It was previously a private port, but the Dampier Port Authority took over operational and administrative control in 1989. In the 1991-92 financial year, Dampier's international trade alone totalled 60 million tonnes (gross)—23 million tonnes more than the total trade of Victoria, South Australia, Tasmania and the Northern Territory combined. However, in terms of value, the largest port in that year was Sydney (including Botany Bay and Kurnell), which at over \$20 billion exceeded the combined total of all Western Australian, South Australian, Tasmanian and Northern Territory ports. The second largest port in terms of volume was Newcastle with over 41 million tonnes, and in terms of value was Melbourne which also exceeded \$20 billion.

### Box 2.1: Australia's ports classified

Australia has many varied ports. Drawing on a number of participants' attempts to group them to simplify the discussion, the Commission has constructed the following classification. Not every port has been classified.

#### 1. *Integrated ports*

These publicly administered ports incorporate a broad mix of both public and private sector investment and service general cargo, container cargo, bulk cargo, recreational and passenger vessels.

Adelaide	Brisbane	Burnie
Darwin	Fremantle	Melbourne
Sydney		

#### 2. *Regional ports*

These publicly administered ports service major regional areas and may be dominated by a core group of bulk commodities supplemented by a mix of general and/or container cargo and tourist, recreation and maintenance facilities.

Bunbury	Cairns	Devonport	Esperance
Geelong	Geraldton	Hastings	Hobart
Launceston	Newcastle	Port Lincoln	Townsville
Yamba			

#### 3. *Dedicated ports*

These ports have one or two bulk commodity operations in export-oriented industries such as coal and mineral ores. They provide little, if any, general cargo facilities for the general community or industrial development beyond the bulk commodities. Some of these ports are privately run (\*).

Abbot Point	Albany	Ardrossan*	Bundaberg
Cape Flattery	Dalrymple Bay	Dampier	Eden
Gladstone	Gove*	Groote Eylandt*	Hay Point
Lucinda	Mackay	Mourilyan	Port Bonython
Port Giles	Port Hedland	Port Kembla	Port Pirie
Port Stanvac*	Portland	Thevenard	Weipa
Whyalla*	Yampi Sound*		

#### 4. *Community ports*

These are small, publicly administered ports which service domestic and business needs of small communities in outlying areas and often comprise small boat harbours.

Apollo Bay	Karumba	Lorne Port	Campbell
Port Fairy	Port Latta	Queenscliff	Roslyn Bay
Thursday Island	Warrnambool		

Source: Submissions, especially nos. 4, 28, 54 and DR139.

This situation reflects differences in the unit values of cargo shipped from and received at the various ports. Bulk cargoes are shipped in large volumes at relatively low unit values, while processed goods are shipped (often in containers) at relatively high unit values. The latter move largely through the capital city ports, whereas international bulk trade is mainly through dedicated ports.

### Box 2.2: Australia's private ports

No Australian port has a private 'owner'. However, private operators run about fifteen ports under agreements with their respective state governments.

In South Australia private ports operate under special State Government legislation which allows the 'owner' to run the port operation. The SA DMH acts as harbour master in all private ports and as pilot in all but Port Stanvac. South Australian legislation is silent on freedom of access to third parties; however in practice they are accommodated through commercial negotiation. The ports of Stanvac and Whyalla were established under an indentured Act in which the SA Government gave the operators property rights over tracts of land and reclamation of water areas in addition to commitments to provide non-port infrastructure. Ardrossan is a smaller operation and exists under licence transferring rights to the water area and adjacent land. BHP has made a private agreement with barley shippers for them to use the port subject to BHP ships having priority. Special leases allows private companies to own port facilities and control their port in the Northern Territory. Freedom of access by third parties into the Port of Gove is guaranteed under its lease. The lease states that any party can use the general cargo berths subject to an appropriate charge being levied and the lessee (Nabalco Pty Ltd) controlling all handling of cargo and using its personnel. Source: Department of Transport 1981, *Australian Port and Marine Administration Directory* and participants.

Aggregate throughput figures disguise the relative volumes and values of imports and exports. Some ports' trade lies mainly in exports, some in imports, and some have a balance. Many of the regional bulk ports are biased heavily towards exports. Of the container ports, Melbourne is the largest for both imports and exports, followed by Sydney.

Different cargoes require different facilities. Bulk cargoes require bulk handling and loading equipment that often has to be specifically installed. Because of its expense, a shipper will often need to make a commitment to a particular port. Containerised cargo also requires costly specialised equipment. Much break-bulk cargo can be handled with relatively simple equipment, such as standard cranes and fork lifts.

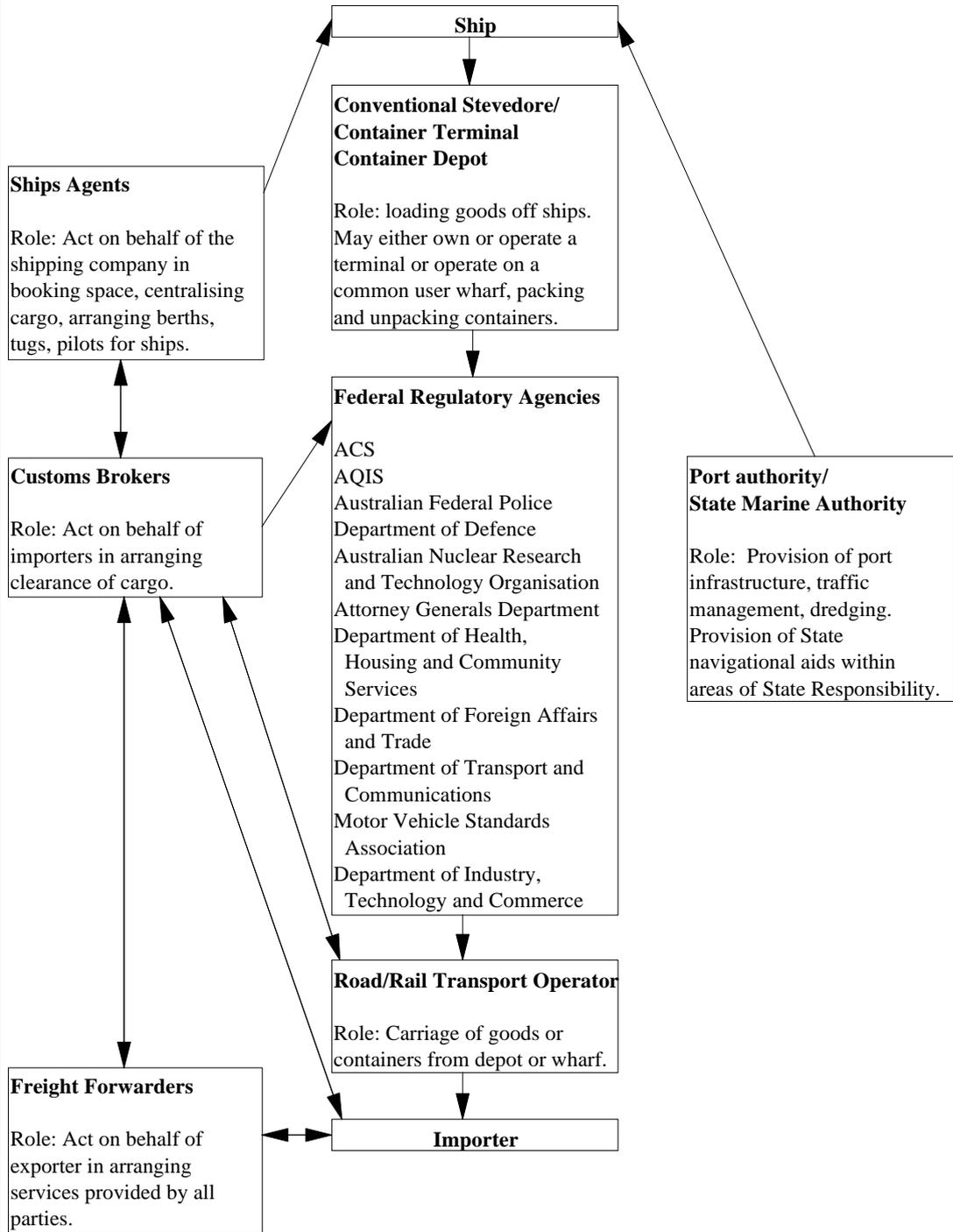
Another type of cargo, vehicles, are transported by pure car carriers (PCCs), as opposed to bulk and container vessels. PCCs require relatively little port infrastructure and are commonly used in Australia for both importing and exporting.

In some ports, facilities are also provided for passenger and cruise vessels. Melbourne, Devonport and Launceston service the Bass Strait passenger trade. Sydney and Cairns, for example, provide facilities for cruise ships.

### **2.1.2 Operators within ports**

Figure 2.2 illustrates the operators and agencies involved as import cargo moves from ship to shipper. Export cargo flows in reverse from shipper to ship. At several places, control of the cargo passes from one operator to another.

Figure 2.2: The movement of import cargo from ship to importer



Source: House of Representatives 1992.

As owners of the cargo, shippers initiate the decision to move cargo, nominating its destination, and possibly also specifying the means by which the cargo gets there.

Once these decisions are made, land transporters, cargo handlers and shipping lines take over. Collectively these operators account for the vast majority of the cost of moving cargo.

### *The impact of governments*

In Australia, the main responsibility for the establishment and regulation of ports lies at the state level. Nevertheless, governments at all levels—federal, state and local—affect the operations of ports, port operators and port authorities.

Through the Australian Maritime Safety Authority (AMSA), the Federal Government regulates some matters relating to ship safety in Australian waters, and provides navigation aids. AMSA collects a maritime levy to pay for these services, as well as a levy used to prevent oil pollution.

The Australian Customs Service (ACS) and the Australian Quarantine and Inspection Service (AQIS), both federal agencies, provide services to the community through their regulation and control of traded goods. They cover matters such as the collection of customs duties, prevention of illegal imports, and quarantine. The AQIS levies fees and charges to cover all its costs, and ACS covers part of its costs through charges.

The Federal Government also plays a role in funding the provision of land-based infrastructure. For example, the 1992 ‘One Nation’ statement provided funds specifically designated to improve land transport links to ports.

This statement also introduced a new class of infrastructure bonds to encourage private investment in public infrastructure—including public seaport facilities. These bonds can be issued by the private sector investor at below market interest rates because interest received by bond buyers does not attract tax. They are currently being used by a private entity involved in a joint public/private sector venture developing a second liquids berth at Botany Bay.

State and territory governments are responsible for regulating maritime matters in their territorial waters, including waters within the bounds of the various ports. Such regulation may concern safety, navigation and the environment. It may cover the registration of vessels, such as recreational boats. In some cases, separate maritime authorities are established in the states; some port authorities play a role in this broader maritime regulation. Section 2.2.2 and Appendix Table B4 give further details of the states’ maritime regulatory role.

Within ports, state and territory governments exert their influence largely through their establishment and control of port authorities. But these governments also play a part in the provision of the necessary infrastructure to link ports to land transport.

Port authorities are generally exempt, within their port boundaries, from the control of local government bodies. However, through their planning of surrounding areas, including the provision of infrastructure to ports, those bodies can affect the efficiency with which ports operate. Similarly, the off-site effects of port authority activities impact on local communities. The City of Melbourne Council noted that:

issues such as traffic, particularly heavy vehicles and trucks, and the storage of dangerous substances are of specific interest to those [neighbouring] communities. (Sub. DR108, p. 1)

### **2.1.3 Waterfront reform**

Following the 1989 Inter-State Commission (ISC) report, the Commonwealth Government initiated a three-year program of waterfront (ie stevedoring industry) reform. According to the Waterfront Industry Reform Authority (WIRA), the body set up to oversee the reform process, the key aims were to:

- introduce enterprise employment;
- dismantle former industry employment arrangements and regulations;
- establish a competitive, commercial environment; and
- substantially improve reliability, efficiency and performance.

Part of the change involved a substantial reduction in the numbers of waterfront employees. This was facilitated by a redundancy package, worth over \$300 million, funded equally by the Commonwealth and employers.

According to WIRA (1992):

The reforms have been very successful. Substantial improvements have been achieved in cost and performance and the industry is now far more competitive ... The fundamental structural changes have been achieved ... What this means is that the Australian waterfront has been reorganised to the point where normal commercial and competitive forces can, and should be, expected to drive the industry successfully. The Australian waterfront will now be able to further improve its performance in response to customer demand.

WIRA highlighted the following achievements:

- labour productivity at terminals, across all types of ships, has doubled since 1989;

- container crane handling rates have improved and are now closer to international rates;
- the waterfront workforce has more than halved;
- stevedoring charges generally declined by 20 to 25 per cent to 1991-92;
- ship turnaround times have decreased;
- reliability and industry stability are better;
- many enterprise agreements are in place;
- a single skills-based award has replaced 21 awards and agreements; and
- comprehensive training is being introduced.

Despite these achievements, concern has been expressed that the benefits of waterfront reform are not flowing through to shippers. In a 1992 report into land-based charges in Australian ports by ocean carriers and conferences, the Prices Surveillance Authority (PSA) noted that:

There have been substantial benefits obtained by direct users of stevedoring services, that is shipping lines. These have been in the form of both price and non-price benefits. Stevedoring charges have declined over the last two years. Whilst there is evidence of some cost reductions being passed on to shippers (approximately 12 per cent over fourteen months), not all of the benefits have flowed through. (PSA 1992a, p. 71)

The PSA (p. 72) added that 'stevedoring costs may have been inflated by the cost of redundancy packages and declining volumes'. But it considered that the market power of the shipping lines may inhibit the flow on of benefits.

However, Shipping Conferences Services Ltd responded that:

... the industry as a whole strongly disputed the conclusions reached by the PSA (Sub. DR110, p. 4).

In particular, ANL claimed the benefits of waterfront reform have been passed on to shippers, and did not agree that it has the market power necessary to prevent benefits being passed on:

ANL's experience in all trades is that we are a price taker. (Sub. DR138, p. 1)

As part of waterfront reform, efforts are being made to improve the efficiency of communication between port authorities, port operators and government agencies such as the Australian Customs Service. Tradegate Australia Ltd, a not-for-profit co-operative of relevant parties, was formed in 1989 to establish a community-based EDI (electronic) network. Tradegate's aim is 'to improve the efficiency and speed of moving goods through the trade chain by the widespread introduction ... of a comprehensive range of electronic trading services' (sub. 62, p. 1).

## 2.2 Port authorities

Australia has some 30 public port authorities administering individual ports or groups of ports (Appendix Table B3).

### 2.2.1 Structure and accountability

Port authorities in Australia fall into three basic categories:

- state government statutory authorities with appointed board members. They control the majority of ports, including all the capital city ports except Adelaide and Hobart;
- state government departments acting as port authorities. The South Australian Department of Marine and Harbors (DMH) runs all that state's public ports including Adelaide. In Western Australia, the Department of Marine and Harbours runs Broome and Wyndham. The Harbours Corporation of Queensland (part of Queensland's Department of Transport) is responsible for several ports in that state; and
- authorities with elected board members. This applies in all ports in Tasmania.

Most authorities are responsible for only one major port, with some also administering smaller ports. An exception is the MSB of NSW which administers three major ports, albeit through three separate divisions. The MSB is the largest authority in terms of operating revenue. See Table 2.1.

Except for Tasmania, members of port authority boards are appointed by government. In many cases, this is on the basis of their individual expertise, but in others members are appointed to represent particular groups. In Victoria, for instance, board members have been appointed from interest groups such as importers, unions and exporters. This could change, however, as the policy of the recently elected government is to appoint board members selected for their skills, expertise and experience and who will not need to be representative of particular groups (sub. 78).

Table 2.1 Selected statistics for some port authorities, 1991-92

<i>Port authority</i>	<i>Operating revenue (\$m)</i>	<i>Employees (no.)</i>	<i>Container throughput ('000)</i>	<i>Throughput (million mass tonnes)</i>
Maritime Services Board of NSW	273.1	1 297 <sup>a</sup>	526.8	92.6
Dampier Port Authority	3.0	11	-	59.2
Port Hedland Port Authority	10.4	31	0.1	42.6
Gladstone Port Authority	61.2	316	-	32.0
Port of Brisbane Authority	54.9	234	200.1	25.3
Fremantle Port Authority	36.2	450	132.0	17.2
Port of Melbourne Authority	139.8	946 <sup>b</sup>	667.0	11.8
Bunbury Port Authority	10.8	29	-	6.6
Port of Geelong Authority	17.5	143	-	5.2
Department of Marine and Harbors, SA	45.2	393 <sup>c</sup>	42.7	4.1 <sup>d</sup>
Marine Board of Hobart	9.7	105	35.5	2.5
Port of Burnie Authority	8.4	44	77.2	2.2
Port of Portland Authority	6.9	49	-	2.1
Cairns Port Authority	8.6	82	2.8	1.2
Darwin Port Authority	7.6	48	4.7	0.7

<sup>a</sup> Includes Waterways Authority. <sup>b</sup> Includes Hastings and regional ports. <sup>c</sup> Includes 85 marine safety employees. <sup>d</sup> Throughput figures are for Port of Adelaide only.

Source: ATAC 1992a.

In Tasmania board members are elected, a practice followed to some extent internationally especially in parts of the United States. Members of the Marine Board of Hobart are elected by importers, exporters and shipping lines using the port. In the other six Tasmanian authorities, members are elected on a local government area basis.

The degree of legitimate state government control over port authorities in Tasmania has been a contentious issue. The port authorities have opposed State Government attempts to exert greater control and direction over their activities. The Marine Board of Hobart presented a legal opinion to the Commission which stated:

The Hobart Marine Board holds title to all of the land which it occupies and in our opinion there is no 'government ownership' of the lands owned by the Board. (Sub. 30, p. 30)

And the Port of Devonport Authority stated that:

The people who own the port at Devonport are the people of the district that we represent. (Transcript, p. 1176)

However, the Independent Commission to Review Tasmania's Public Sector Finances (1992) considered that:

as a matter of urgency, the government should make it clear to the marine boards and port authorities that they are government owned ... (p. 95)

In response, the Government established a Tasmanian Port Policy Review Working Party. This has recently reported to the Minister for Transport and Works. But the issue of ownership was not completely resolved by the working party—see Appendix C.

Despite their structure, most of Australia's port authorities are subject to a significant degree of government control or ministerial direction. As discussed in later chapters, governments set financial and other performance targets, control investment and borrowing and influence port authority pricing.

Being state government agencies, port authorities are generally exempt from the usual requirements of corporations law, and from the purview of the Trade Practices Commission and the Prices Surveillance Authority.

### **2.2.2 Objectives and functions**

The powers of port authorities are generally set out in the relevant state legislation. In many cases, port authorities have also developed mission statements, corporate plans or business statements which set out their objectives and functions and which have been approved by government.

A port authority typically has a number of objectives. They may differ from state to state, and between port authorities in the same state. They may cover meeting the needs of users through providing safe access to the harbour and berth, developing trade for the benefit of the local region or the wider state community, recognising the interests of employees, operating in a cost effective manner, minimising costs to users, and so on. In some authorities the objectives may be expressed separately, but in others they are intertwined.

While they may be clear, some of the objectives may conflict when the port authority attempts to fulfil them. For example, it would be very difficult to 'efficiently and cost effectively' fulfil all 'the differing needs of Government, customers, employees and townfolk' at the same time, as is apparently expected of the Port Hedland Port Authority. Some examples of objectives are set out in Box 2.3.

**Box 2.3: Objectives of port authorities**

The following examples illustrate the wide range of objectives held by port authorities in Australia, and also the different ways in which they may be combined.

**Brisbane:** to manage an efficient port and encourage trade growth for the continuing benefit of port users, the region and the nation.

**Devonport:** to serve the regional hinterland by facilitating commerce and trade.

**Fremantle:** to ensure the provision of reliable, efficient and financially viable port services and facilities for port users.

**Launceston:** to facilitate the safe and efficient movement of shipping and cargo through the port by planning, providing and managing port and related facilities, assets and services in a manner responsive to customer requirement and to a standard of excellence.

**Melbourne:** to facilitate the flow of trade through the ports of Melbourne and Hastings by the efficient management of port operations for the benefit of all Victorians.

**Port Hedland:** to provide, operate, develop and monitor port facilities and services, such that the differing needs of Government, customers, employees and townsfolk, who together comprise our stakeholders, are efficiently and cost effectively fulfilled, and port trade enhanced thereby.

**South Australia:** to facilitate trade through South Australian ports to contribute to the economy of the State.

**Sydney:** to ensure safe navigation and facilitate the efficient land/sea movement of cargo and passengers carried on ocean-going vessels through the ports of Sydney Harbour and Botany Bay. This will be carried out in a manner which is commercially viable, competitive and compares favourably with other national and international ports.

Source: Submissions and port authority annual reports.

Reflecting the wide range of objectives for port authorities, the functions and powers entrusted by parliaments to port authorities vary but are usually quite broad.

In general, port authorities have powers to:

- *regulate:* this may involve setting and/or policing rules regarding such matters as safety and navigation in port, taking responsibility for environmental regulations, regulating prices and charges of port operators, and licensing port operators including pilotage and towage services;
- *plan, coordinate and facilitate:* this relates to the overall development of the port, such as taking control of land, planning additional berths, arranging dredging and ensuring appropriate infrastructure is available. Port authorities may also seek to coordinate the interface between various users of ports such as shippers, terminal operators and shipping lines; and
- *provide other services and activities:* these may include cargo handling facilities such as cranes, fork lifts, storage sheds, and common-user facilities. They may be operated by the port authority or leased to private operators for extended periods.

Further, some port authorities have power to undertake activities that are not associated directly with ports, such as the operation of airports or real estate dealings.

Most port authorities are responsible for some maritime regulation, especially in port. In some states they may have a part in maritime regulation outside port boundaries. In some cases, the wider state maritime regulatory bodies take responsibility for some in-port activities.

For instance, in Victoria a separate Marine Board of Victoria regulates pilotage and vessel safety. However, the PMA has some regulatory functions under the Marine Act, including the maintenance and upgrading of navigational aids in all Victorian coastal waters, oil pollution control in Victorian coastal waters and hydrographic surveying of Victorian ports. In South Australia, all maritime regulatory functions are performed by the DMH. In Tasmania, a separate Navigation and Survey Authority is responsible for the safety of life at sea in state waters. Appendix Table B4 gives details about maritime regulation in each of the states and the Northern Territory, including responsibility for pilotage and towage.

Port authorities also assist AMSA in ensuring that safety regulations are adhered to within the port. Such regulations relate to the use of cargo handling equipment; the movement of dangerous goods, livestock and containers; and to the seaworthiness of ships.

### 2.2.3 Services and activities

Reflecting their various objectives and functions, Australian port authorities are involved in many different combinations of activities and services.

#### *Core services and activities*

All public port authorities have certain core activities in common—see Box 2.4. They include providing safe access and harbouring for ships; and planning, providing and allocating port infrastructure such as channels, breakwaters, navigation aids and berths.

#### **Box 2.4: ‘Core’ services and activities**

Core services and activities could include:

Channels (if needed)	Harbour master duties
Breakwaters	Safety regulations
Berths	Trade facilitation
Strategic planning of the port	Management of port property assets
Navigation aids and information	Environmental protection within port
Port promotion and marketing	Enforcement of marine pollution laws

Port planning and coordination involves deciding the form port facilities will take, their location and how they relate to other features of the port. An efficiently planned port benefits all users of the port regardless of whether they

have contributed to the cost of the planning service or not. Through effective planning, port authorities can facilitate trade.

Public port authorities hold ownership of port land, either in their own right or in trust for the state. Although land which is considered to be required for port purposes is generally not sold, it is often leased to port operators. Some leases range up to 99 years.

Other core activities relate to the maritime regulatory functions discussed above. Some port authorities also license and supervise port operators.

### *Non-core services and activities*

These include cargo handling, stevedoring, marketing, pilotage, towage, non-port real estate management and industrial estates—see Box 2.5. Such services and activities could often be supplied by private operators but, in many cases, port authorities choose to be involved instead or as well. Their reasons for doing so may include: filling a gap in services provided by private operators; offering competition to private operators for the benefit of users; extending core business to provide a more complete port service; and using port authority personnel and expertise most effectively.

#### **Box 2.5: ‘Non-core’ services and activities**

Non-core services and activities could include:

Administration of associated ports	Construction of wharves and terminals <sup>a</sup>
Recreational boating facilities	Slipway/vessel repair services
Beach renourishment	Provisions, stores and bunkering
Road and rail booking systems	Pilotage
Cargo handling	Towage
Property rental for non-port operations	Line handling
Industrial estates	Storage (including cold stores)
Airports	Terminal operation and stevedoring
Tourist related facilities	Stacking areas
Port emergency and security services	

<sup>a</sup> National Terminals (Australia) Ltd noted, however, that all present container wharves in Australia have been constructed by port authorities.

Examples of non-core activities and services undertaken by Australian port authorities include:

- The Marine Board of Hobart designs and constructs cargo handling facilities and maintains and services equipment. It supplies pilotage, fresh water, bunkers and other ship services. The Authority has been involved in port reclamation, the design and construction of a new ship-to-shore ramp and other facilities.

- The port authorities of Cairns, Mackay, Devonport and Burnie run airports in their respective centres.
- The Darwin Port Authority develops fishing and small craft infrastructure and promotes international shipping, especially the Darwin to Singapore trade.
- Some port authorities, including Fremantle, Adelaide, Burnie, Devonport, Hobart and Launceston, provide pilotage services.
- In many cases, common-user cargo handling facilities are provided. These may include cargo storage sheds, tarmac and container cranes.
- Commercial operations undertaken by the Fremantle Port Authority include pilotage, mooring, small craft, forklift training, stevedoring maintenance, container depot and infrastructure maintenance.
- The Gladstone Port Authority operates major coal and grain handling facilities.
- Similarly, the DMH currently owns bulk handling/loading equipment in South Australian regional ports, although stevedores are separately engaged by ship and/or cargo interests during loading of bulk commodities. The South Australian Government has announced that this equipment is to be sold to private operators.

Activities which extend well beyond core activities can bring in significant revenue. More than half the Marine Board of Hobart's revenue comes from such activities, mainly the leasing of real estate. Cairns Port Authority is a major land holder, receiving about one-third of its income from land rental for non-port activities such as the Pier Complex (a tourist attraction) and the Hilton Hotel. Table 2.2 shows information about non-core activities undertaken by several of the port authorities.

Table 2.2: **Non-core activities provided by selected port authorities (Y=yes; N=no)**

	<i>Pilots</i>	<i>Tugs</i>	<i>Steve- doring</i>	<i>Equip- -ment</i>	<i>Storage</i>	<i>Real estate</i>	<i>Air- port</i>	<i>Depot (LCL)</i>	<i>Line handling</i>	<i>Common- user facilities</i>
<b><i>New South Wales</i></b>										
Sydney	N	N	N	N	N	N	N	N	N	Y
Hunter	Y	N	N	N	N	N	N	N	N	Y
Illawarra	Y	N	N	N	N	N	N	N	N	Y
<b><i>Victoria</i></b>										
Melbourne	N	N	N	N <sup>a</sup>	N	N	N	N	Y <sup>b</sup>	Y
Geelong	N	N	N	Y	Y	N	N	N	N	Y
Portland	Y	N	N	Y	Y	N	N	N	Y	Y
<b><i>Queensland</i></b>										
Brisbane	N <sup>c</sup>	N	N	Y	N	Y	N	N	N	N
Townsville	N <sup>c</sup>	N	N	Y	N	N	N	N	N	Y
Gladstone	N <sup>c</sup>	N	Y	Y	Y	Y	N	Y	N	Y
<b><i>Western Australia</i></b>										
Fremantle	Y	N	N	Y	Y	Y	N	Y	Y	Y
Geraldton	N	Y	Y <sup>d</sup>	Y	N	N	N	N	N	Y
Dampier	Y <sup>e</sup>	N	N	N	N	N	N	N	N	Y <sup>f</sup>
Hedland	Y	N	Y	Y	Y	N	N	N	Y	Y
<b><i>South Australia</i></b>										
DMH	Y <sup>g</sup>	N	N	Y	Y	N	N	N	Y	Y
<b><i>Northern Territory</i></b>										
Darwin	Y	N	Y <sup>h</sup>	Y	N	Y	N	N	N	Y
<b><i>Tasmania</i></b>										
Hobart	Y	N	N <sup>i</sup>	Y	Y	Y	N	Y	Y	Y
Burnie	Y	N	N <sup>d</sup>	Y	Y	N	Y	N	Y	Y
Devonport	Y	N	N	Y	Y	N	Y	N	Y	Y
Launceston	Y	N	N	Y	Y	Y	N	N	N	Y

Equipment refers to container cranes, loaders, etc. supplied by the port authority, but which may then be leased to private operators. Storage and real estate refers to that provided for commercial gain rather than as part of the port's operation.

<sup>a</sup> The only remaining stevedoring equipment hired out by the PMA are two small capacity hoppers for dry bulk cargoes. <sup>b</sup> Except for Webb Dock. <sup>c</sup> Provided in all ports through the Queensland Department of Transport. In Brisbane the Department contracts the provision of pilotage to a private company. <sup>d</sup> Through the Integrated Port Labour Force. <sup>e</sup> Hamersley Iron, Dampier Salt and Woodside Offshore Petroleum operate their own pilot services. <sup>f</sup> A 'priority use' agreement exists between the port authority and Woodside Offshore Petroleum for this public wharf. <sup>g</sup> For all ports except Port Stanvac where responsibility has been delegated to Petroleum Refineries Australia P/L. <sup>h</sup> A joint venture with Conaust Ltd and Federated Stevedores Darwin P/L. <sup>i</sup> Contracts its employees to stevedoring companies.

Sources: Submissions, annual reports, participants and TPC 1992.

### *Landlord or comprehensive model*

Port authorities can be classified into various 'models', depending on the particular range of services and activities they carry out.

A port authority providing only core activities is said to follow the 'landlord' model. Core activities include activities such as those listed in Box 2.4. One which undertakes a greater range of activities including cargo handling activities is a 'comprehensive' authority. And one which provides common-user cargo handling facilities, such as cranes or bulk lifts, but does not itself operate them, is considered to be a 'tool' authority.

One of the main inquiry issues is which, if any, of these models is most appropriate for the various port types found in Australia.

### **2.2.4 Community service obligations (CSOs)**

A community service obligation arises when a government requires a public enterprise to carry out activities (relating to outputs and inputs) which it would not elect to do on a commercial basis, or which it would only do commercially at higher prices. Examples are the requirements for port authorities to administer associated (usually non-commercial) ports, to maintain recreational facilities such as parks and beaches, and to maintain recreational and fishing jetties. Another example is the provision of services by port authorities free of charge to naval vessels.

As Appendix Table B5 shows, most port authorities have taken action to identify and cost their CSOs. Their monetary value is generally low, with the exception of Victoria.

The policy of the new Victorian Government is to define CSOs, and fund them from Consolidated Revenue. But until now, the PMA has been required to manage the majority of the Victorian coastline, involving an extensive program of beach renourishment, the administration of a number of regional ports and the maintenance of fishing jetties. The PMA valued these obligations at approximately \$12 million a year (excluding depreciation), most of which the Authority had to finance itself, accounting for approximately 8 per cent of its total costs excluding depreciation.

The Port of Portland Authority has been prevented by government from charging Alcoa Aluminium for the provision of a berth. The Authority said that:

... we would see that as a community service obligation, if you wanted to call it that, in supporting the smelter development for regional growth and the other benefits it brings to the state in terms of export earnings. We would lump that, I guess, in with the associated ports as another community service obligation. (Transcript, p. 975)

The Authority considered that its CSOs cost it in excess of \$860 000 a year, including more than \$500 000 on account of the smelter.

### 2.2.5 Financial requirements

As well as establishing the objectives and functions of port authorities and, except in Tasmania, appointing members of their boards, governments have a significant degree of financial control. For example, they may control price structures and levels, set target rates of return on assets, impose taxes and dividends, and control investment and borrowings. Appendix Table B6 gives details for some port authorities.

No instances were drawn to the Commission's attention of any direct subsidies, either in the form of cash grants or loans at concessional interest rates, to Australian port authorities in 1992. In some previous years, however, the Darwin Port Authority has received direct subsidies from the Northern Territory Government.

However, the wide range of financial requirements applying to port authorities suggests that some are indirectly subsidised, at least relative to other port authorities.

Governments set a wide range of financial targets. For example, the South Australian Government expects the DMH to aim for an 8 per cent real rate of return on assets, whereas the former Victorian Government required a 4 per cent target.

The fact that a port authority falls under the government umbrella can also limit its activities. Its borrowings ultimately fall under Australian Loan Council approval. State governments (often Treasury) exert control over investment, evaluating proposed expenditures against various investment benchmarks, taking account of the availability of funds. In the allocation of borrowing approval between the various state agencies, a port authority may miss out on the opportunity to undertake sound commercial investment and development in its port.

Further, port authorities may be subject to public service employment conditions (see Chapter 7) which can limit their freedom to operate efficiently.

### 2.2.6 Performance

**As with all performance indicators, comparisons between port authorities must be made carefully because of specific needs and differences in accounting and reporting practices,**

**especially asset valuations.** Many participants considered that there was only value in assessing the performance of authorities over time, and that there was little, if any benefit, in comparing one authority with another. Although a substantial amount of data is available, it is very difficult to ensure that the comparisons are like with like. The South Australian Government considered that:

While there is a considerable amount of base data on port authority performance in Australia, there appears to be little information on reliable methodologies for making meaningful national and international comparisons of port authorities and for setting appropriate performance targets. (Sub. 32, p. 36)

The Commission has prepared detailed case studies of the Brisbane and Melbourne port authorities, assessing their financial performance and analysing productivity changes over time. These are given in Appendixes D and E. They show that while both port authorities have made considerable progress in improving productivity, Brisbane has performed better financially than Melbourne. PBA's total factor productivity has grown strongly since the first facilities at Fisherman Islands opened. Total factor productivity of the PMA has been more varied, falling when it was burdened with responsibility for the World Trade Centre and associated ports, and growing since 1987-88 when the Authority set out to reduce its costs.

In the time available, the Commission has not been able to prepare similar studies for other ports. **But the Bureau of Transport and Communications Economics, the Bureau of Industry Economics, the Australian Transport Advisory Council (ATAC) and WIRA have compiled port performance indicators.**

Reports by the ATAC also include port authority indicators. These are divided into two areas: '*financial management indicators*', which give an indication of how well authorities use their assets and their financial stability, and '*efficiency indicators*' which endeavour to show the impact on users of measures to improve authority efficiency.

Table 2.3 is based on ATAC information about the earnings before interest and tax of various port authorities calculated as a percentage of their total assets. The rates of return are expressed in real terms, that is adjusted for the effects of inflation, but based on the value of assets as shown in balance sheets. The basis of these figures does not necessarily line up with the ways in which the various port authority rate of return targets are established.

Table 2.3: 'Real' rate of return

Authority	Real rates of return (%)			
	1986-87	1989-90	1990-91	1991-92
<b>Integrated ports</b>				
Port of Brisbane Authority <sup>a</sup>	-0.7	5.8	10.0	13.5
DMH	3.6	7.1	5.6	8.3
Port of Melbourne Authority <sup>a</sup>	-3.7	3.5	4.2	7.7
Maritime Services Board	-0.1	0.7	2.6	6.1
Burnie Port Authority	-3.6	1.8	3.2	5.9
Darwin Port Authority	-13.3	-10.8	-7.7	-0.3
Fremantle Port Authority	-2.9	-0.1	-8.4	-1.4
<b>Regional ports</b>				
Geraldton Port Authority	-4.7	0.3	1.8	13.3
Bunbury Port Authority	0.4	1.0	4.4	9.1
Townsville Port Authority	-4.8	10.4	4.0	6.7
Port of Devonport Authority	-6.4	-3.5	0.8	5.3
Marine Board of Hobart	-5.3	-4.4	-2.0	3.6
Port of Launceston Authority	-3.5	-4.5	-1.0	2.5
Port of Geelong Authority	-3.3	-1.7	-0.7	1.3
Cairns Port Authority	-9.1	-2.1	1.0	0.2
<b>Dedicated ports</b>				
Albany Port Authority	0.7	0.6	5.5	10.8
Esperance Port Authority	-1.4	0.7	3.7	9.1
Gladstone Port Authority	-2.4	0.3	3.3	7.0
Port of Portland Authority	-2.9	2.1	1.8	5.0
Rockhampton Port Authority	-3.4	11.4	7.4	1.7
Dampier Port Authority	na	na	-2.0	-0.4
Port Hedland Port Authority	-8.9	-7.0	-3.4	-0.5
Mackay Port Authority	-7.6	-6.3	na	-1.6
Bundaberg Port Authority	-8.4	-8.0	-6.2	-1.9

na = not available. The rates of return are nominal rates adjusted by the CPI for the relevant year. <sup>a</sup> These figures differ from those in Appendixes D and E mainly because of differences in asset valuation.

Source: Calculated by the Commission from ATAC 1992a, and ATAC 1992b.

As noted in ATAC 1992a (p. 2), differences in accounting standards and reporting requirements of port authorities mean that caution needs to be exercised in making comparisons between port authorities. This said, the table shows a wide variation of rates of return within port authorities. Of immediate note is the general improvement in recent years. However, a number of authorities continue to make negative rates of return.

Other pointers to the performance of Australia's port authorities are the ATAC port authority indicators presented in Table 2.4 and the Association of Australian Ports and Marine Authorities (AAPMA) labour productivity indicators presented in Table 2.5. However, according to the PMA none of the Table 2.4 indicators provides a reliable basis for comparing different port authorities.

**Table 2.4: ATAC port authority efficiency indicators**

<i>Period</i>	<i>Cost per mass tonne (\$)</i>	<i>Cost per ship visit (\$'000)</i>	<i>Average charge per TEU (\$)</i>
<b>MSB Sydney Ports Authority</b>			
1989-90	4.35	34.28	69.96
1990-91	4.20	33.69	78.56
1991-92	3.72	31.98	76.00
<b>Port of Melbourne Authority</b>			
1989-90	4.02	27.22	72.15
1990-91	6.56	29.13	45.18
1991-92	6.23	29.67	48.60
<b>Port of Brisbane Authority</b>			
1989-90	1.83	19.49	43.08
1990-91	1.88	18.94	43.08
1991-92	1.92	17.94	43.08
<b>Port of Fremantle Authority</b>			
1989-90	3.02	34.52	64.91
1990-91	3.16	35.30	48.80
1991-92	2.58	30.67	52.08
<b>DMH - Adelaide</b>			
1989-90	3.76	27.32	62.14
1990-91	3.62	27.38	69.72
1991-92	3.51	27.67	65.98

Costs refer to total port authority operating costs.

Source: ATAC 1992a.

**Table 2.5: Port revenue and throughput per port authority employee**

(Percentage increase from 1989-90 to 1991-92)

<i>Port authority</i>	<i>Port revenue per employee</i>	<i>Port throughput per employee (tonnes)</i>
MSB	48	97
PMA	34	21
Geelong	3	1
Portland	21	48
Brisbane	28	12
Gladstone	7	-2
DMH	54	59
Fremantle	49	63
Port Hedland	12	21
Hobart	4	-8

Source: AAPMA Sub. DR135.

According to AAPMA, the statistics in Table 2.5 demonstrate the benefits of reforms undertaken in ports in recent years. However, AAPMA warned:

These statistics should not be used to compare the performance of one port with another [as] each port is unique, for example with respect to its physical layout, geographic location as well as the combination of trades, throughputs and type of vessels utilising the port. Furthermore, different port authorities are engaged in a range of different activities. (Sub. DR135, p. 8)

The Steering Committee on National Performance Monitoring of Government Trading Enterprises is presently compiling data for expected publication in August 1993. This will include some more detailed information about several port authorities.

### **2.2.7 Recent and current changes**

In recent years, particularly since the ISC's 1989 report, port authorities across Australia have been undergoing significant change. Governments have reviewed

their objectives and functions as well as their financial controls and operating arrangements. Port authorities have themselves been improving their operations, and some have been contracting to providing only core activities. Employment numbers have declined significantly (see Chapter 7). Reviews of pricing have occurred and pricing reforms introduced in many states (see Chapter 6). Even so, the progress of reform has varied greatly between states and between capital and regional ports.

### *New South Wales*

Following the NSW Maritime Review in 1988, the MSB was restructured to create four separate subsidiaries under MSB Head Office. Three subsidiaries control the ports of Newcastle, Sydney and Port Kembla and the fourth (the Waterways Authority) has responsibility for recreational boating.

Since passage of the Marine Administration Act in 1989, the landlord port model has been adopted in NSW. According to the MSB:

In adopting the landlord port model, the MSB port authority role has substantially contracted to that of owner of strategic port lands and manager of the venue where port activity occurs in NSW, whilst providing encouragement for others to compete for the operating rights in these venues. (Sub. 21, p. 5)

As a result, the MSB has itself reduced or ceased supplying non-core services including coal loading, stevedoring, operation of gangways, wharf maintenance, ship repair, major capital construction and service connections for vessels. For example, cargo handling operations have been fully privatised and the percentage of NSW cargo handled at MSB common-user facilities (compared with private or leased facilities) is less than 5 per cent.

In a further move towards the landlord model, there was a transfer of regulatory functions from the MSB to the Department of Transport in 1991-92. A review of pilotage in NSW ports has been undertaken. The MSB Sydney Ports Authority has withdrawn from operating pilotage services following the awarding of a three-year contract in September 1992 for services in Sydney Harbour and Botany Bay. The MSB awarded a contract for the supply and installation of navigation buoys to Transfield Construction Pty Ltd in November 1992.

CSOs have also been reviewed in NSW. The MSB Waterways Authority has taken responsibility for recreational boating, and manages the heritage estates on islands in Sydney Harbour. MSB Hunter Ports Authority has ceased to be responsible for the ports of Yamba, Ballina, Coffs Harbour, Trial Bay and Lord Howe Island and MSB Illawarra Ports Authority for the port of Eden. These ports are now administered by MSB Head Office or the MSB Waterways Authority. During 1991-92 there was further organisational restructuring with the transfer of some functions from MSB Head Office to subsidiary authorities.

As a result of its moving out of non-core activities, the MSB has disposed of many assets. The proceeds from asset sales have been used to reduce debt, thereby reducing the MSB's interest costs and its real charges on port users, while increasing the return to the NSW Government (see Boxes 8.2 and 8.3).

The Government has adopted the policy of promoting more commercial behaviour on the part of its trading enterprises, including the MSB. They are to be subject to:

- a target rate of return on equity calculated on a nominal before company tax basis, equal to the prevailing return on a 10-year Commonwealth bond plus an additional risk premium;
- a target rate of return on assets, calculated on a nominal before company tax basis equal to the enterprise's prevailing weighted average cost of capital;
- a target pre-tax profit distribution to the Government of at least 50 per cent of pre-tax profit;
- a credit rating based fee on outstanding debt guaranteed by the Government; and
- interest payments on outstanding debt.

### *Victoria*

Each of the three Victorian port authorities has been moving to a more commercial basis of operation.

The PMA has been moving away from providing common-user cargo handling facilities. In 1991-92, over 90 per cent of the containerised and general cargo trade was handled at leased facilities. The PMA has awarded Strang Patrick Stevedoring the rights to redevelop East Swanson Dock as a multi-modal facility. It has also sold all of its container cranes to Strang Patrick Stevedoring. Further, superstructure assets paid for by stevedores renting land under new leases will no longer automatically become port authority property at the end of the lease period if the lease is renewed.

Presently, Port of Melbourne tenants are required to use PMA civil maintenance services. As at 30 September 1993, port tenants will be free to contract with any service provider they wish to carry out civil maintenance work.

The Port of Geelong Authority has been divesting all community and recreational facilities from its control.

The new Victorian Government's policy is to privatise port services where possible, to divest all non-core activities and to contract out other activities where efficiency gains are possible.

The Government supports the placing of the port authorities in a corporate environment which will impose a financial discipline and foster a commercial culture. A consultant has been appointed to broadly identify, analyse and make recommendations about policy, operational and organisational issues and priorities confronting Victorian ports and port authorities.

Restructuring will commence with the establishment of Reorganising Bodies in accordance with the State Owned Enterprises Act 1992. Declaration of a port authority as a reorganising body is a temporary measure which gives the Government wide discretion to ensure that the affairs of the authority are rearranged.

The Act provides for:

- a clear focus on commercial objectives;
- transparent targets negotiated through the business planning process;
- a levy on borrowing for State Business Corporations reflecting the benefit of an actual or imputed Government guarantee;
- the payment of dividends as an appropriate return on the public equity vested in the enterprise;
- reimbursement for the performance of agreed non-commercial functions; and
- an income tax equivalent payment to the Consolidated Fund.

Other reforms include the appointment of new boards with a clear commercial focus, and the completion of detailed proposals to restructure and reorganise each port authority.

### *Queensland*

The Queensland Department of Transport reviewed Queensland's port system in 1990. A number of recommendations came out of that review, including that port authorities and the Harbours Corporation (in its port management role) be corporatised. Queensland port authorities came under the umbrella of the March 1992 White Paper released by the Queensland Government on policy guidelines for corporatisation in Queensland. This covered such things as:

- new legislation providing for government enterprises to be nominated under Schedule A (Statutory Authority Corporate) or Schedule B (a Company Limited by shares). Schedule B enterprises would generally be subject to Corporations Law, with Schedule A enterprises to be progressively subject to the provisions of Corporations Law and transferred to Schedule B if and when Shareholding Ministers considered it appropriate;

- wherever possible enterprises would be subject to legislation applicable in the private sector, with application of the Trade Practices Act and the extent of removal of Crown immunity to be considered on a case-by-case basis;
- the portfolio Minister and the Treasurer would be known as Shareholding Ministers in the sense that they would hold the shares of the Government and represent the interests of the public;
- enterprises would be required to prepare accounting statements to accrual accounting concepts and Australian Accounting Standards;
- the board, in consultation with the Treasury GOE unit, would make recommendations to the Shareholding Ministers on the capital structure and the intended level of dividend payments. Final determination of dividend payments would be made by Shareholding Ministers, subject to Cabinet approval;
- the government would levy a fee on the enterprise based on its credit rating where there is an implicit or explicit government guarantee on debt; and
- enterprises would be subject to all taxes, duties and charges normally applicable to private firms, with the state retaining any new taxation revenue resulting from corporatisation, with the exception of fringe benefits tax, withholding tax, excise duties and tax on superannuation income.

Legislation based on the White Paper has now been passed by the Queensland Parliament and will shortly be proclaimed. Cabinet has also announced that the PBA, the Gladstone Port Authority and the Harbours Corporation are to be corporatised by the middle of next year. The remaining port authorities are expected to be corporatised by the middle of 1995.

Following extensive consultation, a draft port pricing policy was prepared and subsequently approved by the Minister. This policy provides autonomy for port authorities to determine prices, based on the general principles of transparency, relating price to cost and recovering at least marginal costs.

A review of pilotage and conservancy is currently being undertaken, with a draft paper outlining various options for reform recently circulated to industry.

### *Western Australia*

In 1990 the State Government announced its intention to corporatise Western Australia's government trading enterprises, including the port authorities.

Following a Ministerial Review, the Fremantle Port Authority (FPA)—which can be considered a 'comprehensive' authority—has been restructured. Five divisions have been established to cater for the authority's core business, and seven

business units have been established for 'discretionary commercial operations' (see Box 7.1). Each business unit will have up to two years to prove its viability and will be required to operate competitively after that time.

In 1992 the regional ports of Albany, Bunbury, Esperance, Geraldton, Broome and Wyndham introduced Integrated Port Labour Forces (IPLFs). These are discussed in Chapter 7.

The Department of Transport and the Department of Marine and Harbours amalgamated in 1993. The department has both a policy role in relation to port authorities and an operational role in respect of the ports of Broome and Wyndham. However, this situation may change in response to a proposal to establish a Kimberley Port Authority to manage and operate both ports.

The complete ports policy of the new Western Australia Government, which was elected in February 1993 is not yet known. However during the campaign, the Shadow Minister released the Coalition Transport Policy which included the following proposals:

- an independent review of the cost effectiveness of the Department of Marine and Harbours (now the Department of Transport, Ports and Shipping Division) to identify whether any current services can be privatised;
- an independent audit and review of waterfront charges;
- a commitment to encourage greater use of regional ports for the export of goods produced in the ports' hinterlands; and
- an inquiry into the efficiency and cost of receiving grain through road and rail.

Also, the Fremantle Port Authority was identified in the Western Australian Government's 'WA Advantage' document for corporatisation. The five underlying principles of corporatisation outlined by the Government are: clear and non-conflicting objectives; managerial autonomy, authority and responsibility; performance monitoring; rewards and sanctions; and competitive neutrality.

### *South Australia*

The Department of Marine and Harbours (DMH), which is the port authority for all South Australia's public ports, was restructured as a public sector business enterprise in 1990. The Department now has:

- two business divisions for the commercial ports: Port Adelaide Division and Regional Ports Division;
- a Marine Safety Division operating as a business;

- three support divisions: Corporate Services, Technical Services and Commercial Division; and
- a Strategic Planning Unit.

This restructuring has included: eliminating the Department's dredging, supply and transport functions and rationalising workshop services, using private contractors instead; reorganising the Department's mooring function to reduce the Department's direct involvement; rationalising administration procedures; and separating and highlighting CSOs. The government has recently announced that the bulk grain loading facilities of the regional ports will be sold to private enterprise.

The DMH operates with its own financial resources and is required to achieve certain financial targets.

The South Australian Government claimed that these reforms are leading to a greater focus on meeting customer needs, behaving more commercially and improving its financial performance.

### *Tasmania*

As a first step in encouraging its GBEs to behave more commercially, the previous Tasmanian Government enacted the State Authorities Financial Management Act (SAFMA) in 1990. The Act requires GBEs to adopt economical, efficient and effective financial management, including accounting standards and financial practices along sound business lines and the payment of adequate returns to the State from the assets and operations of the enterprise.

At present only the Port of Devonport Authority is specifically included in the coverage of SAFMA. The government's intention was to apply similar criteria to those in SAFMA to other port authorities by amending the Marine Act appropriately. Negotiations between the government and the port authorities have been held but no agreement has been reached.

In the State of the State Address in April 1992, the Premier announced the government would establish independent commercially-oriented boards for a number of authorities, and make marine boards and port authorities more commercial and accountable. A broad-based working party has recently reported to the Minister for Transport and Works about future port policy in Tasmania (see Appendix C).

### *Northern Territory*

A review of the role and functions of the Darwin Port Authority carried out in the latter part of 1991 showed that, with internal restructuring, further substantial gains could be made in terms of the efficiency and cost competitiveness of port

operations. The Authority has already reduced staffing by 25 per cent, with further savings expected. The review has also led to closer links between the Authority and the Department of Transport and Works to achieve management and administration economies, and the creation of the Darwin Port Efficiency Task Force which meets regularly to resolve issues affecting operational efficiencies at the port.

The Authority participates in a joint venture stevedoring company, Darwin Port Services Pty Ltd, which is the sole employer of waterside workers in Darwin (see Chapter 7).

The NT Government has begun a four-year program to establish new port facilities and services at East Arm in the Darwin harbour close to the Darwin Trade Development Zone. The new port has been designed to incorporate the proposed Darwin to Alice Springs rail link.

### **2.3 The importance of port authorities**

The terms of reference ask the Commission to have regard to the ‘importance of port authority services and activities to the international competitiveness of Australian industry’. An important aspect of this is the impact of port authority charges on the cost of exporting and importing goods.

Port authority revenues account for about 1 per cent of the total value of Australia’s outward and inward overseas cargo (see Appendix Table B7). There are some differences between the states, but the significance of this is obscured by the different natures of cargo passing through various ports, and the differences in services and activities performed by the various port authorities.

When related to total port costs, the importance of port authorities increases. Even so, their charges typically make up only a small part of the total. To illustrate this, Table 2.6 shows the break up in charges for a ‘typical vessel’ for the Port of Adelaide in July 1992.

**Table 2.6: Charges levied on a 'typical vessel'<sup>a</sup> using the Port of Adelaide at July 1992**

<i>Category</i>	<i>\$ Charge</i>	<i>\$ per TEU</i>	<i>Percentage of total</i>
Commonwealth	7 700	19.25	4.2
State navigation fees (DMH)	9 100	22.75	5.0
Harbour services (DMH)	6 000	15.00	3.3
Cargo services (DMH)	31 600	79.00	17.4
Pilotage (DMH)	2 200	5.50	1.2
Towage (private)	16 400	41.00	9.0
Stevedoring (private)	103 700	259.25	57.0
Agency fees etc. (private)	5 100	12.75	2.8
<b>Total</b>	<b>181 800</b>	<b>454.50</b>	<b>100.0</b>

<sup>a</sup> The parameters of the vessel are: GRT 30 000, NRT 12 000, LOA (ship's length overall) 220m, exchange: imports 160 TEUs, exports 240 TEUs, time in port 24 hours.

Source: South Australian Government, Sub. 32, Appendix 14.

In the Adelaide example, the charges accruing to the DMH—state navigation fees, harbour services, cargo services, and pilotage—account for 27 per cent of the total. But some of that percentage accrues to the Department in its role as the state maritime authority. Only the harbour services, cargo services and pilotage categories are 'true' port authority charges: these total \$99.50 and make up 22 per cent of the overall total. (In addition, some of the stevedoring charge would ultimately accrue to the DMH as revenue for the lease of the container terminal.) The other charges accrue to private operators, to the Commonwealth or to the State.

Because different port authorities provide a different range of services and activities—not all provide pilotage, and some provide stevedoring—and because different ports have different physical characteristics (for example some have long channels requiring extensive pilotage and towage), the proportion of port charges accounted for by port authorities differs.

Port charges are relatively small compared with total freight costs. In the Adelaide example, the DMH estimated that the average total transport chain cost at May 1992 was about \$3000 per TEU for the Japan trade. This makes port authority charges in Adelaide about 3 to 4 per cent of total transport chain costs.

From the shipper's point of view, what matters is the relationship of port authority charges to the value of the goods being shipped. In the Adelaide containerised cargo example, port authority charges account for less than 1 per cent (based on an average container contents value of \$45 000 estimated by the DMH).

The National Bulk Commodities Group's 1992 survey of port charges levied in 25 Australian ports shows that port authority charges accounted for between 0.56 per cent and 2.58 per cent of the value of bulk commodities (from \$0.34 to \$3.69 per tonne)—see Table 2.7. The detailed information supplied by the NBCG for bulk commodities is summarised in Appendix Table B8.

**Table 2.8: Australian port charges for a Shell tanker<sup>a</sup>**

<i>Port</i>	<i>Total charge (\$)</i>	<i>Charge per tonne (\$)</i>
Broome	221 250	7.38
Wyndham	221 250	7.38
Darwin	208 458	6.95
Esperance	190 725	6.36
Adelaide	152 950	5.10
Port Lincoln	152 950	5.10
Fremantle	136 080	4.54
Dampier	128 658	4.29 <sup>b</sup>
Townsville	115 048	3.83
Geraldton	114 318	3.81
Melbourne	94 395	3.15
Gladstone	94 032	3.13
Cairns	93 508	3.12
Albany	81 614	2.72
Brisbane	80 250	2.68
Mackay	61 594	2.05
Bunbury	51 083	1.70
Geelong	35 737	1.19
Sydney	31 664	1.06

<sup>a</sup> Charges are based on the theoretical port visits of 'Conus' a 26 324 GRT tanker carrying 30 000 MT and spending 48 hours in port. The charges include tonnage, berth hire and wharfage. <sup>b</sup> \$1.53 per tonne for a recent visit by 'Conus' according to the Dampier Port Authority (Sub. DR132).

Source: Shell Company of Australia, Sub. 35, p. 7.

**Table 2.7: Significance of port charges**

<i>Commodity</i>	<i>Port authority charges as a proportion of commodity value (%)</i>
Sugar	0.56
Coal	2.58
Phosphate	2.44
Wheat	1.03
Iron ore	1.67

Values assumed: raw sugar - \$300.00  
 coals - \$57.49 phosphate - \$115.00  
 wheat - \$180.00 iron ore (lump) - \$25.00.

Source: National Bulk Commodities Group Port Cost Survey 1992 Update.

A higher level of charges is indicated by information supplied by the Shell Company of Australia Ltd (Table 2.8). Differences between Australian port charges are also illustrated in Table 2.8.

Because of the present role of port authorities in planning ports and in facilitating the movement of cargo through them, their significance extends beyond that indicated by the above comparisons. For example, port authorities can directly influence the performance of port users through criteria contained in port leases (see Chapter 5).

The key point is that Australia's international competitiveness can only be improved if efficiency is optimised at all stages of the transport chain. As the Department of Transport and Communication said:

Ports and port authorities play a pivotal role in Australia's international trade. Port authorities are economically significant in their own right, but more importantly influence the efficiency of Australia's export and import dependent industries. (Sub. 67, p. 5)

## 2.4 How Australia's ports compare

The fees and charges levied by Australian port authorities vary greatly. Appendix Table B8 illustrates this for bulk commodities. But 'cheaper' ports are not necessarily the more efficient.

There are several reasons for this. The range of services and activities provided varies, the physical characteristics of the port have an important influence on costs, the nature and extent of trade varies, port authorities aim to achieve different objectives, their governments set them different targets, their competitive positions vary, and so on. As noted in Section 2.2.6, in the context of port authority performance, care must be taken in making comparisons between them.

As well as noting the differences in charges between Australian ports, many participants were critical of the level of charges in Australian ports compared with ports in other countries. As shown by Tables 2.9–2.13, for each type of cargo Australia's ports are generally, although not always, more expensive than foreign ports. The reasons are broadly the same as those behind the differences between Australian ports. However, it is perhaps even more problematical to compare Australian port authorities with their foreign counterparts than it is to compare

**Table 2.9: Comparison of Australian and international port authority charges for a bulk ship at June 1992**

<i>Port</i>	<i>Charge (\$A)</i>	<i>Cost per tonne of wheat (\$A)</i>
Teesport	67 509	2.41
<b>Esperance</b>	<b>59 580</b>	<b>2.13</b>
<b>Brisbane</b>	<b>57 415</b>	<b>2.10</b>
<b>Geraldton</b>	<b>48 720</b>	<b>1.77</b>
<b>Port Lincoln</b>	<b>48 030</b>	<b>1.72</b>
<b>Albany</b>	<b>47 247</b>	<b>1.68</b>
Hamburg	32 385	1.16
<b>Gladstone</b>	<b>32 370</b>	<b>1.14</b>
<b>Mackay</b>	<b>30 580</b>	<b>1.09</b>
Gijón	30 455	1.09
Rotterdam	21 393	0.76
Dunkirk	21 027	0.75
Antwerp	19 903	0.71
Livorno	2 109	0.08

The vessel is 30 000 DWT, 11 500 NRT and 16 500 GRT. The charges are for loading 27–28 000 tonnes of wheat.

Exchange rates as at 26/10/92: \$A1 = DM1.09, DFL1.22, BF22.56, FF3.70, SP77.72, STG0.44, Lire 958.

Source: National Bulk Commodities Group, Sub. 95.

Australian ports with each other. In addition, overseas ports are more often subsidised or assisted by government than in Australia. (Appendix F describes ports and port authorities in some other countries.)

**Table 2.10: Comparison of Australian and international port authority charges for a container ship**

<i>Port</i>	<i>Towage costs (\$US)</i>	<i>Port costs (\$US)</i>
<b>Melbourne</b>	<b>10 000</b>	<b>64 000</b>
Bremerhaven	12 000	40 000
Hamburg	12 000	40 000
<b>Sydney</b>	<b>11 000</b>	<b>36 000</b>
<b>Adelaide</b>	<b>14 000</b>	<b>32 000</b>
Tilbury	9 500	32 000
Rotterdam	3 000	30 000
Auckland	7 600	20 000
<b>Fremantle</b>	<b>9 000</b>	<b>19 000</b>
Flushing	2 500	17 500
<b>Burnie</b>	<b>12 000</b>	<b>17 000</b>
Zeebrugge	5 500	17 000
Wellington	6 300	14 000

Towage costs are in addition to port costs.

All costs were at April 1992, and are for a container ship 39 000+ DWT.

Source: Australian Chamber of Shipping, Sub. 43, Attachment C.

Further, comparisons can be deceptive because of the differences in port pricing structures. For example, Table 2.10 appears to include the full navigation charge for Melbourne, but this is levied on a vessel only once in 6 months and could therefore be distributed over a number of visits. The point at which a charge is made also affects comparisons. Berth hire charges are recovered from the ship owner at some ports, while at others they are recovered from the terminal operator via the lease charge.

An illustration of the difficulty in comparing Australian and overseas ports is given by the recent attempt by the PMA to identify 'comparable' ports to Melbourne. The PMA completed a comparative port study in December 1992. Its aim was to identify similar ports to Melbourne so that productivity and performance measures could be compared. The PMA used four selection criteria: total port container trade; annual trade volume; number of commercial ship visits; and nature of the

port.

Although it identified several ports similar to Melbourne, in each case the PMA considered that significant differences existed in the port's nature, operations and infrastructure. The study concluded that 'there is no port comparable to Melbourne' (sub. 94, p. 3).

**Table 2.11: Port charges for a Shell tanker at November 1992**

<i>Port</i>	<i>No. of tugs</i>	<i>No. of hours</i>	<i>Port authority (\$)</i>	<i>Pilotage (\$)</i>	<i>Towage (\$)</i>	<i>Other charges (\$)</i>	<i>Govt. charges (\$)</i>	<i>Total shipowner charges (\$A)</i>
<b>Geelong</b>	<b>4</b>	<b>30</b>	<b>49 600</b>	<b>9 000</b>	<b>32 500</b>	<b>9 800</b>	<b>56 600</b>	<b>157 500</b>
<b>Pt. Bonython</b>	<b>4</b>	<b>30</b>	<b>13 000</b>	<b>3 700</b>	<b>46 000</b>	<b>6 600</b>	<b>38 300</b>	<b>107 600</b>
<b>Sydney</b>	<b>4</b>	<b>30</b>	<b>50 100</b>	<b>5 600</b>	<b>24 700</b>	<b>3 000</b>	<b>16 200</b>	<b>99 600</b>
Rābigh	4	30	26 000	700	12 000	-	-	38 700
Singapore	4	30	25 000	3 000	10 000	-	-	38 000
Dumai	4	30	18 500	2 000	5 500	-	-	26 000

Charges are calculated for the 'Nivosa', GRT 72 609, NRT 32 974 and 80 000 Mt.

Source: Shell Company of Australia, Sub. 88.

**Table 2.12: International comparison of port charges for pure car carriers<sup>a</sup>**

(\$)	<i>Melbourne</i>	<i>Brisbane</i>	<i>Nagoya</i>	<i>Zeebrugge</i>	<i>Wellington</i>
Pilotage	4 000	3 490	2 326	6 481	1 660
Towage	6 725	7 200	1 348	2 122	2 078
Mooring	4 545	1 420	684	896	830
Berth	530	2 476	-	322	581
Navigation	5 719	-	3 642	3 323	775
Wharfage	4 416	8 533 <sup>b</sup>	1 120	-	6 900
Totals	25 935	23 119	9 120	13 144	12 824

<sup>a</sup> Vessel carrying 230 CBU @ 10 cubic metres; 5 hours alongside. <sup>b</sup> Includes harbour dues.

Source: Federal Chamber of Automotive Industries, Sub. 27, p. 2.

In May 1993 the Bureau of Industry Economics (BIE) released a report on international performance indicators for the waterfront, including some information about government and port authority charges. The BIE reported that charges for representative vessels and cargoes in Australian ports can be much higher than in ports in other countries (see Table 2.13). A possible reason for these differences may be scale: according to the BIE, traffic values and revenue bases in many Australian ports are comparatively small. The BIE continued:

Further explanation may lie in the different roles assigned to port authorities in Australia and overseas. In Australia these authorities are generally required to be self funding and remit dividends to the relevant State government. There is evidence of cross-subsidisation within and between ports, and port authorities are sometimes tasked with undertaking community service obligations. The policy and regulatory environment varies considerably between overseas ports — some are operated along commercial lines while others are heavily subsidised by way of cross-subsidies between users and direct subsidies from government. (BIE 1993, p. xiii)

**Table 2.13: BIE comparisons of Australian and overseas government and port authority charges for representative vessels and cargoes<sup>a</sup>**

<i>Cargoes, ports</i>	<i>Govt and port authority charges</i>
<b>Coal (\$ per tonne)</b>	
Lowest overseas	0.16
Lowest Australian	1.94
Highest Australian	3.30
<b>Wheat (\$ per tonne)</b>	
Lowest overseas	0.16
Lowest Australian	1.11
Highest Australian	2.63
<b>Crude oil (\$ per metric tonne)</b>	
Lowest overseas	0.30
Lowest Australian	0.49
Highest Australian	0.73
<b>Containers (\$ per TEU)</b>	
Lowest overseas	41.14
Lowest Australian	67.72
Highest Australian	141.56
<b>Cars (\$ per car)</b>	
Lowest overseas	10.48
Lowest Australian	60.97
Highest Australian	73.92

<sup>a</sup> The lowest/highest charging port referred to is on the basis of total non-terminal charges, thus the figures for government and port authority charges may not be the lowest/highest observed.

Source: BIE 1993.

Even so, the BIE considered that:

there seems to be much more scope for improvement ... in the area of improving Australia's relative position in relation to government and port authority charges. (BIE 1993, p. 73)

## 2.5 Summary

Port authority charges generally make up a small proportion of the cost of moving cargo through ports. However, because of their facilitative and regulatory roles, the port authorities play a more important part in influencing Australia's international competitiveness than the figures suggest.

It is difficult to assess a port authority's performance by comparing it with that of other port authorities (in Australia or in other countries) because authorities serve a wide range of objectives, perform a wide range of services and activities, and are subject to a wide range of government controls and constraints.

Undoubtedly, however, the operations of port authorities can be improved. It is vital to do so. The following chapters go on to discuss how.

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### **3 PUBLIC PORT AUTHORITIES: THEIR RATIONALE AND INSTITUTIONAL SETTINGS**

Why do so many countries establish public port authorities? What should such authorities do? Should they be restricted to the landlord model—that is, supply core services and activities only? Should these include regulatory functions? Should port authorities be involved in port-related activities only? This chapter explains the rationale for the provision of port services and activities by public authorities, and begins to examine such questions. Chapters 4 and 5 discuss in more detail the role for governments and port authorities in promoting efficiency by encouraging an appropriate degree of competition between and within ports.

Irrespective of the services and activities they provide, and of whether their role should extend to enhancing the efficiency of ports and port operators, port authorities themselves need to operate efficiently. So, the concluding parts of this chapter examine the institutional settings which are most likely to maximise public port authority performance.

#### **3.1 The range of port authority services and activities**

Although port authorities undertake a wide range of services and activities (see Boxes 2.4 and 2.5), they can be broadly classified into one of the three models—landlord, tool and comprehensive (see Section 2.2.3).

A good overseas example of a landlord port is Rotterdam, the world's largest port in terms of international cargo throughput. It provides safety and navigation services, dredging and a safe berth for vessels as well as leasing land to private operators. The Port of Rotterdam Management plans facilities, and cooperates with private operators to develop new projects. For port promotion, there is a separate body—the Rotterdam Port Promotion Council—which is funded by business and the local municipality.

In contrast, the Port of Singapore Authority, the world's second largest port, follows the comprehensive model. The authority itself provides and operates cargo handling equipment, such as container cranes. It is also heavily involved in port development and promotion.

Examples of foreign tool port authorities include Antwerp (the second largest European port), and Seattle (a relatively small port in the United States). The

authorities in these ports own, but do not themselves operate, container handling equipment.

In several countries privately owned ports undertake many of the activities commonly considered to be core activities of public port authorities. For example, privatisation of ports has been progressing in New Zealand and the United Kingdom. These tend to follow the comprehensive model although some core activities may still be provided by public authorities in some ports.

In Australia, also, ports follow the various models (see Table 3.1). Port authorities in New South Wales and Victoria generally follow the landlord model. Several ports in other states are classified as comprehensive because port authority employees are used to stevedore or handle cargo. The port authority at Gladstone in Queensland handles almost 60 per cent of cargo passing through it. Some port authorities provide common-user cargo handling equipment because the volume of cargo throughput makes it uneconomic for individual port operators to do so. These authorities fall into either the tool or comprehensive categories.

**Table 3.1: Examples of port authority models in Australia**

<i>Landlord<sup>a</sup></i>	<i>Tool</i>	<i>Comprehensive</i>
Sydney	Adelaide	Gladstone
Melbourne	Devonport	Hobart
Brisbane	Launceston	Burnie
Newcastle	Townsville	Fremantle
Port Kembla	Cairns	Darwin
Port Hedland	SA regional ports	Some WA regional ports <sup>b</sup>
Portland		
Geelong		

<sup>a</sup> Includes ports with some common-user berths. <sup>b</sup> In these, integrated port labour forces under port authority employment handle cargo.

There are about 15 examples of fully private ports in Australia. They follow the comprehensive model.

### **3.1.1 Participants' views**

In recent years, there has been some contraction of Australian public port authority activity towards a landlord model. Even so, this model is far from being unanimously accepted by Australian port authorities and their governments. And there is some debate about what activities a landlord port authority should undertake.

The MSB indicated that:

In adopting the landlord port model, [the MSB's] role has substantially contracted to that of owner of strategic port lands and manager of the venue where port activity occurs in NSW, while providing encouragement for others to compete for the operating rights in these venues. (Sub. 21, p. 5)

The PMA is moving progressively out of the provision of common-user facilities. The new Victorian Government favours the contraction of port authority activity to basic core activities. The Port of Brisbane Authority stated that it was 'a port manager and landlord rather than a port operator'.

Other port authorities considered their role extended beyond a landlord model. The South Australian Government commented that it had a:

clear economic development requirement [which] requires that the Department actively seek to promote trade. This goes well beyond the passive landlord role. (Sub. 32, p. 16)

The Gladstone Port Authority (GPA) is in favour of maintaining its comprehensive approach to port management:

GPA does not subscribe to the theory that port authorities should be merely landlords. Its aggressive approach to operating on the wharves has led to a greater understanding of customers' requirements, and to the provision of modern technology in handling facilities and operating practices. (Sub. 6, p. 1)

The Fremantle Port Authority's philosophy was explained this way:

Fremantle is not a landlord port. The government made a decision on that which said that Fremantle would have two roles; one is a strategic port manager which is the landlord model plus the trade facilitator model, but the second proviso that the government made was that Fremantle would continue to provide services where those services can be commercially competitive. (Transcript, pp. 283–4)

The Port of Launceston Authority stated:

The question as to whom should be the provider of port services and activities has no specific answer other than it is the prerogative and role of the port authority to determine how the operations within a port are carried out within the framework of their responsibilities, as laid down by their respective state. (Sub. 24, p. 82)

In contrast to this range of views from port authorities, most users of ports advocated a narrow role for public port authorities, although none ruled out a role for public port authorities altogether. Port Waratah Coal Services indicated that it believed:

the role of a port authority should be to facilitate trade by developing and providing port infrastructure which normally cannot be economically developed and provided by a single port user, and to oversee the safe movement of vessels into and out of the port. PWCS does not believe that port authorities should be involved in cargo handling or like activities which can and should be undertaken by private enterprise. (Sub. 47, p. 1)

And CRA Ltd considered that:

the role of port authorities should be restricted to channel construction and maintenance, the provision of port nav aids, port traffic control, the coordination and provision of emergency services and as the landlord of leased berths and serviced (but undeveloped) land ... CRA sees no role for port authorities in the licensing of pilots, tugs or other ship service providers for exclusive market access, land site infrastructure beyond the wharf face, ownership of cranes and other cargo handling equipment, monitoring and tracking of movement of cargoes. (Sub. 49, p. 22)

The NSW Coal Association described the preferred role for a port authority as follows:

While port authorities must naturally be involved in future planning of port facilities, their role should be that of a facilitator of private investment and of overall coordinator of development, in the best interests of the port and its community. (Sub. 45, p. 4)

Caltex Australia Ltd supported a regulatory role, as well as a need to facilitate investment:

The main function of a port authority is its regulatory role (establish and enforce conditions for port use, long term planning etc.). We believe that port authorities have a responsibility to initiate infrastructure investments (berths, jetties etc.) subject to demonstrated needs and/or commercial viability. (Sub. 19, p. 4)

In contrast to most users which supported a narrow role for the port authority, the Australian Wool Corporation considered that it could in some cases extend beyond the landlord model:

The role of port authorities is central to the investigation. There is diversity of responsibilities evident in overseas port management bodies, ranging from those that are privately operated and focused only on handling a specific cargo or cargo type such as containers, to the other extreme where public bodies are developing large expanses of land for leasing to industry that has a requirement for, or would benefit from, waterfront location ... There is no reason why Australia's ports cannot also reflect diversity in the scope of their operation and the call for landlord only status is not necessarily appropriate for all ports. (Sub. 3, p. 2)

The Australian National Maritime Association considered there could be a case for port authorities providing common-user facilities:

There could be occasions ... when several users might want a common-user facility to be developed by the port authority for the basic reason that no single user is large enough to justify the investment single-handed. Such occasions should be few and should not be allowed to develop into a situation where the authority makes unnecessarily large investments which adds costs to users. (Sub. 55, p. 2)

According to the Burnie Port Authority, this could be the case in Tasmania:

no stevedore would be prepared to provide container handling cranes in Tasmanian ports. If they were forced to do so, costs would rise astronomically. (Sub. DR120, p. 1)

### 3.1.2 Rationale for public port authorities

Together with the main railways, roads and airports, sea ports are integral parts of the nation's transport system. Their location has had a major influence on the development of Australia's capital infrastructure. Consequently, their planning and development have implications which usually extend beyond the interest of any single entity or group of firms. Just as there is a broad public interest and involvement in planning and developing other parts of the transport infrastructure, there is a public interest in the development and maintenance of the major ports and their facilities.

This public interest in ports is the overriding rationale for the establishment of public port authorities. The specific economic reasons commonly advanced for the provision of various services and activities through public port authorities relate to the provision of public goods; externalities; natural monopolies; promotion of efficiency; pursuit of social objectives; and a belief that public bodies should not be prevented from providing commercial services and activities.

A service or activity is said to be a *public good* if its use or enjoyment by one person does not reduce the value of its use or enjoyment by others. The provision of beacons, buoys and fixed or floating navigation aids in ports could be public goods: their use by one ship does not diminish their value to others. Similarly, breakwaters and dredged channels may also be public goods.

Such goods are unlikely to be provided sufficiently, satisfactorily or at all by competitive private industry. If a particular vessel owner were to install navigation beacons or lights, for example, then other vessels could *free ride*—that is, make use of those beacons without payment. Similarly, without government intervention, a private operator would not be able to charge vessels for the use of a channel. Such public goods are often provided through a public port authority. However, there is no in-principle reason why the providers of such public goods, be they governments or public port authorities, should not charge an appropriate fee for their use—see Chapter 6.

*Externalities* occur where the actions of one person have consequences, generally adverse, for others which are not reflected in prices. For example, private interests are unlikely to provide maritime safety or environmental protection to the levels considered adequate by society, because private operators would not bear the full costs of damage caused by failure of safety or by environmental pollution. Port authorities often regulate safety and environmental aspects of port operation.

Some port activities are *natural monopolies* in that they can be supplied by one operator at lower cost than by any combination of two or more firms. Public

goods may be natural monopolies. But other services and activities such as towage, container handling, some aspects of planning, and the transport networks within ports may also be natural monopolies in some ports. Without some form of government intervention, providers of these services may be able to charge inefficiently high prices. Control of price is often achieved through port authorities. In some cases, they may provide the relevant services themselves, in others they may set special conditions in lease or licence arrangements.

Port authorities may also endeavour to promote port efficiency in other ways. In smaller ports, for example, workforces may be integrated or shared so that workers can be more fully employed. Port authority personnel might be involved in non-port activity such as airport management to utilise their time and expertise more effectively. And port assets, such as spare land and buildings, might be leased to non-port operators.

Governments commonly use port authorities to implement social objectives. As noted in Section 2.2.4, many port authorities are required to fulfil some CSOs for government. Further, many port authorities have been given the task of facilitating regional or state development; such objectives are often at least partly social in nature.

Finally, some port authorities undertake services and activities on a commercial basis in competition with private operators, because they believe they can do it effectively and profitably.

These reasons for establishing port authorities raise a number of issues:

- even if government intervention is necessary, are public port authorities the best means for that involvement?
- could the private sector provide required services more efficiently and, if so, what if any property rights or other regulation would be needed? and
- are there functions in which port authorities should not be involved?

The following discussion concentrates on the general question of whether it is best to limit the role of a public port authority to the landlord model—in particular, whether port authorities should be excluded from providing services and activities purely as commercial ventures. It largely leaves aside the role for port authorities in regulating the nature and amount of competition between and within ports; these latter issues are addressed in Chapters 4 and 5. It also leaves an examination of the question of privatisation until Chapter 8.

### **3.1.3 The Commission's views**

Some form of government intervention is clearly justified in regard to many of the services and activities provided by public port authorities. Some necessary

services and activities might otherwise not be provided sufficiently or at all, and monopoly pricing may occur.

However, port authorities may not necessarily be the best vehicle for ensuring the provision of all required core services and activities. Planning and regulatory services could be provided departmentally. State-wide or national institutions could look after some aspects of maritime safety, for example. ‘Market failures’ due to public good, natural monopoly or externality characteristics of services and activities could be addressed through the allocation of property rights to private operators, and appropriate licensing or franchising arrangements. However, in the absence of full privatisation of a port (see Section 8.5), a nucleus of core activities specific to the port is likely to remain, for which a separate port authority would most appropriately take responsibility.

But giving responsibility to port authorities for core services and activities does not necessarily mean that they need to provide them themselves. It could be more cost-effective for the authorities to contract out their provision.

Non-core activities are those which private operators would normally undertake without any government involvement. Port authorities undertake them in more than one circumstance: first, to provide competition to control prices of a private natural monopoly operator (discussed in Chapter 5); second, to improve overall efficiency in smaller ports (Chapter 7); and third, as commercial activities in their own right.

Private enterprise should, in principle, be able to supply non-core services and activities more efficiently than public port authorities. Even if all the corporatisation principles discussed below in Section 3.2 were implemented for the public authorities, they would still not have the same financial market disciplines for efficient performance (such as listing of shares, exposure to takeover, and threat of insolvency) as private enterprise.

In summary, the Commission considers that limiting port authorities to the provision of core services and activities has much to commend it. A number of Australian port authorities follow, or are moving towards, this landlord model. In certain ports, however—particularly regional ports—it may be efficient for some non-core activities to be undertaken by port authorities: this point is discussed further below and in later chapters.

### **3.2 Institutional settings**

Whatever services and activities a public port authority provides, the institutional framework in which it is placed, and the requirements imposed on it by government, can have an important influence on whether it operates efficiently.

In agreeing with this view, the AAPMA stated that:

gains in productivity ... are ... possible if the wide range of operational and other controls and constraints imposed on ports and their activities by governments were to be lifted. These constraints are well beyond any governmental constraints on private sector organisations and do not allow ports to operate in a truly cost effective, commercial manner ... (Sub. DR135, p. 2)

Examples of these controls and constraints, which vary from state to state, given by the AAPMA are listed in Box 3.1.

**Box 3.1: Examples of state government controls and constraints on port authorities**

- Imposition of all/some public sector legislative constraints, eg freedom of information, finance and audit acts, etc.
- Compliance with governmental industrial relations policies and procedures, rather than having control over port specific needs.
- Role of ministers (government shareholders) versus role of boards of directors.
- Some controls over charges set by port authorities for services provided.
- Dividend setting procedure.
- Ministerial direction/government budgetary impact considerations overriding commercial policy decisions.
- Requirement to purchase government corporation/authority services and products at government rates rather than being able to freely negotiate supply terms with a range of suppliers.
- Provisions of community service obligations without compensation from the government for the costs incurred.
- Constraints on borrowing of funds, working capital retention, etc.
- Ministerial/government appointment of senior executives and approval required for employment and travel.

Source: AAPMA, Sub. DR135, p. 2.

In several reports, the Commission has developed a set of principles which it considers should apply to government business enterprises (see Box 3.2). The Commission believes that efficiency would be enhanced if, as far as possible consistent with their functions, port authorities were exposed (through these principles) to the same incentives, rules and regulations as private enterprise corporations.

**Box 3.2: Principles for government business enterprises**

While there may be sound reasons to tailor corporatisation to individual circumstances, government business enterprises would have better incentives to operate efficiently if owner governments:

- provide clear and non-conflicting objectives that relate to commercial performance only;
- identify, cost and directly fund any community services from the budget so as to make subsidies transparent;
- vest management in a commercial board accountable to Parliament through a minister;
- introduce performance monitoring based on financial and non-financial targets and establish a system of rewards and penalties for managers related to performance;
- separate out regulatory functions—an enterprise should not be both umpire and player;
- make authorities liable for all taxes and government charges;
- require dividends at levels equivalent to similar private companies;
- remove constraints such as government employment policies and advantages such as those associated with government borrowing guarantees;
- require adoption of uniform and commercial accounting practices;
- make corporatised authorities subject to the Corporations law;
- introduce effective natural monopoly regulation and remove advantages such as exemptions from the Trade Practices Act that do not apply to private companies; and
- remove regulatory and legislative barriers to entry.

Source: IC 1991, pp. 11–12.

As noted in Chapter 2, many states already implement some of these principles for their port authorities, or plan to do so. While the MSB provides the best example of the implementation of commercialisation/corporatisation principles in port authorities, it has some considerable way to go. The MSB describes itself at this stage as ‘commercialised’ rather than ‘corporatised’. It indicated that in New South Wales corporatisation refers to the establishment of an enterprise as a state-owned corporation under the State Owned Corporations Act, the ‘next logical step’ for the MSB (sub. DR145, p. 2). But even that Act does not fully encompass the Commission’s principles.

The rest of this section considers several of these principles in more detail.

**3.2.1 Objectives**

Port authorities need to be given objectives by governments which are clear, consistent, and capable of practical implementation. Without them, their performance will be difficult to assess and monitor.

If objectives conflict, port authority management will need to assess which objectives to pursue with higher priority than others. Further, the managers could implement policies which contradict their owner-governments’ wishes. Governments and their port authorities need a mutual understanding of the objectives to be pursued.

Although ports obviously exist to serve trade, there are differing views on the extent to which a port authority should be involved in actively promoting trade through its port. As noted in Box 2.3, the PBA has an objective of ‘encouraging trade growth’. Further, in its response to the Draft Report, the PBA inferred that its mission was ‘trade maximisation’ (sub. DR133, p. 1). The WA Port Authorities considered that ‘objectives given to port authorities should reflect a careful balance between their two potentially conflicting roles as arms of trade or as fiscal devices’ (sub. DR132, p. 6).

The Commission’s view is that a prime objective of port authorities is to ensure the efficient provision of core services and activities. As noted in Section 3.1.3, in the absence of government intervention such services might not be provided sufficiently, or at all. Further, there is merit in a port authority endeavouring to minimise costs to users by encouraging usage of its facilities. In these ways, port authorities facilitate trade. However, an objective of being an ‘arm of trade’ or of ‘maximising trade’ (rather than optimising it) can involve economic costs, if this means that the principles outlined in the rest of Chapter 3 and in Chapters 5 and 6 are not followed.

To the extent that port authorities have a regulatory role (see Chapters 4 and 5), it may not be possible to relate objectives to commercial performance. However, there are strong advantages in having commercial objectives for other functions.

### **3.2.2 Community services**

State governments pursue social objectives through their ownership of public ports by requiring port authorities to satisfy various CSOs. In some cases, port authorities may be required to pursue regional objectives as CSOs; regional objectives are discussed further in Chapters 4 and 6.

As noted in Chapter 2, some port authorities are required to fund CSOs from moneys they receive from commercial users of their other services and activities. In the case of the Victorian port authorities particularly, CSOs have been quite significant.

Many participants considered that CSOs should not be subsidised by commercial port users. For example, the Australian Shipping User Group said:

It is accepted that a state government may direct a port authority to pursue activities which a port authority would not perform if it were governed by strictly commercial considerations. Such decisions are the right of government but these functions, commonly referred to as community services obligations (CSOs), should be funded by direct government subventions or by the beneficiaries of the services provided. It is not acceptable for the commercial users of a port to be required to fund non-commercial activities undertaken by a port authority. (Sub. 50, p. 6)

The Port of Devonport Authority commented:

There is no doubt that the Authority in pursuing a ‘commercial’ objective should not be required to provide these community service obligations in the form of a subsidy from its commercial users. (Sub. 13, p. 16)

Another participant, CRA Ltd, said it:

... believes CSOs imposed by governments on port authorities should be met directly by governments through direct subsidies. Such obligations should be transparent and fully accountable by governments. (Sub. 49, p. 12)

And the AAPMA drew attention to services provided by port authorities to naval vessels:

exemption from charges for naval vessels should be considered as a community service obligation, imposed on ports by the Commonwealth Government. (Sub. DR148, p. 1)

The Commission considers that, as far as possible, port authorities should be given commercial objectives. Requiring them to fund CSOs risks diverting resources from their best use, may frustrate efficient pricing (see Chapter 6), and obscure port authorities’ true performance.

Port authorities should not be required to fund CSOs imposed on them by governments, State or Commonwealth. The social objectives behind CSOs should be clearly identified, and the cost of meeting CSOs explicitly funded by governments themselves.

Further, governments need to consider whether their CSOs are soundly based. A judgment needs to be made, on a case-by-case basis, whether the benefits of the social objective pursued exceed the economic costs. Direct government funding of CSOs provides an appropriate discipline on governments for this to be done.

### **Recommendation**

Governments should clearly specify and make public the community service obligations they expect port authorities to satisfy. Their costs should be funded by direct budgetary payment.

### **3.2.3 Accountability**

If public port authorities are to be required to perform efficiently, consideration has to be given to the most appropriate type of board, to selection of board members, and to how boards relate to government.

Apart from the South Australian Government, most participants explicitly or implicitly accepted the statutory nature of public port authorities commonly adopted in Australia. The South Australian Government considered that necessary reform could be achieved through commercialisation within the existing departmental arrangements. It commented that the DMH had restructured as a government business enterprise with commercial objectives, that there was a direct line of accountability from the chief executive officer to the Minister rather than through a board, and that there was no conflict between the department's regulatory and port authority roles.

The Commission considers that, in principle, efficiency is enhanced if government and ministerial oversight is removed as far as possible from the day-to-day operations of a port authority. This supports a statutory, rather than departmental, form of authority. Governments should remain at arm's length from the activities of port authorities so the performance of the board and management can be clearly seen and accounted for. In turn, the board should be accountable to the parliament through the relevant minister or ministers and the authority subject to audit.

State governments, as owners, could still set performance goals and broad limits to investment, and could restrict the range of activities undertaken. But if governments want to issue directions, they should be in writing and tabled in parliament. A board should not be required or expected to seek ministerial approval for activities within its prescribed responsibilities.

When discussing the composition of boards, participants concentrated on the issue of representation. Many large individual users of ports such as Caltex Australia Ltd, the Australian Wheat Board, and Westralian Sands Ltd, were in favour of user representation. For instance, Westralian Sands said that:

The south west mining industry contributed 99% of the tonnage exported through Bunbury. It has tried unsuccessfully on a number of occasions to gain representation ...  
(Sub. 36, p. 1)

And Caltex considered:

Most port authority boards currently do not have adequate port user representation. Therefore, port problems/issues are frequently not well understood at the highest level of decision making. (Sub. 19, p. 5)

The Marine Board of Hobart, which has elected users in its membership, commented that:

Users are uniquely placed to make their point of view well known to us, and to have an input into our charging structure and administrative costs. (Sub. 76, p. 5)

In contrast to these views, the Australian Shipping User Group considered:

Board representation for port authorities should be determined on merit given the commercial focus that the port authority must achieve. It is most inappropriate to have board members who represent commercial interests with activities in the port because of conflicts of interests. In particular, directors, management or employees of shipping lines and stevedoring companies should not be eligible for board membership in view of this obvious conflict with their commercial interests. (Sub. 50, p. 13)

CRA Ltd commented that:

It is important that members of port boards be selected on expertise and knowledge and not on affiliation. Too many Ministers throughout Australia are forced by legislation to draw members from designated areas. (Sub. 49, p. 21)

Finally, some participants supported elected board members. The Port of Devonport Authority stated that:

elected representation to Boards remains the most democratic and equitable way to decide on membership. The PDA opposes the concept of appointed representatives, due to the risks of political domination by any party, the risk of commercial self-interest from Board members and a lack of familiarity with the PDA's core business of trade and shipping. Under the existing mechanism for Board membership, any candidate may stand for election, and be elected on his/her merits. (Sub. 13, p. 37)

As noted in Appendix C, the working party into Tasmanian port policy did not reach a conclusion about ownership of the Tasmanian port authorities. It proposed, as an interim measure, boards consisting of three government appointees and three elected members.

In a private enterprise corporate environment, board directors are elected by the company's shareholders. However, in the case of a government port authority, where it could be considered that there is only one shareholder—that is, the government acting on behalf of the community at large—an election would be superfluous. The Commission considers that the owner government should appoint board members on the basis of their experience, knowledge and skills relevant to the objectives set. This does not rule out people from shipping or union backgrounds being appointed to boards. But they would be there because of their own expertise, rather than to represent particular interest groups.

### **Recommendation**

Public port authorities should be constituted as statutory bodies, which are separate from the departmental structure of government.

Board members should be appointed on the basis of individual experience, knowledge and skill, and not as representatives of interest groups.

Boards should be accountable to the parliament through the relevant minister(s).

All directions issued by government should be in writing, and tabled in the parliament.

### **3.2.4 Performance targets and monitoring**

Rates of return on assets or equity are standard private sector measures of performance, and are increasingly used in the public sector. The introduction of rate of return targets for a number of port authorities over recent years has provided a means of assessing performance.

Rates of return, which in broad terms express 'profit' as a proportion of 'assets', are specified in a number of different ways. Sometimes targets are also set in terms of a return on the owner's equity.

The setting of performance targets based on assets or equity is a quite separate issue from that of dividends. Such targets mainly relate to ensuring that the resources used in an activity receive an appropriate economic return, whereas the dividend issue is about what share, if any, of that return (after allowing for items such as interest payments and tax) is retained by the enterprise and what share is paid to the owner.

Several port authorities, particularly the Tasmanian authorities, opposed any requirement to achieve a target rate of return. For example, the Burnie Port Authority said:

Competent management should be directed towards ensuring an enterprise achieves its goals, which may vary considerably between organisations and within a given organisation over time. In an essentially service-oriented enterprise such as a port authority one of those goals should not be achieving a predetermined rate of return on assets employed. (Sub. 23, p. 6)

Some participants, for example Sydney Chartering and Agencies Pty Ltd, considered break even was an acceptable target:

if any port authority is operating at very close to break even or even at a slight loss then provided that Australian trade and the nation are benefiting, such a 'target' would be totally acceptable. (Sub. DR136, p. 2)

The Business Council of Australia commented:

the principle of achieving commercially acceptable returns on port authority assets is unlikely to be in the best interests of Australian industry and should not be the driving force behind port charging. (Sub. DR153, p. 3)

But many participants supported the idea of economic or commercial rate of return targets for port authorities. The Shell Company of Australia Ltd, a large port user, considered that:

port prices should be set so as to provide an economic rate of return on the market value of assets used. (Sub. 35, p. 3)

And the Australian Chamber of Commerce said:

Where ... port authorities remain in government hands, they should not only cease to be an operating centre for subsidies and cross-subsidies, but should also reasonably look to earn commercial rates of return on the assets used. (Sub. 65, p. 11)

The MSB was one port authority which accepted the need for performance targets:

it's only reasonable that a body trading commercially should be working to such targets which are effectively set by its shareholder. (Transcript, p. 1039)

The Commission considers that performance targets need to be set for port authorities, and that performance monitoring should be rigorous and transparent. Providing clear objectives and more management freedom to a board will only improve efficiency if there are established methods to assess the board's performance against targets appropriate to the authority's objectives, and to the resources it utilises. This is especially so as there is no share price for public authorities, which can serve to reflect their performance.

A number of issues regarding the manner in which port assets should be valued, and the appropriate financial and non-financial targets which should be set for different categories of assets, are discussed in Chapter 6. As discussed in Section 3.2.7, rate of return targets should not be set simply to suit the revenue requirements of government.

Target rates of return should be just that: rates which the port authority is expected to achieve on average over a period of time. A public body could not be expected, as neither could private enterprise, to succeed in meeting particular levels of performance and achieving particular results year-in, year-out. Market conditions and wider economic factors will all affect results.

**Port authority boards should accept responsibility for performance. They** should bear liability for commercial performance as do directors of companies. Further, **the boards should** introduce procedures to reward and penalise management appropriately for its performance.

**Recommendation**

Port authority boards should be set appropriate financial and non-financial targets, including target rates of return on assets.

### **3.2.5 Regulatory functions**

As the National Farmers Federation noted (sub. DR119, p. 4), ‘making regulations is an intrinsic part of certain core functions’. However, port authorities may also be responsible for setting standards or policing safety and environmental matters for non-core services such as pilotage or cargo handling, that they themselves engage in.

Conflicts of interest may arise in such instances. Regulation might not be entirely pursued solely in accord with safety or environmental objectives, if taking a softer or harder approach could increase an authority’s revenue. No specific cases of that were drawn to the Commission’s attention although there were some instances, listed in Chapter 4, where participants claimed that regulation was too conservative and excessive pilotage or towage was required.

To avoid conflict, or the suspicion of conflict, it is desirable to separate regulatory activity from provision of a service. In smaller ports, however, there could be economies in having the one organisation provide both services and the regulation of services.

**Recommendation**

Port authorities should not regulate non-core activities in which they themselves are engaged. An exception might be where it can be shown that there are cost savings from the one organisation performing both functions.

### **3.2.6 Taxation**

Many port authorities pay some form of tax, for example payroll tax, to state governments. However, as statutory authorities, most port authorities are not liable for the full range of Commonwealth, state and local government taxes and charges that private enterprises face. In particular, port authorities are exempt from Commonwealth company tax.

In some cases, there is provision for company tax (and/or sales tax) equivalent payments to be made to state governments. This applies now in Tasmania under the SAFMA provisions, and is to apply in New South Wales under the government's financial distribution policy for its trading enterprises.

The Victorian Government intends to 'establish tax equivalent payments for its state owned enterprises based on the tax system faced by private sector firms' (sub. DR152, p. 3). However the PMA commented:

full application of the tax laws will involve significant compliance costs for port authorities ... perhaps the aim of treating private and public bodies equally could be approximated via the dividend requirement, avoiding imposition of the administrative costs associated with the complexities of the tax system. (Sub. 152, PMA letter, pp. 5–6)

Other State and Territory Governments also appear to consider that their agencies should not be advantaged or disadvantaged by taxation arrangements relative to the private sector (see Box 3.3).

### **Box 3.3: Taxing state authorities**

'The South Australian Government supports the view that government trading enterprises should be exposed to the same financial factors as equivalent private sector businesses. The Premier of South Australia, acting on behalf of Premiers and Chief Ministers, indicated ... to the Prime Minister in November 1991, that State public sector agencies should be explicitly exempt from Commonwealth income and sales tax but should pay equivalent income and sales taxes to the responsible State or Territory Government. Administrative and legislative arrangements to effect this proposed approach have yet to be finalised, but all parties agree to the principle that government agencies should not be advantaged or disadvantaged relative to the private sector by taxation arrangements.'

Source: Sub. 32, p. 57.

Some port authorities agreed they should be liable to pay taxes. For example, the Port of Geelong Authority said that it:

accepts that under corporatisation, the organisation should be subject to the same tax regime as private enterprise organisations. (Sub. 82, p. 23)

Other port authorities, however, opposed paying taxes to government. The PBA argued that:

the financial rigour or burden of paying tax and dividends is not essential or necessarily conducive to ensuring efficiency of operation of an organisation. (Sub. 22, p. 6)

And the Western Australian Port Authorities considered:

the payment of government taxes and charges may simply add to costs for port users without bringing any commensurate benefit. (Sub. DR132, p. 8)

The Tasmanian port authorities were also opposed. The Burnie Port Authority claimed that discussion about commercialising port authorities:

invariably commences with an assumption that port authorities are inefficient. It has never been demonstrated to this Authority that that is so. Even if it was correct, the logic of suggesting that the imposition of all government taxes and charges would somehow magically rectify inefficiencies escapes this Authority. (Sub. 23, p. 5)

A few users were also opposed to these imposts. Shipping Conferences Services Ltd urged the Commission to recommend that:

... the state governments fully appreciate the role a port can play in the economic development of the community it serves. Such governments must resist the temptation to tax what is in effect an input to production. (Sub. 12, p. 13)

However, most users—in supporting the corporatisation proposals in the Draft Report—considered that port authorities should be liable for taxes and charges. For example, the National Bulk Commodities Group stated:

It is agreed that port authorities should not be advantaged or disadvantaged by taxation arrangements. Therefore, they should be liable to the same taxes and government charges as the private sector. (Sub. DR128, p. 3)

The Commission considers that port authorities should be liable for taxes such as corporate, sales and payroll tax (or their equivalents). These taxes and charges need to be paid so as to ensure the efficient allocation of resources, including capital, among the various activities in which they can be used, be those activities in the public or the private sector.

<b>Recommendation</b>
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Public port authorities should be liable for taxes and government charges.
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### 3.2.7 Dividends

In the private sector, dividends are declared following consideration of after-tax profit. A number of different arrangements currently apply with port authorities. Many are not liable to pay a dividend to government (see Appendix Table B6).

In New South Wales, the dividend payment for the MSB in the past has been determined by the Treasurer after negotiations with the authority. In respect of 1991-92, a dividend of \$35 million is to be paid out of operating surplus of \$78 million. From 1993-94, there is to be a pre-tax profit distribution to government of at least 50 per cent of pre-tax profit.

In South Australia in 1991-92, a dividend was paid from the DMH's commercial operations, and then utilised to fund the department's semi-commercial and non-commercial activities.

Some 'dividends' are struck as a percentage of turnover or income. For example, the Fremantle Port Authority pays 3 per cent of its turnover to government, while 5.5 per cent is paid by the PBA.

Some 'dividends' have been set according to a government's revenue requirements, irrespective of profit levels or turnover of the authority. The PMA outlined the dividend policy it faced under the previous Victorian Government:

The Public Authorities (Dividend) Act 1987 provides for the payment of a dividend by the Authority to a maximum of 5 per cent of public equity at the beginning of the year. The dividend is set by the State Treasurer after consultation with the Portfolio Minister. The Authority paid a public authorities dividend in each of the years ended 30 June 1991 and 1992 of \$10 million. However, the return on equity achieved by the Authority in the years preceding the payment of these dividends was less than the dividend payments. These returns were \$7.819 million positive in 1989-90 and \$13.873 million negative in 1990-91. (Sub. 79, p. 30)

Under the new Victorian Government, dividends are to be established as an appropriate return on the public equity vested in the authority. Once a 'genuine equivalent income tax system' is established (in 1993-94), dividend will be determined on an after-tax basis (sub. DR152, p. 3).

Some participants strongly opposed dividend payments being required by governments of their port authorities. For instance, the Australian Wool Corporation believed that this:

simply becomes a revenue raising device or tax for the government, distorting the focus of the authority; efficient and effective port operation enhances the commercial results of on shore enterprises that use the port, thus providing greater tax income from conventional imposts to reward the creation of the appropriate port management environment. (Sub. 3, p. 2)

And the National Farmers Federation considered that:

where government enterprises are competing with private enterprise, some requirement to pay dividends is justified ... [however] requiring a dividend, in addition to payment of taxes and charges, on the provision of public goods by a government owned natural monopoly will lead to sub-optimal outcomes. (Sub. DR119, p. 4)

Mr Gary Davies said that:

not only is trade required to pay for the inefficiency associated with monopoly public sector port authorities, it must, in most states, suffer the additional burden of port authorities achieving target rates of return and providing dividends to governments. (Sub. 85, p. 2)

The arbitrary basis on which some dividends have been set was criticised by some participants. BP Australia commented:

The current system in some states where the port authority must pay a set dividend whether or not it makes a profit is economically unsound and should be abandoned. (Sub. 18, p. 1)

And the Australian Chamber of Shipping said:

The Chamber opposes an arbitrary monetary amount of dividend payable to port authority shareholders, predominantly state governments. (Sub. 43, p. 2)

The Business Council of Australia stated:

the monopolistic positions of the state and territory port authorities [should not be] misused by their owners for the purpose of generating general revenue. (Sub. DR153, p. 2)

The National Bulk Commodities Group considered:

It is most important that the setting of all port authority charges and the declaration of dividends from after-tax profit be commercially based and not determined by governments as a means of raising revenue. (Sub. DR128, p. 3)

Most port users participating in this inquiry supported the corporatisation proposals in the Draft Report and thus agreed that port authorities should be liable to pay a dividend provided that this was out of after-tax profit. For instance, the National Bulk Commodities Group agreed that:

Port authorities should be liable to pay a dividend to their shareholders (governments) out of after-tax profit. (Sub. DR128, p. 3)

In the Commission's view, it is appropriate for government (ie the owner of the port authority on behalf of the community) to be given the opportunity to receive a dividend for its equity. However, excessive dividend requirements detract from the efficiency of port operations with a flow-on effect to Australia's international competitiveness: ultimately they reduce the welfare of the community as a whole. Governments have legitimate needs for revenue, but taxes need to be struck efficiently and equitably.

Thus, dividends should not be set according to the revenue requirements of governments. Irrespective of what dividend targets might initially be set, the port authority board should make a recommendation to government (the owner shareholder) for decision when after-tax profit for the year is known. In arriving at the decision, the board and government should balance the needs of the authority for ongoing investment and working capital with the reasonable expectations of government for dividend payments.

**Recommendation**

Public port authorities should be liable to pay a dividend out of any after-tax profit. The amount of any dividend should be recommended by the board to government for decision.

But as is apparent from participants' comments set out in this section and in Section 3.2.4, several state governments have used port authorities as revenue raising mechanisms irrespective of their profitability. Further, the lack of competition between ports has facilitated the fulfilment of high dividend requirements by raising prices to users rather than reducing costs through increased productivity. Conversely, cost savings through increased productivity could be passed on to government rather than to port users.

The problem of using government business enterprises, with natural or regulated monopoly characteristics, as 'milch cows' to meet government budgetary needs is more general than that of port authorities alone, and appears to have been increasing with the budgetary stress facing state governments. A recent report by EPAC (1993) indicates that the ratio of dividend payments to earnings after tax has increased in aggregate for government business enterprises paying dividends, and that the largest increases have been for those authorities able to exercise a degree of market power. That is not to deny that in the past dividend payments may have been too low.

The implementation of the Commission's recommendations regarding dividend policy for port authorities might therefore desirably be addressed on a wider front. In the federal context, the Commonwealth Government might be able to exert pressure if it were to offset excessive dividend payments to state governments through the allocation of financial assistance grants. Such an approach would necessitate a formal review process and raises the question of how that would relate to the approach of the Commonwealth Grants Commission in making its assessments of state finances as part of the fiscal equalisation arrangements. It would also require the Commonwealth Government to adopt a similar dividend policy with respect to its own business enterprises.

**3.2.8 The legal framework for corporatisation**

The principles of corporatisation set out in Box 3.2 are designed to provide a greater commercial focus for managers; to separate government from the day-to-day operations of the authorities; to introduce greater accountability; and to put authorities on a similar footing to private firms. If owner governments were to go 'all the way' on these matters, there would be strong reasons to incorporate their

port authorities under Commonwealth Corporations Law, which provides a common prudential and accountability framework for a wide range of commercial business undertakings across Australia. Indeed, to place port authorities within the framework of Corporations Law would subsume many of the principles of corporatisation already outlined. In some of its other reports involving government business enterprise reform, the Commission has included making the enterprise(s) subject to Corporations Law one of the principles of corporatisation.

The legal framework within which governments corporatise their business enterprises is an issue which goes beyond port authorities. Nevertheless, the Commission is firmly of the view that, whether or not port authorities are incorporated under Commonwealth law, it is preferable that corporatisation takes place under policy guidelines which provide a consistent framework within which all government business enterprises operate. Some states already have such guidelines, which are embodied in legislation in some cases, but they do not encompass all of the features of corporatisation discussed in Section 3.2.

### **3.2.9 Exemption from Trade Practices Act and Prices Surveillance Act**

In its recent draft report on port leasing policies (TPC 1992), the Trade Practices Commission reviewed the application of competition laws to port authorities. Most port authorities claim to be exempt from the Trade Practices Act. They are excluded from the coverage of the Prices Surveillance Act.

As port authorities provide many services and activities within their port on a monopoly basis, there is scope for them to wield market power. For example, there could be some temptation for port authorities to raise prices, particularly where governments impose unreasonable dividend requirements. Alternatively, port authorities could use the extra revenue to improve their competitiveness in other areas of activity provided in competition with private firms. As another example, the TPC (1992, Appendixes, p. 20) noted that port authorities have been able to include in leases:

anti-competitive terms such as the tying of lessees to the port authority for the acquisition of services such as crane maintenance, container unpacking and requiring the use of the services of the port authority as a wharfinger.

For private firms, anti-competitive practices are controlled through state-based fair trading laws, and exposure to federal mechanisms such as the Prices Surveillance Authority (PSA) and the TPC.

The AAPMA considered that:

clearly there would be conflicts if port authorities were subject to direction by both a state minister and by the Trade Practices Commission and/or the Prices Surveillance Authority. (Sub. DR135, p. 3)

And the Fremantle Port Authority argued that as:

the port is already subject to ministerial direction and is accountable to parliament for ensuring the provision of port services in the public interest ... the application of ... [the Trade Practices] Act or the legislation of the Prices Surveillance Authority to the port authority [is] duplicative and not in the interest of economic efficiency. (Sub. DR132, p. 9)

The Commission supports the TPC's draft recommendation that port authorities be made subject to the Trade Practices Act. For the reasons discussed above, and for reasons discussed in Chapter 5, the Commission also considers that port authorities should no longer be excluded from the coverage of the Prices Surveillance Act.

These measures would serve to improve efficiency, rather than worsen it as the Fremantle Port Authority claimed. They would open up an avenue for appeal for port users against possible exploitation of monopoly power by port authorities, perhaps in response to unreasonable dividend requirements imposed on them by governments. Further, they should impose little additional administrative cost on port authorities.

#### **Recommendation**

Port authorities should be made subject to the Trade Practices Act and no longer be excluded from the coverage of the Prices Surveillance Act.

### **3.3 Summary and conclusions**

Government intervention in ports can be justified for many reasons, and there are a variety of ways in which governments act to improve efficiency. However, in the absence of full privatisation of a port, there is likely to remain a nucleus of core activities specific to the port for which a separate port authority would most appropriately take responsibility.

Even where responsibility for particular services and activities is given to public port authorities, the possibility of contracting out their provision needs to be fully explored (see Chapter 8).

Private enterprise should, in principle, be able to undertake non-core port activities more efficiently than public agencies. Even if institutional and regulatory arrangements for port authorities are transformed, it is questionable whether they could operate as efficiently as private enterprise in fully commercial activities. Thus, the Commission considers that restricting port authorities to the landlord model, by limiting them to the provision of core services and activities, has much to commend it. Later chapters discuss whether, in particular cases, efficiency would be enhanced if port authorities were to undertake some non-core activities.

Public port authorities need to fulfil their responsibilities in an efficient manner, whatever those responsibilities are determined to be. The Commission considers that efficiency would be enhanced if, as far as is possible consistent with their functions, port authorities were exposed to the same incentives, rules and regulations as private enterprise corporations.

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## 4 COMPETITION BETWEEN AUSTRALIAN PORTS

Port authorities actively endeavour to exploit opportunities for competition between Australian ports. There is some evidence that such opportunities are increasing. The AAPMA commented that:

especially within the last twelve months or so, competitive activity has increased dramatically and all ports are ‘anxiously looking over their shoulders’ at the activities of neighbouring ports. (Sub. DR135, p. 3)

But Shipping Conferences Services considered that ‘it is extremely easy to exaggerate the opportunities for sensible competition between ports’ (sub. DR110, p. 6).

This chapter starts by reviewing factors influencing interport competition in Australia, giving examples of existing competition. Because of physical, demographic and market factors, the scope for competition between Australian ports is much less than in many other countries.

The chapter then assesses relevant institutional and regulatory settings, including those pertaining to port authorities, to see what changes would facilitate a more efficient degree of competition. Mention is made of the special circumstances applying in Tasmania.

### 4.1 Physical, demographic and market factors

A number of physical, demographic and market factors, which are largely outside the control of port authorities, limit the scope for competition between ports and port authorities in Australia.

#### 4.1.1 Geography and demography

Compared with other continents, Australia’s commercial ports are widely separated, and its population is small and concentrated in several coastal cities.

For bulk cargo, particularly the voluminous minerals exports, the choice of port is limited. Either the cargo is shipped through the nearest existing port, to which suitable transport is available or which has suitable bulk loading facilities, or a ‘new’ port is developed to handle it. Competition is limited by the relatively higher cost of land transport than sea transport.

Competition is more feasible for cargo originating in or destined for locations midway between two or more ports, or derived from a relatively diverse area. Some agricultural commodities, such as grains, fall into this latter category.

A large proportion of general cargo, including containers, is destined for or originates in Australia's large capital cities. These cities are centred on the major ports. For example, the PMA indicated that 88 per cent of containers imported through Melbourne have their ultimate destination within 40 kilometres of the port, and 53 per cent of export containers originate in that area. Except in special cases, such as time-sensitive or high value cargo, the use of more distant ports is simply uneconomic.

#### **4.1.2 Land transport links**

The feasibility of competition between ports is affected by cost, frequency and reliability of land transport links.

Most long distance land transport of transhipped cargo is by rail rather than road. While figures are not available, long distance movement by road is thought to be quite small in the east-west direction, but more significant in the case of movement along the east coast.

Not all main ports are linked into the national standard gauge rail network. The Prime Minister's 'One Nation' statement of 26 February 1992 announced a number of major infrastructure investments planned to improve the land links to, and between, Australia's major ports. A stated reason for this was to improve competition between ports.

The Western Australian Port Authorities considered that:

the provision of an effective interface in the port with various modes of land transport is vital if Australian ports are to become more efficient and competitive. (Sub. 44, p. 36)

Similarly, the General Manager of the PBA has said:

it would be patently absurd to attempt to be a major gateway port when cargo would have to go from the port by road or rail to another railyard for linking to standard gauge. (Martin 1991, p. 5)

#### **4.1.3 Relative cost of sea and land transport**

One reason to move cargo through one port instead of another could be to reduce sea freight. However, for many cargoes, there might not be any significant saving. For example, pan-Australian freight rates (to the extent they apply—see TPC 1992, Appendix B) reduce differences in shipping costs which would otherwise apply to/from different ports.

Further, because blue water sea freight is much cheaper—on a tonne/kilometre basis—than land freight, additional land transport costs (even of efficient land transport) could easily outweigh sea freight saving, if any.

In some cases, this severely limits competition. For instance, to illustrate the effect of land transport costs, the South Australian Government indicated that almost 90 per cent of the cargo shipped through South Australian ports is bulk cargo, most of it valued at less than \$200 per tonne and thus the cost of landbridging is relatively high:

Landbridge costs of up to \$20 per tonne to move bulk products by road or, where possible, by rail would quickly erode the potential gains available through moving the cargo to a competitor port and, in some cases, erode the economic viability of the individual trade as a whole. (Sub. 32, p. 19)

However, as noted by the General Manager of the PBA (Martin 1991, p. 6), 'it is the total transport cost between alternative ports which much be assessed'. Factors other than the relative cost of freights can change the equation. For example, an important factor in the Nissan move to import motor vehicles through Brisbane rather than Sydney was the availability of low-cost back loading capacity to the southern states, together with lower port rates and land lease costs in Brisbane.

#### **4.1.4 Shipping**

Competitiveness of ports can be influenced by shipping operations in several ways. In some trades pan-Australian rates can be important. Liner shipping schedules also matter: which ports are visited, in what order, and how often, all affect competitiveness.

If the volume of trade destined for or from a particular port is large, it will be relatively less costly per unit of cargo for a ship to call there. Thus the ports which attract large shipments, such as Sydney and Melbourne, have a competitive advantage. A port operating on a large scale provides more frequent shipping services, with bigger vessels operating to a wider range of destinations. Sydney and Melbourne receive twice the number of conference line visits as Brisbane and Fremantle, and some three to four times the number of visits as Adelaide.

Competitiveness of a port is enhanced if it is the first port of call for import trade, and the last port of call for export trade. For example, Sydney is often the first port of call for incoming ships as that is the largest Australian consumer market. Chilled beef for Japan is loaded at Brisbane, being the last port of call, to minimise the shipping time.

Future competitiveness between Australian ports is likely to be affected by the increasing use of larger ships, requiring deeper channels, longer berths, more cranes and so on; and the growth of foreign 'hub' ports such as Singapore, with feeder services to and from other countries.

#### **4.1.5 Need for specialised facilities**

Many types of cargo require specialised facilities. In many cases, such as containerised cargo, the volume and nature of trade, and the costs of land transport between ports, are such that the provision of the required facilities at several ports is justified.

The capital required to provide facilities is often immense. For example, iron ore exports from Western Australia require rail links over substantial distances to ports, as well as the requisite mine and port loading facilities. An up-front decision has to be made where to install them. Ports may compete during the initial decision phase but, once the decision is made, the trade from a particular mine will become locked in to a particular port.

#### **4.1.6 Stevedoring**

In the non-bulk sector, the two main stevedoring groups, Conaust Ltd and National Terminals (Australia) Ltd, have ownership links with the shipping lines—P&O in the former case, and ANL in the latter. A number of participants were concerned about the impact of this vertical integration on interport competition.

The TPC in its recent draft report said:

To the extent interport competition is possible, the presence of the national operators in almost every major container handling port may work against the intensity of such competition. (TPC 1992, vol. 2, p. 44)

In January 1993, the South Australian Government replaced the then operator of the Adelaide container terminal, Conaust, with a new operator, Sea-Land Containerised Freight Services Pty Ltd. This is the first Australian operation for Sea-Land, which is a large terminal operator internationally. Before the announcement of the new operator was made in November 1992, an executive of ANL was reported in the press as querying whether the shipping lines would choose to deal with a third-party terminal operator (Sea-Land) 'when they could direct cargo through their terminals in Melbourne instead'. (Daily Commercial News, 1 Oct 1992, p. 2). At the Draft Report hearings, ANL explained that:

if Conaust or NTAL have a terminal in Adelaide and a terminal in Melbourne ... they're obviously going to try and maximise the volumes through those respective terminals. If they only have a terminal in Melbourne ... [then they are] ... obviously going to do

everything [they] can to attract the business through Melbourne. (Transcript, pp. 1309–10)

If one stevedoring operator were to gain dominance over several ports, this could also affect interport competition. According to the Launceston Port Authority:

The emerging dominance of Coastal/NTAL in northern Tasmania must raise concern for port authorities as they might influence, or be unconcerned over, which port a vessel calls as it is irrelevant for them if they know they will do the stevedoring anyway, and in doing so become the dominant force, effectively a monopoly. (Sub. 24, p. 55)

## **4.2 Existing interport competition**

As well as the influence of the physical, demographic and market factors discussed above, competition varies between ports depending upon types of cargo, whether it is import or export bound, and the attention given by port authorities to ‘marketing’. Institutional and regulatory factors affecting competition are covered in Section 4.3.

### **4.2.1 Bulk cargo**

There are several examples of competition or potential competition between ports for bulk cargo. For instance:

- Gladstone and Dalrymple Bay compete for the export of Queensland Bowen Basin coal in the planning stages of mine development. Once mine owners choose which port to use, however, they become locked in for the life of the mine;
- Portland competes with Geelong to the east, and Adelaide to the west. Cargo types which can move between these ports include woodchips, grain, fertilisers and live sheep. Each port uses different marketing and pricing policies to attract trade;
- Geelong competes with Hastings for some petroleum cargo; and
- Bunbury and Fremantle compete for alumina and steel billets.

At one extreme, bulk cargo is captive in the short and medium term. This may be because of the location of the port relative to the source or destination of the cargo, the availability of required land transport such as rail (for example because of an existing rail link, nickel ore from Mt Keith will be shipped through Esperance even though the alternative port, Geraldton, is some hundreds of kilometres closer), or because specialised handling facilities are available only at that port. But there can be competition before the cargo becomes committed to a particular port; there also can be competition when new loading facilities become required.

At the other extreme, some bulk cargoes could move from port to port almost on a shipment-by-shipment basis. For example, grains are exported through the many ports that have the required handling facilities. Depending on the established road and rail infrastructure, and any regulatory transport barriers, such cargoes can move from port to port to take advantage of differences in cost (see Section 4.3.3 below).

#### **4.2.2 General cargo**

Several port authorities actively endeavour to expand general cargo trade through their ports. They do this through the development of cargo handling facilities, through marketing strategies—for example, exploiting niche opportunities, and links with foreign ports (for example Adelaide’s agreement with Singapore on trade promotion and an EDI link)—and through pricing.

This section concentrates on containerised cargo. To a varying extent, the ports of Fremantle, Adelaide, Brisbane, Melbourne, Sydney and Darwin all promote themselves as ‘hub’ or ‘gateway’ ports for containers, offering ‘landbridge’ services.

##### *New South Wales*

Although there is some competition between them in some trades, the three major New South Wales ports largely serve different markets, with most containerised cargo focused on Sydney (Port Jackson and Port Botany). This is likely to continue, as according to the MSB:

the MSB corporate planning process which links the three main MSB subsidiary port business plans, also provides a mechanism to identify and avoid over investment or duplication. (Sub. 21, p. 27)

Compared with many port authorities in other states, and consistent with its contraction to a landlord role, the MSB takes a ‘minimalist approach’ to marketing ‘acting as a catalyst to work in conjunction with industry, rather than on behalf of industry to encourage market growth or port development’ (sub. 21, p. 18). The MSB stated its marketing priorities for Sydney as being:

- cargoes such as cotton from interstate border areas;
- increased ship calls to Sydney, with the introduction of the port as an ‘Australian Gateway’; and
- cargoes such as chilled beef currently transported by road for shipment from other major ports.

### *Victoria*

Although the PMA stated that the ‘capital investment approval process [in Victoria] has discouraged duplication of port capacity’ (sub. 79, p. 19), some years ago the Port of Geelong established an overseas container terminal, and purchased a crane, in an endeavour to attract trade from Melbourne. However, that venture failed and the container crane was sold.

The PMA considers that it has been one of the ‘more active’ ports in competing for trade. It has substantial trade flows from South Australia, and Tasmania—most Tasmanian general cargo trade, whether international or coastal, passes through Melbourne—and some from other states.

Part of Melbourne’s strategy is to:

facilitate adequate trade volumes that allow the port to target international service levels and standards and attract frequent ship schedules to all trade regions throughout the world. (Sub. 79, p. 11)

The Victorian Trades Hall Council commented that:

marketing teams drawn from PMA, stevedores, unions and transport operators have made successful visits to actual and potential customers in Victoria, South Australia and overseas. (Sub. 15, p. 7)

### *Queensland*

Queensland’s specialised container handling facilities are concentrated in the Port of Brisbane, although both Cairns and Townsville have some container facilities and Gladstone has plans for developing a major container terminal in future.

The PBA stated that its principal role is one of trade maximisation. It promotes Brisbane as a ‘gateway’ port. In noting that its charges account for only about 4 per cent of total port and sea freight cost, the PBA listed the criteria considered essential for success as a port from which cargo is landbridged as follows:

- sufficient regional port requirements to ensure regular sailings of scheduled services;
- efficient port handling of cargo from vessel onto land transport;
- efficient land transport; and
- appropriate price structure (sub. 22, p. 11).

Additional factors are the capacity to handle extra cargo, suitable room for expansion, low congestion and low levels of truck queuing, and relative proximity to Asian and North American ports.

The PBA argued that ‘Brisbane satisfies all those criteria in certain cases’. In particular, there are ‘opportunities for cheap southbound land transport’ (sub. 22, p. 11).

According to the PBA, there has been a reversal of the trend for Brisbane cargo to go out through Sydney. The export of cotton and meat were cited as major successes of the gateway port.

According to the General Manager of the PBA, 'the major and most recent breakthrough for the gateway concept' is Nissan's decision to use Brisbane for the import of vehicles bound for Sydney and regional NSW (Martin 1991, p. 7). Major factors in this decision were low road transport backloading rates, and lower port charges and land lease costs. Also, the service is quicker with vehicles reaching their destination before the vessel would have reached Sydney.

Brisbane's port prices are structured in line with its objective of increasing trade through the port. Apart from a berthage charge, the port's main charges relate to the volume of cargo handled through the port.

### *Western Australia*

Western Australia's main container handling facilities are at Fremantle.

According to the Western Australian Port Authorities, some 3 to 5 per cent of the containers that arrive in Fremantle are transported by land to various eastern seaboard destinations. They consider the primary reason for this small but regular trade to be the state's proximity to major South East Asian ports, particularly Singapore, and the savings in delivery times which shippers can derive by using the rail system rather than maintaining the sea leg. According to them, this advantage has been magnified by the poorer industrial performance of major ports like Sydney and Melbourne compared with Fremantle.

Some cargo moves in the other direction. Cargo for Western Australia handled through the eastern states is generally confined to a small number of trades, such as with North America, that are not well serviced from Fremantle.

The Fremantle Landbridge Project aims to establish Fremantle as a gateway port for containerised landbridge cargo. A recent study by consultants (see WA Dept of Transport 1992) to the project estimated that, over time, up to 45 000 imported containers a year could be landbridged through Fremantle to the east. This is significant compared with the total of 132 000 containers handled by the port in 1991-92. The expectation for increased landbridging relies heavily on two factors: the imbalance in exports from and imports into Fremantle with exports about twice imports; and unused backhaul rail capacity from the west to the east.

Fremantle is particularly targeting Adelaide trade that has traditionally gone through Melbourne. A major selling point is that cargo from Singapore would reach Adelaide 7 to 8 days earlier through Fremantle than through Melbourne.

The Port of Fremantle charges only 50 per cent of its usual wharfage for cargo which is landbridged.

### *South Australia*

The port of Adelaide competes with Melbourne for containerised cargo and motor vehicles. About 40 000 TEUs per annum are shipped into Adelaide through the Port of Adelaide. A further 40 000 containers are landbridged by road or rail into Adelaide having been imported through the Port of Melbourne.

As part of the Adelaide Transport Hub concept, Adelaide is endeavouring to establish itself as a gateway for time-sensitive international cargoes for Sydney and Melbourne. The South Australian Government said that:

In specifically servicing an estimated demand of only 50 000 time-sensitive containers per year in this niche market, the Adelaide Transport Hub will complement rather than compete with Sydney and Melbourne, which will continue to be the volume ports serving south eastern Australia. (Sub. 32, p. 12)

A major element in Adelaide's plans is the development of an integrated marine and road/rail transfer facility operated by a world class stevedore with associated storage and distribution facilities. This is expected to be completed by 1996.

Adelaide's major current disadvantage is the lower frequency of calls by ships in the major trades. The DMH is hoping to improve this situation by attracting a weekly visit by the major container trades. Even where the amount of cargo is insufficient to justify a direct call, the DMH is hoping that in some cases such cargo can be consolidated in Singapore for transshipment by a feeder service to Adelaide.

The DMH provides a 33 per cent concession on wharfage for interstate cargo.

### *Tasmania*

Most of Tasmania's container trade, international and interstate, is shipped through Melbourne. Less than 10 per cent of Tasmanian trade consists of international cargo.

There is significant competition between the four principal ports of Burnie, Devonport, Hobart and Launceston for general cargo, both containerised and break-bulk. Until recently, Circular Head (on the north coast of the state) also competed for this trade. The ports are relatively close to each other. Each is accessible to all areas of the state as distances are small and there are suitable land transport links. Each port seeks to maximise its trade.

The Marine Board of Hobart argued that industry and commerce could benefit from competition between the ports because 'shippers can negotiate arrangements and prices between competing port authorities' (sub. 30, p. 5). However, the

Board considered that ‘it is extremely doubtful whether any investments have been made in any port merely to divert business away from other ports’ (sub. 30, p. 6).

But the Burnie Port Authority commented that:

history has revealed that the desire to attract additional cargoes, in some cases from a neighbouring port, has resulted in the provision of duplicate and underutilised facilities and the ongoing cost of servicing the debt created to construct those facilities has as its legacy a regime of port prices higher than they need be. (Sub. 23, p. 4)

Burnie supports the proposal to amalgamate the northern Tasmanian port authorities—unlike the Port of Devonport Authority:

in order to encourage the provision of price sensitive and quality services to port users, the PDA believes that competition between ports should be encouraged. This means that a forced amalgamation of the three northern ports should not be pursued. (Sub. 13, p. 21)

Nor does the Port of Launceston Authority support amalgamation, although it noted that ‘it is certain that this overinvestment [in Tasmanian ports] was made in an effort to take business from competing ports’ (sub. 24, p. 55).

As noted in Chapter 2, a working party has recently reported to the Tasmanian Minister for Transport and Works on Tasmanian port policy. More details about the Tasmanian situation are in Appendix C.

### *Northern Territory*

Competition between the Port of Darwin and southern ports is limited by the cost of land transport.

The Northern Territory Government has, however, embarked on a four-year program to establish new port facilities and services. It has been designed to incorporate the ‘long planned Darwin to Alice Springs rail link thereby transforming the existing rail network into a truly national network’ (sub. 93, p. 4). The aim is for Darwin to enter the market for intermodal cargo movements, with a Darwin landbridge expected to ‘provide exporters and importers with quicker transit times as well as savings in transport costs’ (sub. 93, p. 8).

## **4.3 Institutional and regulatory factors**

Institutional and regulatory factors also influence competition between ports. They include government involvement in port authorities, maritime regulation, land transport infrastructure and regulations, cabotage, and the exemption of shipping companies from certain provisions of the Trade Practices Act.

### 4.3.1 Differing institutional settings for port authorities

The Commission did not receive any evidence of outright prohibitions on port authorities competing with other ports, either intrastate or interstate. Thus, it is the differences between port authorities—in the way they are established, their objectives and functions, their commercial orientation or lack of it, and their pricing and investment policies—which influence the effect port authorities have on competition between ports.

Differences are, of course, what competition is all about. Commercial firms compete on the basis of the relative advantages they have in various aspects of their business: price, quality, range of product, service and location. So differences between states and ports in the institutional environments established for port authorities are not necessarily bad in themselves.

But the scope for competition is reduced if the incentives to operate efficiently are weak or missing. This applies to many Australian port authorities. Although commercial incentives have increased in recent years, there are still cases where objectives are not clear or conflict, CSOs are not funded by government, performance targets are ‘soft’ or non-existent, dividend and tax requirements do not apply, cross-subsidies distort pricing, and investment and borrowing controls are unduly restrictive.

Thus, implementing the principles and recommendations set out in Chapter 3 should increase competition between Australian ports and improve efficiency, as should improvements in work practices as discussed in Chapter 7.

#### *Tasmania*

The scope for competition between ports is greater in Tasmania than for mainland ports. However, the comments of the Tasmanian port authorities, quoted above, suggest that the institutional settings in which competition takes place may have led to undesirable investment in facilities, and distortions in prices.

In many ways the incentives for Tasmanian port authorities to operate efficiently are lacking (see Appendix C). For example, Tasmanian port authorities are not set target rates of return by government, and their boards are accountable only to the local community.

Forced amalgamation of port authorities would not, in itself, address these fundamental problems. Indeed, the recent Tasmanian working party recommended against amalgamation. The Commission considers the better approach for Tasmania would be to address directly the shortcomings in accountability and in incentives for efficiency by implementing the recommendations set out in Chapter 3.

### 4.3.2 Maritime regulation

Maritime regulation covers such matters as safety, navigation, pilotage, towage, and relevant environmental concerns. It occurs at federal, state and port authority level. Background information is given in Chapter 2.

Such regulation generally applies to protect the community as a whole, seafarers, or users of navigable waters, rather than for purely economic reasons. However, irrespective of their rationale, regulatory controls can affect the nature and extent of interport competition.

Participants pointed to several problems: inequitable navigation and conservancy charges; pilotage exemptions and night navigation requirements; differences in towage requirements between ports; pollution levies; and ship cleaning regulations.

#### *Marine navigation levy and conservancy/navigation charges*

Some participants expressed concern about these charges. The marine navigation levy is a Commonwealth impost, whereas some of the states impose conservancy charges.

Participants generally considered that such levies and charges were for a worthwhile purpose. But the Australian Chamber of Shipping considered that:

where the user of a service is not clear, as in the case of certain navigation aids, a community service obligation or payment by government ought to be identified and the charge not imposed on commercial shipping. (Sub. 43, p. 7)

AMSA pointed out the significant reductions which have occurred in the marine navigation levy. However, the Australian Peak Shippers Association was critical of increases in state dues, saying ‘all sums collected go to the consolidated revenue of the state concerned and are not earmarked for any port purpose’ (sub. 37, p. 7).

Several participants considered these levies and charges were discriminatory. They were said to discriminate against bulk shipping in favour of liner shipping; discriminate against international shipping in favour of coastal shipping which spends a greater proportion of time in Australian waters; discriminate against vessels not requiring the services such as commercial vessels with their own modern navigational aids; and fail to levy fishing vessels and pleasure craft. In at least one case—Port Hedland—federal and state charges are levied for the use of facilities which users of the port have themselves provided.

#### *Pilotage and towage*

For safety reasons, maritime and port authorities generally require vessels entering and leaving port to make use of pilotage and towage services. In some

cases, the ship's master can be exempt from pilotage and bring a vessel in or out. The number of tugs required is sometimes prescribed but more often left to the judgment of the pilot and ship's master. Likewise, the times at which a vessel is permitted to enter and leave port sometimes vary depending on the ship's load, the tide, the season and the time of day.

Although some overall regulatory agency may be involved, such as a state marine board or port authority, to a large extent pilotage and towage requirements for particular ports are left to the professional officers in each port to determine. AMSA is involved in regulating pilotage in Torres Strait and the Great Barrier Reef (see Section 5.3.1).

Some participants complained of overly restrictive or conservative requirements:

- Port Waratah Coal Services was concerned about restrictions preventing the movement of ships to and from Newcastle at night and at low tide. (According to the MSB, previous changes at Port Kembla in night navigation had saved BHP about \$250 000 a year. [Transcript, p. 99]) Other participants were concerned about restrictions at other ports;
- BP Australia claimed that, despite some of its ships being fitted with bow thrusters specifically to avoid the need for tugs, an 'excessive number' of tugs were still used to berth these ships. Shell cited Bunbury in Western Australia and the South Australian ports as being the main problem. The Queensland Sugar Corporation also complained of an excessive number of tugs required in some ports; and
- pilotage exemptions appear to be available only to masters of Australian registered vessels and then on the basis of criteria which differ from port to port—some allow no exemption, while some only exempt smaller vessels.

Pilotage and towage requirements and traditions can affect the attractiveness of one port compared with another. Although their impact is intended to be upon safety, overly restrictive or conservative requirements can impose significant economic cost.

### *Pollution levies*

These apply at federal and state level. At federal level, AMSA levies ships to fund equipment provided for storage of pollution control materials and their use in port spill control and clean up, for training, and in a range of other pollution control activities (see also Chapter 6). At present, funds are allocated according to the recommendations of an intergovernmental advisory committee, but the arrangements are presently being reviewed.

This levy in effect funds a protection program against oil pollution in Australian waters and ports. The competitiveness issue here is whether each port is equally placed with others to take advantage of the funds raised through the levy.

Some ports, for example remote ports such as Port Hedland or those in heavily populated areas such as Sydney, may well need, as a matter of prudence, to have their own oil pollution control and clean up facilities. In this case, the national levy could provide little assistance and would indirectly detract from the competitiveness of those ports.

Some individual port authorities also impose environmental levies—for example, the MSB imposes a special levy on the oil and chemical industries at Sydney to fund the Emergency Response Unit. Caltex Australia Ltd considered the levy to be discriminatory as ‘the oil and chemical industries have an excellent record compared to other users of Port Botany’ (sub 19, p. 2). However, the MSB indicated that the oil industry accounts for a much higher than proportionate number of oil spills (sub. 83, p. 11).

To the extent such levies relate to the requirements and experience of each port in minimising and controlling pollution, they enhance efficient interport competition.

### *Ship cleaning*

The Shell Company of Australia Ltd contended that two ports in Australia—Adelaide and Port Lincoln—require oil tankers to depart the berth if they need to carry out any tank cleaning operations. This adds to the expense of using those ports, duplicating charges and levies. Shell commented that:

all ships above 20 000 DWT are required to have inert gas systems. Ships fitted with these systems can inert their tanks when cleaning, rendering them completely safe, such that the ship is no more of a hazard than it is during normal cargo operations. (Sub. 35, p. 10)

### *Assessment*

Maritime regulation aims to guarantee an acceptable level of safety and environmental control in the operation of vessels while in Australian waters, both offshore and in port. This regulation obviously affects the costs of port operators and users.

But maritime regulation can differentially affect the cost of using different ports. Although the Commission’s task does not extend to making judgments about safety issues, it appears from the evidence that there are instances where requirements in particular ports are unnecessarily conservative or restrictive. Further, the basis of some levies and charges differs from state to state, and some levies and charges discriminate against particular categories of vessel.

Any impact on competition between ports caused by unnecessarily conservative maritime regulations in some ports, or by uniform levies on all users giving rise to cross-port-subsidies, would only be small, particularly given the captive nature of much of the trade. However, based on the evidence before it, the Commission considers there would be merit in some review of maritime regulation.

**Recommendation**

The Australian Transport Advisory Council should review maritime regulations to ensure that they are reduced to a minimum, consistent with appropriate safety and environmental needs.

In this review, consideration should be given to the circumstances of particular ports, in terms of safety and environmental protection, and to the views of port users.

**4.3.3 Land transport**

In recent years, governments have been endeavouring to improve the efficiency and effectiveness of land transport. Part of this process has involved improving cost recovery, and reducing cross-subsidy between and within forms of transport. These changes have had an effect upon the relative competitiveness of road, rail and sea.

However, the effect of road and rail regulation upon competition between particular ports and particular states is most relevant here.

State governments have tended to approach transport matters parochially. As noted by the Australian Wheat Board and the Australian Shipping User Group, the existing pattern of transport infrastructure largely reflects this bias, as the location of ports, bulk loading facilities, and rail lines has been largely determined on a state-by-state basis. The physical location of transport facilities has been supported by regulations relating to the road and rail shipment of cargo. These have tended to favour rail over road, and to prevent interstate shipment of certain commodities.

To a large extent, these sorts of restrictions have now been discontinued. In Western Australia, for instance, road transport has been deregulated and in Victoria B-doubles are now allowed on many highways as they have been for a longer time in other states. The National Rail Corporation has been established to facilitate interstate rail freight.

Some restrictions remain, however. In Western Australia, a system of designated port loading zones for grain (operated by the bulk handling cooperative) generally insulates the ports of Esperance, Albany, Fremantle (Kwinana) and Geraldton from competition between each other. Controls in Victoria still favour rail through restrictions on the transport by road of such products as barley, oats, wheat, briquettes, limestone and petroleum products.

Further, the effects of previous controls may linger for a considerable time. The Port of Portland Authority indicated that, at least partly because of the previous B-double ban, it had lost a large volume of the petroleum trade to South Australia.

The Australian Wheat Board has prepared and published Port Cost Differentials which provide a signal to growers about the least cost grain path to the overseas customer, including the impact of port authority charges. The Grains Council of Australia stated, however, that:

the effect of PCDs is restricted due to the location of grain growing areas relative to existing ports and established road and rail infrastructure which often restricts growers' ability to access other ports. (Sub. 56, p. 9)

Land transport planning is made less efficient and more costly for a state and for the nation as a whole when regulation prevents competition between the various modes of transport. The Commission considers it imperative that the dismantling of the remaining regulatory structure restricting land transport mode of use proceed as rapidly as possible.

#### **4.3.4 Cabotage**

Australia restricts foreign shipping from competing with Australian vessels for work in the coastal trades. This policy, known as 'cabotage', has operated for many years, and is aimed at protecting Australian shipping operators and seamen.

Under certain restrictive conditions, foreign vessels can gain single voyage permits, or multiple voyage permits, to carry coastal cargo. However, permits issued in 1991-92 accounted for just over 1 million tonnes, or only 1.3 per cent of coastal trade (SIRA 1992). No continuous (multiple) voyage permits were issued in that year. The Western Australian Port Authorities indicated that the majority of single voyage permits for foreign liner service operators related to voyages to and from Western Australia.

Over time, there has been a steady decrease in the proportion of intra- and interstate trade carried by sea. Coastal shipping now remains viable predominantly for high volume, low value cargo on long haul routes where there is little possibility of effective competition from other transport modes. The vast majority of coastal shipping is bulk cargo.

The removal of cabotage would not benefit all of Australia's ports equally, but it would increase the scope for competition between them. Transport operators would continue to make trade-offs between convenience, timeliness, freight and handling costs.

However, factors other than cabotage affect the nature and extent of coastal sea trade. The Australian National Maritime Association considered that land-based waterfront charges, rather than blue water costs, reduce the competitiveness of coastal shipping relative to other modes of transport. Furthermore, the 'subsidisation which is attached to road and rail transport' continues to reduce the competitiveness of sea transport (transcript, p. 1127).

ANL Ltd commented that:

competition from road and rail, coupled with high costs of handling cargo across the wharves, have been by far the most important factors behind the decline in coastal shipping. (Sub. DR138, p. 4)

The Commission acknowledges ANL's comment. Nevertheless, it considers that the removal of cabotage would open up the possibility of a greater proportion of domestic cargo moving by sea. In this respect, the Western Australian Port Authorities said there is 'interest in shipping circles in Western Australia in taking more advantage of the excess liner service capacity in and out of Fremantle on the trans-continental route' (sub. DR132, p. 22).

While the Commonwealth Government has undertaken a number of initiatives in recent years to improve productivity and reduce costs of coastal shipping, the Commission remains concerned that reforms so far do not address directly the lack of competition on the Australian coast. The voyage permits system has freed the coastal trade only to a very limited extent and price considerations remain absent as a criterion for the availability of permits.

There is good reason to discontinue the current policy of cabotage on the Australian coast. It reduces the competitive pressure between Australia's ports and, more importantly, adds to the cost of transporting domestic freight. An examination of the various options is beyond the scope of this inquiry, but they warrant further urgent attention by the Commonwealth Government.

#### **4.3.5 Pan-Australian freight rates**

Pan-Australian ocean freight rates apply in some trades.

They set a relatively uniform freight charge regardless of the Australian port from which the cargo leaves or to which it is consigned. Pan-Australian rates can also, in some cases, equalise land transport costs of shippers in moving cargo to particular ports (see TPC 1992, Appendix B). A common set of pan-Australian

rates can apply to members of a particular conference. While pan-Australian rates can also apply for non-conference lines, each line would independently have to arrive at its own rate structure.

Pan-Australian rates can affect the degree of competition between Australian ports by disguising from shippers the true freight cost and, in some cases, could involve cross-subsidies between shippers in different ports.

However, capital city price equalisation is a common competitive practice in many industries, and a more competitive market for shipping services would not necessarily result in freight rates (for each separate trade) which differed markedly from port to port. The outcome would depend upon many factors, including the negotiating strengths of the shipping lines and shippers, actual costs incurred in moving freight, ship itineraries, frequency of call, the volumes of cargo exchanged at the various ports, and the extent of competition between the various shipping lines.

Pan-Australian rates, at least in their present form, are inextricably bound up with the system of conferences whereby many of the operators in a particular trade agree on matters such as freight rates and scheduling. Such agreement (for export trades) is facilitated by the exemption of conferences from various provisions of the Trade Practices Act. The Commonwealth Government has established a panel to review Part X of the Act, which provides for those exemptions. It is to report to the Government by 31 October 1993.

#### **4.4 Summary and conclusions**

Competition between ports in Australia is mainly determined by physical, demographic and market factors. The institutional and regulatory environment—as it reflects on port operators through port authorities, or through other actions of government—can also have an effect.

Some progress has been made towards improving incentives for port authorities to operate efficiently and effectively. In the Commission's view, competition between ports would be enhanced if further progress were made, preferably on a more consistent basis between the various states (see Chapter 8).

Maritime regulations also impact upon competition. ATAC should review them to ensure that they are reduced to a minimum, consistent with appropriate safety and environmental needs.

It is imperative that the dismantling of the remaining regulatory structure restricting land transport mode of use proceed as rapidly as possible.

There is good reason to discontinue the current cabotage policy. It reduces the competitive pressure between Australian ports and, more importantly, adds to domestic freight costs. An examination of the various options is beyond the scope of this inquiry, but they warrant further urgent attention by the Commonwealth Government.

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## 5 EFFICIENCY WITHIN PORTS

Despite reported improvements to stevedoring and other port services, there is a widely held view that the benefits of reforms are being impeded from flowing through the transport chain to port users. This chapter considers what role, if any, port authorities have in promoting efficiency within ports so that benefits of reforms at all levels can be generally enjoyed throughout the community. It examines:

- the features of markets within ports, to determine where activities may naturally form a monopoly because of economies of scale, and the significance of factors affecting ease of entry;
- ways of preventing the abuse of monopoly power where natural monopolies and significant deterrents to entry exist; and
- appropriate licensing policies for services such as towage and pilotage.

### 5.1 Market structures

Stevedoring, towage and pilotage are three key port activities over which port authorities have traditionally had some control, through their leasing and licensing policies. This section examines the market structures of these activities and the effect of these structures on the efficiency of port operations.

Market circumstances and structures are not static. They differ significantly between ports and change over time. Factors affecting the ease of entry for firms willing to provide port services vary according to the type of cargo handled within ports. But trade patterns also vary and technological progress affects cost structures.

Many port activities can be characterised as natural monopolies, ie the entire market for the service can be supplied by a single firm at lower cost than by any combination of two or more firms. Natural monopoly is particularly likely to characterise container terminal operations and towage.

Economies of scope (ie factors which make it cheaper to produce a range of related products than to produce individual products on their own) apply to some ports and not to others.

The following discussion covers the broad range of circumstances encountered in Australian ports. It does not attempt to describe the market structures within individual ports.

### 5.1.1 Terminal operation

#### *Economies of scale*

The Commission obtained a variety of estimates of economies of scale for container terminal operations. The PMA estimated that a throughput in the order of 200 000 to 250 000 TEUs is necessary to employ technology that gives the lowest per unit costs that can be achieved. Conaust Ltd, whose submission argued that there should be at most one terminal operator in each port, provided the results of a port planning model which showed that unit costs per TEU continue to decline up to and beyond an annual terminal throughput of 500 000 TEUs.

National Terminals (Australia) Ltd supported the findings of Conaust's model, but suggested other factors needed to be considered:

The major finding of Conaust's report is that there are economies of scale to be achieved by operating single container terminals in Australia's major ports. NTAL supports this finding ...

There are two major factors however which have to be taken into account in an assessment of the feasibility of Conaust's single terminal proposals:- (i) The extent to which a monopolistic terminal operator ... would be encouraged to reduce its costs ... is questionable because in the absence of competition is there incentive to reduce costs? ... (ii) ... the possibility that single terminals could now emerge from the existing infrastructure in major ports is remote because of ... high sunk costs, both public and private, in the existing terminals. (Sub. 100, pp. 1-2)

Other port authorities gave estimates of the minimum annual TEU throughput required to support a single crane container terminal operation. The Port of Geelong Authority said that level of throughput was 50 000 TEUs and the South Australian Government said that trade volumes of between 70 000 and 100 000 TEUs per annum are required before a minimum facility container terminal will meet all costs and provide an acceptable return on assets.

On the basis of evidence received, the Commission has formed the view that, with the possible exceptions of Melbourne, Sydney and Brisbane which have annual throughputs of about 650 000, 500 000, and 180 000 TEUs respectively, container terminal operation is a natural monopoly in Australian ports. That is, the combination of current market size and available economies of scale are such that the total cost of providing a container terminal service is lower under a single terminal operation than under two or more within a port.

Conventional stevedoring usually occurs at common-user berths where the costs of developing the berths and buildings were met by the port authority. Cranes are usually provided by the port authority and can be hired as needed, while other mobile equipment required for the stevedoring operation can be leased. For

operations such as these the available economies of scale appear to be insignificant.

### *Factors affecting ease of entry*

Many factors affect the ease of entry to container terminal operations. These factors may be absolute barriers to entry, or may just raise the cost of entering the market. Some, including the substantial investments required in specialised and immobile container handling facilities, are inherent in the nature of the activity. Some are associated with a high degree of vertical integration. Others are associated directly with activities of port authorities through lease conditions and provision of complementary port infrastructure.

For many small ports the potential annual throughput of containers is insufficient to warrant investment in specialised facilities. The scale estimates reported above indicate that terminal operations of less than, say, 50 000 TEUs per annum have no prospect of realising a commercial return on the necessary investment. Even so, some port authorities with lower container throughput invest in container terminals.

The port of Adelaide has one container crane operation and Launceston has plans to install one. ATAC (1992a) reported that Adelaide and Launceston had throughputs of 42 740 and 37 160 TEUs respectively in 1991-92. Both ports appear to accept the view that their operations will not achieve acceptable returns, but justify the investment on other grounds. The South Australian Government stated that external benefits to the community could be achieved despite low levels of throughput:

The evidence available ... would suggest that trade volumes of between 70 000 and 100 000 TEUs per annum are required before a minimum facility container terminal will meet all separable and non-separable costs and directly provide an acceptable return on assets to the stakeholder. However, the evidence available ... also indicates that positive economic returns to the whole state community are achieved at much lower throughputs. These positive returns can start at throughputs of between 20 000 and 30 000 TEUs per annum. (Sub. 32, p. 22)

The General Manager of the Port of Launceston Authority agreed that a container crane in Launceston would not earn an adequate rate of return, but stated that the objective in establishing it was to facilitate trade rather than meet costs:

There is not the shadow of a doubt that this facility [container crane] will be greatly underutilised like many other facilities in the Tasmanian port system ... Our role is to seek to facilitate the movement of shipping and trade through this port ... almost regardless of cost, and that means we have got a heap of facilities that ... wouldn't earn a reasonable rate of return. (Transcript, p. 360)

A container terminal requires substantial investment in facilities. The establishment outlay, although large, does not of itself prevent entry. But the

fixed nature of some of the facilities represents a formidable sunk cost which cannot readily be recovered on early exit from the industry. For example, while there may be a market for used container cranes which can be transported to other ports, wharves, reinforced aprons and specialised storage facilities are immobile and have limited alternative uses. High capital requirements and the sunk cost nature of some of the necessary investment thus combine to act as a deterrent to entry to container terminal operations.

Conaust listed a number of essential basic port infrastructure facilities required by terminal operators, including shipping channels, breakwaters, swing basins, wharf aprons and navigation aids (sub. 66, p. 18). The number of terminal operators may be restricted by the location or availability of these facilities. From the available evidence, this does not seem to be an issue in Australia at present.

The vertical integration between shipping companies and stevedores, combined with relatively few, large container stevedoring groups in Australia, was said by some to deter entry to container terminal operations. However, other evidence questions this conclusion.

Table 5.1 shows container terminal market shares for Australia's major ports in June 1992. Three stevedoring groups handled about 90 per cent of Australia's container trade. Two of them are vertically integrated with shipping companies in terms of ownership. The P&O Group wholly owns Conaust Ltd, one of the three major stevedores, and has an 80 per cent interest in Container Terminals of Australia Ltd, which operates in Port Botany. ANL Ltd owns 50 per cent of each of the two companies which form another major stevedoring group (National Terminals (Australia) Ltd and Brisbane Gateway Terminals Ltd). The remaining 50 per cent is owned by James Patrick & Co Pty Ltd, a wholly owned subsidiary of Howard Smith Ltd which is also a ship operator, towage operator and shipping agent. The Trade Practices Commission is currently examining a proposal for a merger between the third major stevedoring group, Strang Patrick Stevedoring, and National Terminals (Australia) Ltd.

Vertical integration between container terminal operators and shipping companies has the potential both to increase the efficiency of stevedoring and to deter entry. Efficiencies arise if vertical integration provides a more coordinated approach than otherwise to the servicing of ships. Turnaround times may be reduced.

**Table 5.1: Container terminal market shares in Australia's major ports, June 1992 (%)**

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	<i>Melbourne</i>	<i>Sydney</i>	<i>Brisbane</i>	<i>Fremantle</i>	<i>Adelaide</i> <sup>a</sup>	<i>Tasmania</i>
Conaust/CTAL <sup>b</sup>	32	44	57	58	98	3

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NTAL/BGTL <sup>c</sup>	34	46	32	35	na	32
SPS <sup>d</sup>	24	10	11	7	2	na
USS <sup>e</sup>	na	na	na	na	na	30
Other (Brambles/TT <sup>f</sup> )	10	na	na	na	na	35

na=not applicable. <sup>a</sup> Sea-Land Containerised Freight Services Pty Ltd became the Adelaide container terminal operator in January 1993. <sup>b</sup> Container Terminals of Australia Ltd. <sup>c</sup> National Terminals (Australia) Ltd and Brisbane Gateways Terminals Ltd. <sup>d</sup> Strang Patrick Stevedoring. <sup>e</sup> Union Steamships. <sup>f</sup> Transport Tasmania.

Source: National Terminals (Australia) Ltd 1992, p. 5, revised after discussions with NTAL.

Potential entrants may be deterred if a shipping company continues to use its own stevedore in the face of lower rates from competitors. For example, National Terminals (Australia) Ltd stated in a submission to the TPC:

terminal operators tend to attach a premium for shareholder cargo (as the shareholder is financially committed to utilising the services of the stevedoring subsidiary). In order to absorb any excess capacity the terminal operator is then able to provide lower tariffs to the general market which enhances competition for the servicing of smaller shipping lines. (NTAL 1992, p. 22)

Other participants expressed concern at the level of vertical integration. The Federal Chamber of Automotive Industries stated:

we can't even engender competition between stevedores because there's a lineal system between the shipowner, the ship agent and the stevedore concerned ... (Transcript, p. 509)

Shipping lines may also schedule ports of call according to container terminal ownership within ports. As noted in Section 4.1.6, there is the possibility of cargo being directed away from Adelaide by the shipping lines to their associated terminals in other ports. Further, the Port of Geelong Authority commented:

Shipping lines that experience a large degree of vertical integration, including a direct involvement in terminal and stevedoring operations, endeavour to centralise cargoes in one particular port. (Sub. 82, p. 16)

However, views were put to the Commission that genuine competition exists between stevedores despite the level of vertical integration. Conaust Ltd commented:

I wanted to make the point quite clearly that there is no way that a port operator is going to favour his shipping line or the shipping line that he's associated with to the disadvantage of anybody else. (Transcript, p. 775)

ANL Ltd stated:

we have noticed that there is competition between stevedores. Even when you only have two stevedores in a port there is intense competition between them to get the business. (Transcript, p. 611)

The PBA noted:

there is genuine competition. People have a choice. Some of the conference lines, of course, make their own arrangements as to who they go to, but the general shipper has a choice ... (Transcript, p. 14)

Lease conditions could also affect ease of entry. If port throughput is such that a single operation provides the least cost service, a potential new entrant must choose between investing in new facilities and winning all of the port's container trade against fierce competition from the incumbent (unless an exclusive lease has been provided to the incumbent), seeking to buy out the lease (if it is tradeable), or waiting to tender for the existing lease when it comes up for renewal. Long leases can thus deter potential entrants. As the TPC commented:

long leases have the potential to entrench market power by eliminating for long periods of time the possibility of effective new entry ... Leases of port land for container terminals typically run for initial periods of between 20 and 25 years. (TPC 1992, pp. 61–62)

Most leases in Australian ports do not appear to contain provisions that explicitly prevent new entrants to the market. However, general port authority policy regarding the appropriate number of players may act to deter entry.

Features of the industry or market structures can therefore deter entry to container terminal operations to a significant degree. Those that depend on the regulatory function of port authorities can be lessened through changes to leasing policies.

### **5.1.2 Towage**

#### *Economies of scale*

For many small ports a single tug satisfies demand and may have substantial excess capacity (see Table 5.2). Even for larger ports where several tugs operate, towage may be provided at least cost by a single operator. The scope for achieving higher capacity utilisation by operating a vessel in more than one port is restricted by the large distances between major Australian ports.

**Table 5.2: Ports requiring one or two tugs**

<i>One tug ports</i>	<i>Two tug ports</i>
Bundaberg	Cairns
Mourilyan	Mackay
Devonport	Townsville
Port Lincoln	Geelong
Thevenard	Portland
Wallaroo	Westernport
Albany	Burnie
Esperance	Launceston
	Port Pirie
	Whyalla
	Bunbury
	Geraldton

Source: National Bulk Commodities Group, Sub. DR128, Attachment.

In its 1990 report on Towage Charges (PSA 1990b), the Prices Surveillance Authority indicated that economies of scale in towage operations extended beyond individual ports to the regional and national levels. At the regional level a major economy was said to flow from the ability to spread the cost of auxiliary tugs over a number of ports. At both regional and national levels centralised administration, joint use of communication facilities, and rationalisation of fleets were cited as sources of scale economies.

The Commission has therefore reached the conclusion that towage is a natural monopoly in the majority of Australian ports.

#### *Factors affecting ease of entry*

A number of factors affect ease of entry to towage operations in most Australian ports. Some depend on features of the market, such as economies of scale and vertical integration within the maritime sector, and others are regulatory in nature, such as the licensing approaches of port authorities.

Economies of scale have contributed to a high level of concentration at the regional level and a small number of major operators at the national level. The PSA reported that in 1990 three companies (Howard Smith, Adsteam, and Brambles) either individually or in joint ventures controlled towage services in about 80 per cent of ports (see Table 5.3). Consequently, a single tug operator seeking entry to a port is often faced with a single incumbent who also has a regional monopoly. In order to match the cost structure of the incumbent (apart from dealing with a potential price war for the market) entry at the regional level may be required, in which case the stakes of any battle for market share would be considerably higher than for entry to a single port.

Entry costs to the towage industry are not insignificant. The PSA reported that a single tug can cost up to \$7.5 million, and that annual crewing costs could amount to \$1 million for the full time operation of a single tug.

However, potential capital loss upon exit from the industry is less in the case of towage than for terminal operation. Tugs are relatively mobile assets that can be bought and sold for use in various markets. Lower exit costs and less significant sunk costs for this industry can therefore mitigate somewhat the problem of economies of scale.

Table 5.3: **Towage operators in various ports**

<i>Howard Smith</i>	<i>Adsteam</i>	<i>Brambles</i>	<i>McIlwraith McEacharn</i>	<i>P&amp;O</i>	<i>Stannard Bros.</i>	<i>BHP Transport</i>
<i>Single Operators</i>						
Geelong	Adelaide	Sydney	Dalrymple	Geraldton	Cape	Hay Point
Bundaberg	Port Pirie	Newcastle	Bay		Curvier	
Melbourne	Whyalla	Hobart				
Westernport	Ardrossan	Burnie				
	Pt Stanvac	Launceston				
	Pt Bonython	Port Stanley				
	Pt Giles	Devonport				
<i>Joint Ventures</i>						
Sydney	Sydney					
Newcastle	Newcastle					
Brisbane	Brisbane					
Cairns	Cairns					
Mackay	Mackay					
Mourilyan	Mourilyan					
Townsville	Townsville					
Lucinda	Lucinda					
Abbot Point	Abbot Point					
Gladstone	Gladstone					
Eden	Eden					
Fremantle	Fremantle					
Albany	Albany					
Bunbury	Bunbury					
Port Hedland	Port Hedland					
Weipa			Weipa			
Kwinana	Kwinana			Kwinana		
	Port Kembla	Port Kembla				
	Port Lincoln				Port Lincoln	
	Thevenard				Thevenard	
	Wallaroo				Wallaroo	
	Darwin				Darwin	

Source: PSA 1990b, various submissions.

The three major towage companies operating in Australia all have ownership links with other maritime operators such as shipping companies, stevedores and shipping agents. Any vertical integration derived from those links could deter entry to towage (as well as being a source of efficiency in overall maritime operations).

The terms and duration of a towage licence may deter entry. Unless licences are tradeable, the longer the licence period, the less frequent is the opportunity for a

new entrant to replace an incumbent operator without the risk of either party incurring the high expense and loss associated with competition for market share.

Licences may be provided on either exclusive or non-exclusive terms. An exclusive licence may be justified by the port authority on the basis that without exclusive rights a satisfactory standard and level of an essential port service may not be available to all port users. Several participants claimed that for some of the smaller regional ports it may be difficult to attract a towage operator unless exclusive licences are granted. This led the National Bulk Commodities Group to propose the following options:

- existing arrangements of exclusive licences in smaller regional ports;
- non-exclusive licences allowing more than one operator to compete for the provision of services in larger ports;
- port authorities provide towage infrastructure and award short term management contracts; or
- port users, either individually or collectively, own and operate their own tugs.

The use of exclusive licences may be coupled with a short licence term to ensure competitive pressures are maintained (ie serial competition). An example of such a licence is provided by the Port of Geelong:

Towage services in the Port of Geelong are reviewed at regular intervals and a licence is awarded to the best applicant. Expressions of interest in providing towage services within the port are undertaken on a national basis, thereby ensuring all potential entrants have an equal opportunity to tender for the licence. Currently there is a 3-year licence period. (Sub. 82, p. 18)

The Commission understands that exclusive licences have also been issued in Portland and in the northern Queensland ports.

Some participants, such as the New South Wales Coal Association, expressed concern at the issuing of exclusive licences:

the NSWCA considers the existence of exclusive licensing agreements has tended to result in excessively high charges and restrictive work practices. (Sub. 45, pp. 7–8)

An exclusive, non-tradeable licence represents an absolute barrier to entry for the duration of the licence.

Issuing a non-exclusive licence ensures that this regulatory barrier is removed. The Port of Devonport Authority gave evidence of such a licence:

the Authority issued North Western Shipping and Towage with a non-exclusive licence to operate within its jurisdiction. This licence may be withdrawn by the Authority by giving no less than three months' notice. (Sub. 13, p. 15)

### 5.1.3 Pilotage

#### *Economies of scale*

The basic ingredients of pilotage are a suitably qualified pilot and a means of conveying the pilot from shore to ship. While the acquisition of qualifications may not incur a high capital outlay, considerable capital may be tied up in the vessels used to transport pilots from shore to ship. Port Phillip Sea Pilots Pty Ltd provided evidence that the cost of launches it uses for boarding outside Port Phillip Heads is more than \$650 000, and that the total value of its property, plant and equipment exceeds \$3.5 million. The company operates five of these launches.

However, pilots do not have to own the means of boarding the vessels they pilot. Launches (or helicopters) could be owned separately and hired by pilots as required. There is thus less opportunity to exploit economies of scale than in stevedoring and towage. Despite this, participants such as the South Australian Government and the Western Australian Port Authorities were of the view that pilotage is a natural monopoly:

Within the ports of South Australia towage and pilotage are natural monopolies with demand for these services insufficient to warrant more than one service supplier. (Sub. 32, p. 23)

In the context of Western Australian ports, a range of services, which may be different for each port, operate under conditions that suggest natural monopoly. These services may include towage, pilotage and stevedoring. (Sub. 44, p. 11)

The Port of Devonport Authority pointed out that its pilots undertake a range of other tasks when not employed in pilotage duties, and claimed that this has resulted in an efficient provision of pilotage services:

nautical officers perform a significant range of non-pilotage duties, duties that would need to be performed even if the Authority did not provide the pilotage service. Therefore the ability to utilise the nautical officers for duties other than pilotage ... ensures provision of a least cost service. (Sub. 13, pp. 14–15)

The Authority also claimed that rationalisation of pilotage under an agreement with the Port of Launceston Authority had not worked, but that informal arrangements exist to share pilots:

In 1989 the PDA entered into a formal Pilot Interchange Agreement with the Port of Launceston Authority. This involved pilots from each port gaining licences to operate in the other with a view to rationalising the total number of pilots employed between the two ports. However the agreement lapsed ... an informal arrangement does continue to exist in order to give each port protection during periods of extended recreational and other leave. (Sub. 13, p. 14)

However, the Commission also found evidence that suggested pilotage could be undertaken on a part-time or contract basis. The National Bulk Commodities

Group quoted from the Central Queensland Coal Associates Agreement Act 1968:

the state shall provide and maintain a harbour master and all necessary pilot services for ships using the harbour. Such provision may be made on a part-time basis having regard to the volume of work involved. (Sub. 98, p. 8)

The Marine Board of Hobart commented:

It is not possible to have competition in the provision of pilotage and towage services in Hobart as the market is too small (although it is contemplated that the Board may have some 'contract' pilots in the future and a reduced number of permanent pilots). (Sub. 30, p. 8)

The Commission is of the view that pilotage does not constitute a natural monopoly in larger ports. Where there is a sufficient number of ship movements to require a number of pilots, economies of scale are not sufficient to prevent private pilots from competing for the right to provide a service.

In the smaller regional ports, the lack of sufficient ship movements to employ even a single pilot on a full-time basis does not necessarily constitute a natural monopoly in pilotage. The employment of competing pilots on a part-time or contractual basis, or the availability of pilots to service more than one port, may satisfy pilotage requirements in these ports.

#### *Factors affecting ease of entry*

The key market factors governing entry to pilotage appear to be the requirements to be suitably qualified and to have ready access to a reliable boarding system. While the cost to an individual of obtaining pilot qualifications may be considerable, it is generally incurred by nautical officers in the course of their careers and does not significantly deter entry. Neither does the cost of access to a boarding system, even if it takes the form of a launch owned by the pilot.

The major impediments to entry are regulatory.

Port authorities have an interest in ensuring that a reliable and safe pilotage service is available to ships which visit their ports. As a consequence they usually issue licences which include certain conditions. For example, they require pilots to hold qualifications relevant to the port, and the licences issued for pilotage in both Sydney and Melbourne specify that the service must be available 24 hours a day, every day of the year. The inclusion of such conditions in licences would appear to be consistent with normal commercial practice.

Other regulatory barriers, such as the issue of an exclusive right to provide a pilotage service (as is the case for many ports including both Sydney and Melbourne) represent an absolute barrier to entry for the duration of the licence.

Some port authorities may offer exclusive licences or provide pilotage directly to prevent abuse of market power in smaller ports. The Western Australian Port Authorities commented:

[For] services [such as] towage, pilotage, and stevedoring ... port authority involvement, either directly or through regulation may be necessary to protect users from the potential abuse of monopoly power. (Sub. 44, p. 11)

In response to the Draft Report, the Western Australian Port Authorities further stated:

We believe that the [involvement] of the port authority in a facilitative role is more capable of producing results in the public's best interest than the approach of issuing non-exclusive licences recommended by the Commission. (Sub. DR132, p. 17)

However, some participants, such as CRA Ltd and the Shell Company of Australia Ltd, considered there is some scope for increased competition in the provision of pilotage services through removal of regulatory barriers:

Suppliers of services such as ... pilotage ... should be encouraged to compete for port business. There should be no artificial restrictions on competitive entry. (Sub. 49, p. 21)

Where possible a range of pilotage companies should be available at the major ports to ensure true competition which should lead to lower charges. (Sub. 35, p. 9)

In summary, market factors deterring entry to pilotage are negligible. Regulatory factors are significant in some ports.

## **5.2 Preventing abuse of market power**

As discussed above, natural monopolies appear to characterise container terminal operations and towage in many ports. Where natural monopolies exist, the most efficient (least-cost) outcome is for the service to be provided by a single supplier. But a monopoly supplier may be able to take advantage of market power to restrict output and raise prices, and has less incentive to minimise costs. Some services which are valued by potential users at more than their incremental cost of production will not be provided.

Where deterrents to entry are low, the threat of entry by a competitor will usually be sufficient to deter monopoly pricing. A single supplier therefore has limited scope to exploit market power. The mere threat of entry would generally provide sufficient incentive for a single supplier to produce and price efficiently. So long as there are no regulatory barriers to entry, normal market forces could be expected to provide an efficient outcome.

There are no container terminal operations in Australian ports where both a natural monopoly appears to exist and the deterrents to entry are low. However, as discussed in Section 5.1.2, there may be cases where towage is a natural

monopoly, but deterrents to entry are less significant (eg if the licence were non-exclusive).

In markets where there is the combination of natural monopoly and high barriers to entry (such as container terminal operations), there is scope for a monopoly supplier to exploit market power. In such cases, consideration needs to be given to how best to control that market power.

Licence issues are discussed in Section 5.3. For leasing, the three broad approaches discussed below encompass the range of views expressed during the course of this inquiry on whether port authorities have a role in regulating the commercial relationship between private monopoly operators within ports and their clients (eg between stevedores and shipping companies).

Under the first approach, the port authority would have no influence on the market power of leaseholders, any such power being regulated by non-industry-specific bodies. Under the second and third approaches, there would be an active role for port authorities in preventing the abuse of market power, either through leasing policies or enforcing competition.

### **5.2.1 No port authority influence on market power of leaseholders**

Although the Commission has come to the view that in many Australian ports container terminal operations and towage are natural monopolies (the former also having significant deterrents to entry), there is a wide diversity of circumstances between ports, and circumstances are likely to change over time. For those large capital city ports least likely to be characterised by natural monopoly and deterrents to entry, the optimum number of operators in an activity is also likely to change with changing market circumstances.

The Commission's strong preference is to allow market forces to determine how many private operators provide non-core services within a port, and who those operators should be. In the case of stevedoring, this approach requires additional waterfront land to be available for lease to potential new entrants and for leases to be tradeable. The price at which leases are sold should be the market price as determined by public tendering either when existing leases expire, or when the port authority makes port-zoned sites available following expressions of interest in developing new facilities. The reserve price should reflect the value of the site in its most profitable alternative use, consistent with the port plan. The value should be determined by independent valuers.

### *Response to the Commission's Draft Report leasing proposals*

Several participants supported the Commission's Draft Report preference that market forces determine how many operators undertake non-core leasing activities within a port. The Grains Council of Australia said:

The Commission has recommended that to prevent or minimise the monopoly supplier of a service (within a port) exploiting their market power, port authorities should make sites available for lease on demand and leases should be non-exclusive and tradeable ... The GCA fully supports this recommendation and considers that, in some cases, the simple threat of entry by a competitor may be sufficient to deter monopoly pricing of services. (Sub DR144, p. 5)

Similarly, the National Farmers Federation commented:

NFF endorses the Commission's recommendation of the landlord model. The fundamental purpose of this model is to allow competition between private providers of non-core port services. Hence we support recommendation 5.2.1, which suggests making sites available for lease on demand, on a non-exclusive and tradeable basis. (Sub. DR119, p. 5)

Shipping Conferences Services Ltd stated that:

In particular, SCS agrees with the Commission's conclusion that the port authority of the future should not have any role in regulating the commercial relationship between leaseholders providing services and their customers. (Sub. DR110, p. 9)

However a number of participants, including the major port authorities, supported the recommendations in principle but indicated that they intend to pursue a more interventionist role than envisaged by the Commission.

The Victorian Government said that leases on land reserved for port purposes should be tradeable and should be for periods agreed between the port authorities and the lessee, but contended that:

port authorities should be able to exert some influence over the effective and efficient use of the site as the lessees' performances will determine the overall performances of the port which in turn will impact on the State. (Sub. DR152, p. 4)

It further stated that:

Awarding of leases on the basis of the highest bid is not supported because competition is restricted by the volume of trade and the availability of large areas of land ... The Victorian Government prefers the current approach of awarding leases on port land on the basis of the feasibility of the proposal and its relation to port business ... the rent is determined on the unimproved value of the land and the value of the improvements. (Sub. DR152, p. 4)

The PMA strongly supported the view that market forces be the major determinant of the services offered in large ports, but expressed concern in a number of areas. It stated that, while effective utilisation of port authority assets will generally be achieved by allowing lessees to pursue their business with

minimal interference by the port authority, port authorities should have a broader role in influencing the behaviour of port operators, and that performance clauses can be used to ensure port authority assets are effectively used by leaseholders:

port authorities have a legitimate interest in ensuring that the assets which they lease are used effectively ... Port leasing policy should therefore not prevent port authorities from seeking to influence operator behaviour ...

The PMA's strategy is designed to ensure that investment in new terminals is not required as a result of the failure of existing operators to achieve full terminal capacity. Performance clauses in the Swanson Dock East lease link investment by the lessee to trade levels ... Similar conditions have been included in the Swanson Dock West lease ... (Sub. DR152, PMA letter, pp. 6–7)

Regarding the Commission's Draft Report proposal that leases be tradeable, the PMA suggested the failure of a significant port operator could have a major impact on efficiency and costs. The PMA supported the tradeability of leases being subject to port authority approval:

Any trading in leases should ... be conditional on the new lessee being able to meet basic port authority requirements. These would usually be confined to financial viability and the capacity to meet any non-financial condition in the lease. (Sub. DR152, PMA letter, p. 6)

The PMA did not support the allocation of leases to the highest bidder:

the bidding process could serve to increase overall port prices. This is a particular danger if the capacity of existing facilities is inadequate or the costs of developing the next cheapest facility are high ... PMA rentals are currently based on market valuations as determined by a panel of independent valuers. (Sub. DR152, PMA letter, p. 7)

The NSW Government said that:

... all decisions regarding the leases for the supply of land and/or facilities will be determined by the board based on the commercial benefits of each proposal rather than on a broad set of ground rules as proposed by the Commission. (Sub. DR145, p. 6)

It added that land owned by the MSB and its subsidiaries is made available for port-related purposes including stevedoring, but opposed the tradeability of leases:

NSW is of the view that the most appropriate type of lease for NSW ports is short term (where appropriate), non-exclusive, non-transferable and non-tradeable ... Tradeable leases can encourage a 'quick sale' mentality amongst some operators which is not in the best interests of the industry as a whole ... NSW does not wish to encourage speculative activity within its ports. (Sub. DR145, p. 5)

The PBA also saw a role for itself in influencing the operations of leaseholders. In regard to the issue of leases, the Authority told the Commission that where the likelihood of effective competition is small:

this Authority believes that other criteria, besides just being the highest bidder, should apply in assessing bids ... All relevant criteria such as proposed charging structure,

performance measures, handling times, cargo availability, should be considered in assessing the relative merits of submissions received. (Sub. DR133, p. 5)

The PBA agreed with and endorsed the recommendation that port authorities be responsible for the provision of sites on a non-exclusive basis, but commented:

With regard to the transference of leases, the Authority recognises the rights of lessees under law and would only seek to apply restrictions on lease transfer if a proposal was adjudged as being not in the best interests of the port. (Sub. DR133, p. 5)

The Western Australian Port Authorities stated:

There are a number of service criteria that ... need to be taken into account. These criteria include vessel turnaround time, time for clearance of cargo, the type of physical resources to be used and the capacity and capability of the operator. (Sub. DR132, p. 16)

The Fremantle Port Authority argued in favour of its regulation of port operators in Fremantle, and the inclusion of service criteria in leases:

In a port the size of Fremantle a strong case exists for the port authority to regulate in respect of the provision of major port services such as stevedoring and to restrict the number of leases granted, in the best interests of port users ...

The Fremantle Port Authority also contends that there is a case for lease agreements to include various performance and service standards and criteria to create incentives for increased efficiency and measures by which these gains can be passed on to users. In the case where the service is provided by one operator only, there is also a need for these criteria to include controls on pricing. (Sub. DR132, p. 16)

In regard to the Commission's proposal that sites be available for lease to potential new entrants, several participants pointed out that there may be practical limitations on the availability of suitable sites, although it was acknowledged that this is unlikely to pose any significant problem in the immediate future.

Other participants suggested that there should be some vetting of potential lessees before making further sites available. The New South Wales Coal Association for example said that there should be some assessment of the competence and intention of the proposed operator:

making sites available ... should be qualified by some assessment of the competence, ability (including financial ability) and intention of the proposed operator to provide services at that site. (Sub. DR114, p. 3)

National Terminals (Australia) Ltd, while broadly agreeing with the Commission's approach, said:

NTAL disagrees ... that leases should be awarded on the basis of highest bid ... by adopting one specific criteria the range of criteria which needs to be considered by the port authority is overlooked ... in a bidding situation the level of rental prevailing in the port should be a 'given' and not a criteria on which to evaluate bids for these significant capital developments. (Sub. DR142, p. 2)

Some participants said that, in the case of bulk terminal facilities, there are additional considerations in the awarding of leases. The Australian Mining Industry Council commented:

A number of bulk cargo interests require specific arrangements for port access critical to the integrated nature of their business. Often bulk or dedicated cargo users require special arrangements and infrastructure developments to enable the efficient handling of their cargoes. (Sub. DR129, p. 2)

The National Bulk Commodities Group was concerned at the length of leases for bulk operations:

Because of the integrated nature of their operations it must be recognised that bulk commodity exporters and importers can require specific long term leasing arrangements. (Sub. DR128, p. 2)

Similarly, the Australian Shipping User Group stated:

the needs of bulk cargo and other direct cargo interests ... require long term commercial relationships to support or protect their investments in plant which requires certainty of access to port facilities for the shipment of product ... (Sub. DR130, p. 2)

### *The Commission's views*

The Commission acknowledges that the process of allocating leases will require lessees to meet normal commercial prudential requirements and will include consideration of factors such as the required length of lease, services to be available to port users, and the lease price offered to the port authority. Considerations such as these are consistent with encouraging the most efficient use of port assets while maximising commercial benefits to the port authority.

However, a distinction should be drawn between lease conditions such as these, and performance conditions which impinge on the commercial relationship between the lessee and other port users. In the Commission's view, port authorities should have no influence over how a commercial service is delivered by lessees to port users. Neither should port authorities constrain lessees' pricing policies. Matters such as these are best left to negotiation between those directly concerned.

The Commission maintains the view that the availability of new leases and the tradeability of existing leases would facilitate the emergence of the most appropriate market structure according to the particular circumstances of a port, and allow that market structure to change over time. This would open the way to efficient, least-cost activity, to the benefit of port users and the wider community.

Importantly, this approach would not enshrine a natural monopoly, as would an exclusive lease, and it would not restrict the number of leaseholders. If a natural

monopoly is the market structure which results from potential competition, it would be allowed to emerge.

Whether the port authority should issue short- or long-term leases would not be an issue because new leases would be available at any time. (If the availability of land proved to be a constraint, the tradeability of existing leases would ensure that even if incumbent operators had long leases the market would be contestable.) Potential lessees would nominate their preferred length of lease in their bid. Length of lease would then be a matter for commercial negotiation between the port authority and the lessee, and would not be influenced in any way by a need to make the market contestable by introducing serial competition through the issuing of short-term leases.

Some port authorities consider that performance-based leases have the potential to provide the same results as competitive alternatives. However, there are practical difficulties in including performance conditions in leases. A port authority would first need to be satisfied that any costs of compliance, monitoring and enforcement were outweighed by efficiency gains attributable to the conditions. Conditions specified at the outset could prove to be inappropriate or could become obsolete over time. Periodic renegotiation of conditions throughout the term of the lease might be required.

In the case of port facilities leased by bulk cargo interests which have considerable capital tied up in their own bulk terminals, the Commission envisages that arrangements could be negotiated which might couple long leases with periodic reviews of their terms and conditions.

**Recommendation**

Port authorities should offer through public tender any available port-zoned land when interest is expressed in its commercial development. Incumbent operators should be eligible to tender. Leases should be:

- tradeable;
- for any length of time to be negotiated commercially between the lessee and the port authority; and
- awarded on the basis of the highest commercial benefit to the port authority, with the minimum acceptable bid being the lease value of the site in its alternative use, consistent with the port plan.

In the event that a monopoly or anti-competitive behaviour emerged under this approach, it is the Commission's view that the behaviour of the leaseholder, in terms of how market power is exercised, should be regulated through non-

industry-specific bodies such as the Trade Practices Commission and the Prices Surveillance Authority. The ability of such bodies to police monopoly or anti-competitive behaviour is therefore important. The costs of regulating to prevent the abuse of market power would be borne by these bodies.

The PSA has been involved in a number of investigations regarding ports (see Box 5.1). As a result of its towage inquiry, towage operators in major ports are subject to ongoing monitoring of charges and are required to notify the PSA of any proposed increases. Outcomes of its other inquiries have included a series of recommendations regarding how and on whom land-based charges are levied by ocean carriers and conferences, formal ongoing monitoring of coastal shipping freight rates, and monitoring of stevedoring charges.

#### **Box 5.1: Activities of the PSA in the maritime sector**

The Prices Surveillance Authority has published the following inquiry reports on various activities associated with shipping and the waterfront:

- coastal shipping freight rates (PSA 1990d and PSA 1992b);
- proposed port congestion surcharge for cargo handling at Sydney (PSA 1990c);
- harbour towage charges (PSA 1990b);
- charges by the stevedoring and container depot industries (PSA 1990a); and
- land-based charges in Australian ports by ocean carriers and conferences (PSA 1992a).

In short, recommendations from PSA inquiries have played a considerable role in exerting broad pressure for improved efficiency in port operations.

The TPC's charter is basically limited to competition issues. Its activities in maritime matters (see Box 5.2) have demonstrated that it has experience in investigating anti-competitive behaviour by port operators.

It has been suggested that port authorities should regulate the relationship between shipping companies and stevedores. However, the Commission considers that role to be outside the responsibility of port authorities and to belong properly to the TPC.

#### **Box 5.2: Activities of the TPC in the maritime sector**

In relation to the maritime industry, the Trade Practices Commission has been involved in:

- investigating a complaint by APSA under Part X of the Trade Practices Act regarding terminal handling charges by the North American conferences;
- conducting localised market inquiries into commercial matters affecting the container depot sector;
- revoking the authorisations of inter-company towage arrangements in key ports;
- adjudicating on the Conaust terminal acquisition proposal in Adelaide, with the rights to operate ultimately being resolved between landlord and tenant in another forum;

- adjudicating on the rationalisation of ANL and Union Shipping in Bass Strait, concluding that there would still be significant competitive pressure and allowing the parties to proceed; and
- publishing a draft report into port leasing practices (TPC 1992).

Some participants were concerned about problems that may arise if the monitoring of monopoly power is left to the TPC and the PSA. The Australian Wheat Board stated that compliance costs need to be considered:

Potential abuse of market power by operators is an issue of some concern. Monitoring by third parties such as the Trade Practices Commission or Prices Surveillance Authority offers one avenue of control. The administrative obligations and costs associated with the monitoring process would need to be minimised to ensure that they did not impose their own inefficiencies on operators and consequent costs on users. (Sub. DR115, p. 5)

Other participants, such as the National Farmers Federation, felt that these bodies lack the powers to deal with monopoly power:

as we all know the Prices Surveillance Authority has little real teeth to make its recommendations effective and if we were relying on them to protect us from privately-owned natural monopolies in crucial areas of the economy, that is in the provision of port services, then it would be a false hope really. (Transcript, p. 1116)

However, the PSA suggested there is ample evidence (referring to the PSA submission to the National Competition Review and recent PSA reports on the monitoring of stevedoring rates and towage) that it could provide an effective means of controlling monopoly power (sub. DR143, p. 1).

In summary, the Commission believes that the appropriate bodies to regulate the behaviour of industries within ports are those that apply to firms in all sectors, such as the TPC and the PSA. The Commission considered this issue in some detail in its recent report into Mail, Courier and Parcel Services (IC 1993) and concluded that general regulation is preferable to industry-specific regulation, because intervention only occurs when problems arise, a consistent approach can be applied across all industries and the risk of the regulatory body being captured by an interested party is reduced.

### **Recommendation**

Responsibility for guarding against the abuse of market power by port service providers should rest with non-industry-specific bodies such as the Trade Practices Commission and the Prices Surveillance Authority.

### 5.2.2 Port authority regulates through leasing policies

An alternative to allowing the market to determine whether or not a natural monopoly exists, and then using non-industry-specific regulatory bodies, is to first identify an activity which is (or is thought to be) a natural monopoly, issue an exclusive lease, and then restrict the monopolist's scope for abuse of market power by regulation through leasing policies and through the use of serial competition. The option of issuing multiple leases for the purpose of preventing a natural monopoly from emerging is discussed in Section 5.2.3.

The adoption of this approach implies that there are net benefits in having the port authority influence the market structure, production and pricing outcomes of activities undertaken by private operators within ports, while forgoing the opportunity of competition.

The basic ingredients of the approach are to:

- identify the natural monopoly;
- select the leaseholder;
- have an exclusive lease; but
- introduce contestability through serial competition; and
- consider the need for lease conditions.

One reason for taking this approach, as discussed earlier, may be that the powers of the PSA and the TPC to deal with natural monopolies are considered insufficient. Institutional arrangements for regulation of natural monopolies are currently under consideration by the National Competition Policy Review (Hilmer Committee).

#### *Identifying natural monopoly*

Under the first approach discussed in Section 5.2.1, a natural monopoly identifies itself and activities move in and out of the status of natural monopoly as the market determines over time.

For the second option, a judgment needs to be made each time the exclusive lease expires as to whether demand and supply conditions are such that a single supplier could satisfy market demand at least cost. For small ports that may be a straightforward decision, but for others there is likely to be some dispute. The scale estimates reported in Section 5.1.1 show that there is not widespread agreement on the extent of scale economies for container terminal operation.

In the event that an activity is not a natural monopoly, but is given monopoly status through the issuing of an exclusive lease, costs will be incurred through unnecessary regulation. An inefficient market structure with its associated

production and price distortions will be imposed on the activity within the port. This could result in significantly increased costs to users, as they would be denied the benefit that competition would bring in the form of pressure to pass on productivity improvements.

### *Method of selecting the exclusive leaseholder*

Whatever the method chosen to allocate an exclusive lease, it should be awarded on the basis of public tender. Allocation by private negotiation lacks transparency. Indeed, where a lease is exclusive, it may preclude potential entrants who are able to provide the service more efficiently than incumbents.

The lease could be awarded by public tender in one of two ways.

### *Highest bid*

In a competitive market, an efficient allocation of the right to provide a service can be achieved by offering the service for tender, calling for bids, and making the allocation to the highest bidder.

In the case of a port service clearly identified as a natural monopoly, this method would not necessarily provide an efficient outcome if bids were made on the basis of using market power to charge users monopoly prices (unless perfect price discrimination was adopted). This form of sale would not ensure that the lessee charged an efficient price. It would merely allow some, if not all, of the excess revenue to be collected by the port authority instead of the lessee. In these circumstances, users would generally face charges which exceed supply costs.

### *Lowest charges to users*

The second method of awarding a lease by public tender would place a pricing discipline on the successful bidder by employing a competitive bidding process in which allocation is made according to the lowest nominated maximum schedule of charges to users.

Under this approach, the port authority would be required to nominate the lease price at the time tenders were called. If that price were based on the lease value of the asset in its alternative use, a competitive bidding process would ensure that neither the port authority nor the leaseholder benefited from the monopoly power inherent in the lease. Prices to users would approximate those which would prevail in a competitive situation.

The TPC advocated this type of approach in its December 1992 draft report on port leasing policies (see Box 5.3). The TPC argued that awarding leases to the tenderer providing for the lowest maximum scale of service delivery charges would achieve a pricing result for users approximating competitive levels.

**Box 5.3: Summary of TPC draft report on port leasing policies**

The principal recommendations of this report are that there should be competitive tendering for leases, every 10 years (5 years if the port authority owns terminal assets), and that the criterion for the awarding of a lease be the service at lowest maximum scale of service delivery charges to users, given the port authority's nominated commercial rental. The TPC considered awarding leases to the operator prepared to pay the highest rental but opted against it on the basis that port authorities might extract monopoly rents from stevedores, resulting in higher prices to shippers.

The report included a proviso that the maximum price to users offered by the successful tenderer may be renegotiated when future leases are granted so that existing operators are not at a competitive disadvantage.

To overcome the anticipated reluctance of operators to invest in immobile, industry-specific capital equipment for just 10 years, the TPC recommended that the port authority (or next operator) acquire assets on the basis of an agreed formula at the end of the lease.

Source: TPC 1992.

While this approach places a discipline on pricing policies, it does not guarantee the most efficient outcome for users. The price charged for a service is just one element of its cost to port users. Others are the timeliness, adequacy, and reliability of the service available. A reliable, rapid turnaround facilitated by an efficient stevedoring operation is likely to be less costly to a shipping company than an unreliable, slow turnaround caused by a less efficient operation. A bidding system based solely on the lowest service charge would not necessarily favour the efficient stevedore and may even discriminate in favour of a bid offering a lower quality of service if the employment of outdated equipment enabled a low service cost to be tendered.

The TPC acknowledged that a potential disadvantage of its proposal is that the port authority needs to specify the service to be provided, make an assessment of the competing price/service quality trade-offs, and to monitor the level of service to ensure compliance. The TPC did not consider these to be major problems, however, because container handling and other stevedoring activities are well established commercial functions and performance conditions are increasingly stipulated in contracts. The TPC also implied that competition among stevedores would help to maintain quality standards.

This approach means that the port authority would have a specific role in ensuring the efficiency of the terminal operator through regulation of the price the operator could charge to shippers. Specific industry regulation by the TPC and the PSA would then be unnecessary, although standard regulatory features of the relevant Acts, as they apply to all firms, would still apply.

### *Serial competition*

Complementary action to the issuing of an exclusive lease (which would not be necessary under the Commission's preferred approach) would be necessary to make the market contestable from time to time. In this context the length of lease issued is an important consideration.

There is an active debate as to whether a contestable port environment, in which services are provided efficiently, can best be achieved with a short- or long-term lease. The discussion usually refers to facilities used for stevedoring, but it is also relevant for storage facilities and other port assets. A variety of approaches is adopted by Australian port authorities.

In Victoria, if facilities are provided by the lessee, terms can vary from one to twenty-one years with an option for a further twenty-one years. For facilities provided by the port authority, terms of up to ten years are granted, with options for further terms subject to negotiation.

For New South Wales ports, the MSB said:

it may be that the benefits from competition are outweighed by the cost savings available to one provider from economies of scale. Hence it may be better to simply maintain the potential for competition rather than necessarily having alternative suppliers for each service. Short term licences or leases and serial competition can assist in this respect. (Sub. 21, p. 26)

In practice, three different approaches can be adopted. They are:

- specify short-term leases;
- specify long-term leases; and
- invite tenderers to nominate their preferred length of lease.

Proponents of short-term leases claim that the frequent opportunity to change leaseholders makes the market for leases more contestable and provides an incentive for incumbent leaseholders to operate efficiently. However, short-term leases may not provide sufficient time for a lessee to learn how to operate a terminal efficiently and prices tendered may reflect the added cost this entails. In these circumstances the port authority may have difficulty achieving an adequate return on its investment in capital equipment or, alternatively, port users may be required to pay inflated prices for port services.

Long-term leases provide security of tenure to lessees. Joy (1989) believes that waterfront efficiency would be enhanced if terminal operators were encouraged to make long-term commitments to the infrastructure they require for their businesses, and then to take the rewards of the increased utilisation that their efforts and efficiency could generate. Critics of long-term leases, especially leases with renewal options, point to the scope they provide for complacency

because of the limited possibility of new entry. This would be exacerbated in the case of an exclusive lease. The problem could be relieved to some extent by incorporating performance conditions in the lease terms, but specifying such conditions in the face of twenty years of technological change may not be practicable. Frequent renegotiation of lease conditions is an alternative approach.

A common commercial practice is to allow interested parties some flexibility when tendering for leases. The Commission considers this practice should apply to the length of lease for port assets. Tenderers should be invited to nominate their preferred length of lease so that port authorities could consider all of the options rather than the limited set available when the length of lease is determined in advance.

### *Lease and performance conditions*

Lease conditions can be expected under all systems. Under the Commission's preferred approach, lease conditions would relate to the contract between the port authority and the lessee (eg to preserve port assets), whereas an approach which gave the port authority a role in regulating the commercial activities between leaseholders and other port users would include performance conditions in leases.

As outlined in Section 5.2.1, a number of port authorities use conditions to influence the performance of firms operating within ports. Whatever the conditions included in leases, the port authority needs to ensure that they do not unnecessarily impinge on the flexibility of holders to make their own commercial decisions about how best to provide a service. Other practical considerations are performance monitoring requirements, and appropriate enforcement mechanisms and penalties for non-compliance with conditions.

### *Asset ownership and compensation for improvements*

The effective implementation of serial competition rests on the length of lease being of significantly shorter duration than is currently the norm. The amortisation period for major assets is therefore likely to exceed the lease period if serial competition is introduced. This raises the problem of the appropriate treatment of such assets when the lease expires.

The PMA is one authority that until recently employed a policy of asset reversion. That policy was reflected in lease conditions which provided that any improvements made by a tenant reverted to the port authority at the conclusion of the lease, even if the tenant received a further lease. The effect was that the tenant paid rent on self-funded capital investment, providing little incentive for port operators to make improvements to port facilities, particularly toward the end of a lease. This policy has now been amended in respect of new investments by

stevedores in Melbourne, with assets paid for by stevedoring tenants reverting to the port authority at the end of the lease if the tenant does not renew the lease.

Such policies are inappropriate for encouraging an efficient level of investment in port facilities. A method of determining compensation for such assets is therefore necessary. In the TPC's draft report on port leasing policies, two approaches were canvassed. The first uses the current system of periodic revaluation of assets for rent review purposes to value improvements at two or three year intervals. The second involves agreement at the inception of the lease on a formula for valuation of lessee assets, or on the method of resolving disputes about such valuation. Upon transfer of the lease, compensation would then be payable for the unamortised portion of those assets by the incoming lessee.

The Commission believes that periodic revaluation of assets or an agreed upfront valuation formula may be appropriate for valuing improvements by lessees. However, the method of dealing with such assets must be determined and clearly set out prior to entering a lease agreement.

### **5.2.3 Promote competition**

A third approach to addressing natural monopoly is to prevent it emerging. This approach has been employed by some port authorities. In its 1989 Waterfront Investigation report, the Inter-State Commission recommended that port authorities should regulate the provision of commercial services by the private sector within the port area so as to encourage competition and ensure that monopoly power is not abused. However greater competition within a port is not synonymous with greater efficiency for activities characterised by significant scale economies.

#### *Container terminals*

Some participants expressed the view that port authorities had detracted from the efficient operation of ports through their attempts to encourage competition, especially when facilities for multiple container terminal operations were provided. For example, Conaust Ltd said that:

perhaps it could be said that sort of a slavish preoccupation with introducing more players within a port can be and, we would suggest, is counter-productive in terms of the types of efficiencies that are available with few operators. So intervention by port authorities can be misguided. (Transcript, p. 770)

The issue is how best to make a trade-off between lower costs associated with large scale operations and the benefits associated with competition from an alternative supplier of services. The Commonwealth Department of Transport and Communications said:

for smaller ports it is unlikely that there will be sufficient traffic for more than one container terminal to operate efficiently. Even for larger ports, effective competition may be limited to two, or at most three, container terminals. Any attempt to artificially stimulate competition may in fact lead to reduced efficiency and increased costs. (Sub. 67, p. 19)

The Western Australian Port Authorities said that, in circumstances where the market will only support one operator, competition for competition's sake is not encouraged because the benefits may be short-lived.

The PMA saw the outcome of the trade-off differently and told the Commission:

The PMA believes that in the Australian environment there would be significant problems with a monopoly stevedoring operator in the Port of Melbourne. Two [or three] operators providing a competitive environment to shippers is believed to be preferable. (Sub. 79, p. 17)

The PMA's decision to develop container facilities at the East Swanson Dock (ESD) and to exclude the existing operator of the West Swanson facilities (Conaust) from the tender process implies that for the port of Melbourne the benefits of competition are judged to outweigh the potential economies of large scale operation. The PMA said that the geography of the port constrained the extent to which the economies of large scale operation could be achieved:

At physically separate terminals a single operator may be able to achieve some scale efficiencies, for example by labour rationalisation. However, provided trade volumes are sufficiently high, the benefits from introducing a competitor are likely to outweigh any such efficiencies. The PMA therefore excluded Conaust from the short list of tenderers for Swanson Dock East. (Sub. DR152, p. 8)

In September 1992 the Chairman of the PMA expressed his belief that changing the ESD into a single operator facility would better utilise current facilities and defer the need for additional investment by the Authority. He also alluded to the possible advantages of having further rationalisation:

The thrust of our strategy was right; no one criticised it, if anything it didn't go far enough. In this context I would refer anyone interested to the excellent submission made by Conaust Limited to the Industry Commission. It is a brilliant exposition of the economies of scale. It recommends that there should be only a single operator in each Australian port, a position of some logic, but one which will be rejected by those for whom competition is the objective rather than a means to achieve the end of cost efficiency. (King 1992)

### *Common-user facilities*

Many ports provide common-user facilities. In the case of the smaller regional ports this is to ensure that essential services are provided, but for larger ports it is to inject a degree of competition into some activities. The circumstances of different ports, and the attitudes of their port authorities to the provision of common-user facilities, differs widely. The Marine Board of Hobart said:

The Marine Board of Hobart involves itself in as many of the services and activities required by ships and shippers in the port as necessary to ensure that there is effective competition. (Sub. 30, p. 7)

A different view was taken by the PMA which submitted:

Given the current situation and trade levels in the Port of Melbourne there is little point in trying to encourage competition in the international container trade via more common-user facilities. Competition is only one of a number of arguments for common-user facilities and while some justification for this could be made in the short run, long term provision of these facilities by the PMA is seen as inappropriate and a misuse of resources. (Sub. 79, Attachment 3.16, p. 9)

Endeavouring to promote competition through artificial means (eg preventing an incumbent from tendering) is not an efficient solution to the problem of natural monopoly with high barriers to entry. A more efficient solution would be gained from allowing a single firm to operate, achieving production efficiency, and then approaching the problem of pricing inefficiency in the most effective way.

## **5.3 Licensing policies**

Leases confer the right of use of physical assets. Licences differ in that they confer the right to provide a service. Licences are usually issued for reasons of port safety or to ensure that an essential service is available within a port, but they have also been widely used to influence market structures and to control the pricing policies and performance of licence holders. The discussion which follows refers to towage and pilotage but also applies to other activities that may be licensed by port authorities (eg mooring).

### **5.3.1 The number of licence holders**

If safety considerations are the sole justification for licensing a port activity, there would seem to be no reason to restrict the number of licence holders. In the case of pilotage, for example, for safety reasons it is essential for pilots to hold qualifications relevant to the port, and for this reason they are licensed. But that does not mean that there should be a limit on the number of licences issued. Even where conditions are attached to licences in order to ensure that an essential

service is readily available to port users (such as requiring licence holders to be available to provide an at-call service), there is no justification for restricting the number of licence holders.

Some participants were of the view that port authorities should not issue exclusive licences. CRA Ltd and the Australian Shipping User Group stated:

port authorities should not license pilot, tug or other ship service providers for exclusive market access (Sub. 49, p. 12).

On the issue of the provision of port services such as towage, mooring and pilotage, a port authority should not establish licensing or other market restrictions which limit competition. Port authorities should not establish barriers to entry for the provision of these services (Sub. 50, p. 12)

The Commission accepts that for some small regional ports it may be difficult to attract a towage operator, or to ensure a satisfactory standard and level of service is delivered, unless an exclusive licence is made available. Table 5.2 indicates regional ports requiring only one or two tugs, where the potential exists for this to occur. In that case the licence should be issued only for a short term through public tender and the licence holder's pricing practices should be transparent.

As discussed in Section 5.1.2, the issuing of exclusive licences represents a regulatory impediment to entry which should be avoided if possible. As with container terminal operations, contestability would be improved by making licences non-exclusive. But the Commission acknowledges that in the case of a natural monopoly with few deterrents to entry (towage in some ports), there may be circumstances which lead to an unstable situation.

This could bring its own costs. For example, under a non-exclusive licence approach a new entrant to towage (say, following negotiation with a bulk grains shipper) may undercut the price of the incumbent natural monopoly towage provider. For as long as both operators supply services within the port, total demand would not be satisfied at least cost. Sooner or later one of the operators would leave the market. However, there would be little by way of sunk cost to prevent the entry of a new challenger. If this were to occur frequently, not only would demand often not be supplied at least cost, but there could be significant dislocation costs.

The Western Australian Port Authorities supported this view:

licences for towage, pilotage and other port services ... issued on a non-exclusive basis ... could lead to natural monopoly instability problems and the possibility of excess competition leading to higher charges after an initial period of competition ... this could lead to increased costs for users. (Sub. DR132, p. 17)

Similarly, the Prices Surveillance Authority stated:

It is not clear that the issuing of non-exclusive licences for towage is necessary to promote economic efficiency. Towage operation exhibits many natural monopoly characteristics which implies that an exclusive licence may promote the most efficient market outcome. Competition in these markets may be both destructive and inefficient. (Sub. DR143, p. 2)

However, in Section 5.1.3 the Commission concluded that pilotage does not constitute a natural monopoly in larger ports, and even in smaller ports, the lack of sufficient ship movements to support a single pilot on a full-time basis does not necessarily constitute a natural monopoly in pilotage. In these circumstances licences should be issued on a non-exclusive basis.

An example of such licensing arrangements occurs with pilotage for the inner route of the Great Barrier Reef. From 1 July 1993 licensing responsibility for the Queensland Coast and Torres Strait Pilot Service will be transferred to the Australian Maritime Safety Authority (AMSA). AMSA will set minimum requirements for entry and certification as a coastal pilot to ensure an adequate level of safety, but will not limit the number of licences issued. If individual pilotage providers have higher qualifications or choose to attain them, AMSA states this is a commercial decision that may be used to competitive advantage (AMSA 1993).

However, pilotage in Melbourne, Sydney, and Brisbane provides examples of monopoly supported by regulation. In each of these ports an exclusive licence is issued.

In Sydney, the MSB recently contracted out the provision of pilotage under an exclusive licence for a short, three-year period. This licence provides for payment to the MSB of a percentage of gross revenue to cover the MSB's costs in providing the navigation and communication services required to operate a safe pilotage service, although it is unclear how these costs would relate to the level of pilotage revenue. Restrictions were also placed on the pilotage company's pricing policy, to the effect that no increases in pilotage fees are permitted over the three-year term. Tenders were assessed on a range of factors, including ability to meet the level of service required, financial status, experience in the provision of an essential service, percentage of revenue offered and qualifications and experience of staff to be employed.

In Melbourne, the Marine Board of Victoria, which is established and operates under the Marine Act 1988, is the pilotage and vessel safety authority. The Board advertised for providers of pilotage in 1989, and subsequently awarded a ten year licence to a private sector company. The exclusive licence was issued on the basis that the company would provide all pilotage services from its own resources

and income. No licence fee was paid by the pilotage company. The Board also sets the maximum pilotage fee to users.

In Brisbane, pilotage has been privately provided for several years on an exclusive basis. The Queensland Government receives the revenue from the provision of pilotage and then pays a percentage of that revenue to the pilotage company. Pilotage fees are set by the Government.

At the time of finalising this report, the Commission had not been able to establish whether the amount paid by the licensee to the MSB in the case of Sydney or the amount retained by the Queensland Government in the case of Brisbane covers only the costs of issuing the licence and providing any services or assets to the licensee. But if the amount were to cover more than these costs, it would represent a tax on port users. This would provide an opportunity to add to port authority/government revenue—an opportunity which would be maximised through the issue of an exclusive licence, but it would detract from the international competitiveness of port users.

The circumstances which may justify the issue of an exclusive licence should be the exception rather than the rule, and in any event are likely only to apply to the smaller regional ports. In these cases, the exclusive licence should be issued for only a short term (say, three years) through public tender in order to inject a degree of serial competition. For larger ports, the availability of licences to all who meet safety and other requirements related to the availability of a service would be conducive to the provision of the most efficient service to port users. In this context, the issue of exclusive licences for the provision of pilotage by Melbourne, Sydney and Brisbane is difficult to justify.

### **5.3.2 Licence conditions**

As for leases, a distinction should be drawn between licence conditions which refer to the contract between the port authority and the licensee, and those which impinge on the commercial relationship between the licensee and other port users.

For example, licence conditions which relate to safety, the availability of a service, or to maintenance of port authority assets clearly fall into the former category, whereas those which specify the manner in which a service will be delivered, or restrict licensees' pricing policies (for example, as occurs for pilotage in Sydney, Melbourne and Brisbane) affect commercial decisions which should be beyond the influence of port authorities.

The Commission's strong preference, as expressed in a recommendation in Section 5.2.1, is for commercial behaviour to be the responsibility of general

regulatory bodies such as the TPC and the PSA, rather than be regulated by port authorities. At present licensees are subject to a wide range of control over their commercial activities.

The Port of Geelong Authority referred to towage as a ‘monopoly of necessity’ and said that the terms of its licences contain provisions carefully controlling the towage operator’s delivery of service and cost. The Western Australian Port Authorities told the Commission:

Presently, the Fremantle Port Authority has no power to direct towage operators. However, proposals are currently being developed to allow the Authority the opportunity to respond to abuses in monopoly power. (Sub. 44, p. 17)

Some port users were critical of the manner in which towage fees are set and an apparent lack of control over the level of fees. The New South Wales Coal Association said:

A number of port authorities in Australia have established licensing agreements with towage operators in particular, which effectively guarantee a minimum rate of return for the operator. Such arrangements perpetuate a *cost-plus* attitude to pricing and do little to encourage efficiency and improved work practices. NSWCA is opposed to such arrangements and believes that licences between service providers and port authorities ... should be used as a mechanism for encouraging efficiency improvements and transparency in pricing. (Sub. 45, pp. 3–4)

The Queensland Sugar Corporation submitted that better regulation of the towage natural monopoly is needed and that:

towage is a cost-plus service. For the most part, charges are set on an average cost basis (by dividing annual costs by the number of services provided in the year and adding a profit margin). In the absence of competition, this pricing strategy provides little incentive to improve the efficiency of operations. (Sub. 29, p. 5)

Pricing practices such as these can only be sustained if there is no competition for the provision of port services. This occurs where there is a natural monopoly for the provision of a service, and where monopoly status is granted through regulation. The natural monopoly case was discussed in Section 5.2 where it was concluded that any regulation should be through non-industry-specific bodies such as the TPC and the PSA.

Regarding pilotage, the AMSA model for the Great Barrier Reef outlined in Section 5.3.1 suggests that, with the exception of safety requirements, licence conditions (eg restrictions on pricing) are also unnecessary.

**Recommendation**

Subject to ensuring a satisfactory standard and level of service, port authorities should issue only non-exclusive, tradeable licences for towage, pilotage and other port services. Any exclusive licence should be issued for only a short term (say, three years) through public tender.

**5.4 Summary and conclusions**

Market structures for port activities differ significantly between ports and over time. A number of approaches may be needed to ensure that commercial port services are provided efficiently.

Container terminal operations and towage are likely to be characterised by natural monopoly in all but the largest Australian ports. Regulatory impediments to entry also exist in some cases.

The Commission's preferred approach is for the market to determine the number of operators for port activities, and who those operators should be. Leases should be made available through public tender when interest is expressed in the commercial development of a port-zoned site, and awarded according to the highest commercial benefit to the port authority. Leases should also be tradeable.

If a natural monopoly emerges, responsibility for guarding against the abuse of market power should rest with non-industry-specific bodies such as the TPC and PSA. Port authorities should not impinge on the commercial relationship between port service providers and their customers. In particular, leases should not contain performance conditions relating to such things as how a service is delivered, or incorporate pricing controls.

Licences should similarly be issued on a non-exclusive and tradeable basis, subject to ensuring a satisfactory standard and level of service. The Commission recognises that in some circumstances exclusive licences may be justified. Any exclusive licence should be issued for only a short term through public tender.

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## 6 PRICING

This chapter concentrates on the pricing of services and activities provided by port authorities. First, it looks at existing structures and levels of charges and describes recent changes. It goes on to discuss pricing issues of concern to participants, and to examine how better pricing can enhance efficiency.

In addressing these issues, the chapter concentrates on prices charged to shipping and cargo interests for facilities such as channels, breakwaters, navigation aids and berths, and services such as strategic port planning. 'Prices' charged for the provision of land and other facilities to terminal operators are discussed in Chapter 5.

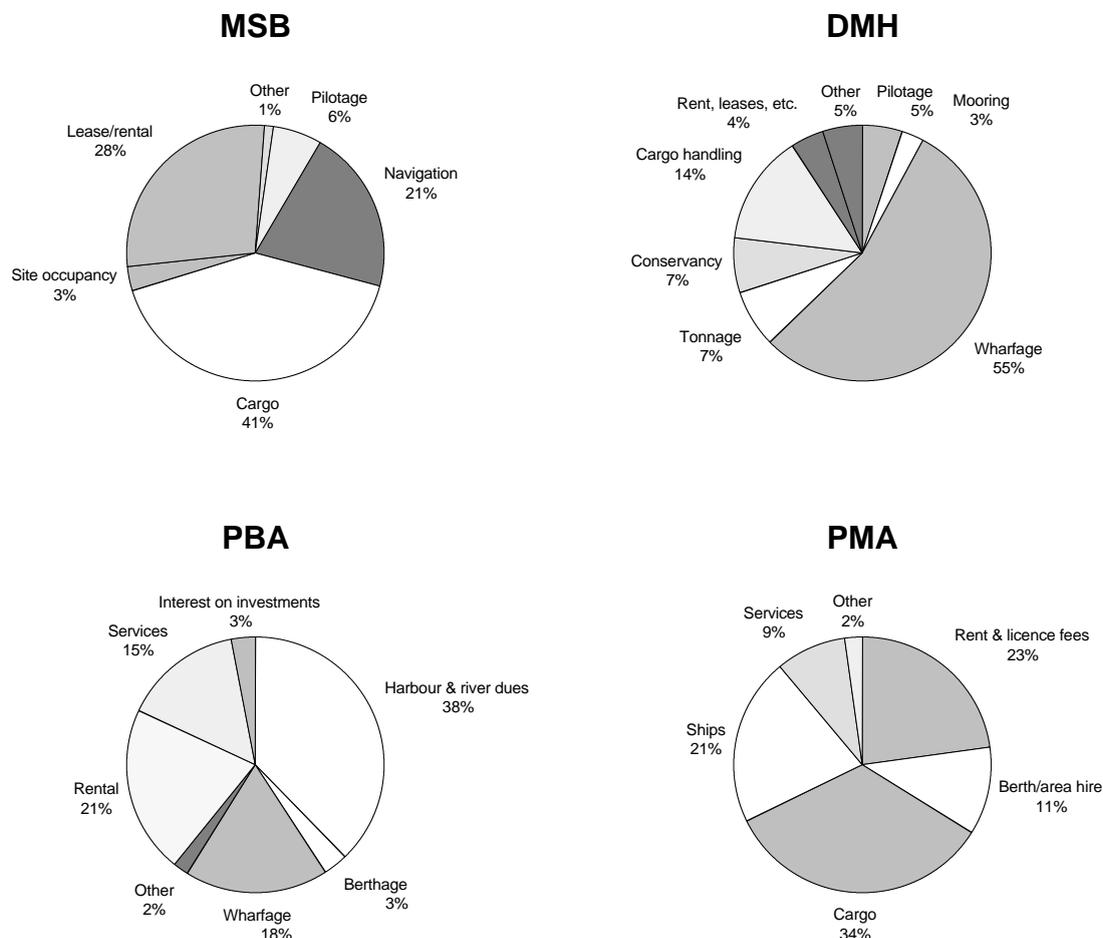
### 6.1 Existing port charges

Port authority revenue comes from a mixture of charges that do not necessarily relate directly to particular services provided. The charges may be based, for example, on the characteristics of a ship, the nature and volume of cargo, the area of land leased, or the distance for which pilotage is provided. They may be paid by ship operators, cargo owners or terminal operators. Charges on ships do not necessarily relate to facilities used by ships such as navigation aids, channels and berths; nor do charges on cargo owners necessarily relate to land-based infrastructure. The different ship- and cargo-based charges are illustrated in Appendix Tables B9 and B10, which present information about several capital city port authorities.

The tables illustrate that port authority charges are not consistent between ports in terminology, structure or level. This makes it difficult to compare charges between ports.

Sources of revenue can vary markedly between ports. While the data may not be strictly comparable, Figure 6.1 shows, for example, that revenues from cargo (including wharfage) differed substantially between the DMH, PBA, PMA and MSB in 1991-92, as did revenues from leasing/rental.

Figure 6.1: Port authority sources of revenue—1991-92



Note: The data in this figure may not be strictly comparable. Its purpose is to illustrate the big differences between port authorities in sources of revenue.

Source: Port Authority annual reports.

### 6.1.1 Port authority charges on ship operators

Charges on ship operators for the use of a port and its facilities may be based on the registered tonnage of the vessel, its length, the time in port, the actual cost of providing a service, or some combination of these.

For example, Fremantle and Melbourne charge ‘tonnage dues’ based on the GRT of the ship, while the MSB makes a ‘navigation services’ charge also based on GRT.

South Australia levies a ‘harbor services’ charge which depends on time at berth as well as on ship tonnage.

Berth hire charges apply in Melbourne per hour for berth use on a casual basis, and may in some instances be paid by the stevedore rather than the shipping line. In Fremantle berth hire is charged on cargo being loaded or unloaded, measured in tonnes, kilolitres or cubic metres.

The PBA charges 'berthage' based on the length of the ship.

A charge is payable on ships using pilotage services in ports and their approaches. In some ports, for example Adelaide, Hobart and Fremantle, pilotage is provided by the port authority and in others, for example Brisbane, Sydney and Melbourne, by private operators. The charge may be a set fee or calculated on a GRT basis, and may have a time component.

Area hire was introduced in Melbourne with its pricing revisions of 1990. This is an hourly charge for storage of cargo at common-user facilities, and is levied on the shipping line.

Port authorities may also provide and charge for some other services such as mooring and unmooring, and the services of linesmen and line boats.

### **6.1.2 Port authority charges on cargo owners**

The principal charge on cargo owners is generically described as 'wharfage'. Such charges vary in particular description. They generally relate to cargo being loaded or unloaded, and may differ substantially depending on the type of cargo and its origin/destination. Some port authorities discriminate against imports and in favour of exports, eg containerised cargo in Sydney.

In Brisbane, another cargo-based charge, 'harbour dues', is also payable by the cargo owner. This is intended to recover the fixed costs of common facilities such as channels and navigation aids. In Brisbane, wharfage recovers costs associated with loading and unloading ships.

Cargo-based charges such as wharfage, as with port authority charges on shipping lines, are often paid by the shipping line in the first instance as a service to cargo owners. But as they are considered a cost to the cargo owner, they are passed on as a separate charge by the shipping line and not incorporated in its freight rate.

Recent pricing reforms by the MSB, PMA and Fremantle Port Authority (see Section 6.2) have altered the previous balance of charges on shipping lines and cargo owners, with shipping lines being levied a higher proportion of port authority charges. Rather than adjusting freight rates, shipping lines in these ports have introduced a surcharge to shippers, known as the Port Pricing Additional (PPA), to pass on the extra ship-based charge (PSA 1992a, p. 51). Charges passed on directly to the cargo owner (rather than through the freight

charge) may therefore include some proportion of port authority ship-based charges as well as wharfage.

The MSB Sydney Ports Authority supported the abolition of the PPA stating that:

It could well be that shippers are judging the port authority performance by the size of the PPA published by the shipping company or conference for the port, whereas in reality it may well be much more a reflection of the shipping company performance. (Sub. 90, p. 3)

In a recent report, the PSA (1992a) stated that the PPA was inappropriate and negated the efficiency effects of port pricing reforms.

### **6.1.3 Charges on stevedores/terminal operators**

For dedicated berths and facilities, lease or licence arrangements usually apply (see Chapter 5). However, common-user berths are available in some ports and are generally hired from the port authority on an as-required basis.

In Melbourne, as noted above, ship operators bear such casual hiring charges. However, in Sydney, the casual 'site occupation' charge applies to stevedores using common-user berths. It is a set fee either per hour or per eight hours.

### **6.1.4 Government charges**

#### *AMSA levies*

The Australian Maritime Safety Authority (AMSA) has responsibility for providing a network of navigational aids in Australian waters to meet the needs of commercial shipping for safe and efficient navigation. AMSA also provides various safety services, and combats marine pollution.

The cost of AMSA's responsibilities is met through fees and levies, with some funding from the Commonwealth Government as CSOs. (Funding from Government for CSOs in 1991-92 accounted for \$22.3 million out of AMSA's \$76.5 million revenue.) A Marine Navigation Levy is imposed on most commercial vessels using Australian waters. The levy varies between 35 and 55 cents per GRT, depending on the size of the ship, and covers three months' trading in Australian waters. Fishing vessels and pleasure craft do not pay the levy.

Oil pollution levies are also collected by AMSA to cover travel in Australian waters for a three-month period. This levy is paid by ships of 24 metres or more in tonnage length having on board more than ten tonnes of bulk oil. The levy funds NATPLAN, an arrangement between the Commonwealth and the states to combat and clean up ship-sourced oil spills in Australia.

### *Conservancy charges*

State governments have general responsibility for navigation aids and other facilities relating to state waters, local and inshore traffic, entry to ports and harbours, and the inner port. 'Conservancy' charges are levied in some states to meet the cost of these facilities. The charges are generally based on vessel tonnage and time. For example, South Australia levies a conservancy charge known as a 'navigation services' charge based on gross tonnage each time a vessel enters state waters. But within a six-month period, the charge for each subsequent call reduces by 20 per cent.

### *AQIS and ACS fees*

Other charges may include fees for quarantine and customs services. The Australian Quarantine and Inspection Service (AQIS) and the Australian Customs Service (ACS) are responsible for maintaining the barrier to undesirable imports and for providing inspection certificates for Australian exports where required.

The Western Australian Port Authorities expressed concern about recent increases in the level of charges by AQIS. It charges on a full cost recovery basis, which the Commission supports as a principle. However, it is important for AQIS to supply services efficiently at the lowest possible cost.

## **6.2 Pricing changes in recent years**

In its Waterfront Investigation in 1989 the Inter-State Commission (ISC) recommended the following changes to port authority pricing practices as a means of improving economic efficiency:

- the development by the Association of Australian Ports and Marine Authorities (AAPMA) of standard guidelines for setting prices;
- setting prices to provide an 'economic' rate of return on the market value of the assets employed by port authorities, while avoiding cross-subsidisation between areas of activity; and
- a reduction in reliance on wharfage charges (possibly eliminating them altogether), with costs being recovered from users of services.

In regard to the first recommendation, standard pricing guidelines have not been agreed or implemented in Australia. Pricing initiatives have tended to be undertaken by individual port authorities with little coordination. Terminology is discussed further in Section 6.5.

Progress on the second recommendation is reported in Chapter 2.

Some major ports have introduced changes in pricing structures in recent years along the lines of the third ISC recommendation. The main thrust of these changes has been to increase charges on ships while reducing charges on cargo. Several port authorities continue to support the use of charges such as wharfage on cargo owners. Irrespective of their views on how charges should be structured, Table 6.1 shows that most port authorities have, however, reduced average port charges in real terms over recent years.

**Table 6.1: Real price index of total port charges<sup>a</sup>**

<i>Port</i>	<i>1987-88</i>	<i>1988-89</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
MSB	100	93	85	80	72
Melbourne	100	93	92	86	82
Brisbane	100	93	87	83	81
Gladstone	100	89	86	78	86
DMH	100	97	94	92	92
Fremantle	100	98	96	97	103
Hobart	100	83	71	58	59
Burnie	100	94	88	84	82
Darwin	100	93	97	98	96

<sup>a</sup> With prices of individual services weighted by their contribution to total revenue.  
Source: Association of Australian Ports and Marine Authorities, sub. DR135.

### **6.2.1 New South Wales**

Before pricing reform was commenced by the MSB, cargo-based charges accounted for nearly 80 per cent of revenue from statutory port charges. The MSB introduced the first stage of a new three-part port pricing system in 1990. The new system shifts the burden of port charges from the cargo owner to the shipping line. According to the MSB:

A new charging structure was introduced on 30 June 1990 as the first step in phasing in a fully commercial set of charges over a 3–5-year period ... The main objective of the new charging structure is to place responsibility for the MSB's costs on those who directly benefit from the use of its services rather than placing an undue reliance on the cargo owner, thus encouraging allocative efficiency in the use of port assets and services. (Sub. 21, p. 9)

The new wharfage charge which replaced the previous harbour rate is levied according to the wharf or port used rather than the type of product being traded. The charge is calculated on the quantity of cargo loaded or unloaded. This

charging basis relates more closely to the MSB's costs in providing wharf services and supersedes the previous tax-like appearance of the harbour rate scales.

Since the introduction of these changes, there has been a significant reduction in real port charges.

### **6.2.2 Victoria**

The basic change in Melbourne has been a reduction in wharfage and a corresponding increase in berth hire, area hire and tonnage rates, with the changes intended to be 'revenue neutral' to the PMA overall. However, the phasing in of the pricing reform program has been delayed due to concerns within the shipping community. According to the Shell Company of Australia Ltd:

The PMA introduced phase I of its port pricing reforms on 1 July 1990 when wharfage rates (cargo owners costs) were reduced and tonnage rates (ship owners costs) were increased. It proposed phasing in the reforms over a 3-year period. Unfortunately since then consensus amongst port users representatives could not be reached and the reform process has lapsed. (Sub. 35, p. 13)

In response, the PMA is:

moving away from a uniform pricing structure for all port users and placing increasing emphasis on negotiating appropriate pricing arrangements to suit the particular circumstances of individuals or groups of users. (Sub. DR152, PMA letter, p. 10)

In some agreements, wharfage could be replaced by other charging arrangements.

The ports of Geelong and Portland have also moved to adopt new pricing structures to reduce the reliance on wharfage, with the Port of Geelong Authority abolishing wharfage in 1992. After making some changes, Portland has postponed further pricing reform (see Box 6.1).

**Box 6.1: 'Revenue neutral' pricing reforms in Victoria**

The three major Victorian ports of Melbourne, Geelong and Portland have introduced changes in the structure of their charges. The effect is to increase charges on ship owners and reduce wharfage. In Geelong, the PGA has eliminated wharfage from 1 July 1992. Previously 80 per cent of its revenue came from wharfage. The PGA endeavoured to maintain revenue neutrality in real terms in the new pricing system. But if turnaround time is taken into account, the new pricing system is revenue negative rather than neutral.

In Melbourne, the PMA changed its pricing structure on 1 July 1990 to reduce its reliance on wharfage. This has declined from about 86 per cent to 54 per cent of revenue. Although the new structure was designed to be revenue neutral, revenue has fallen as the improved productivity of users eroded revenue from crane and berth hire by \$2.8 million in 1991-92. The process of pricing change in Melbourne has shifted to place greater emphasis on agreements with particular users or market segments.

In Portland, the PPA had plans to eliminate wharfage over a three-year period from 1990. However, two years into that period, changes were put on hold because of user opposition and the detrimental effect the new policy had on revenues. The efficiencies that were being generated from the time based pricing model were underestimated by the Authority.

Source: Subs. 77, 79, 82, DR152, and Transcript.

**6.2.3 Queensland**

The pricing policy of the PBA is to minimise costs and maximise trade. This is seen to benefit port users, increase the state's economic well-being, and attract trade away from southern ports.

No major pricing reforms have been introduced in any Queensland port over recent years. However, following extensive consultation, a new port pricing policy has been approved by the Government. This policy provides autonomy for port authorities to determine prices, based on the general principles of transparency, relating prices to costs, and recovering at least marginal costs from users.

**6.2.4 Western Australia**

On 1 July 1990, the Fremantle Port Authority introduced a new 'revenue neutral' pricing structure, decreasing the number of separate categories of charges levied and increasing the incidence of charges on shipping lines while reducing charges to cargo owners. Increases in individual charges generally did not exceed 10 per cent.

According to the Western Australian Port Authorities, the Western Australian Government has not accepted the view that wharfage charges should be eliminated or reduced as a matter of principle. Continued reliance on wharfage is seen as important to assist trade development.

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### 6.2.5 South Australia

The DMH has introduced a revised pricing structure in two stages. The first of these involved the reduction of a number of wharfage charges in July 1992. The second stage, introduced in January 1993, involved a complete overhaul of charges, with charges more closely aligned with costs. According to the South Australian Government:

The levels of the new charges reflect the commercial conditions applying in the various trade categories. They include redistribution of charges for services to ships aimed at more effectively recovering costs together with some substantial reductions in charges to various categories of cargo. (Sub. 32, p. 27)

Under the new structure, existing charges of conservancy, wharfage, tonnage and most direct charges have been discontinued, and replaced by cargo service charges, navigation service charges and harbor service charges. The cargo service charge is a charge to cargo intended to recover the cost of providing the basic port facilities, including channels, berths and wharves. The navigation services charge is ship-based and replaces conservancy. The harbor services charge is a charge to vessels to recover the costs of servicing vessels at berth.

### 6.2.6 Tasmania

The four major Tasmanian port authorities support the use of wharfage and have not introduced any changes in pricing structure in recent years. The Port of Launceston Authority's view is typical:

Recently the authority undertook a thorough review of our pricing policies and concluded there was not a need, or even a push from our customers, to alter the system whereby our main income is from wharfage. (Sub. 24, p. 41)

### 6.2.7 Northern Territory

In Darwin, port charging is currently a traditional system of berthage, wharfage, Ro-Ro hire, container crane hire and equipment hire. The Darwin Port Authority stated that 'it is expected that in future, Darwin port charges will be revised on the ESCAP [Economic and Social Commission for Asia and the Pacific] system' (sub. 93, attachment, p. 4).

## 6.3 Level of port authority prices

Many participants commented adversely on the level and structure of port authority charges in Australia. As noted in Chapter 2, however, it is difficult to make adequate comparisons of charges between ports, particularly between those in Australia and in other countries. In any case, the 'cheaper' ports are not necessarily the more efficient. Even so, it is vital that port authority prices be

struck as efficiently as possible. This means finding both the ‘right’ level and ‘right’ structure of prices.

In many of their services and activities, public port authorities do not face competitive market pressures. Therefore, compared with enterprises operating in competitive markets, there is less incentive for them to obtain an economic return on performing assets, to minimise their costs or to price efficiently. As noted in Chapter 3, setting performance targets, such as rates of return on assets, is one way to induce them to improve their economic performance and accountability. Performance targets would encourage port managers to focus on obtaining sufficient revenue to fully recover costs.

However, particularly where natural monopoly or public goods elements are present, rate of return targets must be chosen carefully. Inappropriate targets can distort pricing and investment decisions. Setting target rates of return raises a number of issues for government about choosing target levels, determining an authority’s asset base and the basis of valuation.

### **6.3.1 Setting financial targets and valuing assets**

Both the target level and the method of asset valuation can have an important influence on the efficiency of capital investment and pricing and, ultimately, the overall performance of the port authority.

Assets used by port authorities fall into several categories: land; navigation aids; channels, seawall, breakwaters, etc; wharves, berths, jetties; buildings and sheds; land based infrastructure such as connecting roads; cargo handling equipment; building and office equipment, motor vehicles etc. In determining targets and valuing assets, each of these categories requires separate consideration.

If assets are to be used efficiently, they should return at least their opportunity cost over their useful lives: that is, a return at least equivalent to the return which could be obtained from their best alternative use.

Some assets such as cargo handling equipment, office equipment, and transport vehicles are relatively mobile, and can be employed in port and non-port uses. These assets are appropriately valued at their current market value, ie what they would fetch on the second-hand market. An appropriate target rate would be that normally achieved by private enterprise in the use of such assets, making allowance for risk factors and any other special advantages or disadvantages facing the port authority.

### *Under-performing assets*

Over time assets may lose their usefulness to the port authority and to port users. For example, with changes in technology towards containerised shipping for general cargo, many wharves and sheds are not utilised to the extent that they once were. Eventually, facilities may become completely redundant for port purposes.

If historical cost is used for such under-performing assets, their book value may overestimate their opportunity cost to the port, and some adjustment may have to be made to reflect current value. At the extreme, those assets may have to be written off if they have no value for port purposes and cannot be sold. Owner governments would need to write down their equity in the authority.

#### **Recommendation**

Under-performing assets should be written down if they have no better commercial use.

### *Land held for future use*

Part of the landlord role of a port authority may be to hold land for future development of the port. Some such land may house out-of-date or redundant assets, some may be in the process of development and some may be entirely undeveloped for port use.

In the case of land held for future use, its rate of return should come from its appreciating value, net income from current leasing to non-port users, or a combination of both. It should not come from revenue sourced from current port users. That is, its value should be excluded from the asset base used to determine the level of charges, and any financing charges associated with holding this land should not be attributed to current port users.

One example of land being held for future use is at Bunbury. The Port Authority has acquired some farming land adjacent to the existing port for strategic planning purposes; the land is presently leased for farming activity.

#### **Recommendation**

The value of land held for future use should be excluded from the asset base used to determine the level of charges for current port users.

### *Channels and breakwaters*

Methods of valuing specialised port authority fixed assets such as channels and breakwaters are contentious. Because they have very long lives, their replacement cost is likely to be significantly higher than their historic cost. Therefore, depreciation or target rates of return based on replacement cost can impose significantly greater burdens on channel users than those based on historic cost. Determining the opportunity cost of the resources embedded in a channel is an essential part of resolving this issue. In turn, this requires consideration of the appropriate price for use of a channel.

The views of the Australian Chamber of Shipping are typical of many users:

The shipping industry believes that channels and breakwaters are sunk costs and have no other commercial or replacement value. The industry is opposed to the notion that these assets ought to be valued at replacement costs especially when the channel has been in existence for several decades (Sub. 43, p. 12).

In a joint paper, Shipping Conferences Services, the Australian Chamber of Shipping and the Australian National Maritime Association commented that:

For the purposes of port pricing it seems that, with assets such as channels (for ease of the argument, setting aside maintenance) there are only two decisions that reasonably can be made in relation to valuations. One is to assume that the channel has become an historic fixed and permanent alteration to the seascape; in which case there is no charge. The other is to establish a usage price based on the original cost. Any replacement cost formula is fictitious—and yet such an approach is vigorously defended by certain authorities. (Sub. 39, p. 7)

However, some port authorities base depreciation or target rates or return on replacement cost. For instance, in respect of Geelong where channels are depreciated and the value of channels is accounted to be about 30 per cent of the value of the port's non-current assets, the Port of Geelong Authority argued that the revaluing of channels to replacement cost is valid and stated that:

... assets such as berths and channels are of high value (Sub. 82, p. 25).

The Bureau of Transport and Communications Economics (BTCE) also commented on the pricing and valuation of these types of long-lived assets. It said that, although channels may become obsolete, they did not depreciate physically provided any necessary maintenance dredging was carried out. It continued:

The theory of public goods ... suggests that the price for using a channel should be such that because the marginal costs of using the channel are essentially zero the price should also be zero, ie the value of the channel for pricing purposes should be zero. (Sub. 89, p. 17)

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The BTCE went on to observe that the valuation of the channel is distinct from its financing. It argued that charges need to be struck to recover the financing costs:

The choice made by Australian governments is to finance channel costs by charges on port users. An important point ... is that ... prices used in this way are essentially taxes. Although this choice is made for government budgetary reasons there are also efficiency reasons as the raising of taxes can also affect allocative efficiency ... efficiency is best served by recovering at least some of the capital costs from those directly benefiting from the use of the public good ... The Bureau recommends that the capital costs of channel construction should be recovered from port users ... (Sub. 89, p. 18)

The Commission agrees with the BTCE that the marginal cost of using a channel is zero, and considers that the opportunity cost of a channel, taken in isolation from other port assets, is also zero. It also agrees that the capital cost of channels should be recovered from port users rather than the community at large.

The Commission understands that the joint Commonwealth, State and Territory Steering Committee on National Performance Monitoring of Government Trading Enterprises is developing guidelines for valuation of non-current assets in public enterprises. These guidelines are intended to address the treatment of long-lived special purpose assets such as port channels.

Although the opportunity cost of a channel itself would be zero, a channel can increase site values for wharves and other water/land based interfaces. The Commission considers that it is appropriate for a port authority to receive a rate of return for any value embedded in these sites because of a channel. This would be by way of lease rents. Further, in the absence of a specific charge on channel users to recover its capital cost, the value of sites would be increased even more. In that case, the Commission considers that it is appropriate to recoup the capital cost through the lease rent.

In the case of facilities needed for particular users, port authorities may, like any other landlord, make special arrangements to fund specific developments such as a new channel or channel deepening. These arrangements could include up-front capital contributions by users, channel usage surcharges and/or higher leases rentals on terminal sites.

**Recommendation**

Long-lived non-depreciating assets such as channels should be valued at zero, but their capital cost should be recovered from users rather than the community at large.

### 6.3.2 Funding by users

In many ports, some port authority assets have been explicitly funded initially by users. Some concern was expressed about whether such assets should be included in the asset base for rate of return purposes.

Port Waratah Coal Services commented:

The first concern is with assets now owned by the Authority, but which were paid for by port users. The best example of this is the main channel in the Port of Newcastle which was deepened in the late 1970s. The cost of the deepening program was substantially funded by a special per tonne levy imposed on the coal and steel industries. The Authority has stated that the main channel is an asset of the Authority on which it is entitled and required by the Act to earn a return. Under normal circumstances ownership of this asset would rest with the parties who paid for the asset's construction, and therefore it is the coal and steel industries who should be entitled to receive a return for the use of this asset, instead of actually being charged for the use of the asset. (Sub. 47, p. 13)

The Queensland Sugar Corporation had a similar concern:

The terminal facilities and associated land were constructed, maintained and developed by the sugar industry with all capital and operating costs being defrayed from the proceeds of the sale of vested sugar. However ... the ownership of the bulk sugar terminal facilities is vested in the local port authorities ... Any charges levied should reflect a fee for service, not a return on port capital infrastructure which was established, developed and paid for by the sugar industry. (Sub. 29, pp. 1-2, 6)

Payment for the use of port authority facilities does not give users ownership rights over them. But if the port authority assumes ownership of assets explicitly funded initially by users, it is entitled to a return to cover the opportunity cost of the resources embodied in the asset. At the same time, users should be given credit for the value of the asset taken over by the port authority, for example, through a direct payment to the user to amortise the funds provided, or reductions in future charges.

It is important that user funded assets taken over by a port authority be properly treated in the authority's accounts. The value of the asset should be taken into the port authority's balance sheet. And the credit given in exchange also needs to be properly accounted for. For example, agreed reductions in future charges should be entered as a contingent liability of the authority.

<b>Recommendation</b>
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When a port authority assumes ownership of assets explicitly funded initially by users, the value of those assets should be taken into the authority's balance sheet, but the credit given in exchange to users should also be properly accounted for.
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### **6.3.3 Non-financial targets**

While appropriate financial targets can play an important role in improving the efficiency of port authorities, there are dangers in relying on such measures exclusively. They could be met by increasing prices or reducing quality, particularly in services where there is monopoly power. For instance, shippers such as the Australian Wheat Board have claimed that ‘revenue neutrality’ has been used to prevent savings from lower costs from being passed on to port users:

the concept of ‘revenue neutrality’ is often cited by port authorities to justify changes to charging structures which would otherwise see declining revenues as port users improve their efficiency. (Sub. 41, p. 7)

Removing exemption of port authorities from coverage of the Prices Surveillance Act (as discussed in Chapters 3 and 5) should help control unjustified price increases. In addition, setting non-financial targets could guard against port authorities reducing the quality of their service in order to meet financial targets. However, finding appropriate non-financial targets for port authorities, especially landlord authorities, would be difficult. While they might cover reliability, timeliness and adequacy of service, they would need to be clearly specified and made public.

In the Draft Report, the Commission requested views from participants about appropriate non-financial performance targets for port authorities. There was little response. Shipping Conference Services considered, however, that under the corporatised landlord model very limited non-financial targets would be needed: the Commission agrees.

## **6.4 Structure of port authority prices**

Port authorities recover their costs in many different ways. Subsidisation occurs between and within activities, while price discrimination between different users and cargoes is often practised. Charges are based on ships, cargo, and the time in port, and levied on shipping lines, cargo owners, stevedore and terminal operators. As discussed below, the ways in which charges are set can have important efficiency effects.

### **6.4.1 Subsidisation**

In some ports, port authorities and port users may be advantaged or disadvantaged by various types of subsidy between and within activities.

For example, non-port activities could be used to subsidise port users. This situation exists, for example, in the port of Cairns:

In recent years the Authority identified key parcels of waterfront land for development ... with the intention of generating high revenues in order to offset these against port operating and development costs. Land lease revenues constitute one third of the Authority's seaport income ... Port revenues are a mixture of port related charges and land development rentals. The continued viability of the port is dependent upon this form of cross-subsidisation. (Sub. 26, p. 2)

The Cairns Port Authority reaffirmed these views in its Draft Report submission.

In some Tasmanian ports, for example Hobart, subsidisation of this nature may well occur. Although the Marine Board of Hobart's Seaport and Property Divisions both run at a surplus, it stated that:

non-port revenues [are used] to provide the reserves that we need to meet our capital works. Now, had we not had the non-port revenues we would have to rely on our port revenues to provide those reserves. (Transcript, p. 1150)

Subsidisation can also occur when governments require port authorities to provide community service obligations (CSOs) without adequate government funding for them. This taxes commercial port users, as discussed in Chapter 3.

A third form of subsidisation can occur between ports. In several instances, different ports are controlled by the one authority. For example, the DMH has responsibility for all public South Australian ports, the MSB controls the three major ports in NSW and the PMA controls the nearby port of Hastings.

Such joint control of ports opens up the possibility of subsidisation. In South Australia, for instance, uniform charging across ports is employed. According to the Grains Council of Australia:

The relationship between port authority charges and the cost of services provided by port authorities is largely unclear, and in most cases it is difficult to determine whether the cost of providing a service is truly reflected in the port charge ... For example, wharfage charges and other port costs at South Australian Department of Marine and Harbors' six grain ports are aggregated, and port users at all ports are charged the same. (Sub. 56, p. 6)

In NSW, some concern was expressed that charges at the Port of Newcastle were subsidising the other ports. Port Waratah Coal Services considered that:

... notwithstanding the pricing reforms ... in recent years ... there continues to be significant cross-subsidisation ... between the Port of Newcastle and other NSW ports. (Sub. 47, p. 2)

The MSB rejected this claim, but confirmed that subsidisation had occurred in the past. It said:

Cross-subsidies occurred for many years within the MSB. An examination of Authority and MSB balance sheets however demonstrate that in MSB HPA's [Hunter Port

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Authority] case their profits have consistently been expended on Hunter Port infrastructure and not on cross-subsidising other areas of the MSB. (Sub. 83, p. 5)

The New South Wales Coal Association claimed that users of the Port of Newcastle are bearing a disproportionate share of the total MSB dividend to government. In commenting on the MSB's statement that allocation of the dividend from the individual port authorities is on the basis of their share of the total operating surplus, the Coal Association said:

Following the MSB reasoning, a higher wharfage charge on coal and other Newcastle exporters would lead to a greater HPA [Hunter Port Authority] surplus and justify a greater share of the total MSB dividend. (Sub. DR141, p. 1)

The Coal Association claimed that the HPA contributed \$7.8 million of the dividend. This represents about 60 per cent of the HPA's operating surplus for 1991-92, whereas the total MSB dividend to government of \$35 million represents about 45 per cent of total MSB operating surplus. Data available to the Commission do not establish that users at the Port of Newcastle are subsidising users at other New South Wales ports. However, there does appear to be a need for greater transparency in setting dividends for the MSB's subsidiary port authorities.

In summary, it is most efficient to seek to recover the costs of providing a service from those for whom the service is provided. It is not efficient to subsidise port from non-port activities. Nor is it efficient to subsidise one port from another, as apparently occurs in South Australia, and also possibly in New South Wales.

Governments may also decide to develop particular ports, for regional development reasons, by allowing them not to fully recover costs. However, governments need to consider whether such behaviour is of net benefit to the community as a whole, not just to those who are directly advantaged. Governments should then provide a direct budgetary payment, not an indirect subsidy from users at other ports.

Within ports, it is not always possible to directly attribute the costs of services to particular users or categories of user. The following section on price discrimination discusses how costs could be efficiently recovered in such cases. However, it is unequivocally inefficient not to at least fully recover from particular users the marginal costs of providing the service to them (assuming administrative costs do not outweigh any efficiency gain). Using revenue from another source to cover a deficiency in revenue which does not meet marginal costs encourages excessive use of resources in particular activities which could be used elsewhere to produce a higher economic return.

The Commission considers that the forms of subsidisation discussed above should be eliminated from port authority pricing. The move towards the landlord model, recommended in Chapter 3, should assist in this process.

**Recommendation**

Subsidisation between non-port and port activities, subsidisation between ports, and the supply of any services and activities to any users at below marginal cost, should be eliminated.

**6.4.2 Price discrimination**

Price discrimination is the charging of different prices to different users for the same service or facility. Despite the pejorative nature of the term, price ‘discrimination’ is not necessarily inefficient.

A number of port authorities engage in price discrimination in their published charges either between different types of cargo, or depending on origin or destination. Further, several port authorities retain flexibility to enter into commercial negotiations about their charges with particular port users. Thus, for some cargoes price discrimination may be practised even within one category of cargo. (Representatives of shipping interests, however, claimed there were no commercial negotiations about port charges for liner shipping.)

Price discrimination allows the port authority to recover most of its costs from ‘captive’ users of the port, while retaining the flexibility to set low prices to attract new trade. An example of this was said to be Nissan’s decision to import cars through Brisbane rather than Sydney. The NSW State Chamber of Commerce stated:

Pricing policies in the ports have, for instance, contributed to Nissan’s decision to import its cars via Brisbane rather than through Sydney ... (Sub. 7, p. 5)

The PBA commented that:

sensible, commercially based price discrimination which helps increase the total cargo throughput to further spread the fixed cost burden to achieve a lower cost per unit of throughput is fully justifiable and is normal business practice. (Sub. DR133, p. 6)

A further possible example concerns cruise ships. The Commonwealth Department of Tourism argued that:

cruise ship operators as a whole are not tied to Australia and a marginal price increase may be the deciding factor in visiting an overseas port rather than an Australian port. (Sub. DR127, executive summary)

Price discrimination is not always welcomed by users, of course. Some participants representing petroleum and mining interests, such as Caltex, objected to discriminatory pricing:

With our sunk investment at Kurnell, Caltex has been treated as a captive revenue source by the MSB and we therefore pay disproportionately high charges ... (Sub. 19, p. 2)

Can discrimination in pricing by port authorities improve, or worsen, efficiency? In addressing this issue, it should be noted that services provided by port authorities exhibit a variety of market characteristics (see Chapter 3). Some are provided in competition with other suppliers, while others are provided in a monopoly (or near-monopoly) environment. As long as prices to each user are set at the marginal cost of providing the service to that user efficiency will be enhanced. Anyone charging higher than the going rate would quickly find market share lost to competitors. All suppliers would have to set prices to cover marginal costs and this would also cover total costs if demand expectations were met.

Some port authority services and activities appear to fall into the natural monopoly category, where unit costs of providing services decline as usage increases. In cases such as particular aspects of marine safety, the service is publicly available to all once it has been supplied. Any one user does not diminish the availability of its supply to other users. These are public goods.

Where unit costs are decreasing as the usage of a service increases or are practically zero, as in the instance of channels, marginal cost pricing will not be sustainable over time—in the absence of government subsidy—as it will not cover total costs. While all users of the services of these natural monopolies and public goods should pay at least the marginal costs of their provision, the question remains of how to cover fixed costs as efficiently as possible.

One solution is to set all prices to equal or exceed marginal costs in a way which recovers total costs, while least reducing the total demand for port services. Users whose demand is unresponsive to prices (that is, the ‘captive’ users) would be charged relatively higher prices, and users whose demand is more sensitive to price levels would be charged relatively lower prices. Price discrimination is efficient because charging lower prices to users who are more sensitive to price allows for an increase in the total use of port services.

To completely implement this form of price discrimination, in a way which least damages efficiency, may be difficult and costly, involving extensive negotiations with each potential port user. However, administrative costs could be reduced, and worthwhile benefits obtained, if port users were broadly categorised according to their sensitivity to price, and charged accordingly. This system applies to some extent in some ports now.

Alternatives to this form of price discrimination exist, however. For instance, a two-part charge could be raised. The first part, the ‘usage’ price, would directly recover from users the marginal cost of providing the service. The second, the ‘access’ charge, would recover fixed costs and may vary between categories of users.

A further alternative, which would minimise administrative costs, would be to forgo altogether a direct charge on users to recover fixed costs. In this case, the value of other port fixed assets such as land would be increased. For example, land leased to a terminal operator would increase in value if ships coming into that terminal were not charged for the use of the channel into harbour (see Section 6.3.1). In principle, terminal operators and other users of port land would pay more through lease premiums than they otherwise would. The port authority would recoup its fixed costs through such lease charges, rather than through charges on ships.

The resulting structure of prices in a port, including the prices ultimately charged to cargo owners, would differ under each of the above methods of charging. The question is: which method least distorts efficiency? In principle, the form of price discrimination first discussed would distort efficiency least but, when administrative and transactions costs are considered, the answer could be different. The matter needs to be considered on a port-by-port basis.

Shipping interests made an important general point, however, with which the Commission strongly agrees: port authorities must be given the freedom to negotiate prices commercially with their customers without reference to government. Otherwise, efficiency in pricing could be seriously compromised.

### **6.4.3 Basis for charging**

To some extent, the costs incurred by port authorities result from the physical characteristics of the ship (for example, its tonnage or length) and the time it is in port. Tonnage or length of ship may be an appropriate basis for some port authority charges. For example, the cost of pilotage services or berth requirements may relate in part to these characteristics of the ship.

Flat rate tariffs are those which are applied regardless of time of use. Accordingly, it is unlikely that these charges will be efficient where actual costs relate to the time the service is required, eg for use of a berth. However, a flat rate may be appropriate in some cases, eg for navigation lights.

Time-based charges can have important incentive effects for port users. This point has been effectively illustrated in the Port of Portland, which introduced such charges as part of its pricing reform program (see Box 6.1).

Port authority costs may also result from the nature and volume of cargo being carried, and so it can be efficient for some charges to be related to cargo. For example, a cargo-based element of a total charge may be appropriate for inflammable or dangerous goods requiring special services.

Each of these bases for charging can have a place in an efficient pricing regime. Ideally, port authorities should employ a mix of charges related to their cost structures, and in line with the principles discussed in this chapter.

Further, as the BTCE commented:

Placing greater emphasis on ship-based charges is more appropriate to a port for which ship calls are largely captive or cargo exchange ratios are large ... [this] gives the ship operator incentive to exchange as much cargo as is financially feasible in order to reduce the costs per unit of cargo. ... In contrast it may be preferable for ports wishing to attract ship calls to adopt the reverse practice of lower ship charges and more emphasis on cargo charges. In this way the marginal cost per ship call would be lower than if the charges were shifted towards ships. (Sub. 89, pp. 7–8)

As noted above, wharfage is a cargo-based charge which is generally passed on to shippers. Two issues arise in regard to wharfage: the first (discussed here) is what costs should be included as wharfage; the second (discussed in the next section) concerns who should pay.

Several participants commented that wharfage tends to be used as a ‘dumping ground’ in which to include many costs which cannot be allocated more specifically, and to raise the revenue required to meet government tax and dividend requirements. In this regard, Shipping Conferences Services said that:

wharfage ... should [not] be a balancing item ... it should be a charge for clearly defined services. (Transcript, p. 1074)

And the National Bulk Commodities Group considered that:

wharfage tends to be a big bucket ... charges [should] be clearly identifiable as to their purpose and where they relate to. (Transcript, p. 1222)

Some shippers, for example coal interests at Newcastle and Caltex in Sydney, considered they were being charged wharfage even though no services were offered in return.

Certainly, as noted in the preceding two sections, there are costs which it is not possible to allocate directly to particular users or categories of user. In recovering these costs, there is scope to maximise usage of the port by varying the basis on which charges are struck and the party on whom they are levied. But there is no sound reason why all unallocatable costs should be automatically included in wharfage and charged to shippers.

#### 6.4.4 Incidence of charges

Although often charged through shipping lines in the first instance, wharfage is intended by port authorities to be passed on directly to the cargo owner. (Thus, wharfage differs from any Port Pricing Additional—see above.)

Several participants questioned whether it is efficient or equitable for such a charge to be imposed on parties such as cargo owners which, in general, had no direct commercial relationship with the port authority and received no direct port authority services in return. The Australian Shipping User Group was one participant to object to the use of wharfage:

A pricing policy which obtains revenue through wharfage seriously undermines the incentive for those parties which do have direct commercial relationships with the port authority to act in the most commercially efficient manner. (Sub. 50, p. 11)

Similarly, the MSB, Shell (a shipping company and cargo owner) and the Australian Peak Shippers Association, considered that shipping lines and stevedores should bear the charges:

The main objective of the new charging structures was to place responsibility for the MSB's costs on those who directly benefit from the use of its services rather than placing an undue reliance on the cargo owner, thus encouraging allocative efficiency in the use of port assets and services. (Sub. 21, p. 9)

Shell, as ship owners and cargo owners, accepts that the ship owners should bear the port charges in the first instance. Shippers have no direct commercial relationship with port authorities ... The port authorities should only charge shipowners and their other contractual partners (stevedores) ... Shipowners (and stevedores) should recover their costs from shippers through freight rates which are negotiated separately. (Sub. 35, p. 5)

In APSA's view the port authorities have two customers ie the shipowner and the stevedores or terminal and all charges should be negotiated with these two parties ... the shipowner ... in turn negotiates his charges with the shipper who must accept a fair share of the cost of operating the port. (Sub. 37, p. 3)

Others argued that importers and exporters should bear a share of cost. Shipping Conferences Services was one proponent of this view:

local community interests, particularly exporters and importers, [are] major users of port facilities and services, and ... the major redistribution of port costs from such users to other users was considered to be inequitable. (Sub. 12, p. 4)

The Burnie Port Authority commented that:

The principal 'user' of a port is the cargo owner and wharfage is therefore a legitimate charge to levy. There is little point in the port authority directing charges away from the cargo owner and towards the ship owner when the latter is recovering his costs from the former and when port authority charges are such a small component of a ship owner's total cost that with or without them he has sufficient incentive to expedite his vessel's departure from port. (Sub. 23, p. 6)

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Some participants claimed that wharfage charges can be beneficial to shippers as they provide an avenue for direct negotiation with port authorities. The National Farmers Federation said:

There are advantages in the cargo interest accepting responsibility for all port costs, since it gives the exporter/importer the greatest control over port costs/efficiency, and also the opportunity to maximise their competitive edge by minimising costs. (Sub. 60, p. 5)

The PBA considered that many shippers are concerned that ‘the application of port authority charges on the vessel effectively removes the shipper from negotiations concerning port charges’ (sub. DR133, p. 5).

Some participants doubted whether the question of who should pay was really an important issue. For instance, the Marine Board of Hobart said:

however the charging basis is determined, in the end, costs to the shipowner, the stevedore, the transport company etc. will be paid by the shipper who is the user of all the services. (Sub. DR118, p. 2)

However, the strong objections received from shipping interests and from some port authorities about abolition of wharfage as a charge on cargo owners suggest that it would make a difference to the final distribution of costs between ship operators, port operators and cargo owners.

ANL Ltd commented:

Given the competitive nature of Australian freight markets we are deeply concerned at the possible disastrous financial impact on shipping lines [of abolition of wharfage]. (Sub. DR138, p. 4)

Similarly, National Terminals (Australia) Ltd argued:

In a market where container handling tariffs are already below cost and significant overcapacity exists (partly because of the port authorities in the first place) it is unfair to burden terminal operators with further costs which may not be recoverable. (Sub. DR142, p. 3)

The Western Australian Port Authorities said abolition of wharfage would ‘reduce the frequency of shipping services [to Fremantle] and hence impact adversely on importers and exporters’ (sub. DR132, p. 13).

While accepting the ‘theoretical persuasiveness’ of the argument for eliminating wharfage, the PMA indicated that its ‘initial moves to reform its pricing structure met with an extremely negative response from many users’ (sub. DR152, PMA letter, p. 9) and stated that:

Port authorities cannot afford to undermine their competitive position by transferring cargo-based charges to ships. A similar argument applies to terminal and stevedore charges. (Sub. DR152, PMA letter, p. 10)

If markets for shipping and port services were competitive, the final incidence of charges among ship operators, port operators and shippers would tend to be independent of their initial allocation. Clearly, however, there are many

departures from fully competitive markets, and some port operators have more market power than others.

In general, port authorities do not provide services directly to cargo shippers. They provide them to port users such as shipping lines and terminal operators who, in turn, service shippers.

In line with the views expressed in the ISC's 1989 waterfront investigation, the Commission believes that charges should only be levied on those that have a direct commercial relationship with the port authority for the provision of services and activities. In most instances, this would restrict port authority charging to port users such as ship operators and stevedore/terminal operators. These users would themselves negotiate with cargo interests about the charges they would bear. Such arrangements would most efficiently and directly provide pricing information to all transacting parties involved in shipping cargo through ports. As noted above, cargo-based charges can have a place in an efficient port authority pricing regime, but they should be levied on those to whom the services are directly provided.

It would not be inefficient, however, for shippers to enter into direct negotiations with port authorities, provided that the service being provided by them to shippers were clearly defined and prices negotiated accordingly.

**Recommendation**

Port authority services should be charged only to those who have a direct commercial relationship with the port authority.

At present, wharfage is often paid in the first instance by the shipping line before being passed on in its entirety to the shipper. To the extent that efficient charges are cargo-based (see Section 6.4.3), present charging practice might only need to change to the extent that negotiations occur between ship operator and shipper about how much wharfage, if any, should be passed on to the shipper.

Similarly, negotiations should take place between shipping line and shipper about the distribution of the Port Pricing Additional between the parties.

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## 6.5 Transparency and terminology

Several participants claimed that there was a need for greater transparency in port authority pricing, and for greater standardisation of terminology. For instance, the National Bulk Commodities Group said:

One of the major criticisms of port pricing policies that emerged from the NBCG port cost survey was the complete lack of transparency and the absence of standard terminology in port charges. (Sub. 48, p. 11)

And the National Farmers Federation considered:

The traditional methods of charging ships: conservancy dues, pilotage and berthage have come under review. The goal must be to increase the transparency of port pricing to allow users and providers to better identify cost centres and allow them to respond to market signals accordingly. (Sub. 60, p. 4)

‘Transparency’ in pricing relates to a perceived need for port authorities to justify their charges on the basis of the costs they incur. Some port authorities already consult extensively with users and some, for example the PMA, make details of their costs available.

The Australian Wheat Board considered that:

the critical element of pricing transparency is to enable the user to clearly identify the linkage between the charge incurred and the service to which the charge relates. (Sub. DR115, p. 9)

Similarly, the Federal Chamber of Automotive Industries said that:

For the cargo owner in such a variable and complex cost structure there is no way of checking that the [charge] truly reflects the value of the service provided. (Sub. 27, p. 7)

The Australian National Maritime Association, however, pointed out some trade-offs in seeking greater transparency from port authorities:

The difficulties faced by an authority and its users ... is illustrated by the long debate over port pricing. A private company would not open its books to its clients to discuss its pricing structure, yet users of the ports demand transparency of costs in order to judge whether the pricing structure is acceptable. ANMA supports transparency on the basis that a port authority is a public monopoly and should be accountable to its users, but this clearly imposes restraints on a fully commercial approach to pricing. (Sub. 55, p. 5)

In the Commission’s view, a trade-off needs to be made between a requirement to provide detailed justification to individual users of cost structures and price schedules, and the need for port authorities to act as commercially as possible. The Commission judges that an adequate degree of transparency should be provided by adopting the institutional arrangements covered in Chapter 3 (including removal of the exemption from coverage by the PSA) and following the general pricing principles discussed in this chapter.

The Grains Council of Australia considered that:

port authorities should have a formal requirement to consult on a regular basis with port users ... the existing port advisory groups operating at some ports may be the appropriate structure for the port authority/port user consultations. (Sub. DR144, p. 5)

And the Australian Shipping User Group contended that:

At this stage adequate liaison between ports and cargo interests is not universal and should be improved. (Sub. DR130, p. 2)

In the Commission's view, transparency could be facilitated if those port authorities which have not already done so were to set up formal mechanisms for consultation with port users. Such 'port liaison committees' would enable discussion of costs and prices, as well as other matters of mutual interest.

Greater consistency in pricing terminology would partially address the concerns of participants without compromising the commercial operations of port authorities. Inconsistencies in definitions of pricing terms characterise port authority charging schedules. A number of participants, including the New South Wales Coal Association and Australian Shipping User Group, expressed support for the introduction of standard terminology:

The Association considers that there would be some merit in developing uniform or standardised terminology relating to port charges across ports throughout Australia. This would assist both shippers and shipowners in a better understanding of the range of charges which are being levied and enable an easier comparison of port charges between the various ports. (Sub. 45, pp. 12–13)

ASUG would support the establishment of standard terminology for port costs/charging. One of the current problems is that different ports identify different charging items causing it to be very difficult to clearly identify the cost of particular services and allow easy comparison to be made across ports ... The early introduction of such a costing/pricing model would be of considerable assistance. (Sub. 50, p. 12)

Gordon Brandon (Vic) Pty Ltd instanced a situation where lack of standard port charging terminology had added to its costs in chartering vessels.

The PBA indicated that it had no objection in principle to standard terminology but said it could not endorse it:

without a more complete knowledge of the changes that would be required of the authority in achieving the objective. The cost of effecting the change could far outweigh the benefits to this authority in pursuing its core and subsidiary businesses. (Sub. DR133, P. 7)

To address the world-wide problems of nomenclature in pricing terminology, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) developed a model port tariff structure in the late 1980s (see Table 6.2). (The PMA participated in a trial implementation of the model structure.) The model divides port charges into four service groups, defining their components in terms of the basis and unit of the charge, the payer and the recipient.

It appears from preliminary case studies that the benefits of such a model are significant:

The presentation [by ports participating in the trial implementation] clearly showed the benefit of adopting a rigorous framework ... (ESCAP 1988, p. 3)

However, despite widespread support from major users such as the National Bulk Commodities Group, its introduction in Australia seems to have fallen by the wayside:

[The] proposal by AAPMA [to implement the ESCAP model] attracted widespread shipper support, including that of the NBCG. However, for reasons unknown, it was not pursued. (Sub. 48, p. 12)

Thus, despite the development of the ESCAP model and the 1989 recommendation of the ISC for standard guidelines for port authority charging structures, the diversity of terms and meanings attached to port charges in Australia remains largely unchanged. It appears to be difficult to get port authorities to agree on a standard structure, as many see no reason to change their existing structure or have moved to the phasing out of elements of the charging model (such as wharfage). Recognising that there would be some costs involved, the Commission believes, however, that there is merit in the development and application of consistent port pricing terminology in Australia. This would assist in improving understanding of port pricing for users, and enable clear interport comparisons of price.

### **Recommendation**

Standard charging terminology in Australia should be developed by the Australian Transport Advisory Council in consultation with the Association of Australian Ports and Marine Authorities, port authorities and port users. The terminology should include the nature of each charge, and the basis for its calculation.

## **6.6 Summary and conclusions**

Port authority revenue comes from a mixture of charges that do not necessarily relate directly to particular services provided. The charges may be based, for example, on the characteristics of a ship, the nature and volume of cargo, the area of land leased, or the distance for which pilotage is provided.

**Table 6.2: ESCAP model tariff structure**

<i>Service group</i>	<i>Component</i>	<i>Basis</i>	<i>Units</i>	<i>Payer</i>	<i>Recipient</i>
NAVIGATION	Conservancy <sup>1</sup>	Size of ship	GRT	Shipping line	Port/responsible body
	Port dues <sup>2</sup>	Size of ship	GRT	Shipping line	Port
	Pilotage	Size of ship/time	GRT, hours	Shipping line	Port/pilot
	Tug services	Tug time, size of ship	No of tugs, GRT	Shipping line	Port, tug owner
BERTH	Mooring	Size of ship	GRT	Shipping line	Port
	Berth hire <sup>3</sup>	Time along-side, size of ship	Hours, GRT	Shipping line	Port
	Wharfage <sup>3</sup>	Volume/weight/size of cargo	Tonnes/TEU/m <sup>3</sup>	Consignee/consignor	Port
CARGO	Ancillary services <sup>4</sup>	Amount consumed	Various	Shipping line	Port
	Stevedoring	Volume/weight/size of cargo	Tonnes/TEU/m <sup>3</sup>	Shipping line	Provider of service
	Wharf handling <sup>5</sup>	Volume/weight/size of cargo	Tonnes/TEU/m <sup>3</sup>	Consignee/consignor	Provider of service
	Extra movement <sup>6</sup>	Volume/weight/size of cargo	Tonnes/TEU/m <sup>3</sup>	Consignee/consignor	Provider of service
	Special handling (eg reefers)	Volume/weight/size of cargo, type of handling	Unit types	Shipping line	Provider of service
	Storage	Time	TEU/tonnes/m <sup>3</sup> , days	Consignee/consignor	Provider of service
	Packing/unpacking	Volume/weight/size of cargo	TEU/tonnes/m <sup>3</sup>	Shipping line	Provider of service
	Equipment/service/facility hire <sup>7</sup>	Hours of use, by item	Hours	Stevedore	Equipment/services owner
OTHER BUSINESS	Real estate, licensing, management services	Various	Various	Hirer	Port

- 1 Use of general nautical facilities in the approaches to a port.
- 2 Use of general nautical facilities within the port.
- 3 Use of berth and all associated fixtures, provided these facilities are not available for any other use due to the particular ship visit.
- 4 Provision of various services at berth, eg cleaning, water, waste disposal.
- 5 Handling of cargo from wharf to road or rail or vice versa.
- 6 Handling, restacking, and sorting.
- 7 Use of equipment, facilities and services not provided as standard.

Source: ESCAP 1988.

Implementing target rates of return for port authorities raises a number of issues about choosing target levels, determining the asset base, and the basis of valuation.

In applying the principle that port authority assets should be required to return at least their opportunity cost over their useful lives, the Commission arrived at several conclusions: under-performing assets should be written down if they have no better commercial use; land held for future use should be excluded from the asset base used to determine charges for current port users; if a port authority assumes ownership of assets explicitly funded initially by users, those users should be given credit in exchange; and long-lived non-depreciating assets such as channels should be valued at zero, but their capital cost should be recovered from port users rather than the community at large.

In seeking to achieve appropriate rates of return on assets, port authorities should emphasise the improvement of productivity rather than raising their charges. Removal of the exemption of port authorities from coverage of the Prices Surveillance Act should help in that respect.

Subsidisation between port and non-port activities, and between different ports, should be avoided. So too should any price reduction for services within ports below their marginal cost, as that would be inefficient.

However, in some circumstances price discrimination between users can add to the efficiency of service provision. If fixed costs are to be met, charging higher prices to users whose demand is less sensitive to price changes can result in the total use of port services being greater than if a common price were to be charged to all users. Other ways of recovering fixed costs could be administratively less costly, however. For example, port authorities could forgo a direct charge on ships, instead recovering fixed costs through lease premiums on port land.

Efficient pricing requires that only the direct user of a service or activity be charged. In general, this is the shipping line or stevedore/terminal operator, rather than the cargo owner, though it would not necessarily be inefficient for shippers to enter into direct negotiations with port authorities.

At present, port authority charges are not consistent between ports in terminology, structure or level. Standard charging terminology for port authority pricing in Australia should be developed by ATAC in consultation with port authorities and port users.

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## **7 MANAGEMENT AND WORK PRACTICES**

The reference asks the Commission to report on the 'scope for improving the efficiency of port authority services and activities including through changed management and work practices'. As well, it asks about the importance of adopting 'international best practice' in 'areas of work coverage, training, skills development and industrial/human resource relations'. This chapter addresses these matters, and also deals with other relevant 'people' issues.

### **7.1 Background**

#### **7.1.1 Employment numbers**

Since 1988, the total workforce employed by port authorities has fallen by over 40 per cent from about 7400 to about 4200 (see Appendix Table B11). There are a number of reasons for this (see Section 7.2), including a contraction in the range of port authority activities.

Over the same period, waterfront employment has declined by about the same percentage, from around 9000 to about 5000 persons.

The largest percentage falls in port authority employment in the period have been in New South Wales and South Australia with falls of 63 and 57 per cent, respectively. Employment at the PMA, which has fallen from over 1400 in 1988 to about 950 at the end of 1992, is expected to decline to about 550 persons by September 1993. Total employment in Queensland has fallen by a much smaller percentage than in the other states, and has actually increased in a few ports, notably Gladstone and Townsville.

#### **7.1.2 Employment skills**

The wide range of services and activities provided by port authorities requires people from a number of occupations. The needed skills range from professional skills in fields such as piloting and engineering, through administrative and clerical skills, to basic manual skills. In some port authorities, employees require skills in areas such as stevedoring, packing and unpacking of containers, repairing and maintaining equipment, managing real estate, marinas and airports, and gardening.

Harbour masters and pilots occupy a special position, having professional responsibility for the safety and navigation of vessels within port boundaries. In all states except Queensland, where they are employed by the state department, harbour masters are employed directly by the port authorities. Employment arrangements for pilots differ from port to port; they may be employed by the state maritime authority, a port authority or privately.

### *How 'white collar' are port authorities?*

The nature of work within Australian port authorities has changed significantly over the past two decades, with a trend away from unskilled and semi-skilled jobs. In the PMA for example, not only has there been a significant decline in total employment from 1970 to 1992 (see Table 7.1), but also a decline in the proportion of blue collar (operational) employment. In 1992, 45 per cent of PMA's workforce was white collar compared with 18 per cent in 1970.

The Victorian Trades Hall Council observed:

The changes in the ratio between white and blue collar employment in part reflect the PMA's move towards a less interventionist role and the increasing demands of governments, politicians, inquiries and the public for information. (Sub. 15, p. 6)

The MSB commented that:

we're moving to a situation where our workforce is increasingly becoming a white-collar workforce where the skills required are in the management of traffic in ship channels ... in the area of marketing ... skills in communication and in the processes of joining together with the retailers of services and working in a team fashion—that's a form of management skill—and of course skills in areas such as property management, which is what we would define as being the fundamental base of the business that MSB is in. (Transcript, p. 113)

### *Training*

Port authorities are involved in training in a number of ways. Courses are sometimes provided in-house by training staff or by external providers in accord with port authority requirements. Extensive use is also made of the TAFE system and tertiary institutions.

A number of authorities employ their own training staff: Launceston, Gladstone, the DMH, Fremantle and Melbourne, for example. These staff provide their own courses and facilitate the use of externally available training. Many port authorities encourage employees to obtain professional qualifications through assistance with fees and time release.

In common with all other employers, port authorities must comply with the requirements of the Training Guarantee Levy Act. But a number of authorities spend more than the 1½ per cent of payroll that the Act requires. They include

**Table 7.1: White and blue collar employment at the Port of Melbourne Authority**

	<i>White collar employees</i>	<i>Blue collar employees</i>	<i>Total</i>
1970	287	1 294	1 581
1975	332	1 106	1 438
1980	374	1 078	1 452
1985	476	971	1 447
1990	565	692	1 257
1991	483	610	1 093
1992	418	519	937

Source: Victorian Trades Hall Council, Sub. 15.

the port authorities of Gladstone which spends about 3 per cent of payroll, Townsville which has budgeted to spend 2 per cent in 1992-93, and Melbourne which spent 2.9 per cent of its labour budget on training in 1991-92.

### 7.1.3 Management structures

Part of the more commercial approach adopted by port authorities in recent years has involved reducing the size and flattening the structure of management ranks.

Further, many port authorities have been reorganising their activities into separately accountable business divisions. For example, as noted in Chapter 2, the DMH reorganised in 1990, setting up various business divisions. The Fremantle Port Authority provides another example of restructuring—see Box 7.1.

#### Box 7.1: A new management structure at the Fremantle Port Authority

The Fremantle Port Authority adopted a new flatter management structure in 1992, as part of a plan to change the culture of the authority to one firmly focused on customers.

The Authority is now run by a Board of Commissioners and a General Manager. There are 5 divisions catering for the Authority's core business: Business and strategic development; Port maintenance; Port operations; Management services; and Human resource.

The new structure provides for 7 separate business units for 'discretionary commercial operations not forming part of the core business of the Authority', each being responsible for its own revenue and costs. They are: infrastructure maintenance; stevedoring maintenance; pilotage; mooring gang; container depot/bondstore; small craft; and forklift training.

A number of initiatives to upgrade management skills in the Authority have accompanied this restructuring. For instance, the corporate planning process has been strengthened to establish procedures to:

- set objectives and performance indicators;
- ensure that the baseline from which managers' performance will be measured is appropriate; and
- ensure that targets are set within realistic expectations and time frames.

Source: Western Australian Port Authorities, sub. 44.

## **7.2 Reasons for change**

As part of a wider process of microeconomic reform, governments have required port authorities to improve their efficiency and operate more commercially. They have discouraged port authorities from increasing charges and, at the same time, have demanded better performance.

In response, port authorities have had to become more productive in their use of labour. They have done this in several ways: withdrawing from areas of activity; contracting out various services and activities; taking advantage of new technology; improving management and workforce relations; implementing better management and work practices; and placing greater emphasis on training, multiskilling and workforce flexibility. Some examples of these changes are given below.

### **7.2.1 Withdrawal from non-core activities**

A good example of this is the MSB. Since its restructuring began in 1989, the MSB has significantly decreased employment. Non-core activities have been removed or reallocated by the Government. Details are given in Chapter 2.

As the New South Wales Coal Association points out, withdrawing from cargo handling had particularly large effects at Newcastle and Port Kembla (see Box 8.1):

At Newcastle, the main source of downsizing was the disposal of the MSB's coal stevedoring services to the coal loader management, which resulted in the net loss of some 130 positions. A reduction in manning of around 200 also occurred in coal loading operations at Port Kembla, prior to the signing of the lease agreement between the MSB and PKCT. (Sub. 45, p. 10)

### **7.2.2 Contracting out**

Contracting services and activities out to other providers creates an opportunity for reduced costs and, in some instances, allows the port authority to reduce its own employment numbers.

For example, the MSB Sydney Ports Authority has recently ceased to operate pilotage services in Sydney Harbour and Botany Bay following the awarding of a three-year contract to a private consortium of pilots. Many port authorities, including Burnie and Launceston, use external contractors for maintenance and construction. The PBA has contracted out incineration services, reducing employment by 4 persons, and its costs from 81 cents to 53 cents per kilogram. At Cairns, cleaning, gardening, and operation of garbage services has been contracted out, with consideration being given to contracting out the marina.

### **7.2.3 Changes in technology**

Several participants commented that changes in technology within ports have affected port authority workforce numbers. The advent of container ships, the increasing size and sophistication of bulk loading equipment, and the growing use of information and communications technology have reduced the need for labour, both for port operators and for port authorities.

### **7.2.4 Improved management and work practices; better industrial relations; better training and multiskilling**

In recent years, particularly since the commencement of waterfront reform in 1989, relations between the port authority management and workforce have improved in many ports. Enterprise based agreements have been implemented in several port authorities, with others in the process of negotiation.

The Maritime and Stevedoring Unions contended that a 'fundamental component of the successes of the maritime and waterfront reforms [including port authority reform] has been an integrated industrial relations strategy' (sub. DR112, p. 2).

Better management and work practices, and cooperation from the unions, have allowed significant reductions in employee numbers. At the same time, increased resources have been devoted to retraining and multiskilling. An example is given by the DMH where there has been a reduction of over 50 per cent in the workforce:

The restructuring and resizing is being accompanied by suitable retraining to multiskill much of the remaining workforce and by award restructuring to remove outdated work and management practices. (Sub. 32, p. 9)

Fremantle provides another example:

The restructuring process has led to the establishment of enterprise based agreements ... They were negotiated with a single bargaining unit representing all employees and all unions. The satisfactory outcome of that process has been industrial agreements which provide for improved productivity, multiskilling, training and career paths and that eliminate demarcation problems. (Sub. 44, p. 31)

As Box 7.1 notes, these developments at Fremantle have been accompanied by initiatives to upgrade management skills.

## **7.3 Continuing developments**

Several continuing developments will have an impact upon port authority employment numbers, skills needed, and the training people receive.

### **7.3.1 Rationalisation of unions and awards**

The numbers of unions and relevant awards involved with port authority employment are being reduced. As noted, above, enterprise based agreements between port authorities and their workforces are becoming more common.

#### *Union coverage and amalgamation*

Union coverage in port and other maritime activities is undergoing dramatic change with a move towards coverage by a Maritime and Stevedoring Union Federation of two amalgamated groups of unions:

- the Maritime Union of Australia which includes the Waterside Workers Federation (WWF) and the Seamen's Union; and
- the Australian Maritime Officers Union which includes the Merchant Service Guild and the Australian Stevedoring Supervisors Association.

For port authorities, this change will mean the end to coverage by a multiplicity of unions: up to 30 in some cases.

In December 1992, the unions successfully applied to have the Federation registered with the Industrial Relations Commission. The Federation is seen as a vehicle for a formal amalgamation of its component unions by the end of 1993.

According to the submission from the Maritime and Stevedoring Unions, the majority of employees of port and marine authorities are members, or have applied to become members, of the unions participating in the Federation. The main exceptions are most ports in Tasmania; ASU members in Queensland, Victoria and New South Wales; and SPSF members in Western Australia, Queensland and South Australia. The Electrical Trades Union, and the Queensland branches of the Australian Workers Union, have not accepted the arrangements.

Logs of claims have been served by the unions on all port and marine authorities for revised coverage and awards. The Industrial Relations Commission is yet to make a decision on these applications. The Queensland port authorities are opposed to this application, as are all the Tasmanian authorities except Burnie.

#### *Enterprise bargaining and rationalisation of awards*

Single Bargaining Units (SBUs) have been established in each state by the unions to negotiate new awards and Enterprise Based Agreements (EBAs) with governments and port authorities. As all employees of the Darwin Port Authority have joined the WWF, an SBU has not been needed for the Northern Territory. The new awards and agreements develop wage structures and job classifications that cut across the old demarcations.

The current situation in terms of these award and EBA negotiations on a state-by-state basis is as follows:

- The Victorian award supersedes approximately 20 awards. An EBA with the Port of Geelong Authority has been approved by the Industrial Relations Commission. At the PMA, some EBAs have been finalised while others are still being negotiated.

With the introduction of the Public Sector Management Act 1992 and the Employees Relations Act 1992, the Victorian Government has a legislative framework based on the freedom of employers and employees to choose how they regulate their working conditions. 'Under these acts, employers and employees are able to negotiate contracts that realistically reflect the requirements of the individual workplace, introducing flexibility into the labour market with the aim of improving efficiency, productivity and competitiveness of the workforce.' (Sub. DR152, p. 5)

- An award covering blue collar workers in the DMH supersedes seven previous awards. An enterprise agreement is also being developed.
- In the Western Australian regional ports separate agreements have been reached which establish an integration of stevedoring industry and port authority employees under the employment of the particular port authorities (see Section 7.3.2). The agreements eliminate demarcation barriers within the port authority and between the stevedoring industry and port authority operations. In the Fremantle Port Authority, awards and enterprise agreements have been finalised in many of the operational areas, while the development of an enterprise agreement for the administrative areas has commenced.
- In the Northern Territory, the WWF has negotiated an award and enterprise agreement to cover the Darwin Port Authority. It provides, among other things, for the use of port authority employees by private stevedores.
- Ongoing negotiations with the MSB in New South Wales are aimed at rationalising over 20 state and federal awards into a core enterprise agreement covering the MSB operations. At present, the MSB is negotiating an enterprise agreement with an SBU representing relevant unions. The MSB originally set out to develop separate agreements for each authority but agreed to a union request, via the ACTU, for a single MSB wide agreement. Once legislation is introduced to make the ports fully autonomous, it is anticipated that enterprise agreements specific to each authority will be negotiated.
- Although SBUs have been established in Queensland and Tasmania, to date there have been no negotiations. However, the PBA already has a single state award covering all its employees.

### 7.3.2 Integrated workforces

There are several workforces in most ports, including the port authority workforces and those employed by the various waterfront operators. Some ports have implemented sharing arrangements to improve labour productivity and to increase cost effectiveness. The employees stevedore ships and work cargo when vessels are in port, and carry out port maintenance and administration at other times.

In Burnie, and in some regional ports in Western Australia, integrated workforces have been established with all port labour employed by the port authority. Stevedoring companies obtain their labour from these pools. In Western Australia this arrangement commenced in October 1992 while in Burnie it began in January 1993. In Darwin (where the port authority, Conaust Ltd and the Federated Steel Owners participate in the joint venture stevedoring company, Darwin Port Services) and Hobart, spare port labour is made available to stevedores to supplement their own labour.

#### *Western Australian regional ports*

An integrated port labour force (IPLF) exists in each of Western Australia's non-Pilbara regional ports: ie Wyndham, Broome, Geraldton, Bunbury, Albany and Esperance. The integrated labour forces combine, under the employment of the port authorities, the former port authority and stevedoring workforces.

These ports are relatively small, concentrating on minerals and farm products, with throughput varying greatly depending on seasons and international trading conditions. In the past, however, employment has been maintained at levels sufficient to cover the peaks in activity, resulting in idle time in employment by stevedores and port authorities of as much as 80 per cent (see Table 7.2).

**Table 7.2: The projected effects of Western Australian IPLFs**

	<i>Albany</i>	<i>Bunbury</i>	<i>Geraldton</i>	<i>Esperance</i>	<i>Broome</i>	<i>Wyndham</i>
Idle time (%) <sup>a</sup>	58	52	39	64	80	76
Staff : -before IPLF	34	60	60	29	22	33
-after IPLF	16	36	41	16	11	17
Cost savings (% est.)	42	31	23	41	42	42
Productivity improvement (% est.)	113	67	50	73	100	94

<sup>a</sup> An average for 27/12/87 to 30/9/90.

Source: Menegola, Shaun 1992, *Job reform to keep wharves working*, reported in the West Australian, 16 September, pp. 8-9. Data confirmed in February 1993 by WA Dept of Transport.

Significant reductions in employment have occurred with the introduction of the IPLFs. In Bunbury, for example, the port's workforce was reduced from 60

(about 30 with Bunbury Port Authority, and 30 with the stevedoring firms) to 36 (including pilot boat crew).

IPLF employees are covered by the WWF. Agreements for each port have been concluded between the union and the port authority, and specify that employees work a seventy-hour fortnight, rather than the previous arrangements of working only when ships were in port.

The Western Australian Port Authorities indicated some significant operational gains from the IPLFs. At Esperance, for example, where the workforce has about halved, turnaround time for grain vessels has fallen from 3–4 days to 2–3 days; berth time costs have been reduced by about \$1000 per vessel; and ordinary time hours of 6 am to 6 pm have been adopted for the charging of mooring and towage, with significant cost savings to users (sub. DR132, p. 19).

### **7.3.3 Training**

Training can serve a number of purposes such as:

- improving employee career prospects by upgrading qualifications;
- improving future employment prospects of workers facing redundancy;
- providing the skills and knowledge required by employees new to a position to enable them to perform their duties;
- introducing workers to new methods and technologies; and
- equipping workers to perform a greater range of tasks.

#### *Multiskilling*

This attracted a good deal of comment from participants. According to the South Australian Government, restructuring in the DMH:

is being accompanied by suitable retraining to multiskill the Department's workforce and by restructuring to remove outdated work and management practices. In conjunction with the removal of workplace demarcation, this training program will lead to improved flexibility and productivity. (Sub. 32, p. 19)

The PMA advised:

With the emergence of Award Restructuring there has been a shift away from the 'classification' approach to a 'job skills required' orientation. For example in the past a carpenter would have been directed to simply upgrade their carpentry skills in a very specialised and narrow area. Now as their job may require a wider range of skills the training would include a cross-section so that the whole 'job' can be performed. The change in the process of needs assessment reflects changes in the way work is performed—multiskilling, reduction in workforce numbers, etc. (PMA 1992, p. 8)

A number of port authorities gave examples of how training and changes in work practices are closely linked. At Port Adelaide the construction and mooring gangs have been merged, with each being trained to do work performed by the other. In South Australian regional ports, bulk loading plant and mooring workers have been trained in each other's work. At Fremantle, Authority boat crew are being trained in welding to maintain navigation aids. Similarly, at the MSB, boat crews are being trained to do maintenance that would have previously required an in-house tradesman or a contractor.

### *Assessing training needs*

A number of ports have commissioned 'skills audits' to assess their training needs. The PMA completed such a study in 1990. It collected data on the skills already in the workplace by means of a questionnaire and assessed those required in the future. The DMH and the Port of Devonport Authority have also recently undertaken similar studies.

According to the South Australian Government:

The outcome of [the DMH's] review will provide a major input into the formulation, completion and implementation of a comprehensive workforce plan which will increase productivity and the quality and reliability of service delivery. (Sub. 32, p. 35)

The Port of Devonport Authority emphasised the connection between its skills audit and achieving the maximum benefits from multiskilling:

The Authority ... contracted a professional firm of consultants, to undertake a skills audit of its workforce, to identify those areas where maximum benefits can be derived from multiskilling and to prepare a formal training program utilising courses provided by educational institutions. Further, training programs will be introduced and supported by the PDA. (Sub. 13, p. 31)

## **7.4 Issues of concern**

### **7.4.1 Work practices**

Many participants praised the significant improvements in work practices in the last few years. However, a number of particular concerns about work practices were also raised.

### *Berthing times for vessels*

As noted in Chapter 4, a number of shipping operators complained of restrictions on berthing times for vessels. Restrictions apply for safety and navigational reasons, but according to CRA Ltd:

these restrictions are the result of pilotage requirements but may also result from the working times for tug and line boat crews. (Sub. 49, p. 10)

### *Pilotage exemptions*

Pilotage exemptions appear to be available only to masters of Australian registered vessels. This applies irrespective of the qualifications of the masters of foreign vessels, and their experience in Australian waters and ports.

Further, there is reason to question whether the unavailability of exemption to larger vessels in some ports is always related to safety requirements. For instance, Caltex Australia Ltd complained that masters of two of its larger vessels were unable to use their pilotage exemption in Port Botany, even though Caltex considered these masters had more berthing experience at the company's berths than the registered pilots.

### *Towage*

The towage industry has been undergoing considerable reform in recent years. There has been a significant reduction in crew levels and improvements in various work practices such as rostering, and interport tug usage. Despite these changes a number of participants pointed to what they considered were continuing problems, ascribing them to the lack of competition within the industry.

Both the Shell Company of Australia Ltd and the Queensland Sugar Corporation complained about overservicing. As noted in Chapter 4, oil companies, including Shell, considered that, in determining the number of required tugs, inadequate allowance was made for bow thrusters and other relevant equipment on vessels.

The Sugar Corporation considered excessive notice was often required to obtain towage service. Shell also complained about excessive towage cancellation fees.

### *Grain loading*

Some participants considered that inefficient work practices were associated with the separate ownership and operation of different sections of grain loading facilities at some South Australian ports and at Gladstone in Queensland.

In South Australia, the final grain loading belts to the vessel are presently owned and operated by the DMH, whilst the grain handling organisation, the South Australian Co-operative Bulk Handling (SACBH), owns the storage and handling

facilities. Different unions work the different facilities. The South Australian Government has, however, announced its intention of selling the loading facilities.

SACBH and the Grains Council of Australia said that the present arrangement increased the overall cost structure of grain loading at these ports through labour and operational inefficiencies, including the duplication of operation and maintenance crews.

Similarly at Gladstone, the bulk handling organisation (Grainco Queensland Co-op Association) owns the silos, with the ship loaders and gantries owned by the port authority. Problems with this arrangement were said to be restrictions on loading hours, and delays in maintenance.

The WWF considered that the cause of any problems at these ports was not union-imposed demarcations, but simply a question of ownership of facilities.

### *Other*

Several other examples of work practices which result in inefficient resource use came to notice through submissions or during the Commission's visits to various ports:

- the need for users at some ports to hire equipment and labour from the port authority rather than being free to supply their own;
- reservation of particular activities, such as mooring, to particular groups of workers irrespective of cost;
- the general prohibition on the use of ship employees to load and unload vessels; and
- common starting and finishing times for employees, although the useful employment of some was dependent upon the work of others commencing earlier.

In addition, as discussed in Section 7.4.3, several participants expressed concern about a spread of WWF waterfront employment terms and conditions into port authority workforces.

### *The Commission's view*

Restrictive work practices are not always designed solely to benefit the workforce. In some of the cases identified above, working arrangements are the outcome of a range of concerns such as to maximise vessel safety, or to protect an owner's investment in loading equipment.

However, to enhance Australia's international competitiveness, it is vital that all inefficient work practices be eliminated as rapidly as possible. The review of

maritime regulations, called for in Chapter 4, should assist in the process of identifying and rectifying inefficient work practices in pilotage and towage.

Continuing improvement in management and workforce relations, cooperation between port authorities and unions, and consultation with port users, should all help the process of change and reform.

**Recommendation**

In consultation with their employees and port users, port authorities should persevere in identifying all remaining inefficient work practices. Once identified, such practices should be removed.

The Commonwealth Department of Industrial Relations indicated that it supported the intention of this recommendation to improve port authority productivity and efficiency. It considered that recognition should also be given to the following:

- that improving productivity often involves a wider assortment of measures than just removing inefficient work practices;
- the scope that enterprise bargaining agreements offer regarding changes to work practices and improvements to productivity; and
- the importance of employee participation and trade union involvement to successful workplace reform. (Sub. DR150, P. 1)

The Commission agrees with these comments.

**7.4.2 Integrated workforces**

Many participants commented on the advantages and disadvantages of integrated port labour forces and other combined workforce arrangements.

For example, the Western Australian Port Authorities listed what they considered to be the advantages of the IPLF arrangements being introduced in Western Australia:

- flexible, multiskilled workforces able to perform a range of functions;
- established career paths for all port workers;
- cost savings for port users because fewer, more productive, waterside workers will be used;

- cost savings for the Western Australian port community of some 35 per cent (over \$3 million), arising from the reduction of labour in these ports (30–50 per cent decrease) and the avoidance of idle time;
- increased revenue for port authorities through the subcontracting of IPLF labour; and
- greater employment security for employees at small ports. The Western Australian Government does not favour ‘casualisation’ because there is no permanent work to hold labour in the towns concerned and there is no guarantee of skilled labour, a pre-requisite for port viability.

Not all port authorities supported the integration approach. The South Australian Government, for instance, supported the casualisation of stevedoring labour in its regional ports:

The Department of Marine and Harbors has recently reduced its regional ports workforces to the minimum necessary to provide services to shipping. The Department does not have any capacity to absorb additional labour and regards it as totally inappropriate that it should have to make any of its present employees redundant in order to make positions available for waterside workers. The Department does not propose to introduce Integrated Port Labour Forces at its regional ports. (Sub. 32, p. 33)

Users of ports identified a number of problems with integrated workforces. Some considered that they merely extend previous arrangements and thereby maintain excessive employment. The Australian Wheat Board commented:

There’s no suggestion that the development of an integrated port labour force is going to bring about efficiency or productivity. It’s simply an extension of the current pooling arrangements that exist under a new title. (Transcript, p. 476)

The National Bulk Commodities Group believed there would be considerable idle time, or non-productive work, in the ports with IPLFs and feared that shippers would have to pay the costs of these arrangements:

The port authorities, of course, claim ... they let their own workforce run down to the stage where they were able to absorb, as it so happened, in every port without exception the actual number of waterside workers who did not qualify for voluntary early retirement under the WIRA process. To us that appears to be an incredible coincidence ... We have a real concern that you are going to have people in those ports painting rocks with nothing to do that we will be paying for. (Transcript, pp. 756–7)

However, the WWF responded in this way:

We have had to negotiate, based upon the operational requirements of the stevedoring operations in the port and the port authority operations—we have had to negotiate new staffing levels in each of those ports to try and satisfy all of those operational requirements. (Transcript, p. 955)

According to the Western Australian Port Authorities, after six months of operation the IPLFs were working well (see Section 7.3.2). Fears of excessive employment had not materialised, with the workforce being fully occupied.

Performance had improved with reduced costs and turnaround times, and work culture had changed profoundly:

Almost overnight a spirit of teamwork pervaded the workforce bringing with it a level of purpose and mutual interest never apparent when there were two independent workforces. (Sub. DR132, p. 19)

The Burnie Port Authority said that there had been a remarkable increase in the productivity of the port. The average number of portainer crane movements per shift has doubled and ship turnaround times have been reduced. The Authority claimed that the IPLF had not been used to absorb surplus waterside workers because six of them still remain on the Transitional Labour List (sub. DR120, p. 7).

Concern was also expressed that combined workforces could facilitate the extension of waterfront conditions to other members of port authority workforces. For example, the National Bulk Commodities Group again:

The main concern with the WWF takeover is the inevitable flow-on of stevedoring industry wages and conditions to port authority employees. This is already evident in Western Australia as a result of the introduction of IPLFs in a number of regional ports in that State. (Sub. 48, p. 20)

The flow-on was defended by the Western Australian Port Authorities as follows:

What we have in return, however, is the complete elimination of artificial demarcation and the removal of restrictive work practices, improved flexibility and a very considerable reduction in manning levels. (Sub. DR132, p. 20)

In the case of Burnie, the port authority stated that the 'inevitable' flow-on:

has not been its experience and in fact the Integrated Labour Force Agreement negotiated with respect to the port of Burnie preserves the distinction between stevedoring and port authority wage payments. (Sub. DR120, p. 4)

Another concern was that a combined labour force could present a barrier to private stevedoring companies. The Australian Mining Industry Council stated:

We have a concern with ... integrated port labour forces that a stevedoring company may find it very difficult to establish in the future in those ports if in fact the port authority feels that his position is going to become disadvantaged or if he is going to be unable to provide a competitive service. (Transcript, p. 763)

### *The Commission's view*

The Western Australian Port Authorities argued that the IPLF concept applying in Western Australia should reduce costs and bring improvements in efficiency compared with previous arrangements.

The question, however, is whether an alternative approach such as casualisation would bring greater efficiency gains. Some participants thought so. But these

gains would only accrue to the extent that employment numbers in an IPLF were excessive, and/or that IPLF employment conditions were overly generous.

Which approach is to be preferred is not something the Commission can come to a judgment about. The issue is one for case-by-case analysis, taking into account all relevant circumstances.

If an IPLF approach is adopted, it is important that contestability in waterfront operation be preserved. This means that operators independent of the port authority IPLF should be free to compete for and to supply waterfront services. Further, the port authority should not subsidise its waterfront activities from revenues received for performing its 'core' functions.

### **Recommendation**

Port authorities should allow independent operators to compete for and supply waterfront services even if they establish integrated port labour forces. Port authorities should not subsidise their waterfront activities from revenues received from other activities.

### **7.4.3 Union coverage, EBAs and awards**

Many participants praised the ongoing developments in these areas: reductions in the number of unions covering the workforce, changes in demarcation, enterprise bargaining and changes to awards. Some, however, were concerned that the extension of the influence of the WWF into port authority workforces would impose extra costs. There was also concern whether the WWF was flexible enough to vary policy to respond to the differing needs of particular ports.

The WWF said:

where stevedoring work is performed then stevedoring rates and conditions should apply. If that's not the case then a whole lot of factors come to bear in determining what rates and conditions apply, but it is not our claim that by virtue of having coverage of port authority employees, stevedoring rates and conditions should apply. (Transcript, p. 957)

In support of this statement, the WWF pointed to a number of areas where its members did not receive stevedoring rates and conditions. It also considered that it had the capacity to negotiate with port authorities on a case-by-case basis.

The Commission notes, however, that extension of WWF terms and conditions has occurred in IPLFs in Western Australia.

In the Commission's view, any general extension of stevedoring terms and conditions to port authority employees is inappropriate. Terms and conditions of port authority employment should be negotiated in the workplace by the parties concerned. The negotiations should take into account the particular circumstances of the port authority and port users.

**Recommendation**

Terms and conditions of port authority employment should be negotiated in the workplace by the parties concerned. It is inappropriate to extend the terms and conditions of stevedoring employment generally to all port authority employees.

**7.4.4 Training**

The bulk of the training requirements of port authorities are met from in-house courses or from courses available at institutions such as TAFE colleges. The latter are not specifically designed for port authority personnel.

One course specifically targeted at port personnel is the Postgraduate Diploma in Business (Port and Terminal Management) at the Australian Maritime College in Launceston. The College is introducing a Master of Business (Shipping/Ports) in 1993.

In Victoria a Maritime Stream into the Certificate of Occupational Studies (Transport and Distribution) is being introduced into TAFE in 1993. The course will provide training of relevance to some port authority employees.

Some differing views were expressed about the suitability of general courses. The PBA remarked that the training needs of white collar staff were very similar to those in most other industries:

With respect to training of staff, it should be noted that the work functions of PBA staff are no different to that of staffs of the majority of private enterprise companies. As a result the external training courses available to the Australian workforce at large generally accommodate PBA's staff requirements. (Sub. 22, p. 8)

In contrast, the PMA considered that the education system would not presently be able to cope with ports working towards international best practice. It considered that training for waterfront reform should adopt a broad inclusive definition of the industry (thus including port authority employees) rather than one limited to stevedoring (as was the National Training Advisory Council under the WIRA process), and be nationally coordinated including the identification of needs and setting of priorities and curriculum and competency standards.

The Maritime and Stevedoring Unions were keen to see that any training proposals included an appropriate input from port employers and the unions. They also called for the development of generic vocational competency standards which would have an Australia-wide application; an examination of other training material such as the vocational competencies endorsed by the national training board for the stevedoring industry; and consideration to be given to developing a youth employment and training scheme for port and marine authorities consistent with the National Board of Employment, Education and Training Australian Vocational Certificate training system.

Some participants opposed the provision or coordination of training on a national basis. For instance, National Terminals (Australia) Ltd considered that the training of stevedoring employees is best undertaken by the stevedoring enterprise itself.

The Cairns Port Authority said that it would need to see more detail before giving its support:

There have been incidents in the past where training provided in large workforce organisations has had a negative effect on employees where workforces are small, less structured and more results oriented. (Sub. DR134, p. 7)

Mr John Asome considered that, although there is no denying that appropriate training is required:

each port would have its own requirements and even if some of the functions were similar to other ports, the incidence of interport transfers would not justify a national training scheme. (Sub. DR125, p. 7)

And the Geelong Port Authority commented that:

Training must be tailored to the needs of each organisation and accordingly those needs must be determined by the management of that organisation. Any national coordinated training scheme should therefore be for the guidance of individual organisations. As a matter of principle training schemes should not be imposed on an organisation. (Sub. DR152, Port of Geelong Authority letter, p. 9)

Training and multiskilling of port authority employees has been emphasised in recent years. The Commission considers that this should continue. Evidence from participants, however, has not established a case for nationally coordinated training. The Commission considers this matter warrants further study. Whether any need exists for nationally coordinated training of port employees, taking into account the approach to such training in other countries, is an issue which ATAC could pursue in conjunction with the AAPMA and the Department of Employment, Education and Training.

#### **7.4.5 Public service impediments**

In some cases, port authorities may be impeded in their efforts to improve efficiency because their employees are members of the public service. The need to follow public service policies of recruitment, remuneration, promotion and retrenchment could slow down the process of reform and add to its costs.

For example, since February 1990, the DMH has offered 200 excess employees redeployment within the South Australian public sector or redundancy through the South Australian Public Service Voluntary Separation Package. Eighteen employees were redeployed to other government agencies and 33 contract employees did not have their contracts renewed (sub. 32).

Volunteers had to apply to be considered and a number of conditions had to be met before the Voluntary Separation Package could be paid. The package stipulated a minimum payment of eight weeks pay plus three weeks pay for each completed year of service with a maximum payout of 104 weeks. Over 140 employees have chosen this option so far, and this has cost the Department over \$4.5 million.

The majority of state governments have policies which stop their agencies from compulsorily retrenching permanent staff they no longer need. This could restrict port authorities' restructuring plans. The New South Wales Coal Association recognised this as a problem in the MSB:

Further downsizing of MSB's head office and the respective local port authorities is both possible and desirable but is being severely hampered by the State Government's policy against forced retrenchment in the Public Service. Whilst voluntary separation schemes have worked reasonably well, hardening union attitudes and the inability of management to force the issue have resulted in a great many supernumerary staff, for whom no useful work is available and who are being maintained on the payroll without contributing to the activities or income of the authorities. In effect, these positions are being maintained by higher than necessary charges on port users. If further downsizing is to occur, the Government will need to review its policy on forced retrenchment. (Sub. 45, p. 11)

#### **Recommendation**

Port authorities should be free to determine their terms and conditions of employment, not subject to the constraints of government employment policies and practices.

## 7.5 International best practice

The Commission has been asked to have regard to ‘the importance of adopting international best practice for the provision of port authority services including, but not limited to, areas of work coverage, training, skills development and industrial/human resource relations’.

‘International best practice’ requires examination of the productivity with which various inputs are used in different countries. Such examination also extends to how different countries make those factor inputs more productive: for example through efficient management and work practices, appropriate technology, and an appropriate level of training.

International best practice is an important goal to aim for and to try to better. A country lagging behind produces its outputs more expensively than it need compared with other countries, and puts itself at a disadvantage. Lagging behind international best practice in non-traded activities, such as ports and port authorities, disadvantages industries which do trade.

Many participants recognised the potential value of international best practice. For instance, the Australian Chamber of Commerce commented that:

commerce and industry would set the test of performance not at how well we, as a nation, are performing compared to our past performance, but rather how well we are now and likely to be performing against international best practice. (Sub. 65, p. 14)

The Queensland Sugar Corporation considered that ‘it is essential that port authorities ... adopt international best practice’ (sub. 29, pp. 7–8), and the Department of Transport and Communications said:

The need for bench marking is particularly acute where the services in question are important inputs to the costs of our international trading sector. Similar considerations apply where services are provided by agencies which are not directly subject to competitive pressures and/or are provided by government business enterprises which may not operate in a fully commercial manner. ... these factors apply to port authority services in Australia. (Sub. 67, p. 21)

The New South Wales Coal Association considered that:

international competitiveness/best practice [is] vital to Australia’s trading future. The importance of this issue warrants some attempt at quantification. (Sub. DR114, p. 5)

And the National Farmers Federation said:

[although there] are difficulties in establishing a sound basis for comparison ... the value of valid benchmarks is surely worth the effort. (Sub. DR119, p. 6)

For the waterfront industry, some assistance in assessing international best practice is given by the published range of performance indicators on various aspects of Australia’s waterfront performance. The Bureau of Industry

Economics has recently published a study into international performance indicators in waterfront activity.

For port authorities, a limited number of financial and non-financial performance measures are available. ATAC, for example, publishes some relevant data. But detailed examination on a port-by-port basis would be required to assess the productivity of resource use by individual port authorities. With the time and resources available, the Commission has been able only to prepare detailed productivity estimates for Brisbane and Melbourne (see Appendixes D and E), and has not been able to obtain or prepare any such estimates for foreign port authorities.

If adequate data about individual ports were available, comparison between them could be attempted. But it is very difficult to compare performance between port authorities within Australia, let alone internationally. Several participants recognised the difficulty. For example, the South Australian Government said that:

while there is a considerable amount of base data on port authority performance in Australia, there appears to be little information on reliable methodologies for making meaningful national and international comparisons of port authorities and for setting appropriate performance targets. (Sub. 32, p. 36)

As noted in Section 2.4, a recent PMA study concluded that there were no foreign ports ‘comparable’ to Melbourne. The PMA said:

In the search for valid comparisons, there is a need to be aware of the economic, social and political differences between countries and the relationships between governments and ports. Factors that are of considerable importance include capitalisation, technology, safety requirements, subsidisation, statutory requirements, cargo type and product mix, volume of trade, infrastructure requirements, eg dredged channels etc. (Sub. 79, p. 39)

A description of these differences between Australian and other port authorities is given in Appendix F.

Several participants noted that Australian port authority charges are often higher than those in other countries. This was clearly demonstrated in the recent BIE study (see Table 2.13). But because of factors such as those listed by the PMA and described in Appendix F, price comparisons do not, in themselves, establish that Australia lags behind international best practice. Further, the BIE’s operating economic performance indicators relate more to ports as a whole, rather than specifically to port authorities. And measures such as ship calls per port authority employee, and employment per unit of port throughput, could reflect relatively low traffic volumes in Australia rather than inefficiency. Nevertheless, the big differences in charges demonstrated in the BIE study, and in submissions from participants, emphasise the need for continuing cost reductions and productivity improvement in Australia’s port authorities.

**Those matters specifically mentioned in the reference in relation to** international best practice are difficult to compare between ports in anything but general qualitative terms. Even then, nominating ‘best’ practice is not always possible. But as the Western Australian Port Authorities stated, such comparison can still be valuable:

National and international comparisons are of real value for Western Australian ports when it comes to qualitative lessons. There is much to be learned in such areas as work practices, operational techniques, management procedures, new technology and so on. (Sub. 44, p. 35)

### **7.5.1 Work coverage**

Until recently, up to 30 unions have represented employees in some Australian port authorities. As noted above, a maritime federation is being formed in Australia, and the number of unions involved with port authorities is being dramatically reduced. Further, where there is more than one union, in many cases a Single Bargaining Unit has been formed to coordinate negotiations between the unions and the authorities. In many other countries, only a small number of unions cover employees. For example, in Singapore there is a Port Workers’ Union and a Port Employees Union. In the United States and Canada, one union per authority (the Longshoremen’s Union) often covers both management and staff. In some ports in Britain, for example Tilbury and Southampton, the private port authorities do not recognise the unions.

Enterprise based employment is gradually becoming accepted practice within Australian port authorities. This also applies commonly overseas. But in some cases individual employment contracts apply, for example in New Zealand and in some British ports.

### **7.5.2 Training and skills development**

Some foreign ports, for example Singapore and Rotterdam, operate specialised port authority training institutions for their employees. In some cases, they market training courses to people from other ports. Some ports spend in the order of 5 per cent of revenue in training. Some Australian port authorities spend up to about this amount as well.

Even so, the Commission considers that Australian port authorities should continue to give emphasis to training and skills development.

With the rationalisation of work coverage and the breaking down of demarcations in Australia, emphasis is now being given to multiskilling of employees and workplace flexibility. Ports in other countries also use their employees in more than one role.

### **7.5.3 Industrial/human resource relations**

Relations between management and unions in Australian port authorities have improved in recent years. In many foreign ports, industrial relations seem just as good—including in those British ports, for example Tilbury, where management has refused to recognise or deal with the unions, preferring instead to deal directly with employees.

Other countries have also made concerted efforts in recent years to reform the waterfront.

### **7.5.4 Summary**

There are no hard and fast answers to the question of international best practice for port authorities, nor can precise benchmarks be established for Australia. Indeed, given the vast range of social, economic and institutional differences which affect port authorities in various countries, the value of the international best practice concept for port authorities is questionable.

Australia has made considerable progress in reform in the areas listed in the reference. Nevertheless, from the evidence reported earlier it is clear that continuing worthwhile improvements can be made in work coverage, training, skills development, industrial/human relations and other employment-related areas. There may be some lessons to be learned from international experience and it is encouraging that port authorities in Australia are keeping an eye on developments in other countries.

## **7.6 Summary and conclusions**

Port authorities have responded in several ways to the need to become more productive in their use of labour. Employment numbers have declined significantly in the last few years.

Employment could decline further as a result of the current rationalisation of unions and awards, the combining of workforces and sharing of labour within regional ports, and increasing multiskilling.

Many participants welcomed the significant improvements in work practices which are occurring in port authority workforces. But there is also evidence of restrictive work practices continuing. It is vital that all inefficient work practices are eliminated as rapidly as possible, so as to enhance Australia's international competitiveness.

Whatever approach is adopted to improving workforce efficiency in the smaller regional ports, it is important that the provision of waterfront services remains open to competition. Port authorities should not subsidise waterfront activities from revenues received for their core activities.

The general extension of stevedoring terms and conditions to port authority employees is inappropriate. Terms and conditions of port authority employment should be negotiated in the workplace by the parties concerned.

Port authorities should not be required to comply with public service employment conditions.

While port authorities should place emphasis on training their employees, it is not clear that nationally coordinated training—as proposed by some in this inquiry—is required. This matter warrants further study by ATAC.

Comparisons between port authorities within Australia and overseas are difficult to make in anything but qualitative terms. There are no hard and fast answers to the question of international best practice for port authorities, nor can precise benchmarks be established for Australia. Nevertheless, continuing improvements can be made in work coverage, training, skills development, industrial/human relations and other employment-related areas. In this respect, there may be some lessons from international experience.

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## **8 FUTURE DIRECTIONS AND PRIORITIES**

The impact of port authorities extends far beyond their share of transport costs. For example, many port authorities provide services and activities which private enterprise could supply; and they set the terms and conditions of port leases. In so doing they influence the efficiency of port users and operators. In the preceding chapters, the Commission has identified a number of ways in which overall port efficiency can be improved by changes to the way in which port authorities operate.

So, in setting future directions for port authorities, the priorities are to determine the most appropriate role for each port authority, to take the steps needed to get there (including the sale or divestment of non-core activities, and the contracting out of core activities), and to develop institutional settings which maximise the incentives for efficient performance. Early practicable action in all these areas is considered in this chapter.

There might be opportunities to increase efficiency through privatisation of ports, including those core activities commonly carried out in Australia by public port authorities. This issue is also raised in this chapter.

The chapter finally looks at two matters for possible national coordination: whether a national approach is warranted to hasten port authority reform; and whether some form of national coordination of government investment in ports would be beneficial.

### **8.1 The role of a port authority**

Some form of government intervention is justified in regard to many services and activities provided within ports. As discussed in Chapter 3, core services and activities might otherwise not be provided sufficiently or at all, and monopoly pricing may occur.

The Commission has concluded that the landlord model for port authorities has much to commend it. Many Australian port authorities follow this model, or are moving towards it. They restrict their services and activities to core functions such as providing safe access to harbour, strategic planning and management of port land. They avoid providing services and activities that would normally otherwise be provided by private enterprise.

Chapter 5 discussed whether the role of port authorities should extend to the promotion of the efficiency of private operators within ports. It concluded that

this should not be a specific objective of port authorities. But in seeking to make their own operations efficient, subject to the general trade practices and prices surveillance arrangements which operate in Australia, port authorities would contribute to the overall efficiency of port operation.

Restricting a port authority to the landlord model would not always be efficient. In some regional ports, for example, it may be cost effective to have just one provider of services, rather than many. Efficiency in such ports could be improved if the port authority's role encompassed non-core activities such as cargo handling, provided freedom remained for independent operators to compete for the supply of waterfront services and the port authority did not subsidise them from its other activities (see Section 7.4.2).

### **Recommendation**

As a priority, State and Territory Governments should determine which functions can be most efficiently carried out by each of their port authorities. In most cases, this will mean following the landlord model. However, in some regional ports it may be more efficient for the port authority to undertake some non-core port activities.

Some participants were concerned about leaving the determination of port authority functions to government. The National Farmers Federation, for instance, considered that 'states have a vested interest in maintaining monopoly control over services in ports since this has become a significant source of general revenue for them' (sub. DR119, p. 2). The NFF further considered that the review of port functions should be carried out in consultation with port users and cargo interests as 'commercial exigencies of users and cargo interests are likely to lead them to apply more stringent criteria in determining which functions are best provided by the port authority' (sub. DR119, p. 2). The Commission agrees that such consultation is appropriate. The final decision about port authority functions, however, belongs to government as the owner.

## **8.2 The landlord role**

In moving a port authority to a landlord role, consideration needs to be given to the desirability of divesting non-core services and activities; and the scope for contracting out core activities.

### 8.2.1 Identification and divestment of non-core activities

There has been a degree of leasing or sale of port authority assets in most Australian ports already, with many port facilities and services being supplied by the private sector, particularly in those ports already tending towards the landlord model. The last decade has seen transfers of cargo handling equipment to private operators, fewer common-user berths, and the development of new facilities by private operators. Some port authorities have withdrawn from operating pilotage services. Towage is now fully private in most ports, although licences are still required.

This process can bring considerable benefits as the example in Box 8.1 shows.

#### Box 8.1: Benefits from 'privatising' the Port Kembla Coal Loader

In August 1990, control of the Port Kembla Coal Loader passed from the MSB to Port Kembla Coal Terminal Ltd (PKCT), a consortium of NSW coal mine operators. Under the 20-year lease agreement PKCT paid the MSB a lease charge of \$2.50 per tonne during the first year, which reduces to \$2.00 per tonne during subsequent years. The objective was to allow the private sector to run a previously public sector utility, enabling efficiency improvements and cost savings to be realised by industry.

During 1990-91 the Port Kembla facility handled a record 13 million tonnes of coal. Private management of the coal loader has achieved the following:

- industry costs per tonne for ship loading fell from \$5.58 when the loader was operated by the MSB to \$4.50 by June 1991. Costs were expected to reduce further during 1991-92;
- average vessel time at berth fell from 49.4 hours for 1989-90 to 42.3 hours for 1990-91, even though the average vessel load increased by over 10 per cent;
- average ship loading rate increased from 1980 tonnes per hour for the previous three years to 2440 tonnes per hour for 1990-91. A record ship loading rate of 4287 tonnes per hour was achieved in May 1991;
- gross ship loading rate (actual ship loading rate/design ship loading rate) improved from 30.5 per cent in 1989 to 39.25 per cent in 1991;
- the number of employees fell from 390 in 1990 to 221 in 1992; and
- average vessel turn-around time improved from 9.6 days in 1990 to 4.8 days in 1991.

The transfer permitted the MSB to shed a complex activity which was not a part of its core business. It resulted in a reduction of overall MSB staff levels of some 370. The transfer enabled the MSB to turn a 1989-90 \$6.4 million loss for the coal loader into a \$3.9 million operating profit for 1990-91.

Source: Maritime Services Board, Sub. 21, CRA Ltd, Sub. 49.

Participants representing unions opposed such changes. The Maritime and Stevedoring Unions were concerned about market power and the establishment of private monopolies in 'a strategically important sector'. They considered that:

Recent privatisation of the Sydney pilotage service for example has merely transferred a government authority owned and run monopoly to a private sector monopoly ... The principal unions genuinely see no need for the wholesale privatisation of ports, or the partial privatisation by sale or contracting out of functions of port and marine authorities. (Sub. 28, pp. 16-17)

Further:

[the] real and tangible improvements [made so far] should not be disregarded in favour of divesting port authority services and activities to the private sector based on an assumption that the private sector is more efficient. (Sub. DR112, p. 1)

The Victorian Trades Hall Council was also opposed to privatisation of port authority assets.

While not disputing the benefits of the changes at Port Kembla, Gladstone Port Authority, an authority which 'does not subscribe to the theory that port authorities should be merely landlords' (sub. 6, p. 1), indicated that performance of its Clinton coal loading facility is better than at Port Kembla. For instance, the Authority claimed that industry costs per tonne for ship loading average \$2.70, gross ship loading rate is 68 per cent, and average vessel turnaround is 3.6 days.

Many participants, including port authorities and port users, favoured divestment of non-core activities. For example the Victorian Government indicated that:

Non-core activities will be divested and core activities contracted out if efficiency improvements can be achieved and when feasible the regulatory role of the port authorities will be transferred to more appropriate agencies. (Sub. 78, p. 3)

The Australian Wheat Board stated:

Under the AWB's preferred scenario, where the role of the port authority is limited to the provision of safe channel to safe berth, there is considerable scope for privatisation of peripheral activities. (Sub. 41, p. 6)

And the National Bulk Commodities Group favoured privatisation of bulk facilities:

There is considerable scope for an extension of the 'privatisation' of bulk facilities within Australian ports, particularly regional ports, where they are adjacent to terminal/stock-pile facilities or are single commodity/user facilities eg grain loading. (Sub. 48, p. 15)

In this regard, the South Australian Government has recently announced that the DMH's bulk grain loading facilities in regional ports are to be sold.

With the qualification about regional ports in the previous section, the Commission is convinced that contraction of port authorities to the landlord role through the identification and divestment of non-core activities will bring efficiency gains. Public authorities, even if they were fully corporatised, do not have the same financial market disciplines for the efficient provision of non-core services as private enterprise. Thus, even the 'world class' (BIE 1993, p. 51) coal loading operation at Gladstone, for instance, might be improved if it were distanced from the port authority itself.

### 8.2.2 Contracting out activities

With contracting out, services and activities are supplied to the port authority by private enterprise where this can be done more cheaply than by the port authority's own employees. Contracting out enables port authorities to continue to control the provision of services and activities, while reducing costs. There are some examples of contracting out by Australian port authorities (see Sections 2.2.7 and 7.2.2), but they relate mainly to non-core activities such as pilotage (eg by the MSB), machinery maintenance (Adelaide) and even incineration of garbage (PBA).

However, there may well be gains from contracting out particular core activities, and port authorities need to explore what the net advantages would be.

#### **Recommendation**

Where governments follow the landlord port model, non-core activities should be identified and divested to private enterprise. The supply of core services and activities should be contracted out wherever that is cost-effective.

In some regional ports it might be efficient for the port authority to undertake some non-core port activities. An option which could improve efficiency in such ports would be to contract out its entire management and operation, including core and non-core activities. This could be done through periodic public tender so as to provide serial competition. In the Draft Report, the Commission requested comments from participants on this option, but received none.

### 8.3 Corporatisation

Irrespective of the particular services and activities which a public port authority provides, the institutional framework in which it is placed and the requirements imposed on it by governments can have an important influence on whether it operates efficiently.

As discussed in Chapter 3, the Commission believes that the incentives for port authorities to become and remain more efficient would be increased if they were placed in a 'corporate' environment. That chapter goes through various principles which should apply to public port authorities, and arrives at a range of recommendations.

Although all states are moving to make their port authorities more commercial and accountable, they are at differing stages of the process. The MSB has gone

furthest toward implementing the full range of corporatisation principles advocated by the Commission (but, as noted in Section 3.2, even it has some way to go), and the new Victorian Government also intends to pursue corporatisation strongly. General corporatisation legislation for state business enterprises has recently been passed in Queensland.

The principles of corporatisation are designed to provide greater commercial focus for managers, separate governments from the day-to-day operations of the port authorities, introduce greater accountability, and put the port authorities on a similar footing to private enterprises. The Australian community overall would benefit if the principles were to be implemented in all Australian port authorities without further delay.

**Recommendation**

The corporatisation recommendations (see Chapter 3 and Section 7.4.5) should be implemented for all public port authorities without delay.

#### **8.4 Moving to the landlord corporatised port authority**

In moving to the landlord role and implementing the corporatisation principles, a number of steps are likely to be needed. Each will require economic analysis and study of the employment and administrative consequences.

The first step is for government to clarify the objectives which it requires the port authority to pursue. Then consideration can be given to the functions and powers necessary to meet those objectives.

The costs of providing various services and activities need to be studied to discover whether there are any economies of scope which could justify extending the role of the port authority beyond the landlord model. However, such economies of scope are likely to be confined to some regional ports.

Governments need to consult with users in their consideration of the appropriate role and functions of each of their port authorities. Whatever decisions are finally reached, the decision and the reasons for it should be made public.

Non-core activities need to be identified and prepared for divestment. Among other things, this would require the government or port authority to determine an asset base, and to value the port authority's assets. Similar measures may be required before contracting out can be pursued.

It might be appropriate for some port authority functions to be taken over by other government agencies. Consideration needs to be given to whether, for example, CSOs should be transferred to a relevant department.

Corporatisation also takes time: some of the steps need to be taken by government, some by the port authority. For example, government may need to change legislation providing for the appointment of port authority board members, and to remove any shield of the crown protection. The implications of exposing port authorities to corporations law would have to be examined. Government ministers must consider and decide on performance targets. Port authority boards have to establish controls over management.

In all of these matters, careful attention needs to be given to the employment consequences. They will be considerable and have to be handled fairly, yet efficiently. The Maritime and Stevedoring Unions were concerned that the Commission's recommendations 'potentially have the direct consequence of terminating the employment of many hundreds of port authority employees' (sub. DR112, p. 2).

That is correct, although some of the loss in port authority employment would be offset by gains in other enterprises taking over services and activities previously provided by port authorities. But if the total costs to the community in terms of the resources used to provide port services can be reduced, the Australian community as a whole will be better off and Australia's international competitiveness will be enhanced.

So far, reductions in port authority employment has been handled mainly by voluntary redundancy. In commenting that they do not support involuntary retrenchment, the Unions said:

Fundamental to any restructuring or reorganisation involving a reduction in the number of port authority employees is the availability of fair and equitable voluntary redundancy arrangements. (Sub. DR112, p. 4)

However, as noted in Section 7.4.5, public service employment conditions such as restricting retrenchment to voluntary redundancy can add to the cost of reform. The Commission considers that port authorities should be freed of such government employment policies and practices.

The MSB has gone furthest down the landlord/corporatisation road in Australia, although it still has some way to go. Box 8.2 illustrates the process adopted for the MSB, and some of the problems encountered. Despite the problems, the MSB example shows significant gains (see Boxes 8.1 and 8.3). Box 8.3 also shows that the MSB has some way to go to complete the process of moving to a corporatised landlord.

## Box 8.2: Reforming the Maritime Services Board (NSW)

### The process

The *Marine Administration Act 1989* specified a new-look MSB **whose purpose would be to:**

*manage waterfront property suitable for port purposes and to assist ships through provision of safe and secure conditions for their stay in port.*

The MSB released a 3-year program as its first Corporate Plan in 1990. The Board then appointed a team of managers whose approach to reforming the MSB was to:

1. *Identify discrete and manageable core business segments* within each of the subsidiary authorities: MSB Hunter Ports, MSB Illawarra Ports, MSB Sydney Ports and MSB Waterways.
2. *Introduce regular reviews and planning at all levels of the organisation.*
  - a. Define corporate mission.
  - b. Analyse current activities.
    - i. Group them into core and non-core.
    - ii. Analyse profitability of each activity.
    - iii. Prioritise non-core and unprofitable activities for divestment, and focus subsidiary authorities' efforts on improving performance in core activities.  
The MSB significantly reduced or shed coal loading, stevedoring, gangways, wharf cleaning and maintenance, ship repair, major capital construction, service connections for vessels and pilotage services in Sydney Harbour and Botany Bay.
  - c. A review and planning cycle to ensure Step b continues.
3. *Prepare port business plans and integrate them into the Corporate Plan.*
4. *Restructure the subsidiary port authorities* as autonomous units with responsibility for their own assets. This involved:
  - identifying and separating out regulatory activities;
  - identifying and quantifying CSOs;
  - encouraging the authorities to focus on improving customer services through trade facilitation and marketing and Total Quality Management initiatives; and
  - reforming pricing policies according to 'user-pays' principles.

### The problems

According to the MSB, several factors caused difficulties or slowed the reform process:

- little interest from the private sector for investment in port infrastructure;
- lack of interest in sales or adaptive reuse of surplus assets (coinciding with the economic recession and generally reduced investor confidence);
- NSW Government employment policy of no forced redundancies;
- limited availability of software and systems to support and facilitate the process of regionalisation;
- the need to make a tradeoff between diverse stakeholder demands, specifically the level of return on assets paid to the Government as owner, and the price reductions available for customers; and
- the reduced cost effectiveness of implementing organisation-wide training while in a dynamic state of change due to reducing and restructuring the workforce.

Sources: Hayes 1991 and 1992, Moore-Wilton 1992, Sub. 21, MSB 1991 and further information from MSB Head Office.

## Box 8.3: Gains from Maritime Services Board (NSW) reform

### The gains

Asset disposal and privatisation of non-core activities has reduced the MSB's asset base and improved its operating surplus. By applying the proceeds to redeem debt, interest charges have fallen, the return to the NSW Government has improved, and real charges have been reduced.

The MSB reports that reforms have contributed to its improved financial performance of the MSB—see table below. In addition, the three port subsidiaries are now profitable primarily due to the MSB withdrawing from its previous loss-making operation of the Port Kembla and Balmain Coal Loaders.

	1984-85	1988-89	1990-91	1991-92
Throughput (million revenue tonnes)	89.3	92.8	108.5	113.1
Expenditure (\$m)	215.9	266.2	230.9	194.9
Surplus (\$m)	27.5	19.9	60.1	78.2
Number of staff	3388	2998	1484	1297 <sup>a</sup>
Real port price index	100	75	65	58
Revenue/employee (\$'000)	79.5	95.6	153.2	198.9
Gearing ratio	60.7%	55.8%	50.4%	31% <sup>b</sup>

<sup>a</sup> Includes approximately 300 staff of the MSB Waterways Authority who are associated with recreational boating and foreshore property management functions. <sup>b</sup> Based on revaluation of assets.

### The future

The NSW Government is to determine later this year the future arrangements for the four MSB subsidiaries and MSB Head Office. Options include maintaining the status quo, full autonomy for the port authorities, corporatisation and/or privatisation.

According to the MSB, other tasks will continue:

- resolving the problem of too many staff;
- sale or disposal of remaining surplus assets;
- finalising computer based management information systems;
- more customer focus training through Total Quality Management;
- progressive privatisation of non-core activities; and
- isolation of regulatory functions.

In February 1992, the General Manager, Port Co-ordination and Planning of MSB stated that:  
*the momentum of change has been and will remain rapid. No attempt has been made to define an end point. This is just as well, because the process should not be allowed to end.*  
(Hayes 1992)

Sources: Hayes 1991 and 1992, Moore-Wilton 1992, Sub. 21, MSB 1991 and further information from MSB Head Office.

There was only limited response to the Commission's request in the Draft Report for participants' views on the practical steps required to move a port authority to a landlord role, and to introduce the full range of corporatisation principles. However, some participants argued that the twelve month period contemplated in the Draft Report for implementation of its corporatisation proposals was too short. The reform process in the MSB has been underway since 1989. The Commission fully appreciates that the reform program it is recommending will take more than a year to complete. But it is vital that reform of port authorities proceed without delay, so that port users and the Australian community as a whole get the benefits as soon as possible.

## 8.5 Privatisation

Corporatisation would introduce many commercial disciplines to port authorities, but privatisation would fully expose them to the market.

No public ports/port authorities in Australia have been fully privatised (although there are some privately owned ports). But in some other countries, notably the United Kingdom and New Zealand, some ports have been transferred from public to private ownership. Would full privatisation in the Australian context improve or worsen efficiency?

Some participants argued that consideration of full privatisation was of secondary importance to improving the efficiency of port authorities within the current institutional framework.

The Australian Shipping User Group preferred to leave aside the issue of ownership as 'essentially a political decision' to be addressed later:

A privatisation debate involving the main container ports in Australia would be likely to divert the debate away from early reforms that can be accommodated within the public ownership of these ports through the application and implementation of the Commission's own corporatisation model. (Sub. 50, p. 5)

The New South Wales Coal Association shared this view:

of greater importance than the actual ownership of ports, is the need for them to adopt a fully commercial approach to their business. (Sub. 45, p. 5)

The option of full privatisation of port authorities has been examined by many of the states and territories. Comments on the position in each state and the Northern Territory are presented in Box 8.4.

<b>Box 8.4: Government views on full privatisation</b>	
NSW	Privatisation is viewed as a possible option for the future but NSW is of the view that Corporatisation under the SOC Act is an appropriate management structure for NSW ports. (NSW Government, Sub. DR145, pp. 10–11)
Victoria	Where practicable port services will be privatised ... The feasibility of equity investment in the port authorities will be investigated. (Victorian Government, Sub. 78, pp. 3–4) The Government has established a working group to investigate options for the alternative ownership and management of Associated Ports. (Sub. DR152, p. 3)
Queensland	PBA is subject to State Government policy which does not provide for corporatisation being a step towards privatisation. (PBA, Sub. 22, p. 5)
Western Australia	We are unable to endorse a general philosophy of privatising port authorities ... that step may be merely creating a private sector monopoly in place of a government one without producing any attendant benefits for port users. It would also jeopardise the interests of users of the facilities. Furthermore, the government's loss of influence over these basic vehicles of regional, industrial and community development would be of considerable concern. (Western Australian Port Authorities, Sub. DR132, p. 10)
South Australia	South Australia is not convinced that the corporatisation and privatisation models are the most appropriate organisational models on which to base the supply of this State's port services. (South Australian Government, Sub. 32, p. 25)
Tasmania	Government policy is under review. The recent working party on Tasmanian port policy considered that ultimately ... port system efficiency would be maximised by establishing the four main port authorities as fully corporatised state authorities and then, if the state's interests can be suitably protected, as private port companies. (Working Party Report, p. ES1)
Northern Territory	In most instances, the return on capital achieved is too small in the short term to attract private investors ... The NT Government has had to take the initiative in providing the necessary capital ... (Darwin Port Authority, Sub. 93, p. 6)

In short, no state or territory government is committed, at this stage, to full privatisation of its port authorities.

Some bulk cargo port users favoured privatisation of port authorities. The Australian Institute of Petroleum stated:

The issue of privatisation of the port authorities needs to be considered in depth with full cost/benefit analysis. Privatisation may be a more preferable route to follow than corporatisation where the ownership would still remain with the state. (Sub. 59, p. 1)

CRA Ltd saw privatisation as the only way to deal with the political pitfalls of public ownership:

With increased competition political interference is less likely to exist. With privatisation it cannot exist ... CRA's experience is that in the main, the only places where Government controlled ports operate effectively is where there is a single user and there is minimum intervention. (Sub. 49, pp. 11, 18)

A concern of several participants was that full privatisation would merely transfer monopoly power from the public to the private sector. The Western Australian

Port Authorities cited the lack of competition as a reason for continued public ownership of ports in the west:

In the Western Australian context, where there is limited competition between ports, there are arguments against port privatisation particularly where a port has multiple users. (Sub. 44. p. 21)

The Western Australian Port Authorities commented ‘a BHP monopoly [at Port Hedland] would probably not sit well with BHP competitors such as Portman who also use the port’ (sub. DR132, p. 9).

The Australian Chamber of Commerce did not support the sale of a whole authority, as this could lead to excess market power:

As a general rule, the Australian Chamber of Commerce supports the corporatisation and privatisation of sea port authorities ... Where privatisation takes place, it should be done on the basis of the sequential sale of components of the sea port authority/facilities rather than the straight transfer of a dominant or monopoly service from the public to the private sector. (Sub. 65, pp. 6–7)

While the NSW Government agreed in principle that benefits are achievable from the privatisation of the single commodity ports, it considered that:

in the case of Newcastle there is a significant regulatory responsibility and community service obligation by way of dredging that would need to be resolved before privatisation could occur. (Sub. DR145, p. 11)

The NSW Government also noted that the Hunter Port Authority is actively seeking to broaden its market and that Newcastle will move away from its current status as a narrowly based commodity port.

### **8.5.1 The Commission’s view**

Private ownership has the potential to introduce incentives for efficiency that do not accompany public ownership. For example, public authorities remain immune from takeover and insolvency and the performance monitoring implicit in changing share prices. Further, there always remains the possibility of political interference. Private ownership brings with it a dimension of competitive discipline which cannot be replicated in the public sector.

On the negative side, there is the possibility that full privatisation, in the Australian situation where significant competition between ports is generally not possible, would transfer market power from public to private hands. It is not clear whether, in a particular case, the costs of regulating such private market power (through the TPC and the PSA) would exceed those of setting performance targets for port authorities and opening up their activities to monitoring by public agencies (as the Commission has proposed through the TPC/PSA). Any such extra costs could offset the efficiency gains arising from private, rather than

public, ownership. Although the PSA queried whether there were any extra costs associated with regulation of private rather than public monopolies (DR143, p. 3), the matter is one for case-by-case examination.

There would, however, be some incentive for the owners of a privatised port to expand operations away from the landlord model toward the comprehensive model. This would allow the port the opportunity to take advantage of any economies of scope, and to increase turnover and profits. But such expansion, in the Australian context of limited competition between ports, could widen the areas of possible monopoly and add to the regulatory task.

In summary, a general conclusion about the net merits of privatisation is not possible. However, there are some cases where it is likely to be beneficial, and these deserve full consideration. A first case is where there is significant competition between ports, as in Tasmania. Market power is less easy to exploit, and the task of regulating it becomes much less. A second case is where a few bulk users dominate trade through a port, as in (for example) specialised grains, sugar and minerals ports. In such ports, the dominant user or a joint venture among users might operate the port more efficiently than a public port authority. To prevent the dominant port user excluding competitors or other users from the port, privatisation would need to be conditional on the continued availability of access to all port users.

**Recommendation**

Governments should consider the opportunities to increase efficiency which might be offered by fully privatising ports that face competition from other ports (as in Tasmania), or that are dominated by a few large bulk users.

Neither contraction of public port authorities to a landlord role, nor corporatisation within the present institutional framework, are prerequisites for such consideration. At the same time, full privatisation itself requires careful preparation, involving some of the same steps as corporatisation, such as asset identification and valuation.

**8.6 A national approach**

There are differences between states and territories, and even between port authorities within states, as to how far down the commercialisation and

corporatisation road they have gone. Would some sort of national program to encourage institutional and regulatory reform be worthwhile?

One possible result of the inconsistent approach between states and territories is excessive investment in port facilities. For example, as noted in Chapter 4, many ports aspire to be hub ports. Shipping Conferences Services considered that Australia has a ‘surfeit of portainer cranes ... for the ... minuscule volume of containers going through Australia’s ports’ (transcript, p. 1069). In Tasmania, there is overinvestment in port facilities (see Appendix C). Would there be any merit in national coordination of investment within ports?

A national approach to ports could take many shapes—from voluntary associations, to a national authority established to approve plans in accordance with some national strategy. The Commission notes that the Australian Transport Advisory Council (ATAC), which comprises Commonwealth, State and Territory Ministers of Transport, already covers port-related issues. Another national forum for port authority issues is the Association of Australian Ports and Marine Authorities (AAPMA).

### **8.6.1 Fostering corporatisation**

Participants’ comments on a national approach mainly related to the investment issue, rather than the coordination and encouragement of the process of corporatisation.

The South Australian Government, however, saw a place for national review of progress in reform:

Reform must be ongoing. This requires that the momentum for change not be lost. National review of ongoing reforms is appropriate. Whether this be done through ATAC, as at present, or through an alternative ... is immaterial. (Sub. 32, p. 42)

Delay in corporatising postpones benefits to port users and the Australian community alike. And as noted in Chapter 4, adopting a more commercial approach would also enhance competition between Australian ports. Even though the primary barriers to increasing such competition are physical, demographic and market factors, it is important to remove regulations and institutional impediments which distort it. Differences between states in the requirements they impose on port authorities, for example through inappropriate rate of return and dividend requirements which feed through into port authority charges, can affect the degree of competition between ports.

The Commission considers that a national approach to coordinating port authority reform would be useful, particularly in hastening those states and territories that are slow. ATAC already does some monitoring and publishes performance indicators, but the Commission considers that additional pressure

needs to be applied. ATAC should first prepare and make public a comprehensive program and firm timetable for ongoing port authority reform. That task needs to be undertaken by Commonwealth, State and Territory Ministers so that the practical realities facing governments are taken into account. ATAC should then monitor the progress of reform and its effects, and submit an annual assessment to the Council of Australian Governments. The assessment should be made public, to give port users and the Australian community generally an opportunity to comment on it.

**Recommendation**

The Australian Transport Advisory Council should prepare and make public a comprehensive program and firm timetable for ongoing port authority reform. ATAC should then monitor the progress of reform and its effects, and submit an annual public assessment to the Council of Australian Governments.

**8.6.2 Monitoring and controlling investment**

BHP Transport submitted a proposal for a national approach to port activities, which would categorise Australian ports as:

- major integrated ports (Tier 1);
- regional ports (Tier 2); or
- dedicated ports (Tier 3).

BHP Transport recommended the establishment of a National Ports Corporation, ‘similar in principle and application to the National Rail Corporation and Federal Airports Corporation’, to own and manage the Tier 1 ports, and to standardise their services, structures, operations and pricing structures. Tier 2 and 3 ports would remain in their current ownership and management structures. However, Tier 2 ports would be subject to ‘adherence to operating guidelines and national strategies’ as developed in consultation with the National Ports Corporation. In Tier 3 ports the port authorities would revert to a landlord role and lease the facilities to users. (Sub. 54)

In noting the potential for port authorities to make unsound investment decisions based on ‘parochial needs at odds with the national interest’, National Terminals (Australia) Ltd said:

Australian ports, which represent a major link in the transport chain with its trading partners, are of such strategic importance that a national perspective must be taken into account when major port investment decisions are made. (Sub. DR142, p. 3)

Several other countries, for example Canada, France and Japan, have national planning mechanisms for investment in ports (see Appendix F).

However, participants generally opposed any form of national planning of Australian ports, or control of investment in port facilities.

For example, the MSB noted:

Port authorities in Australian states are differently structured to suit their particular business and operating environment. Different cargoes, throughputs, roles and unions make it difficult to perceive benefits from a national approach. (Sub. 21, p. 31)

And the Port of Devonport Authority warned:

care should be taken by the Industry Commission not to attempt to prescribe reform initiatives or to make recommendations on an Australia-wide basis. (Sub. 13, p. 34)

Several participants considered that a national approach which conferred powers on a central body or plan would be counter to the principles of current reforms which are founded on increasing the independent commercial management of individual port authorities. The PMA considered:

Greater government involvement runs counter to policy to commercialise port authorities. (Sub. 79, p. 44)

The Western Australian Port Authorities agreed:

The government is in fact moving to strengthen the independence of Western Australian port authorities. Under the current process of commercialisation, responsibilities and functions are increasingly being devolved from central agencies back to the port authorities. (Sub. 44, p. 41)

Similarly the Commonwealth Department of Transport and Communications stated:

Such an approach would tend to constrain the operation of normal commercial/competitive pressures. (Sub. 67, p. 22)

And some participants claimed that national planning had not succeeded elsewhere, as evidenced by the discontinuance of national plans in some other countries, such as New Zealand and the United Kingdom. For example, the Port of Geelong Authority commented that:

The concept of a national port plan failed in New Zealand because it became a political instrument and never really considered the needs of the market. Significant bureaucratic costs were involved ... A national approach would probably also fail in Australia for the same reasons. (Sub. 82, p. 42)

### *The Commission's view*

Implementation of the form of national port coordination and planning advocated by BHP Transport would clearly be a protracted process in the current environment of the Australian federal framework. It would not work without the

cooperation of all state and territory governments, and the evidence quoted above indicates that such cooperation is unlikely to be forthcoming.

Leaving the question of implementation aside, however, what are the merits and demerits of such coordination and planning? As noted by BHP Transport, in some transport areas, such as the National Rail Corporation, some national coordination and planning has been negotiated and is now being implemented.

Ports are fundamentally different from rail, however. Unlike the national rail network, ports are not physically linked and any natural monopoly characteristics do not extend beyond individual ports. Furthermore, although public port authorities perform core activities, and control some vital aspects of port operation, to a large extent port operations are already under the control of private enterprise. With increasing claims on public funds for capital investment and other social priorities, a good deal of investment in ports is now being privately initiated and funded.

The control of a system of airports by the Federal Airports Corporation (FAC)—also mentioned by BHP Transport—is different in at least two significant respects from Australia’s system of ports. First, the FAC runs a system under the one federal ownership. In contrast, ports are under the control of the several state and territory governments. Second, FAC airports are not run along a landlord model; the FAC itself provides many of the ‘non-core’ services and activities needed at airports.

In the Commission’s view, there should be a move towards less government and greater private involvement in ports—through contraction of public port authorities to the landlord model where appropriate, divesting non-core activities, contracting out core activities, and full privatisation where warranted.

Full implementation of the corporatisation recommendations in Chapter 3 and earlier in this chapter would, in itself, go a long way to ensuring more efficient port authority operations, and resolving any conflict between state and national objectives in ports. Port authority boards that are accountable for their decisions, required to earn appropriate rates of return, and pay taxes and dividends would be discouraged from making unsound investments. However, if their owner governments direct them to make investments contrary to their commercial judgment, that direction should be put in writing and tabled in the parliament. This would open such directions to full public scrutiny.

**Recommendation**

Investment decisions should be a responsibility of individual port authorities acting in a fully commercial manner. There should be no national control or planning of their investment.

The efficiency of ports is considerably affected by their interface with land-based infrastructure such as road and rail, and questions of port development can have serious implications for other forms of transport infrastructure. However, the Commission has not addressed these broader issues in this report. Matters relating to the integration of national transport infrastructure are important, but are beyond the scope of this inquiry. The Commission notes that the Commonwealth Government has announced plans to establish a National Transport Planning Task Force. This is to investigate:

- the adequacy of Australia's national transport infrastructure and institutional arrangements to meet the needs of Australia's freight/passenger demands into the 21st century; and
- priorities for national transport infrastructure investment into the longer term.

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## REFERENCES AND BIBLIOGRAPHY

- Australian Transport Advisory Council (ATAC) 1992a, *Port Performance Indicators June 1992*, Canberra.
- \_\_\_\_\_ 1992b, *Port Performance Indicators December 1991*, Canberra.
- \_\_\_\_\_ 1991, *Waterfront Reform*, report prepared for Special Premiers Conference planned for November 1991 but not held.
- Australian Maritime Safety Authority (AMSA) 1993, *Commonwealth Licensing of Queensland Coast Pilots*, Press Release, 5 May.
- Bureau of Industry Economics (BIE) 1993, *International Performance Indicators—Waterfront*, Research report 47, AGPS, Canberra.
- Bureau of Transport and Communications Economics (BTCE) 1989, *The Pricing of Port Services*, Occasional paper 97, AGPS, Canberra.
- \_\_\_\_\_ 1988a, *Economic Significance of the Waterfront*, Information paper 29, AGPS, Canberra.
- \_\_\_\_\_ 1988b, *Harbour Towing Services in Australian Ports*, Information paper 27, AGPS, Canberra.
- Economic and Social Commission for Asia and the Pacific (ESCAP) 1988, *Report of the Third Group Meeting on Port Tariff Structure*, held from 23–25 May 1988 at Fremantle Australia, United Nations.
- Economic Planning Advisory Council (EPAC) 1993, *Financial Performance of Government Business Enterprises: An Update*, Media Release 2/93 (relating to EPAC Background Paper No. 25), 29 April.
- Goss, R. 1987, *Port Authorities in Australia*, BTCE Occasional paper 84, AGPS, Canberra.
- Hayes, J. 1992, *Leading by example: Port Management Reforms in NSW*, paper presented at the Port Authority and Harbour Reform conference, 10–11 February, Sydney.
- \_\_\_\_\_ 1991, *Transformation of the NSW Port System—Shipping and Waterfront Reforms, Increasing Efficiency at the Sea–Land Interface*, paper presented at conference on Shipping and Waterfront Reform, 27–28 June, Sydney.
- House of Representatives 1992, Standing Committee on Transport, Communications and Infrastructure, *Efficiency of the Interface between Seaports and Land Transport: Warehouse to Wharf*, (Morris Report) AGPS, Canberra.

- Independent Commission to Review Tasmania's Public Sector Finances 1992, *Tasmania in the Nineties*, (Curran report) Hobart.
- Industries Assistance Commission (IAC) 1988, *Coastal Shipping*, Report no. 415, AGPS, Canberra, 20 July.
- Industry Commission (IC) 1993, *Mail, Courier and Parcel Services*, Report no. 28, AGPS, Canberra.
- \_\_\_ 1991, *Annual Report 1990-91*, AGPS, Canberra.
- Inter-State Commission (ISC) 1989a, *Waterfront Investigation - Special Studies*, AGPS, Canberra.
- \_\_\_ 1989b, *Waterfront Investigation - Conclusions and Recommendations*, AGPS, Canberra.
- Joy, S. 1989, *Potential for Increased Competition*, report prepared for the Inter-State Commission by Hyland Joy and Associates, Sydney.
- Keating, P.J. 1992a, *One Nation*, statement by The Prime Minister, 26 February, AGPS, Canberra.
- \_\_\_ 1992b, *One Nation*, speech by The Prime Minister, 26 February, AGPS, Canberra.
- King, J. 1992, *Reducing PMA Costs and Charges*, speech delivered by the Chairman of the PMA to the Australian Chamber of Shipping, 25 September, Sydney.
- Martin, G. 1991, *Benefits of Brisbane as a Gateway into and out of Australia*, paper presented to the Logistics Senior Management School, 14 July 1991, included in inquiry submission no. 22.
- Maritime Services Board (MSB) 1991, *The 55th Annual Report of the Maritime Services Board of NSW*, year ending 30 June 1991.
- Moore-Wilton, M. 1992, *Do Port Authorities need an incentive to increase their efficiency?* paper presented to Waterfront, Shipping and Ports conference, 17-18 February, Sydney.
- National Terminals (Australia) Ltd (NTAL) 1992, *The Effects of Port Leasing Policies on Competition and Efficiency*, submission to the Trade Practices Commission, prepared by Apelbaum Consulting Group Pty Ltd.
- Port of Melbourne Authority 1992, *Workplace Reform 1988-1992*, Melbourne.

- Prices Surveillance Authority 1992a, *Inquiry into Land Based Charges in Australian Ports by Ocean Carriers and Conferences*, Report no. 42, AGPS, Canberra.
- \_\_\_\_ 1992b, *Monitoring of Coastal Shipping Freight Rates*, Report no. 1, Melbourne.
- \_\_\_\_ 1990a, *Inquiry into Charges by Stevedoring and Container Depot Industries*, Report no. 34, AGPS, Canberra.
- \_\_\_\_ 1990b, *Inquiry into Harbour Towage Charges*, Report no. 30, AGPS, Canberra.
- \_\_\_\_ 1990c, *Inquiry into Proposed Port Congestion Surcharge for Cargo Handling at Sydney*, Report no. 28, AGPS, Canberra.
- \_\_\_\_ 1990d, *Inquiry into Coastal Shipping Freight Rates*, Report no. 27, AGPS, Canberra.
- Queensland Department of Transport 1990, *Review of Queensland's Port System*, Brisbane.
- Royal Commission into Grain Storage, Handling and Transport 1988, AGPS, Canberra.
- Shipping Industry Reform Authority (SIRA) 1992, *Shipping Reform—Past, Present and Future*, Canberra.
- \_\_\_\_ *Progress on Shipping Reform*, reports published six monthly from December 1989 to June 1992, Canberra.
- Tasman Institute Pty Ltd 1992, *Waterfront Competition: The Restructuring of Victoria's Ports*, report prepared for the Waterfront Task Force of Project Victoria, Melbourne.
- Tasmanian Port Policy Review Working Party 1993, *Improving the Efficiency of Tasmania's Port System*, Report to the Minister for Transport and Works, April.
- Towage Industry Reform Implementation Committee 1992, *Towage Industry Reform 1989–92*, Canberra.
- Trade Practices Commission (TPC) 1992, *Port Leasing Policies*, Draft report, Canberra.
- United Nations Conference on Trade and Development (UNCTAD) 1992, *Development and Improvement of Ports, the Principles of Modern Port Management and Organisation*, Geneva.
- Wallace R. 1992, *Port Authority—Owner or Operator*, dissertation, Australian Maritime College, Launceston.
- WA Dept of Transport 1992, *Fremantle Landbridge Project*.

- Waterfront Industry Reform Authority (WIRA) 1992, *The Waterfront*, Canberra.
- \_\_\_ *Six Monthly Reports*, published from April 1990 to October 1992, Canberra.
- \_\_\_ *Performance Indicators*, published quarterly from June 1990 to September 1992, Canberra.

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## APPENDIX A: INQUIRY PROCEDURES

Following receipt of the reference on 19 March 1992, the Commission advertised the commencement of the inquiry in the press and despatched an initial circular to parties considered to have an interest in the inquiry.

During the inquiry, mainly during the April to October 1992 period, the Commission met with a wide range of Australian organisations including port authorities, stevedoring companies, unions, shipping groups and cargo interests to seek background information and for discussions on inquiry issues. Their names are listed in Attachment A1.

In early June 1992, an Issues Paper was sent to interested parties and submissions were invited. Many of these submissions were presented at the public hearings (see below).

In July and August 1992, the Commission also consulted with government organisations, port authorities and private port organisations in brief visits to some other countries. A list of those visited is given in Attachment A2.

Initial public hearings were held in Brisbane, Sydney, Perth, Launceston, Melbourne, Adelaide and Canberra in August and September 1992. A further public hearing was held in Melbourne in October 1992 to allow participation by the Victorian Government and Victorian port authorities who had been unable to attend the earlier hearings because of the Victorian elections.

In January 1993, at the Commission's request, the reporting date of the inquiry was extended to 31 May 1993.

Following the release of the Draft Report on 25 February 1993, further public hearings were held at Sydney on 5 April, Canberra on 8 April and at Melbourne on 14–15 April.

During the course of the inquiry, Commissioners and/or staff attended a number of conferences/workshops.

A total of 153 submissions has been received from 90 participants. Inquiry participants are listed in Attachment A3.

## **Attachment A1: Individuals, companies and organisations visited in Australia**

Alcoa of Australia Ltd  
ANL Ltd  
Association of Australian Ports and Marine Authorities Inc.  
Australian Chamber of Shipping—Tasmanian State Committee  
Australian Chamber of Shipping Ltd  
Australian Newsprint Mills Ltd  
Australian Peak Shippers Association  
Australian Shipping User Group  
BHP Australia Coal Ltd  
BHP Iron Ore  
BHP Transport  
BP Australia  
Bunbury Port Authority  
Bureau of Industry Economics  
Bureau of Transport and Communications Economics  
Burnie Port Authority  
Cairns Port Authority  
Cargill Salt  
Conaust Ltd  
CRA Ltd  
Dalgety Shipping, Port Hedland  
Department of Industrial Relations (Commonwealth)  
Department of Manufacturing and Industry Development (Vic)  
Department of Marine and Harbors (SA)  
Department of Premier and Cabinet (Tas)  
Department of Roads and Transport (Tas)  
Department of the Premier and Cabinet (Vic)  
Department of Transport (Qld)  
Department of Transport and Communications  
Department of Treasury (Tas)  
Fremantle Port Authority  
Gladstone Port Authority  
Goliath Cement  
Grainco Queensland Co-op Association  
Grains Council of Australia  
Grain Elevators Board, Geelong  
Harbours Corporation of Queensland  
Hifert  
Dr Barrie Lewarn, Australian Maritime College  
Marine Board of Hobart  
Maritime Services Board of NSW  
MIM Holdings Ltd  
MSB Hunter Port Authority  
National Bulk Commodities Group  
National Farmers Federation  
National Terminals (Australia) Ltd  
NSW Farmers' Association  
P&O International Port Management  
Port Hedland Port Authority

Port of Brisbane Authority  
Port of Devonport Authority  
Port of Geelong Authority  
Port of Launceston Authority  
Port of Melbourne Authority  
Port of Melbourne Union Coordinator  
Port of Portland Authority  
Port Waratah Coal Services Ltd  
Portland Aluminium  
Prices Surveillance Authority  
Queensland Alumina Ltd  
Queensland Sugar Corporation  
Queensland Treasury  
Sea Swift Pty Ltd  
SEAS/Sapfor  
Shell Company of Australia Ltd  
Shipping Conferences Services Ltd  
Shipping Industry Reform Authority  
South Australian Ports Liaison Advisory Committee  
Tasmanian Shippers Association  
Townsville Port Authority  
Waterfront Industry Reform Authority  
Waterside Workers Federation of Australia  
West Coast Shipping Agencies Pty Ltd, Port Hedland  
Western Australian Chip and Pulp  
Westralian Sands Ltd  
WLB Shipping Pty Ltd  
Wool Council of Australia

**Attachment A2: List of companies and organisations visited in other countries**

**Belgium**

Port of Antwerp

**Canada**

Canadian Coast Guard

Vancouver Port Corporation

Canada Ports Corporation

Transport Canada

**Netherlands**

Port of Rotterdam

**New Zealand**

Ministry of Transport

Port of Tauranga Ltd

Port of Wellington

Wellington Stevedoring Services Ltd

**Singapore**

Ministry of Communications

Port of Singapore Authority

Port Officers' Union

Port Workers' Union

Singapore National Shipping Association

**United Kingdom**

Associated British Ports

British Ports Federation Ltd

Department of Transport

Port of Tilbury London Ltd

Port of Felixstowe

**United States of America**

Marine Terminals Corporation,  
Seattle

Port of Seattle

Port of Tacoma

South Carolina State Ports Authority

Western United Shipping Agencies  
Ltd, Seattle

### Attachment A3: List of participants

\* Indicates the participant presented evidence at the 1992 public hearings.

# Indicates the participant presented evidence at the 1993 hearings.

DR Indicates submission received after the release of the Draft Report.

Participant	Submission number
ANL Ltd * #	34, 61, DR138
Mr John Asome * #	9, DR125
Association of Australian Ports and Marine Authorities Inc.	80, DR135, DR148
Australian Barley Board	20
Australian Chamber of Commerce	65
Australian Chamber of Shipping—Tasmanian State Committee *	43
Australian Chamber of Shipping Ltd * #	43, DR111
Australian Customs Service	57, DR116
Australian Institute of Petroleum Ltd	59, DR131
Australian Maritime Safety Authority	42
Australian Mining Industry Council * #	58, DR129
Australian National Maritime Association * #	55, DR124
Australian Peak Shippers Association *	37
Australian Shipping User Group *	50, DR130
Australian Wheat Board * #	41, DR115
Australian Wool Corporation *	3, DR122
William G Barber & Associates Pty Ltd *	4, 68, DR102
BHP Transport	54, DR126
BP Australia	18
Gordon Brandon (Vic) Pty Ltd	DR103
Brisbane Marine Pilots Pty Ltd	DR151
Bundaberg Port Authority	8
Bunnings Forest Products Pty Ltd	72
Bureau of Transport and Communications Economics	89
Burnie Port Authority * #	23, DR120
Business Council of Australia	DR153
Cairns Port Authority	26, 53, DR134
Caltex Australia Ltd *	19, DR117
City of Melbourne	71, DR108
Company of Master Mariners of Australia—South Australian Branch	33
Conaust Ltd *	66
CRA Ltd *	49, DR106
Darwin Port Authority	93, 96
Mr Gary Davies	85, DR105, DR140
Department of Industrial Relations	DR150
Department of Industry, Technology & Commerce	DR104
Department of Marine and Harbors, South Australia	DR139
Department of Tourism #	DR127
Department of Transport and Communications *	67, 81, 84
Electrical Trades Union of Australia	70
Federal Chamber of Automotive Industries *	27
Gladstone Port Authority *	6, DR107
Grains Council of Australia *	56, 73, 91, DR144

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**PORT AUTHORITY SERVICES AND ACTIVITIES**

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<b>Participant</b>	<b>Submission number</b>
ICI Australia Operations Pty Ltd	51
International Cargo Handling Coordination Association	101
Dr Barrie Lewarn, Australian Maritime College *	40
Marine Board of Hobart * #	30, 76, DR118
Marine Operators Association of NSW *	14
Maritime and Stevedoring Unions * #	28, DR112
Maritime Services Board of NSW * #	21, 83, DR146, DR147
Masterman Wooden Boats Pty Ltd	99
Midway Wood Products Pty Ltd	25
MSB Sydney Ports Authority	90
National Bulk Commodities Group * #	48, 69, 75, 87, 92, 95, 97,98, DR128
National Farmers Federation * #	60, 86, DR119
National Terminals (Australia) Ltd	11, 100, DR142
New South Wales Coal Association * #	45, DR114, DR141
New South Wales Government	DR145
Port of Brisbane Authority *	22, DR133
Port of Devonport Authority * #	13, 74, DR113
Port of Geelong Authority *	82
Port of Launceston Authority *	24
Port of Melbourne Authority *	79, 94, DR149
Port of Portland Authority *	77
Port Phillip Sea Pilots Ltd #	DR121
Port Waratah Coal Services Ltd *	47
Portland Aluminium	31
Prices Surveillance Authority	DR143
Queensland Sugar Corporation *	29
Shell Company of Australia Ltd *	35, 88, DR123
Shipping Conferences Services Ltd * #	12, 39, 52, DR110
South Australian Co-operative Bulk Handling Ltd *	16
South Australian Government *	32
South Australian Ports Liaison Advisory Committee *	63
South Australian Shipping User Group	64
State Chamber of Commerce (NSW) *	7
Sydney Chartering & Agencies Pty Ltd	DR136
Tasman Pulp and Paper (Aust) Pty Ltd *	5
Tasmanian Farmers' and Graziers' Association *	38
Mr Frank Thompson	17
Townsville Port Authority	46
Tradegate Australia Ltd *	62
Victorian Government *	78, DR152
Victorian Trades Hall Council	15
Waterside Workers Federation of Australia, Westernport Branch	DR137
Western Australian Port Authorities and the Department of Transport (WA) *	44, DR132
Westralian Sands Ltd	36
Mr Aubrey Wise	1, DR109
Worldwide Customs & Forwarding Agents	2
Zealand Cargo Services Ltd	10

## APPENDIX B: RELEVANT STATISTICS

Table B1: **Australia's international cargo<sup>a</sup>**

<i>Period</i>	<i>Sea</i>		<i>Total</i>		<i>Proportion of sea cargo</i>	
	<i>Volume</i>	<i>Value</i>	<i>Volume</i>	<i>Value</i>	<i>Volume</i>	<i>Value</i>
	<i>'000 tonnes</i>	<i>\$m</i>	<i>'000 tonnes</i>	<i>\$m</i>	<i>%</i>	<i>%</i>
1988-89	300 439	73 454	300 772	91 064	99.9	80.7
1989-90	314 915	78 681	315 270	98 986	99.9	79.5
1990-91	337 031	78 213	337 365	100 503	99.9	77.8
1991-92	351 179	81 056	351 543	106 998	99.9	75.8

<sup>a</sup> International cargo is the summation of inward and outward overseas cargo.

Source: ABS 1993, *June Quarter 1992 Foreign Trade Australia International Cargo*, Cat. No. 5440.0, Tables 1 and 2, p. 2.

Table B2: **Australia's coastal trade<sup>a</sup>**  
(*'000 tonnes*)

<i>Period</i>	<i>Interstate</i>	<i>Intrastate</i>	<i>Total</i>
1988-89	58 280	29 612	87 892
1989-90	60 561	28 848	89 409
1990-91	56 190	32 108	88 298
1991-92	58 879	28 658	87 537

<sup>a</sup> The summation of coastal freight loaded and discharged.

Source: Department of Transport and Communications, Maritime Policy Division, Shipping Industry Section.

Table B3: International throughput at Australian ports by state 1991-92<sup>a</sup>

<i>Port authority/owner</i>	<i>Port</i>	<i>Gross weight</i> <i>'000 tonnes</i>	<i>Value</i> <i>\$m</i>
<b>New South Wales</b>			
MSB Sydney Ports Authority	Sydney )	12 743	20 700
	Port Botany )		
	Kurnell )		
MSB Hunter Port Authority	Newcastle	41 413	2 800
MSB Illawarra Port Authority	Port Kembla	18 238	1 359
Other ports	Other	610	77
<b>Total New South Wales</b>		73 006	24 932
<b>Victoria</b>			
Port of Melbourne Authority	Melbourne	8 508	20 533
	Westernport	1 044	307
Port of Geelong Authority	Geelong	2 661	629
Port of Portland Authority	Portland	1 400	607
Other ports	Other	17	-
<b>Total Victoria</b>		13 635	22 078
<b>Queensland</b>			
Brisbane Port Authority	Brisbane	11 535	7 157
Cairns Port Authority	Cairns	2 123	236
Gladstone Port Authority	Gladstone	22 701	2 170
Mackay Port Authority	Mackay	7 394	587
Rockhampton Port Authority	Rockhampton	55	18
Townsville Port Authority	Townsville	4 483	1 607
Harbours Corporation of Queensland	Hay Point	34 501	2 039
Other ports	Other	9 829	606
<b>Total Queensland</b>		92 620	14 419
<b>Western Australia</b>			
Fremantle Port Authority	Fremantle	9 864	5 655
	Kwinana	3 551	615
Albany Port Authority	Albany	1 076	191
Bunbury Port Authority	Bunbury	5 873	1 205
Dampier Port Authority	Dampier	60 291	3 126
Port Hedland Port Authority	Port Hedland	38 711	1 161
Private port	Port Walcott	22 607	404
Other ports	Other	6 701	779
<b>Total Western Australia</b>		148 678	13 136
<b>South Australia</b>			
South Australian Department of Marine and Harbors	Port Adelaide	2 338	2 121
	Port Lincoln	1 130	206
BHP Pty Ltd	Whyalla	1 985	408
	Ardrossan	424	26
	Port Pirie	830	229
Other ports	Other	3 727	618
<b>Total South Australia</b>		10 434	3 608

Table B3 cont/d

<i>Port authority/owner</i>	<i>Port</i>	<i>Gross weight</i> <i>'000 tonnes</i>	<i>Value</i> <i>\$m</i>
<b>Tasmania<sup>b</sup></b>			
Marine Board of Hobart	Hobart	904	305
Port of Launceston Authority	Launceston	2 099	353
Burnie Port Authority	Burnie	924	418
Port of Devonport Authority	Devonport	70	45
Other ports	Other	665	29
<b>Total Tasmania</b>		4 663	1 149
<b>Northern Territory</b>			
Darwin Port Authority	Darwin	3 688	1 192
Other ports	Other	4 478	533
<b>Total Northern Territory</b>		8 165	1 723
<b>TOTAL AUSTRALIA<sup>c</sup></b>		351 201	81 045

<sup>a</sup> International throughput is the summation of inward and outward overseas cargo.

<sup>b</sup> Excludes domestic cargo. <sup>c</sup> Includes cargo where state of discharge/loading is not known.

Source: ABS 1992 and 1993, *December Quarter 1991, March Quarter 1992, June Quarter 1992, and September Quarter 1992 Foreign Trade Australia International Cargo*, Cat. No. 5440.0, Table 11, p. 9.

**Table B4: State maritime regulation**

<i>Ship safety</i>	<i>Navigation aids</i>	<i>Harbour Master</i>	<i>Pilotage regulation</i>	<i>Towage regulation</i>	<i>Environmental controls and regulations</i>
<b>New South Wales</b>					
MSB subsidiary port authorities responsible for major ports and MSB Head Office for the remainder	MSB subsidiary authorities, incl. MSB Waterways Authority	Formal position does not exist, but powers of harbour master have been delegated to operational personnel	MSB subsidiary port authorities responsible for major ports and MSB Head Office for the remainder	MSB subsidiary authorities	MSB subsidiary port authorities responsible for major ports and MSB Head Office for the remainder
<b>Victoria</b>					
Primarily Marine Board of Victoria and AMSA, but also port authorities	Port authorities, except for some Federal lighthouses which are AMSA's responsibility	Port authorities	Marine Board of Victoria	Port authorities	Port authorities for pollution from shipping and the EPA for land pollution
<b>Queensland</b>					
Qld Dept of Transport	Qld Dept of Transport	Qld Dept of Transport	Qld Dept of Transport	Qld Dept of Transport	Qld Dept of Environment and Heritage. However some aspects are administered by the Marine Board of Qld. Port authorities are responsible for combating oil spills

Table B4 cont/d

<i>Ship safety</i>	<i>Navigation aids</i>	<i>Harbour Master</i>	<i>Pilotage regulation</i>	<i>Towage regulation</i>	<i>Environmental controls and regulations</i>
<b>Western Australia</b>					
Port authorities	Port authorities except for the ports of Albany, Bunbury, Esperance and Geraldton where the Dept of Marine and Harbours is responsible	Port authorities	Port authorities	Department of Marine and Harbours	Port authorities, the Department of Conservation and Land Management and the Environmental Protection Authority all have some responsibility
<b>South Australia</b>					
Dept of Marine and Harbours (DMH) for intrastate and locally surveyed vessels, and in cooperation with AMSA for other interstate and international trading vessels	DMH/AMSA in State waters outside ports and DMH in Government ports. Private port management for private ports	DMH for all ports	DMH except in Port Stanvac which has its own mooring masters	DMH	DMH regulates ship-sourced oil pollution. State environmental legislation covers other pollution
<b>Tasmania</b>					
Navigation and Safety Authority of Tasmania	Port authorities locally, and the Dept of Transport and Works in state waters	Port authorities	Port authorities	Port authorities	Dept of the Environment
<b>Northern Territory</b>					
NT Dept of Transport and Works, Marine Branch administers the <i>Marine Act 1981</i>	Port authorities in port waters and the NT Dept of Transport and Works in NT waters	Port authorities	NT Dept of Transport and Works	Port authorities	NT Dept of Transport and Works

Source: Submissions, transcripts and correspondence.

Table B5: **Community service obligations**

<i>Port authority</i>	<i>Description of obligations</i>	<i>Cost</i>	<i>Funding</i>
<b>New South Wales</b>			
MSB Sydney Ports and Waterways Authorities	Boat races, regattas, special events and spectrum of public entertainment	Varies	MSB
MSB Waterways Authority	Harbour cleaning	\$1.710 million	Government will pay
MSB subsidiaries	Sewage pumpout	\$0.145 million	\$1.855 million in 1992-93
	Environmental protection costs not recovered from offender. Surplus property transferred to local community groups, councils, national parks etc. instead of disposed of commercially	Varies	MSB
<b>Victoria</b>			
Port of Melbourne Authority	Responsibility for 7 non-commercial ports, and for coastal waters throughout the state	In 1990-91, this cost \$12.1 million (excluding depreciation) and in 1991-92, \$10.6 million	Government paid the authority a subsidy of \$1.3 million in 1990-91, and \$0.6 million in 1991-92
Port of Geelong Authority	Non-commercial ports of Queenscliff, Barwon Heads, Lorne and Apollo Bay	\$1.8 million	Authority
Port of Portland Authority	Provide aluminium smelter berth	\$500 000+	Authority
	Non-commercial ports of Port Campbell, Warrnambool and Port Fairy	\$350 000 (1991-92)	\$12 000 from users
	Fishing fleet wharves and moorings	Unknown	Up to one-third of costs recovered from users
	Responsibility for cliff top land	Unknown	Authority
	Construction and maintenance of penguin retreats	Unknown	Authority
<b>Queensland</b>			
Port of Brisbane Authority	Nil		
Gladstone Port Authority	Pleasure craft	\$100 000 net	Authority
	Maintenance of parks and gardens	Unknown	Authority
Cairns Port Authority	Moorings for small craft	Unknown	Cost recovery of 30-40 per cent from users
Townsville Port Authority	Facilities for small craft	Unknown	Authority

Table B5 cont/d

<i>Port authority</i>	<i>Description of obligations</i>	<i>Cost</i>	<i>Funding</i>
<b>Western Australia</b>			
Port of Albany	Nil		
Port of Bunbury	Nil		
Port of Dampier	Nil		
Port of Esperance	Nil		
Port of Fremantle	Responsibility for Port and Leighton beaches, and for facilities contained within port boundaries	\$119 164 (1991-92)	FPA
Port of Geraldton	Nil		
Port of Port Hedland	Nil		
<b>South Australia</b>			
Department of Marine and Harbors	Semi-commercial services: ferry service Port Adelaide to Kangaroo Island; marine safety services to commercial vessels and commercial fishing industry; administration of recreational boating and its safety; legislative advice on marine matters	\$5.5 million in 1991-92	Ferry service partly funded by Department of Treasury. Semi-commercial services partly funded by user fees and charges
	Non-commercial services: maintenance of recreational jetties; provision and maintenance of facilities for recreational boating community and for the commercial fishing industry; provision of an advisory service on marine and port matters to the Minister, Government, Parliament and the community; waterway construction and maintenance service on behalf of the Minister of Marine	In 1991-92, Treasury paid a \$1.5 million contribution to operating loss of \$4.85 million on semi- and non-commercial services	DMH/Treasury

Table B5 cont/d

<i>Port authority</i>	<i>Description of obligations</i>	<i>Cost</i>	<i>Funding</i>
<b>Tasmania</b>			
Marine Board of Hobart	Contributions to water safety, yachting events, maintenance of public areas etc.	\$36 658 <sup>a</sup> (1991-92)	Authority
Port of Devonport Authority	Recreational/pleasure craft control and facilities	\$25 000 <sup>b</sup>	Authority
	Trans Mersey river ferry	\$17 000 <sup>b</sup>	
	Port of Ulverstone	\$8 000 <sup>b</sup>	
Port of Launceston Authority	Assistance to community organisations	\$4 500	Authority
	Low Head Museum	\$6 100	
	Tamar River Improvement Project Committee	\$62 030	
	Control of speed boat areas	\$50 000 (1991-92)	
Burnie Port Authority	Pleasure boat moorings, licences, registrations and patrols	Unknown	Substantially funded by users
<b>Northern Territory</b>			
Darwin Port Authority	Tourism facilities, facilities for the fishing industry such as a mooring basin against cyclonic conditions	Estimated at more than \$1 million	Authority

<sup>a</sup> Net cost after revenue of \$132 275 and expenditure of \$168 933. <sup>b</sup> All averages for the last five years.

Source: Submissions, transcripts, discussions.

Table B6: **State government financial requirements of port authorities as at 1991-92<sup>a</sup>**

<i>Port authority</i>	<i>Rate of return requirements<sup>b</sup></i>	<i>Dividend payments</i>	<i>Other financial requirements</i>	<i>Prices subject to approval?</i>
<b>New South Wales<sup>a</sup></b>				
Maritime Services Board	No specified target rate of return for 1991-92	For 1991-92, dividend is \$35 million	Economic appraisals required for capital projects in excess of \$0.5 million. Government approval required to hire consultancies in excess of \$100 000	Government approval for changes to pricing schedules
<b>Victoria<sup>a</sup></b>				
Port of Melbourne Authority	A target real rate of return on assets in service of 4% per annum, which reflects the assessed opportunity cost of capital for Victorian public authorities	Under the Public Authorities (Dividend) Amendment Act 1992 <sup>c</sup> , a dividend as a percentage of public equity is to be determined by the Treasurer in consultation with the Minister	Borrowings are subject to limits and government approval. Controls on investment. Compliance with policy on contracting, consultants tendering and purchasing	Government approval for price structure and rate increases. Lease rentals set at market rates by a panel of independent valuers
Port of Geelong Authority	None required	None required	As above	As above
Port of Portland Authority	None required	None required	As above	As above
<b>Queensland<sup>a</sup></b>				
Port of Brisbane Authority	None required at present	None required at present	The Authority pays the Qld Govt a levy of 5.5 per cent of turnover under the <i>Harbours Act 1955</i> . It provided \$3.24 million for 1991-92. New projects in excess of \$5 million need Government approval	No

Table B6 cont/d

<i>Port authority</i>	<i>Rate of return requirements<sup>b</sup></i>	<i>Dividend payments</i>	<i>Other financial requirements</i>	<i>Prices subject to approval?</i>
<b>Western Australia</b>				
Port of Fremantle Authority	Set annually by the Minister and Treasurer. The real rate of return on current replacement cost of assets required for the 1992-93 financial year is - 1.56%. New investment is required to show a positive NPV at a discount rate of 12 per cent	WA port authorities are required to recommend a dividend amount, which is then negotiated with the Minister	FPA pays a levy equal to 3% of revenue under the <i>Public Authorities (Contributions) Act 1973</i> . New capital expenditure by WA port authorities must be evaluated under established guidelines	Government approval is required to change gazetted pricing schedules
<b>South Australia</b>				
Department of Marine and Harbors	Return on the written down replacement value of commercial assets before interest and tax of 8 per cent (discount rate of 7% and 1% risk premium)	Negotiated subject to principles in SA Treasury Information Paper No 91/1	Government approval of capital and recurrent expenses and revenue budgets. Separate approval for projects between \$225 000 and \$1 000 000, with Cabinet approval required for more than \$1 000 000	Cabinet approval is required to change pricing levels as well as for pricing policy changes
<b>Northern Territory</b>				
Darwin	Not required. NT Government aims for operating cost recovery	NT Government does not impose dividend requirement	None	

Table B6 cont/d

<i>Port authority</i>	<i>Rate of return requirements<sup>b</sup></i>	<i>Dividend payments</i>	<i>Other financial requirements</i>	<i>Prices subject to approval?</i>
<b>Tasmania</b>				
Marine Board of Hobart, Burnie Port Authority and Port of Launceston Authority	Not required to achieve a target rate of return	Government does not require a dividend payment	Voluntarily paying 4 per cent of revenue as interim arrangement until the Marine Act is amended. The draft amendments require port authorities to pay income tax equivalents and loan guarantee fees. Loans over \$5 000 subject to approval. Borrowing limits	No, but some charges subject to disallowance
Port of Devonport Authority	Not required to achieve a target rate of return	Government does not require a dividend payment	Still under SAFMA <sup>d</sup> which requires it to pay a taxation equivalent payment and loan guarantee fee. Loans over \$5 000 subject to approval. Borrowing limits	No, but some charges subject to disallowance

<sup>a</sup> Since 1991-92, significant changes have been/are being made in New South Wales, Victoria and Queensland (see Section 2.2.7). <sup>b</sup> Rates of return are not comparable between states. <sup>c</sup> The Act removes the previous 5 per cent of public equity maximum limit from the PMA's dividend. The Treasurer can now require the authority to pay a special dividend of an amount determined by the Treasurer with consultation with the Minister. <sup>d</sup> State Authorities Financial Management Act.

Sources: Port authorities, Submissions, TPC Draft Report into *Port Leasing Policies*, December 1992.

**Table B7: Port authority revenues, value of imports and exports, ratio of port authority revenue/value of cargo for each state in 1990-91**

<i>State</i>	<i>NSW</i>	<i>Vic.</i>	<i>Qld</i>	<i>WA</i>	<i>SA</i>	<i>NT</i>	<i>Tas.</i>	<i>Australia</i>
Total revenue (\$m)	273.64	175.25	160.79	97.99	54.29	7.54	41.04	810.54
Value of total outward overseas cargo (\$m)	9 058	8 875	10 623	1 737	9 754	1 000	1 740	42 787
Value of total inward overseas cargo (\$m)	14 699	12 119	3 414	1 396	3 006	174	274	35 082
Total value (\$m)	23 757	20 994	14 037	3 133	12 760	1174	2014	77 869
Revenue/value ratio	0.012	0.008	0.011	0.031	0.004	0.006	0.020	0.010

Source: ABS 9206.0, ATAC and Commission calculations.

Table B8: **Port costs per tonne and their significance**

<i>Port</i>	<i>Cargo (tonnes)</i>	<i>Wharf- age (\$)</i>	<i>Other port charges (\$)</i>	<i>Charges for pilots, towage and mooring (\$)</i>	<i>Total cost (\$)</i>	<i>Cost per tonne (\$)</i>	<i>Significance<sup>a</sup></i>	
							<i>by port</i>	<i>by good</i>
<b>Sugar</b>								0.56%
Lucinda	18 000	0	7 275	40 780	48 055	2.67	0.74%	
	20 000	0	8 425	41 575	50 000	2.50		
	27 000	0	11 650	41 910	53 560	1.98		
	40 000	0	18 600	48 295	66 895	1.67		
Townsville	14 000	0	26 110	7 922	34 032	2.43	0.77%	
	20 000	0	37 205	8 562	45 767	2.29		
	27 000	0	50 080	10 907	60 987	2.26		
	40 000	0	75 450	16 257	91 707	2.29		
Mackay	15 000	0	1 105	10 982	12 087	0.81	0.25%	
	20 000	0	1 492	13 908	15 400	0.77		
	25 000	0	2 283	19 917	22 200	0.89		
	30 000	0	3 629	16 491	20 120	0.67		
	35 000	0	4 176	19 917	24 093	0.69		
<b>Coal</b>								2.58%
Abbot Point	27 000	0	1 400	24 480	25 880	0.96	1.16%	
	60 000	0	2 450	39 100	41 550	0.69		
	130 000	0	7 800	63 340	71 140	0.55		
	196 000	0	16 559	75 544	92 103	0.47		
Dalrymple Bay	37 574	1 114	105 635	31 925	138 674	3.69	5.88%	
	70 407	2 185	208 227	32 091	242 503	3.44		
	140 152	7 657	408 138	36 327	452 122	3.23		
Hay Point	194 941	8 713	569 353	37 045	615 111	3.16		
	30 000	0	2 245	28 180	30 425	1.01	1.00%	
	60 000	0	4 580	30 440	35 020	0.58		
	120 000	0	11 880	32 540	44 420	0.37		
Gladstone (Barney Point)	150 000	0	17 990	33 280	51 270	0.34		
	30 000	0	18 098	15 106	33 204	1.11	2.20%	
	60 000	0	42 856	24 090	66 946	1.12		
Gladstone (Clinton)	90 000	0	116 686	24 090	140 776	1.56		
	30 000	0	18 313	15 106	33 419	1.11	2.59%	
	60 000	0	40 206	21 100	61 306	1.02		
	120 000	0	196 662	33 170	229 832	1.92		
	150 000	0	244 890	40 020	284 910	1.90		
<b>Phosphate</b>								2.44%
Newcastle	27 000	23 400	17 925	11 153	52 478	1.94	1.69%	
Geelong	27 000	5 980	37 850	20 872	64 702	2.40	2.08%	
Portland	27 000	13 000	36 865	14 012	63 877	2.37	2.06%	
Risdon	27 000	31 980	31 980	13 689	77 649	2.88	2.50%	

Table B8 cont/d

<i>Port</i>	<i>Cargo (tonnes)</i>	<i>Wharf- age (\$)</i>	<i>Other port charges (\$)</i>	<i>Charges for pilots, towage and mooring (\$)</i>	<i>Total cost (\$)</i>	<i>Cost per tonne (\$)</i>	<i>Significance<sup>a</sup> by port by good</i>	
Adelaide	27 000	76 700	7 805	8 386	92 891	3.44	2.99%	
Wallaroo	27 000	76 700	7 805	8 651	93 156	3.45	3.00%	
Port Lincoln	27 000	76 700	7 805	7 073	91 578	3.39	2.95%	
Esperance	27 000	36 660	22 245	10 743	69 648	2.58	2.24%	
Albany	27 000	60 060	12 822	10 561	83 443	3.09	2.69%	
Bunbury	27 000	28 968	19 348	13 125	61 441	2.28	1.98%	
Kwinana	27 000	52 000	8 379	15 502	75 881	2.81	2.44%	
Geraldton	27 000	52 000	15 150	16 862	84 012	3.11	2.71%	
<b>Wheat</b>								1.03%
Mackay	30 000	0	30 580	16 938	47 518	1.58	0.88%	
Gladstone	30 000	0	32 370	11 679	44 049	1.47	0.82%	
Brisbane	30 000	27 300	30 115	18 484	75 899	2.53	1.41%	
Port Kembla	23 911	16 000	14 500	13 032	43 532	1.82	0.95%	
	34 995	24 800	14 500	16 489	55 789	1.59		
	57 045	44 000	25 000	29 466	98 466	1.73		
Geelong	27 000	5 750	21 602	26 254	53 606	1.99	1.02%	
	40 000	7 360	32 380	28 071	67 811	1.70		
Portland	27 000	6 500	33 206	13 074	52 780	1.95	0.86%	
	45 000	11 050	40 316	14 164	65 530	1.46		
	64 000	14 300	50 307	14 636	79 243	1.24		
Adelaide	30 000	45 000	6 250	16 540	67 790	2.26	1.26%	
Wallaroo	30 000	37 500	6 550	13 590	57 640	1.92	1.07%	
Port Pirie	30 000	27 000	6 550	20 292	53 842	1.79	1.00%	
Port Lincoln	30 000	45 000	4 730	18 644	68 374	2.28	1.27%	
Thevenard	30 000	30 000	6 550	11 576	48 126	1.60	0.89%	
Esperance	30 000	33 880	27 500	12 907	74 287	2.48	1.38%	
Albany	30 000	35 799	13 248	17 820	66 867	2.23	1.24%	
Kwinana	30 000	5 600	5 411	20 704	31 715	1.06	0.59%	
Geraldton	30 000	33 600	16 920	22 571	73 091	2.44	1.35%	
<b>Iron ore</b>								1.67%
Port Hedland	101 723	0	7 198	41 992	49 190	0.48	1.67%	
	120 174	0	8 302	42 417	50 719	0.42		
	140 086	0	9 750	43 233	52 983	0.38		
	160 533	0	10 980	57 337	68 317	0.43		
	183 526	0	12 277	57 549	69 826	0.38		

<sup>a</sup> Significance of the good is the cost per tonne divided by the good's value (fob) per tonne. It has been averaged over each port and for each good. Value of raw sugar: \$300.00, Value of all coals: \$57.49, Value of phosphate: \$115.00, Value for wheat: \$180.00, Value of iron ore (lump): \$25.00.

Source: National Bulk Commodities Group 1992, Port Cost Survey 1992 Up-date. Commodity values supplied by the NBCG.

Table B9: Port authority charges on ship operators

<i>Port (effective from)</i>	<i>Conservancy<sup>a</sup></i>	<i>Tonnage/ berthage/ harbor services</i>	<i>Berth hire</i>	<i>Area hire/site occupation</i>	<i>Pilotage</i>
Sydney 1-7-92	na	\$0.69 per GRT for chemical/oil <sup>b</sup> \$0.54 others	na	For 8 hrs \$110– 1 920; or \$212– 670 per hr <sup>c</sup>	na
Melbourne 1-9-91	55.62 cents per GRT for six months	\$0.59 per GRT	\$42–239 per hr	\$5-90 per stored hr	na
Brisbane 1-10-91	18 cents per GRT	\$6.70–7.20 per metre	na	na	na
Adelaide 1-1-93	\$832 + 10.17 cents per GRT per trading voyage. 20% reduction each subsequent call within 6 months.	\$2600 + 0.435 cents per GRT per hour at berth	as negotiated	na	\$165–1 950 depending on service required
Burnie 1-6-92	na	6.6 cents per GRT for first day, 1.90 cents for next 9 days, 1.84 cents thereafter	na	na	\$100 plus 2.2 cents per GRT
Fremantle 1-7-92	9.19 cents per GRT for two months	\$0.0059 per GRT	\$1.11 per tonne/ kilolitre/m <sup>3</sup> ; \$14.46 per TEU	na	Vessels over 1000 tonnes \$1 237–2 720

na = not applicable <sup>a</sup> Conservancy is a state government charge collected by port authorities. <sup>b</sup> Includes \$0.15 per GRT environmental services charge. <sup>c</sup> Site occupation charges in Sydney are levied on the terminal operator.

Source: Port authority charging schedules.

Table B10: Port authority charges on cargo owners

<i>Port (from)</i>	<i>Bulk</i>		<i>Other</i>		<i>Containerised</i>	
	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>	<i>Imports</i>	<i>Exports</i>
Sydney 1-7-92	na	na	\$2.65 per rev-tonne	\$2.00 per rev-tonne	\$98 per TEU	\$55 per TEU
Melbourne 1-9-91	\$1.92 per tonne or m <sup>3</sup>	\$1.35 per tonne or m <sup>3</sup> or \$1.14 coastal	\$1.92 per tonne or m <sup>3</sup>	\$1.92 per tonne or m <sup>3</sup>	\$55 per TEU	\$55 per TEU
Brisbane <sup>a</sup> 1-10-91	\$0.80–1.50 per tonne or \$1.65 per kilolitre	\$0.80–1.50 per tonne or \$1.65 per kilolitre	\$1.86 per tonne or \$1.67 per m <sup>3</sup>	\$1.86 per tonne or \$1.67 per m <sup>3</sup>	\$26 per TEU	\$26 per TEU
Brisbane (Harbour dues)	\$0.45–1.24 per tonne or 1.07–2.14 per kilolitre	\$0.30–1.24 per tonne or nil–1.42 per kilolitre	\$0.36–1.75 per tonne or \$0.41–1.50 per m <sup>3</sup>	\$0.30–1.75 per tonne or \$0.41– 1.50 per m <sup>3</sup>	\$42 per TEU	\$42 per TEU
Adelaide 1-1-93	\$1.15–3.90 per mass tonne, or \$3.90 per kilolitre	\$1.15–2.95 per mass tonne, or \$3.90 per kilolitre	\$21-47 per motor vehicle	\$21-47 per motor vehicle	\$79 per TEU	\$79 per TEU
Burnie 1-6-92	\$1.05–\$1.65 per tonne	\$1.10-\$1.65 per tonne	Up to \$3.20 per tonne, \$12.10 per motor vehicle	Up to \$1.65 per tonne, \$12.10 per motor vehicle	\$99.45 per TEU	\$51.25 per TEU
Fremantle 1-7-92	\$2.93 per tonne/ kilolitre/m <sup>3</sup>	\$2.93 per tonne/ kilolitre/m <sup>3</sup>	\$0.19 per unit or \$2.93 per tonne/ kilolitre/m <sup>3</sup>	\$0.19 per unit or \$2.93 per tonne/ kilolitre/ m <sup>3</sup>	\$49.20 per TEU	\$49.20 per TEU

<sup>a</sup> Paid to owner of wharf (not necessarily the Port of Brisbane Authority).

Source: Port authority charging schedules.

Table B11: Port authority employees

<i>Port</i>	<i>June 1985</i>	<i>June 1988</i>	<i>June 1992</i>	<i>March 1993</i>	<i>Reduction from 1985 to 1993 (%)</i>
<b>New South Wales</b>					
Head Office	642	403	148	132	79
Sydney and Botany	1 482	1 366	570	468	68
Newcastle	579	577	208	183	68
Port Kembla	530	566	93	85	84
Waterways	157	141	278	274	-75
State total	3 390	3 053	1 297	1 142	66
<b>Victoria</b>					
Melbourne <sup>a</sup>	1 455	1 424	946	872	40
Geelong	179	224	172	154	14
Portland	104	102	49	49	53
State total	1 738	1 750	1 167	1 075	38
<b>Queensland</b>					
Brisbane	366	278	234	237	35
Bundaberg	24	22	19	16	33
Cairns	82	83	82	94	-15 <sup>b</sup>
Gladstone	234	261	316	320	-37
Mackay <sup>c</sup>	56	57	55	54	4
Townsville	82	84	94	96	-17
State total	844	785	800	817	3
<b>Western Australia</b>					
Albany	19	18	19	20	-5 <sup>d</sup>
Bunbury	28	31	29	36	-29 <sup>d</sup>
Esperance	16	17	15	18	-13 <sup>d</sup>
Fremantle	533	589	450	405	24
Geraldton	37	38	26	40	-8 <sup>d</sup>
Port Hedland	27	32	27	28	-4
State total	660	725	566	547	17
<b>South Australia</b>					
Adelaide <sup>e</sup>	na	na	170	165	na
Regional ports	na	na	138	133	na
State total <sup>f</sup>	789	690	308	298	62
<b>Tasmania</b>					
Burnie	61	56	44	45	26
Devonport	71	65	64	64	10 <sup>g</sup>
Hobart	109	113	106	99	9
Launceston	153	104	63	59	61
State total	394	338	277	267	32
<b>Northern Territory</b>					
Darwin	81	80	48	48	41
<b>Australian total</b>	<b>7 896</b>	<b>7 421</b>	<b>4 463</b>	<b>4 194</b>	<b>47</b>

<sup>a</sup> Includes Port of Hastings and other associated ports. <sup>b</sup> Cairns Port Authority had 94 people working directly for the seaport, but a total of 162 employees. Some of the additional employees do administration and finance work for both the airport and the seaport. <sup>c</sup> The Mackay Port Authority also runs an airport. Some seaport employees do administration and finance work for the airport for which the seaport is paid. <sup>d</sup> The Ports of Albany, Bunbury, Esperance and Geraldton all introduced integrated port labour forces in 1992-93. This has led to an increase in port authority employee numbers.

<sup>e</sup> A separate Port of Adelaide Division in the SA Department of Marine and Harbors was set up in February 1990.

<sup>f</sup> Includes marine safety employees. <sup>g</sup> The Port of Devonport Authority has an additional 7 employees who are exclusively involved in airport and coldstore activities.

Source: AAPMA Sub. DR135, Port of Devonport Authority Sub. DR113, and the South Australian Department of Marine and Harbors Sub. DR 39.

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## APPENDIX C: TASMANIAN PORTS CASE STUDY

In contrast to the rest of Australia, there is considerable scope for competition among the Tasmanian port authorities of Burnie, Devonport, Hobart and Launceston. Indeed, there is much competition in many trades.

Participants had differing views, however, about whether this competition was efficient or not. Some considered that it had benefited users through lower prices. Others considered that competition had led to wasteful duplication of facilities, with higher than necessary port costs.

This appendix examines the nature and extent of competition between port authorities in Tasmania, and the institutional and regulatory environment in which they operate. In Tasmania, as nowhere else in Australia, port authority boards are elected by local communities (as in Burnie, Devonport and Launceston) or port users (as in Hobart). This gives them a strong local emphasis and independence.

There has been much discussion and debate about port authority reform in Tasmania. A working party reported recently to the Minister for Transport and Works about improving the efficiency of Tasmania's port system.<sup>1</sup>

The working party comprised government officials, representatives of the port authorities of Burnie, Hobart and Launceston, shippers, shipping companies, stevedores and the WWF. The Port of Devonport Authority was invited to participate, but was unable to attend. The review followed an earlier inquiry into Tasmania's public sector finances (the Curran Report).<sup>2</sup>

The following extract from its Executive Summary illustrates the basic tenor of the working party's report:

An efficient port system will be best achieved by encouraging a commercially focused and competitive port system for the major port authorities, operating within a framework of competitive neutrality both between themselves and also between port authorities and the private sector. There is a role for privately owned port facilities, with port services purchased from the most appropriate supplier, as well as for facilities run by port authorities. Ultimately, it is considered that port system efficiency would be maximised by establishing the four main port authorities as fully corporatised state authorities and then, if the state's interests can be suitably protected, as private port companies. (Page ES1)

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<sup>1</sup> Tasmanian Port Policy Review Working Party, *Improving the Efficiency of Tasmania's Ports System*, report to the Minister for Transport and Works, April 1993.

<sup>2</sup> Independent Commission to Review Tasmania's Public Sector Finances, *Tasmania in the Nineties*, April 1992.

However, the working party considered that there should be no restriction of port authorities to a defined set of core activities. It concluded that:

Market forces should prevail, with port authorities able to perform any activity which is supportive of their prime function provided that the private sector is able to compete on a fair basis in the provision of such services. (Page ES2)

The working party put forward a series of recommendations and a detailed implementation strategy and timetable. It proposed that the various reform steps take place between the present and March 1996. The Tasmanian Government is yet to respond to the working party's report.

Although there are seven port authorities in Tasmania (Burnie Port Authority, Port of Devonport Authority, Port of Launceston Authority, and the Marine Boards of Hobart, Circular Head, Flinders and King Island), this study concentrates on the port authorities of Burnie, Devonport, Launceston and Hobart, through which almost all of the State's sea trade passes.

## C1 Characteristics of Tasmania's ports

### C1.1 Port throughput

The ports differ considerably in throughput, and in the mix between bulk and non-bulk cargo (see Table C1). Launceston handled the greatest volume of cargo in 1991-92, with Burnie handling the greatest number of containers. Sea passengers and tourist vehicles go through Devonport and Launceston.

Table C1: **Port throughput, 1991-92<sup>a</sup>**

<i>Port</i>	<i>Non-bulk</i>	<i>Bulk</i>	<i>Total</i>	<i>Containers</i>	<i>Passengers</i>	<i>Tourist vehicles</i>
	mass tonnes	mass tonnes	mass tonnes	TEUs	no.	no.
Burnie	1 017 796	1 179 560	2 197 356	77 148		
Devonport	391 153	583 391	974 543	31 700	163 495	43 389
Hobart	646 826	1 878 481	2 525 307	35 468		
Launceston	496 653	2 804 664	3 301 317	37 164	38 500 <sup>b</sup>	12 600 <sup>b</sup>

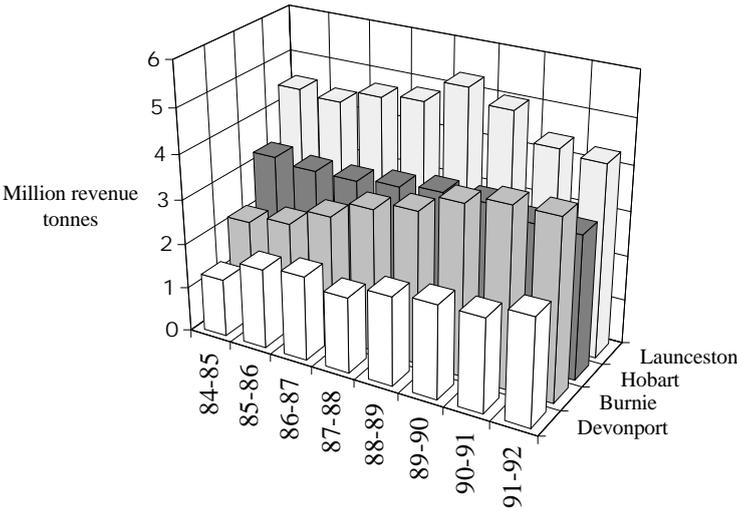
<sup>a</sup> Includes international and domestic cargo. <sup>b</sup> Data for 1990-91.

Sources: Port authority annual reports. Port authority trade statistics.

Trade through Burnie has grown steadily in recent years, while in other ports it has been relatively static (Figure C1). The Port of Devonport Authority (sub. DR113, p. 4), however, expects a sharp increase in throughput during the

1992-93 financial year due to the expansion of the Goliath Cement bulk export trade and the return of the Coastal Express Line (formerly ANL) to the port.

Figure C1: Trends in port throughput, 1984-85 to 1991-92 (revenue tonnes)



Source: Port authorities.

Details about the four ports and their facilities are given in the Attachment.

**C1.2 State government controls, board membership and objectives**

Tasmanian port authorities are given legal form by the Marine Act of 1976, which sets out their duties and powers. The duties are listed in Box C1, and some of the more important powers in the Attachment.

**Box C1: Statutory duties of Tasmanian Port Authorities**

Every board shall, within its own jurisdiction:

- (a) maintain and repair the wharves not vested in any other authority or belonging to any private person;
- (b) make such new wharves as may be found necessary;
- (c) construct and maintain all such works, and do all such things as may be found desirable for ships, shippers, stevedores, and cargo handling and for the improvement of navigation and cargo handling and the accommodation or convenience of shipping, cargo handling, shippers, and stevedores, and all other persons resorting to port or using any works belonging to the board.

Source: Marine Act 1976, Section 64.

Currently, the State Government's main influence over the port authorities is through controls on borrowing and charges. New works which are to be funded by borrowing and which cost more than \$5000 must be approved by the Governor. Port charges are subject to disallowance by the Governor. Other activities such as entering into leases, selling land, and aspects of ferry and pilotage services are also controlled under the Marine Act 1976. The Act also allows the Governor to alter the jurisdiction of a port authority and the boundaries of its voting districts.

### *Boards*

Board members—'wardens'—of all Tasmanian port authorities are elected. This system does not apply elsewhere in Australia, but is found in other countries, notably in parts of the United States.

In Burnie, Launceston and Devonport, board members are elected by ratepayers, be they residents, businesses or companies, of adjacent local government areas. Devonport and Burnie have six wardens each, with the terms of two wardens expiring each year. Launceston has five wardens, with the terms of two wardens expiring every year, except every third year when the term of only one warden expires.

In Hobart there are nine wardens, with three retiring each year. Ship owners, exporters and importers in the ports within the Marine Board's jurisdiction are eligible to vote. The larger the ship, or the greater the value of goods imported or exported, the more votes allowed to be cast, to a maximum of three.

In all of the ports, a warden must be eligible to vote in the election. All voters and wardens must be Australian citizens. Only in Hobart can a non-Tasmanian resident be elected as a warden.

Ratepayers of the voting districts cannot be called upon to make any tax or other payments to the port authorities of Burnie, Devonport and Launceston. (In contrast, ratepayers can be so required in the cases of the Marine Boards of Flinders and King Island—as also is a requirement in parts of the United States.)

### *Port authority objectives*

Apart from the general statement of duties (see Box C1), the Marine Act 1976 does not specify the objectives of port authorities.

The objectives of individual port authorities have been developed separately by their successive boards. The provision of services at lowest cost to users is a strong theme common to all the port authorities.

#### The Burnie Port Authority:

perceives its primary role as that of a provider of services and facilities enabling the efficient transfer of cargoes between land and sea transport modes. It is not a maximiser of profit and in fact believes that those services and facilities should be provided at the least possible cost which permits the authority to meet recurring expenditures and to finance capital developments. (Sub. 23, p. 4)

#### The Port of Devonport Authority's:

overriding objective is to run a self funding entity while providing efficient and effective facilities and services for users at the least possible cost. (Sub. 13, p. 2)

The Authority does not seek to maximise profits—it seeks to achieve a level of profit that will enable it to meet its role as a trade facilitator. (Sub. 13, p. 25)

#### The Marine Board of Hobart:

firmly believes in pursuing any opportunity which can assist the Board to achieve its objective of providing services and facilities at the lowest possible cost. (Sub. 30, p. 4)

[It] considers its role synonymous with a 'co-operative' or 'trust', providing the port facilities and services required by its users at their expense. A port should not be a 'profit generator' to provide excess profits (by imposing additional charges) if that is not the desire of the users of the 'co-operative' or 'trust'. (Sub. 30, p. 4)

#### The Port of Launceston's fundamental objectives are:

- to achieve declining real terms cost inputs to shippers and port user community from port authority activities; and
- to establish arrangements under which maximum influence can be brought to bear on the cost inputs to shippers and port users of other service providers in this port. (Port of Launceston Authority Corporate Plan 1992, p. 3)

### **C1.3 Revenue and pricing**

In line with their objective of providing services at the lowest cost, the port authorities determine prices to cover operating costs and to generate sufficient funds for future development. According to the Port of Devonport Authority:

Historically, Tasmanian ports have adopted a pricing policy based on the philosophy of providing services at least cost, while achieving a positive cash flow to be used for future development. (Sub. 13, p. 3)

The Marine Board of Hobart believes that:

revenues should be no greater than the cost of operating the port and providing reserves sufficient to meet ongoing capital and maintenance expenditures. As the cost of operating the Board alters, then the wharfage charges on cargo and tonnage charges on ships can be adjusted accordingly. (Sub. 30, p. 8)

In 1991-92, each port authority raised about \$10 million in revenue. But their sources of revenue differed markedly (see Figure C2).

In each port, tonnage rates apply to ships. They are calculated differently in each port, but are based on the GRT of the vessel in question, as well as the length of time it is in port.

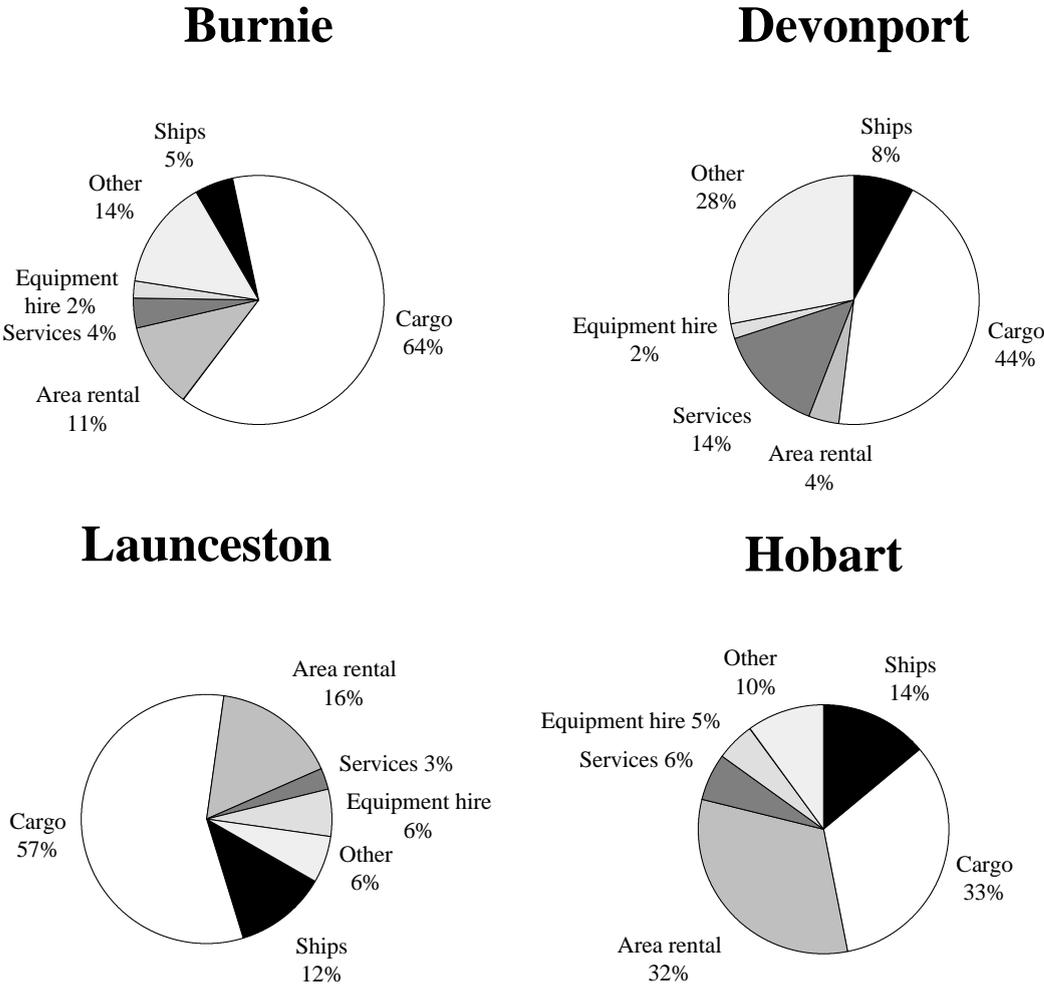
Charges on cargo (wharfage) depend on its type (eg general, bulk or containerised). The Port of Devonport explained:

Historically it has been the practice for general cargo to incur substantially higher wharfage rates than bulk cargoes. This has been due to a large extent to pricing according to the principle of 'what the trade will bear'. (Sub. 13, p. 3)

Wharfage charges in the Tasmanian ports are characterised by some inward cargo rates being significantly higher than outward rates.

Also of note is the relatively high reliance of the Tasmanian ports on wharfage compared with their ship-based charges (see Figure C2).

Figure C2: Sources of revenue, 1991-92



Source: Port authority annual reports.

**C1.4 Employment**

Employment in the Tasmanian port authorities (see Table C2) has declined significantly in recent years, in line with the national trend. Reductions have been achieved through natural attrition and some voluntary redundancies.

Table C2: **Port authority employment**

<i>Port</i>	<i>1986-87</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
Burnie <sup>a</sup>	64	48	48	44
Devonport <sup>a</sup>	85	65	64	64
Hobart	122	107	104	106
Launceston	108	66	66	63

<sup>a</sup> Figures exclude airport employees.

Sources: ATAC, Port Performance Indicators, December 1991 and June 1992. AAPMA Sub. DR135.

An integrated workforce was established in Burnie in January 1993, with all port labour now employed by the port authority. The workforce carries out port authority and stevedoring functions.

### **C1.5 Financial performance**

No Tasmanian port authority is obliged by the Government to target a rate of return on assets.

Burnie, Hobart and Launceston make payments to the Tasmanian Government under a temporary arrangement pending the introduction of amendments to the Marine Act which are expected to require port authorities to pay income tax equivalents and loan guarantee fees. The payments, which are described as a port tax in the financial statements of the port authorities, are calculated as 4 per cent of gross revenue. For 1989-90, the payments were in the \$300 000–\$500 000 range.

Devonport was included by Government under the State Authorities Financial Management Act (SAFMA) because it refused to join the ‘voluntary’ temporary agreement that covers the other three ports. Devonport has contested the legality of the State Government’s request under SAFMA for an income tax equivalent payment of \$292 543 in respect of 1991-92 and a loan guarantee payment of \$44 816 in respect of 1992-93 (sub. DR113, p. 2, p. 6). Further, it stated that it rejects the principle of paying taxation and dividends:

The basic thrust of the Board’s argument against taxation is that, contrary to the State Government’s claim, any imposition of port taxes must be passed on in the form of increased charges to port users. The Board believes that to use ports as revenue raising mechanisms is to inhibit the very role that they should be playing—to facilitate the commerce of the hinterland ... The Authority’s port users are very clearly of the opinion that port costs should be kept to the absolute minimum and that port profits should be re-invested in infrastructure and services. (Sub. 13, p. 4)

The Marine Board of Hobart does not object to paying taxes:

... we have no argument per se of port authorities being treated like any other business and subject to the same tax regime ... In fact we are uncomfortable not paying the same taxes as private enterprises because we are trying to emulate private enterprise. (Transcript, p. 1156)

But it considers that it should not be required to pay dividends:

... we would pay corporate tax etc. and then pay a dividend to our shareholders as assumed by some people, and that is the government. We would say that we would argue strongly against paying twice. (Transcript, pp. 1156–57)

## **C2 The degree and effects of competition between the four major port authorities**

Competition between the Tasmanian port authorities has been at the centre of continuing controversy over possible amalgamation of the northern port authorities of Burnie, Devonport and Launceston.

Amalgamation has been favoured by those who believe that competition between the northern ports has led to wasteful investment. The Burnie Port Authority argued:

history has revealed that the desire to attract additional cargoes, in some cases from a neighbouring port, has resulted in the provision of duplicate and underutilised facilities. (Sub. 23, p. 4)

Similarly, the Australian Chamber of Shipping argued in favour of amalgamation of the northern ports:

The competition between the ports has resulted in duplication and underutilisation of installed capacity. While there have been short term gains, there are concerns that costs will escalate significantly ... (Sub. 43, p. 16)

The Chamber claimed that amalgamation would also deliver administrative savings, and that competitive pressure would remain because of rivalry between the amalgamated northern ports and Hobart.

Amalgamation has been opposed by those who believe that competition between the ports is beneficial to port users. The Marine Board of Hobart considered:

a competitive system produces a far better financial and economic result for the economy than an artificially determined amalgamation of administration and facilities. (Sub. 30, p. 7)

An earlier bill to amalgamate the northern port authorities failed to pass through the Tasmanian Parliament. In its recent report, the working party recommended against amalgamation of the larger port authorities:

The competitive port model was considered to be the most consistent with the Government's objectives of encouraging greater private sector involvement and

establishing truly independent commercial port business enterprises. Effective competition is seen as a fundamental part of any market system, and without it some form of strong central control may be required to avoid an abuse of monopoly power. In the longer term if ports are privatised rationalisation may occur through market forces. The government at that stage would wish to avoid the state's economy becoming vulnerable to dominant market power. (Pages ES4–ES5)

## **C2.1 Nature and extent of competition**

There appears to be significant rivalry between the Tasmanian port authorities for trade. Their relative proximity and the small area of Tasmania enhance opportunities for competition.

Although much bulk trade is relatively 'captive' (see below), general cargo and passengers are able to switch relatively easily. The Port of Launceston Authority stated:

In general port authorities seek to maximise trade through their port which implies competition. (Sub. 24, p. 54)

There is competition as it is possible to move containerised, bulk petroleum products, timber and unitised cargoes between areas in Tasmania. (Sub. 24, p. 44)

All four port authorities handle general cargo, which accounts for 30 per cent of total Tasmanian port trade. Common-user facilities are available in each port to handle this cargo, in addition to the dedicated berths for regular liner services. At Burnie, there is a dedicated facility for Brambles' Melbourne service and a common-user container crane. Both Devonport and Launceston have respectively modified and constructed special berths for the ANL services from Melbourne on the Searoad Mersey and Searoad Tamar. Devonport did so subject to funding being supplied by ANL. Devonport also has a Ro-Ro berth for the TT-Line's Abel Tasman. A large number of the containers handled at the northern ports come from, or are destined for, Hobart.

The Port of Launceston Authority explained:

we are trying to keep our prices at the lowest rate so someone doesn't pick their box up and take it to Devonport or Burnie. (Transcript, p. 355)

There is also competition for passenger services. In 1992, the Port of Launceston Authority unsuccessfully bid to take over from Devonport as the TT-Line passenger terminal when the Abel Tasman is replaced. Launceston has recently become the terminal for the high speed catamaran, Seacat Tasmania. The Port of Devonport Authority, however, does not consider the Abel Tasman to be in competition with the Seacat:

The Abel Tasman operation has specialised terminal facilities in Devonport. The high speed catamaran operates from Georgetown. The two are completely different operations, servicing different market needs and having different operational capacities. The

catamaran service did not operate during the 1992 winter and it is likely that it will not operate during the 1993 winter. (Sub. DR113, p. 6)

Bulk cargoes are less mobile because of the cost and difficulty of transportation. Cargoes such as woodchips, pulp, minerals, and cement are more or less committed to their local port because they require specialised handling equipment or because the location of the extraction, storage or processing would make transport to another port more costly.

However, competition between the port authorities for these ‘captive’ trades emerges when an existing user requires new handling facilities or a new user comes along. Then the port authorities compete as vigorously as they compete for general cargo. For example, in 1992 Burnie developed systems to handle pine logs and woodchips, in competition with Launceston and Hobart. The Port of Launceston Authority commented:

With regard to new trade or shipping lines entering the market, port authorities, if they are in a competitive position will try to influence the operator to use their facilities at the expense of their competitors. (Sub. 24, p. 54)

Competition between ports could be reflected in price levels. Comments from some users support this conjecture. For example:

Australian Newsprint Mills ships out of Hobart, northern Tasmania and from interstate ports as well. It is no accident that our port charges under the competitive Tasmanian system are significantly lower than those we pay interstate. (Australian Newsprint Mills reported in Marine Board of Hobart’s Annual Report 1991)

But, although charges for bulk exports from Tasmania may be relatively low, those for at least some other categories of cargo—for example, inward containers—appear high relative to other Australian ports.

## **C2.2 Overcapitalisation**

In a joint submission in 1990 to the Tasmanian Legislative Council in favour of an amalgamation of the northern ports, the Burnie Port Authority and the Port of Launceston Authority claimed there would be savings from avoiding the duplication of underutilised facilities:

Presently [ie 1990] there are proposals afoot to construct another general cargo berth at Devonport for itinerant shipping at a cost of about \$4 million with the consequent recurrent cost of \$800 000 per annum over ten years. There are already underutilised facilities which can handle irregular cargoes coming into northern Tasmania at both Burnie and Bell Bay [Launceston] and shippers are currently displaying their willingness to use those facilities. (Sub. 24, Appendix 16, pp. 10–11)

And with respect to investment in port facilities in general, they said:

In anticipation of the merger between Launceston and Burnie, constraint on capital projects has been exercised in that approximately \$9 million worth of projects have been

put on hold. If the merger does not proceed, the intention is to pursue these projects.  
(Sub. 24, Appendix 16, p. 11)

In total, they estimated that amalgamation could allow net savings of up to \$2.6 million a year. (The Port of Launceston Authority has subsequently withdrawn its support for amalgamation.)

The Burnie Port Authority gave the following example of overcapitalisation:

Construction of specialised Ro-Ro facilities in Burnie, Devonport and Bell Bay [Launceston] during the 1960s to service ANL's Bass Strait trade is an example of overcapitalisation which was made all the more pointed when that line subsequently withdrew from both Burnie and Devonport and then in recent times sought and succeeded to have constructed in both Devonport and Bell Bay new virtually identical specialised facilities. (Sub. 23, p. 4)

Similarly, the Port of Launceston Authority commented that:

Tasmania provides a good example of investment in underutilised facilities.

1. Passenger terminals in the four major ports—presently only one utilised, although they have been developed in the past at the request of port users. For example, ANL required a cargo terminal in all the northern Tasmanian ports and passenger terminals in three ports.
2. Cranage—extremely underutilised cranage in the four Tasmanian ports.
3. Common-user berth—again underutilised common-user berths in all the major ports. (Sub. 24, p. 55)

However, the Port of Devonport Authority (sub. DR113, p. 7) stated that, as the upgrading of infrastructure to accommodate the new ANL Searoad Vessels was paid for by ANL, it is not an example of overcapitalisation. Further, the Marine Board of Hobart stated:

... the illustration (of overcapitalisation) given is that ANL ... invested in three different ports in Tasmania and they are no longer used, or only one of them is and therefore that is overcapitalisation. However, it was the user who put that in—ANL. It wasn't the port authority who encouraged ANL to overinvest. (Transcript, p. 1147)

The Port of Launceston Authority is itself proposing to install a new container crane, which it estimates would cost \$10–12 million, despite its own views on underutilisation:

There is not the shadow of a doubt that this facility will be greatly underutilised like many other facilities in the Tasmanian port system. But if our port is to focus upon developing the resources and the ability of Bell Bay to handle cargo we don't care about the fact that this might be a duplication of a facility. (Transcript, p. 360)

The Port of Launceston Authority explained that it does not use hurdle rates to appraise an investment proposal because its role was to maximise trade through the port 'almost regardless of cost'. (Transcript, p. 360)

Another example of apparent duplication was the construction of onion sheds at some ports, after approaches by onion exporters. But the port authorities also use these facilities for other trades, and prefer not to see them as an example of overinvestment.

The Port of Devonport Authority challenged the claim that amalgamation would produce savings, and questioned the conceptual basis of savings estimates. It considered that the estimates do not include negative effects from loss of competition:

There is of course a cost associated with duplication but there is also a substantial saving through competition. For example, there are substantial savings to shippers from vessels being able to turn around quickly without queuing for a berth. It has been estimated very roughly that this regional competition benefits the state by \$5–10 million per annum. (Sub. 13, p. 19)

The Marine Board of Hobart offered a ‘rudimentary’ estimate of the costs and benefits of competition in Tasmania:

the existence of nearly equivalent ports in Tasmania with nearly equivalent facilities, the overcapitalisation of which may be say—pick a figure—\$10 million worth of assets, we would say that \$30 million worth of benefits accrue from having those alternatives. (Transcript, p. 810)

But it is not an easy exercise to assign a monetary value to the benefits of competition, particularly as the benefits to users from lower charges do not necessarily equate to the benefits to the community as a whole.

### **C3 Improving commercial disciplines**

Some issues relating to how commercial disciplines can be enhanced within the Tasmanian port system were examined in 1992 by the Curran review. It urged the Government to make clear that the port authorities are owned by the Government, to make port authorities subject to the SAFMA, and to appoint boards based on business or other specialised skills.

The recent working party report also concentrated on establishing commercially focused and competitive port authorities. To this end it proposed that:

- port authorities should comply with the basic reform aims of SAFMA, including the system of corporate taxation equivalent payments and loan guarantee fees. However, this should be done through amendments to the Marine Act, with Devonport taken out of SAFMA and covered by these amendments; and
- following some transitional arrangements, existing boards should be replaced by ‘interim’ boards, with three members elected and three appointed by the Minister. This is to reflect two points of view: that

shippers are the ultimate owners of Tasmanian ports; and that ports are state assets.

The appropriate longer term corporate structure of the main port authorities was not fully addressed by the working party, which recommended ongoing consideration. Relevant matters to be addressed include the final board structure, and whether dividends should be paid.

### **C3.1 Accountability**

The local election of Tasmanian port authority boards, coupled with their freedom to set their own objectives, gives the port authorities a local community and user-oriented attitude to ownership, responsibility, and operations. This is reflected in comments by the Port of Devonport Authority:

The PDA Board of Directors argues that the shareholders or stakeholders are those who benefit from the services it provides ie the regional (and state) populations. (Sub. 13, p. 1)

The Port of Devonport is effectively owned by the Devonport community, and the port hinterland which it serves. (Sub. 13, p. 40)

The Marine Board of Hobart, where local users elect the board, see its users as its stakeholders and shareholders:

I am pleased to report that for the ninth year during the last ten we have not increased our charges on ships and cargo, which amounts to an effective reduction of in excess of 90 per cent since 1982. This is our dividend to our port users who are our stakeholders and we shall continue to pursue this policy as long as we are able. (Marine Board of Hobart, Annual Report 1991, p. 2)

Similar sentiments are expressed by the boards of Burnie and Launceston (see Section C1.2).

### **C3.2 Financial performance**

None of the Tasmanian port authorities is required to aim for a target rate of return on assets.

The Marine Board of Hobart argued that port authorities should apply different investment criteria:

It is the price that commodities obtain on the world market at their destinations which is the governing factor, not whether each facility has met a threshold 'return on assets'. The 'return on assets/investment' so strongly promoted by Government agencies is not necessarily appropriate to port authorities, and serves no useful purpose, except perhaps as being attractive as a dividend to State Governments. (Sub. 30, p. 9)

The Burnie Port Authority explained that it is because of their different goals that port authorities should not need to have regard to rate of return analysis:

This Authority values its assets at historic cost. It has not placed any reliance upon rate of return calculations. Competent management should be directed towards ensuring an enterprise achieves its goals, which may vary considerably between organisations ... In such circumstances the rate of return on assets should be treated as a by-product of an enterprise's operations which is little more than an academic curiosity rather than a goal in itself. (Sub. 23, p. 6)

The Port of Launceston Authority acknowledged the effects of eschewing rate of return targeting:

We don't look at hurdle rates in that respect. Our role is to seek to facilitate the movement of shipping and trade through this port ... almost regardless of cost, and that means that we have got a heap of facilities that have been developed, not just in this port but throughout Tasmania, that till hell freezes over they wouldn't make a reasonable rate of return. (Transcript, p. 360)

Devonport uses internal rate of return analysis to assess new investments. However, it does not favour rate of return targeting as a performance indicator, especially not as a basis for the payment of a dividend. Devonport currently values its assets at historical cost, and it challenges the methodology of both asset valuation and setting a target rate of return:

The PDA is unable to accept the approximate and crude revaluation of its assets ... as being of commercial significance or financial validity. (Sub. 13, p. 25)

All of the port authorities associate rate of return targeting with the question of taxation and dividends. This is reflected in the Port of Devonport's comment:

The Board of the PDA views any requirements for ports to achieve a rate of return on assets as part of the port taxation issue, the basis of which is to provide revenue for the consolidated fund. (Sub. 13, p. 25)

### **C3.3 Government constraints**

Tasmanian port authorities are subject to various institutional arrangements which restrict the way they operate (see Section C1.2). These include controls over borrowings and port authority charges.

In regard to borrowing controls, the Port of Launceston Authority commented:

If the government is serious about saying to us 'you will be commercial' then they can't then put restraints on us like restrictions on loan funds. (Transcript, p. 353)

The Marine Board of Hobart avoids any such difficulty by financing investments internally:

No new borrowings were required for the 14th year in succession with all new works being financed from internal funds and reserves. (MBH, Annual Report 1991, p. 3)

But non-port revenues are used by the Marine Board of Hobart to meet its capital works. This can be inefficient, as explained in Chapter 6, Section 6.4.1.

## **C4 Conclusions**

Competition under the current ground rules has resulted in considerable costs in terms of duplication and underutilisation of facilities. Implementation of the working party's recommendations would certainly be a step in the right direction. But the full introduction of the corporate disciplines proposed in Chapter 3 of this report would allow inefficiencies to be reduced, or even eliminated, without reducing the competitive culture within the Tasmanian ports system.

Public port authorities exist not merely to serve the interests of local communities and port users. They need to perform as efficiently as possible for the benefit of the whole community.

There are grounds for believing that some of the unsatisfactory aspects of port authority operation in Tasmania are due to their parochial nature. The Commission considers that there would be advantages in making port authority boards fully accountable to the State Government rather than to their present limited constituencies.

The Government could then appoint as board members those individuals best suited to such a role. Members would not represent particular interest groups, such as users or ratepayers, but would be selected for their expertise.

The need for rate of return targeting, and liability to taxes and dividends, by port authorities is explained in Chapters 3 and 6. Those mechanisms are aimed at achieving appropriate pricing and proper investment appraisal by port authorities. There is no reason why Tasmanian port authorities should not also face all such commercial disciplines.

The Commission considers that constraints such as those over borrowing should be lifted to allow port authority boards the freedom to operate commercially in determining their most efficient financing methods. Similarly, port authorities should be free to set their own prices, subject to government performance targets, and the general oversight of the Trade Practices Commission and the Prices Surveillance Authority.

## Attachment to Appendix C

### Port location and facilities

#### *Burnie*

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<i>Main trades:</i>	containers (Brambles), fresh produce, dairy, meat, timber, paper (APPM), minerals (Pasminco), vehicles, bulk fuels, pine woodchips.
<i>Ship calls 1991-92:</i>	508
<i>Throughput 1991-92:</i>	2.2 million mass tonnes
<i>Bulk:non-bulk</i>	50:50
<i>Revenue 1991-92:</i>	\$8.41 million
<i>Assets:</i>	\$43.04 million
<i>Current employment:</i>	44

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The Port of Burnie is built on the edge of the Bass Strait. The compact port area is located directly in front of the city on mostly reclaimed land. Burnie is the closest port to the mainland and has the easiest access for shipping. A major user is Brambles, whose service from Melbourne brings in containers on Ro-Ro vessels. The Port of Burnie Authority also runs a cold storage facility and the local airport.

#### *Berths*

1 bulk oil berth  
 3 roll-on roll-off general cargo berths  
 2 general cargo berths  
 1 multipurpose berth

#### *Cargo handling equipment*

1 bulk loader (capacity 1000 tonnes per hour)  
 1 twin lift portainer crane (65 tonne capacity)  
 1 slewing crane (50 tonne capacity)  
 forklift trucks (30 tonne capacity)  
 1 portable woodchip loader

#### *Storage*

1 transit shed of 2500 square metres  
 1 storage shed 1500 square metres  
 296 reefer points  
 28000 cubic metres of cold storage

## *Devonport*

<i>Main trades:</i>	Cement (Goliath), LPG, bulk fuels, passengers (Abel Tasman), general cargo, containerised cargo.
<i>Ship calls 1991-92:</i>	470
<i>Throughput 1991-92:</i>	0.97 million mass tonnes
<i>Bulk:non-bulk</i>	65:35
<i>Revenue 1991-92:</i>	\$9.44 million
<i>Assets:</i>	\$34.30 million
<i>Current employment:</i>	64

The Port of Devonport is situated on either side of the banks of the Mersey River. The port is the home port of the Abel Tasman, which runs a thrice weekly passenger service to Melbourne. The Searoad Mersey carries general cargo between Devonport and Melbourne (three times a week) and King Island (once a week). Goliath, which ships cement to Melbourne and Sydney for distribution, is the largest bulk user. The Port of Devonport Authority also operates three cold stores, the local airport, and a ferry across the Mersey.

### *Berths*

- 1 bulk cement berth
- 1 general user/bulk tallow berth
- 1 general user/petroleum/bulk wheat/bulk tallow berth
- 1 general user/bulk user berth
- 1 LPG berth
- 1 passenger and roll-on roll-off berth (leased by TT-Line)
- 1 roll-on roll-off berth (leased by Coastal Express Line)

### *Cargo handling equipment*

- 1 slewing crane (30 tonne capacity capable of 25 cycles an hour)
- various mobile cranes and forklifts
- various bulk handling equipment designated to berths

### *Storage*

- 174 reefer outlets
- 4 storage sheds (total 5830 square metres)
- 3 cold storage facilities (1 of 7200 cubic metres is located within the port area)
- wheat silos (11000 tonne capacity)
- cattle yards
- 2 cement silos (private)

## *Hobart*

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<i>Main trades:</i>	pulp, chemicals, minerals (Pasminco), bulk fuels, general cargo
<i>Ship calls 1991-92:</i>	580
<i>Throughput 1991-92:</i>	2.53 million mass tonnes
<i>Bulk:non-bulk</i>	75:25
<i>Revenue 1991-92:</i>	\$9.69 million
<i>Assets:</i>	\$43.09 million
<i>Current employment:</i>	106

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As well as the capital city port, the Marine Board of Hobart has jurisdiction over about two-thirds of Tasmania's coastline. A wide variety of general and bulk cargo is handled in many different ports.

- The Port of Hobart, located on the River Derwent, is a general cargo port.
- The Port of Huon and Hospital Bay, to the south of Hobart, services exports of pulpwood.
- Spring Bay, 90 kilometres north east of Hobart, services exports of woodchips to Japan.

### *Berths*

3 roll on-roll off berths  
 7 general cargo berths (including 2 at Port Huon)  
 2 container berths  
 1 bulk wheat berth  
 1 bulk petroleum berth  
 2 docks for fishing vessels (also fishing vessel facilities at Strahan and St Helens)  
 1 woodchip berth (Spring Bay)  
 Slipyard facilities for vessels up to 1200 tonnes

### *Cargo handling equipment*

1 container crane for two berths (capacity of 20 TEU an hour)  
 Spreaders for 6 metre and 12 metre containers  
 Mobile cranes, forklift trucks, dog trailers and tow motors

### *Storage*

30500 square metres of covered storage  
 11.75 hectares of open storage space  
 cool storage facilities

## *Launceston*

<i>Main trades:</i>	Woodchips (APPM), aluminium and steel products and feed stock (Comalco and Temco), bulk fuels
<i>Ship calls 1991-92:</i>	520
<i>Throughput 1991-92:</i>	3.30 million mass tonnes
<i>Bulk:non-bulk</i>	85:15
<i>Revenue 1991-92:</i>	\$7.2 million
<i>Assets:</i>	\$37.69 million
<i>Current employment:</i>	63

The Port of Launceston is spread along 64 kilometres of the banks of the Tamar River, from Bell Bay to the town of Launceston. The deep water berths located in the lower reaches of the Tamar accommodate woodchip exports, oil imports, ANL's Ro-Ro service and Comalco's aluminium smelting raw materials and finished products. The upper reaches are restricted to vessels with a draft less than six metres. The Port of Launceston Authority also operates a cold store.

### *Deep water berths:*

1 private berth (Comalco)  
 1 container berth with crane and roll-on roll-off ramp (leased to ANL)  
 1 general cargo berth with crane  
 1 bulk liquids berth  
 1 common user general/container/roll-on roll-off berth  
 1 thermal power station berth  
 2 woodchip berths  
 2 general/wheat berths  
 Australian Maritime College Jetty

### *Shallow water berths:*

1 wheat berth  
 1 cattle jetty  
 1 general jetty  
 1 shiplift  
 1 graving dock  
 1 fitting out berth

### *Cargo handling equipment*

alumina discharge conveyor belt (private)  
 1 grabbing crane (12.5 tonnes capacity)  
 2 container and general cranes (25 and 50 tonnes)  
 discharge pipelines for tanker berth (oil and LPG) and thermal station berth  
 2 fixed woodchip loaders  
 2 fixed wheat loaders (capacity 250 tonnes an hour)

### *Storage*

1 cold storage facility (22940 cubic metres)  
 stock yards (590 square metres)  
 2 storage sheds (total 2800 square metres)  
 216 reefer outlets

## Powers

Section 65 of the Marine Act 1976 contains 34 general powers of Tasmanian port authorities. The more important powers are listed below:

- to regulate navigation;
- to control shipping in the port;
- to provide for safety of life or property in the port;
- to regulate and charge for moorings;
- to set up and maintain signal stations, beacons and lights;
- to acquire and use tugs;
- to let any wharf, building or land for a term not exceeding three years, or with the approval of the Governor, not exceeding 20 years at any one time or 40 years in the aggregate;
- to let any land on a building lease with the approval of the Governor for a term not exceeding 99 years;
- to do anything for the improvement of navigation or cargo handling or for the convenience of shipping, cargo handling, shippers and stevedores, or any other person resorting to the port;
- to buy and sell land;
- to carry out work for others under contract;
- to appoint officers such as harbourmasters, pilots, managers etc., to define their duties and powers, and to fix their remuneration;
- to licence and regulate recreational vessels; and
- to grant certificates and licences for special activities, and to fix fares and charges.

Section 66 prohibits the construction of wharves anywhere within a port authority's jurisdiction without the permission of the port authority.

Section 74 gives port authorities the power to fix and collect wharfage, tonnage, harbour charges, conservancy, pilotage or any other charges for accommodation afforded, appliances provided or services rendered.

Section 98 gives the port authorities the power to appoint or licence pilots, to fix the rates payable for pilotage services, and grant exemptions from pilotage.

The powers of harbourmasters are also set out in the Marine Act. Section 95 compels all ship masters, and employees, to obey the orders and directions of the harbourmaster. Section 94 allows a harbourmaster to take charge of any vessel that is entering, leaving or moving within a port.

The Marine Act gives the port authorities power to assist employees to purchase their homes by granting loans, execute guarantees, or entering into agreements or arrangements as the board sees fit (section 65(y)).

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## **APPENDIX D: CASE STUDY OF THE ECONOMIC PERFORMANCE OF THE PORT OF BRISBANE AUTHORITY**

The Port of Brisbane Authority (PBA) manages Australia's third largest and most rapidly growing capital city port. In this appendix, the overall economic performance of the PBA has been measured and assessed through the use of three main indicators: the real prices of PBA services over time, the real rate of return, and total factor productivity (TFP). Time series data from 1976-77 to 1991-92 are used in this measurement.

### **D1 The Port of Brisbane Authority**

Prior to 1976, the port of Brisbane was under the control of the Department of Harbours and Marine which operated as the port's landlord. In 1972, a Departmental review found that:

- the port of Brisbane should expand its facilities to meet increasing demand;
- constructing a new installation on Fisherman Islands, rather than upgrading the existing river port area, would be the best way to expand the port; and
- it was essential to establish a port authority to efficiently manage the port and its expansion.

The Queensland Government established the PBA in 1976. Since its inception, it has been actively involved in creating channels and providing buildings, wharves and other capital infrastructure. At Fisherman Islands, it has created a facility that can cater for the largest container and Ro-Ro ships in the world. Facilities in the port include bulk coal, grain, oil and cement terminals, plus three container wharves and access to road and rail transport systems.

The PBA sees its principal role as maximising trade. Its objective is to act in a commercial manner to facilitate the growth and development of the port as well as to maintain safe harbour facilities in an environmentally responsible manner. The PBA owns and leases out facilities to promote the movement of cargo and has four industrial estates covering nearly 300 hectares. It leases land to harbour-oriented industry, including small boat building and repair, metal fabrication, and sand and gravel processing. It also owns and manages recreational boat harbours. However, it does not operate any of these services as a community service obligation. The PBA does not cross-subsidise between its recreational boat harbours and trade operations.

The port handles over 16 million tonnes of cargo a year, which includes 200 000 TEUs of containers. Existing terminal capacity is sufficient to handle an extra 250 000 TEUs. Table D1 provides a summary of cargo throughput in 1991-92.

**Table D1: Cargo throughput 1991-92**  
(‘000 tonnes)

<i>Commodity</i>	<i>Exports</i>	<i>Imports</i>	<i>Total</i>
Oil	2 101	5 292	7 393
Grain	481		481
Coal	3 469		3 469
Metal ores and scraps	391	811	1 202
Silica sand	316		316
Meat and live animals	489		489
Cotton lint	213		213
Animal and vegetable oil	133		133
Woodchips and timber	253	154	407
Iron and steel		103	103
Fertilisers and chemicals		355	355
Paper and pulp		130	130
Other	804	1 178	1 983
<b>Total</b>	<b>8 649</b>	<b>8 023</b>	<b>16 672</b>

Source: Summarised from PBA 1992, p. 21.

The port of Brisbane is principally a bulk (oil, coal and grain) and general cargo (meat, cotton and manufactures) port. However, container traffic is an increasingly important part of the trade: Brisbane is Australia’s fastest growing container port (PBA 1992, p. 9). It competes with Sydney and Melbourne and has an aggressive marketing campaign, with pricing strategies to increase the port’s market share of east coast container and general cargo trade.

Japan is the port of Brisbane’s most significant source of trade, accounting for 50 per cent of total throughput (excluding oil) in 1991-92 (PBA 1992, p. 3). Other Asian economies are becoming important destinations for cargo exported through Brisbane. The PBA believes the port has several competitive advantages over the southern ports of Sydney and Melbourne in terms of trade with Asia, and is therefore pursuing a growth strategy to transform it from a regional port to one of Australia’s most competitive international access ports serving the eastern seaboard. It believes that ‘Brisbane’s success in this regard has strong positive flow-on effects for the nation as a whole’ (PBA sub. 22, p. 1).

The Queensland Parliament has recently enacted the *Government Owned Corporations Act* (1993) and has announced that the PBA will be one of the first trading enterprises to be corporatised. The Government aims to complete the

process for the PBA by 1 July 1994 and thus give the PBA increased commercial autonomy.

At present the PBA monitors performance relative to its corporate plan, which sets out goals, objectives and performance indicators. In its latest corporate plan, the PBA's goals and objectives are set against four key result areas, as shown in Table D2 below.

**Table D2: PBA key result areas and technical performance indicators**

<i>Key result area</i>	<i>Objective</i>	
Trade development	To secure, enhance and diversify trade through the port	
Port performance	To manage the port's operations in a commercially effective and efficient manner so that the port is internationally competitive	
Port infrastructure and development	To develop and maintain port infrastructure consistent with the 'Key Port Brisbane Strategic Plan to 2005 and Beyond'	
Corporate management	To manage the authority as an efficient and effective self funding corporate entity and to support the organisation in pursuit of its broader mission, goals, objectives and targets	
<i>Technical indicators</i>	<i>1991-92 actual</i>	<i>1992-93 target</i>
Trade volume (tonnes)	16.7 million	16.5 million
Container trade (TEUs)	200 105	215 000
Waiting time at Fisherman Islands	80% of vessels less than 6 hours	95% of vessels less than 6 hours
Container handling rates (exchange $\geq$ 250 TEUs)	18.6 TEUs per hour	22 TEUs per hour
<i>Economic and financial indicators</i>	<i>1991-92 actual</i>	<i>1992-93 target</i>
Operating profit (before government levy and extraordinary items)	\$26.3 million	\$26.9 million
Debt/equity ratio	0.18	0.15
Operating cost/revenue	0.35	0.40
Interest cover	9.96 times	10.00 times
Current ratio	1.46	1.20
Port charges	no increase	no increase

Source: PBA 1992, p. 18.

## D2 Measuring economic performance

While the performance indicators shown in Table DError! Bookmark not defined. give the PBA a number of ways to assess its success, they do not show how efficient the Authority is across all of its functions. This study aims to measure the overall performance of the PBA in terms of real price changes over time, real rates of return on assets and total factor productivity (see p. 252 for a definition of total factor productivity).

It is useful to consider these indicators together because it is possible to achieve good performance in one of them by lowering performance in another. For example, the rate of return on assets can be improved by increasing the prices charged for services. Similarly, it is possible to improve the productivity of one input by reducing the productivity of another. For example, port authorities may increase the cargo processed per working hour by investing in additional wharves and container cranes. However, there may be no improvement in overall productivity because the savings on labour costs may be offset by increased capital costs.

In this case study, the Commission has used information primarily from PBA annual reports. The Commission considers that its study is consistent with and complements one undertaken by the Queensland Statistician's Office in 1992.<sup>1</sup> The Commission has undertaken its own study because it considers the Fisherman Islands site has provided unique opportunities to the PBA and that it is important to account for this in the explanation of trends in total productivity. This required the study period to be longer than that of the Queensland Government Statistician.

## **D2.1 Real prices over time**

The PBA aims to set its charges in a manner that covers all marginal costs, reflects market conditions, does not involve cross-subsidies and facilitates trade (sub. 22). As part of this philosophy the PBA sets separate cargo-based charges for each commodity. Charges cover direct costs plus a contribution towards joint costs (such as dredging channels). This ensures that there are no cross-subsidies. However, some users (oil terminal and coal loaders) are charged substantially above marginal cost, while other users (container terminals and general cargo) are charged just above marginal cost.

About 60 per cent of PBA revenue is obtained from harbour dues, wharfage and berthage. The first two of these are cargo-based, while the third is ship-based. Harbour dues are generally used to recover the fixed costs of common facilities such as channels and navigation aids. Wharfage is generally used to recover the cost of loading and unloading ships. Berthage is generally used to recover some of the costs associated with the loading and unloading of ships which are related to the ship rather than the actual loading and unloading of cargo.

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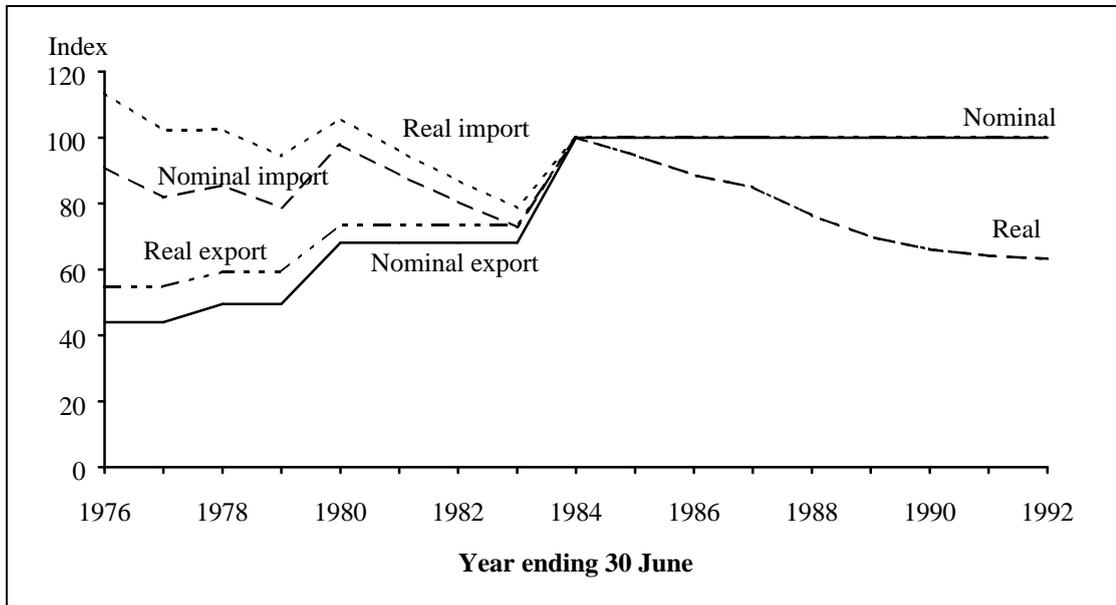
<sup>1</sup> The study was prepared by the Queensland Government Statistician's Office for the Port of Brisbane Authority and published in *Measuring the total factor productivity of government trading enterprises* by the Steering Committee on National Performance Monitoring of Government Trading Enterprises 1992.

Figures D1 to D6 show nominal and real price indexes of harbour dues for wheat, coal, petroleum, motor vehicles (up to 1 tonne), 20 foot and 40 foot containers. The figures are based on rates applying at 30 June each year. Initially, with the exception of coal, harbour dues were lower for exports than imports, prior to the commissioning of Fisherman Islands. However, the PBA progressively increased the export rates so that by 1983-84 import and export rates were identical. Since 1983-84, harbour dues have declined in real terms for all cargo types because they have not been changed since their gazettal in November 1983.

In contrast, wharfage and berthage charges have been adjusted differentially over time. Using the Divisia index procedure, an aggregate index of harbour dues, berthage and wharfage has been estimated (White, Haun and Horseman 1987). The data were obtained from the Queensland Government Statistician's study of the PBA mentioned above. Figure D7 shows that the general level of PBA charges for harbour dues, berthage and wharfage declined in real terms between 1981-82 and 1990-91, by approximately 4.5 per cent a year and a total of 37 per cent.

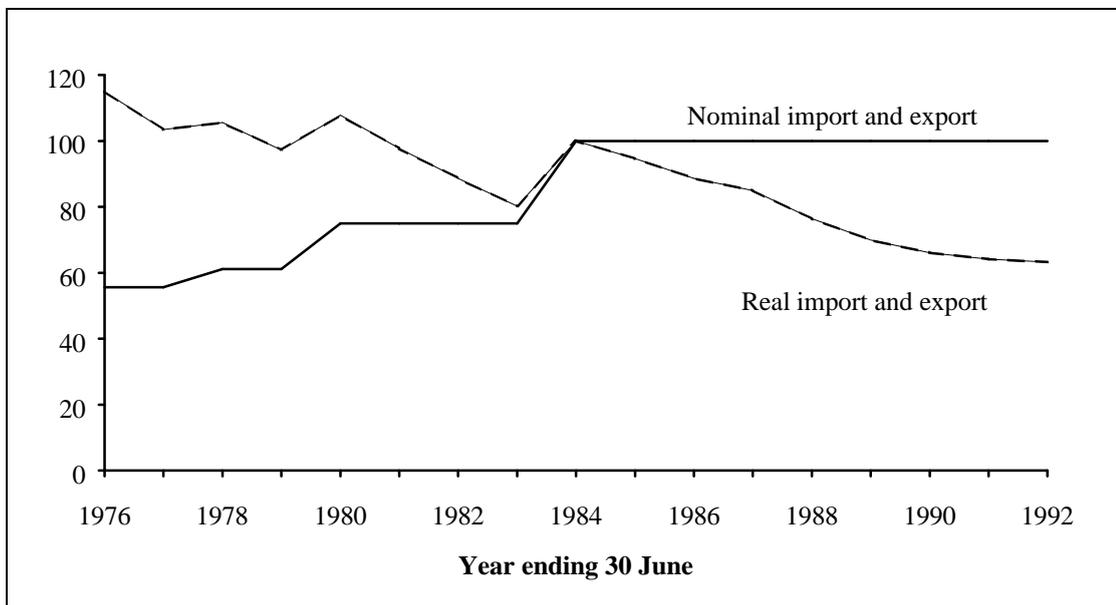
While prices have fallen, the PBA has continued to make profits - for at least two reasons. First, a large proportion of port costs is fixed, so that increasing trade has allowed the PBA to keep per unit charges low, without reducing operating revenue. Second, the PBA has achieved productivity improvements to reduce operating costs. This is apparent from the pattern of growth in the PBA's revenue, expenses and trade. The ratio of operating costs to revenue fell from about 0.9 in 1976-77 to below 0.5 in 1991-92, as trade grew by about 8 per cent a year.

**Figure D1: Price indexes of harbour dues for wheat 1976-92**  
(1983-84 Base=100)



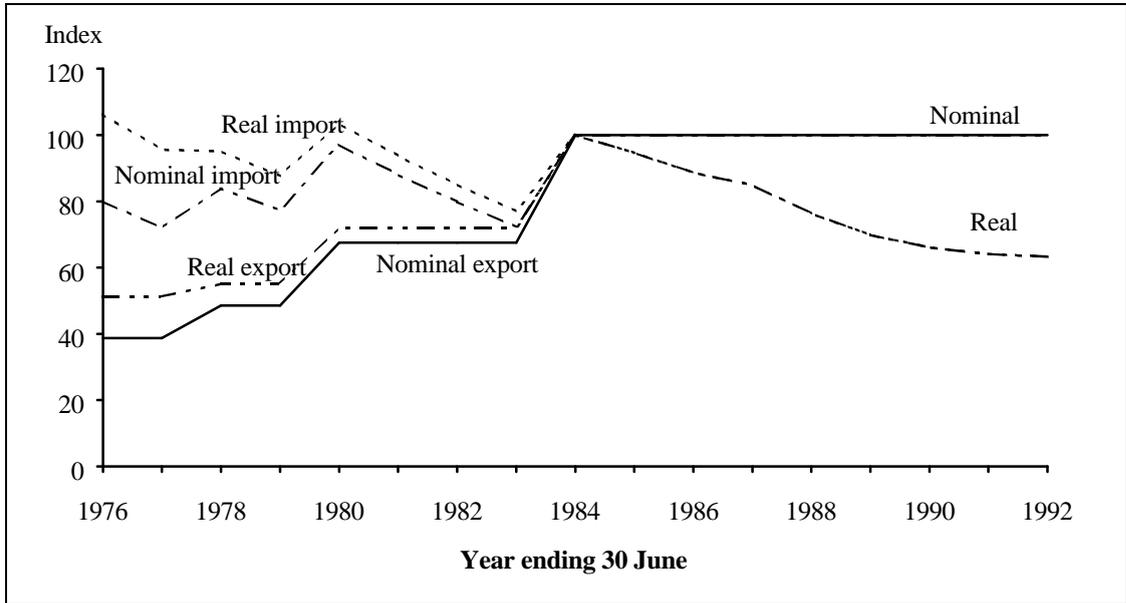
Source: Queensland Government Gazette 1990, and earlier issues.

**Figure D2: Price indexes of harbour dues for coal 1976-92**  
(1983-84 Base=100)



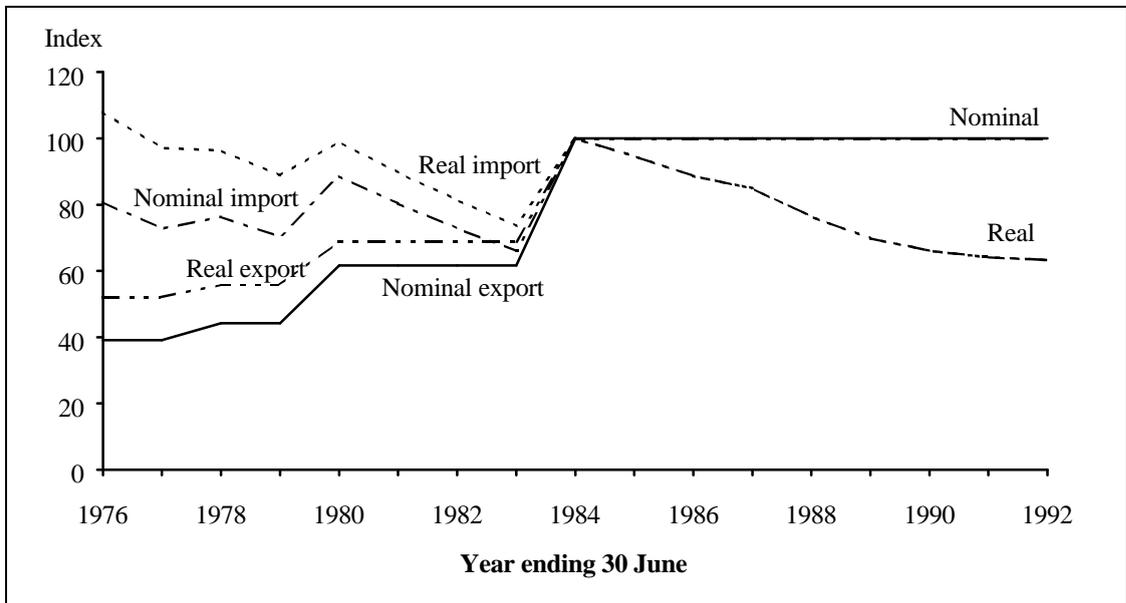
Source: Queensland Government Gazette 1990, and earlier issues.

**Figure D3: Price indexes of harbour dues for petroleum 1976-92**  
(1983-84 Base=100)



Source: Queensland Government Gazette 1990, and earlier issues.

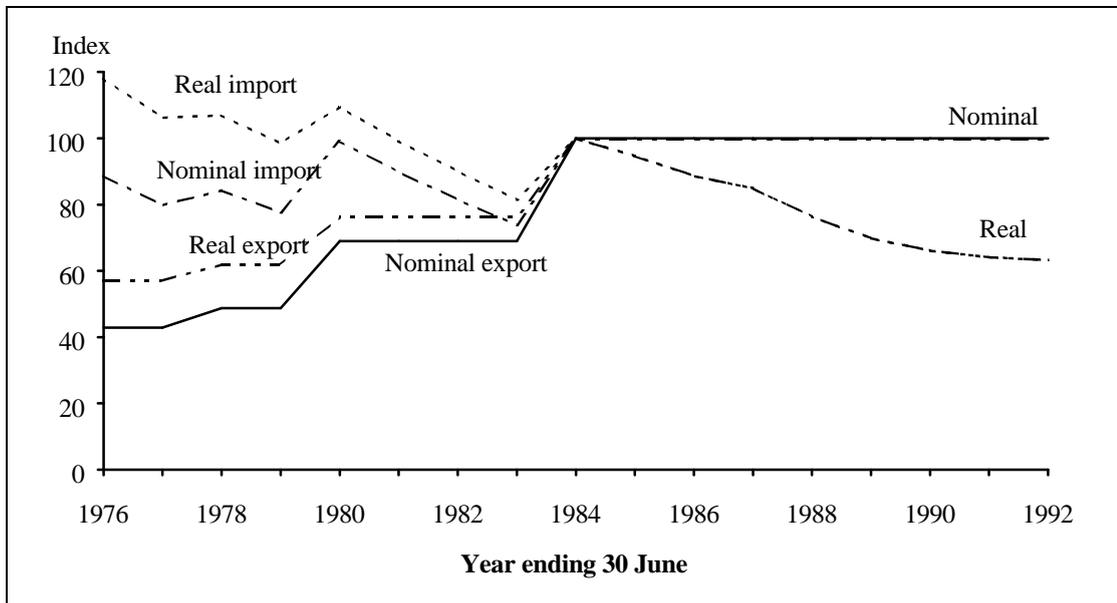
**Figure D4: Price indexes of harbour dues for motor vehicles 1976-92**  
(1983-84 Base=100)



Source: Queensland Government Gazette 1990, and earlier issues.

**Figure D5: Price indexes of harbour dues for 20 foot containers 1976-92**

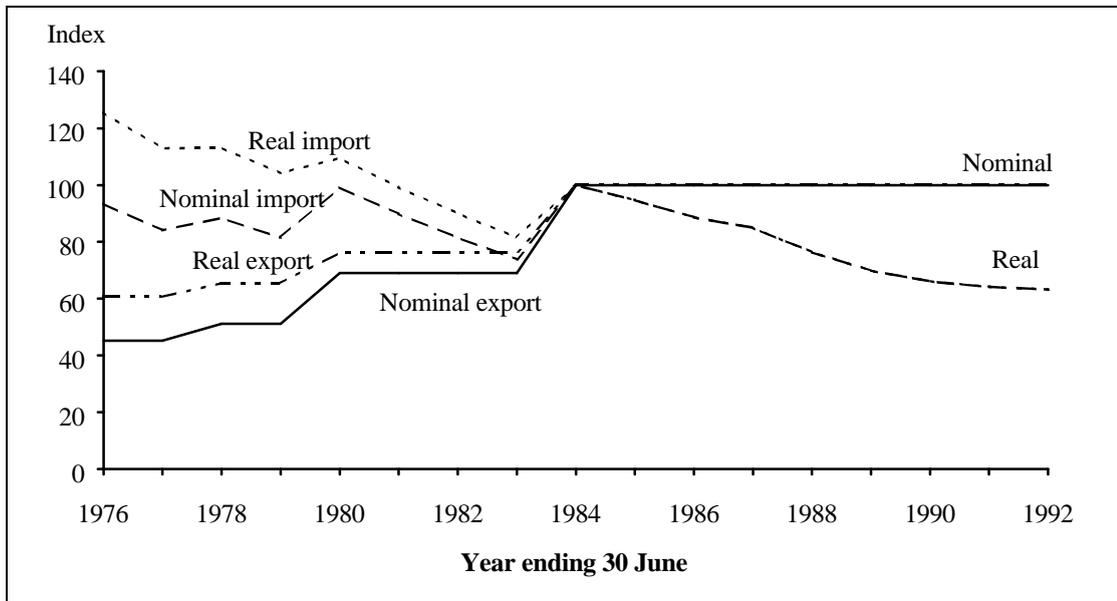
(1983-84 Base=100)



Source: Queensland Government Gazette 1990, and earlier issues.

**Figure D6: Price indexes of harbour dues for 40 foot containers 1976-92**

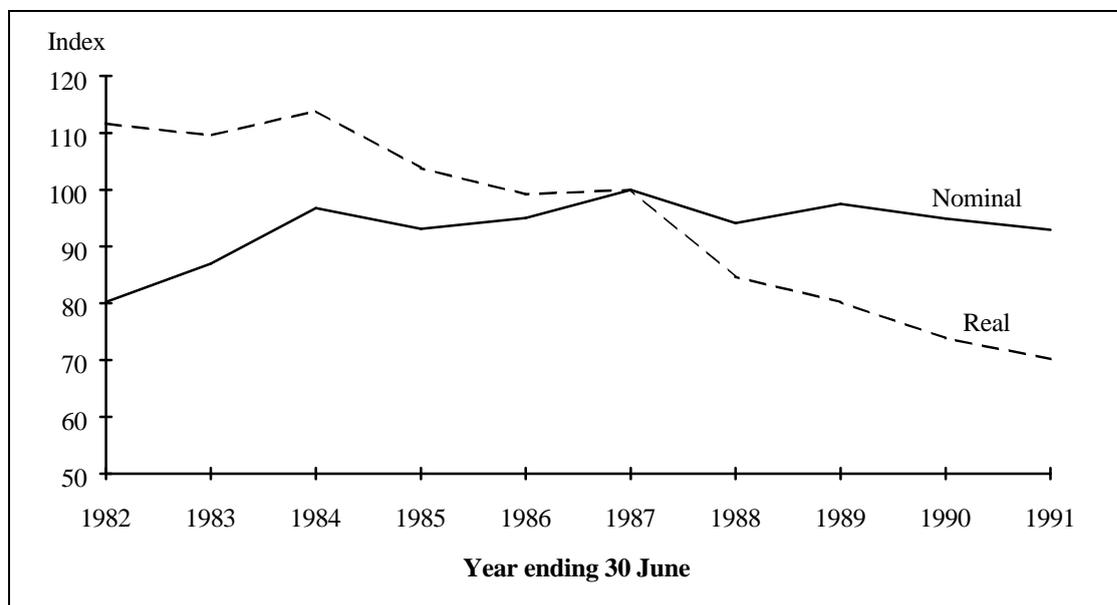
(1983-84 Base=100)



Source: Queensland Government Gazette 1990, and earlier issues.

Figure D7: **Composite price index of harbour dues, berthage and wharfage**

(Base 1986-87=100)



Source: IC estimate.

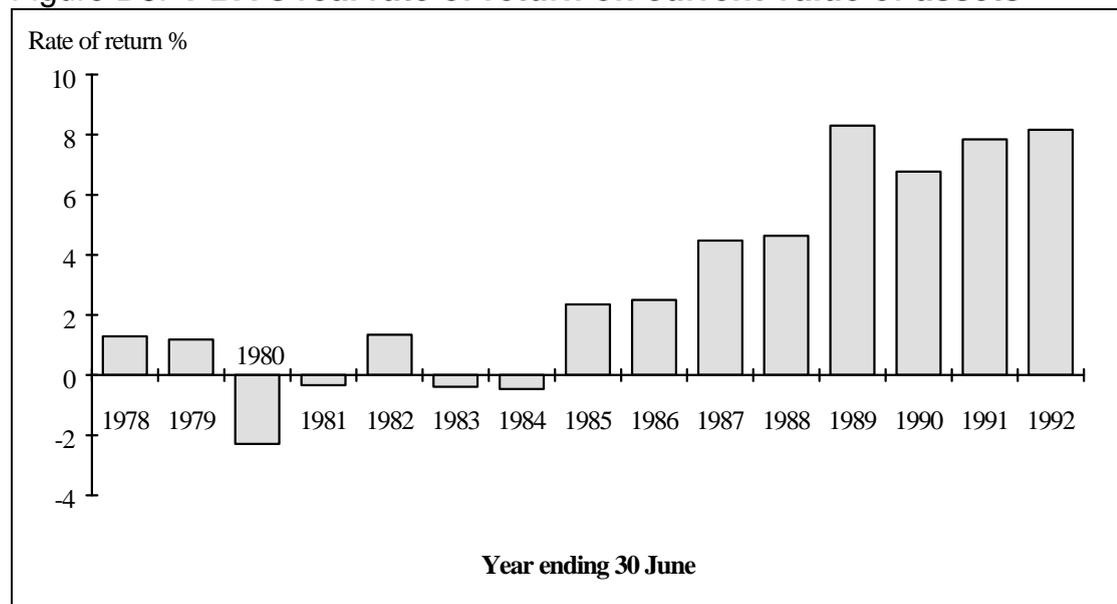
## D2.2 Real rates of return

The real rate of return has been calculated as the ratio of net earnings (operating revenue less operating expenses (including depreciation expense at current cost)) before interest, taxes and extraordinary items and after abnormal items to the current value of performing assets. Figure D8 shows the real rate of return estimated for the PBA.

While the PBA has no target rate of return set by the Government, it has generally performed well in recent years. Between 1978-79 and 1983-84 it earned low or negative rates of return. Within two years of the commissioning of facilities at Fisherman Islands in 1982, its real rate of return was positive. Since then the real rate of return has increased to its present level of 8 per cent.

The large increase in the rate of return in 1988-89 occurred for two reasons. First, the Cairncross Dockyard, which had been making substantial losses over a number of years, was closed. Second, the PBA generated significantly higher revenue from trade.

Figure D8: PBA's real rate of return on current value of assets



Source: IC estimates.

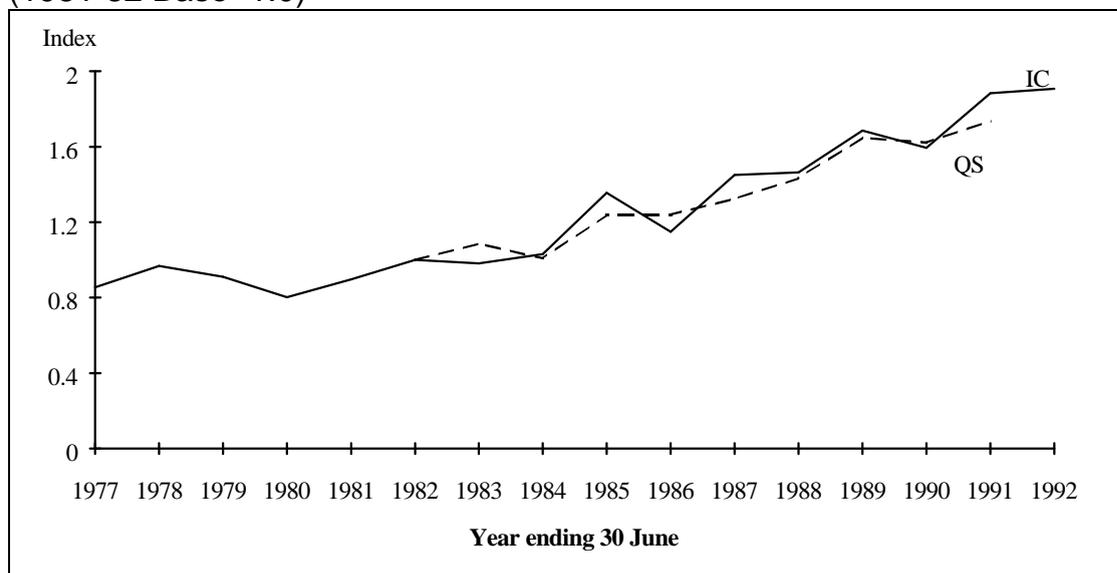
### D2.3 Total factor productivity (TFP)

TFP is measured as the ratio of an index of total output of an enterprise to an index of total inputs used to produce that output. In this way, TFP measures changes in the overall productivity of an enterprise and is therefore a useful indicator of its economic performance. Attachment 1 gives details of the construction of the output and input indexes.

A comparison of the Commission's estimate of TFP with that prepared by the Queensland Statistician's Office for the PBA is shown in Figure D9.

Figure D9: **Comparison of the Industry Commission's and the Queensland Statistician's estimates of TFP**

(1981-82 Base=1.0)

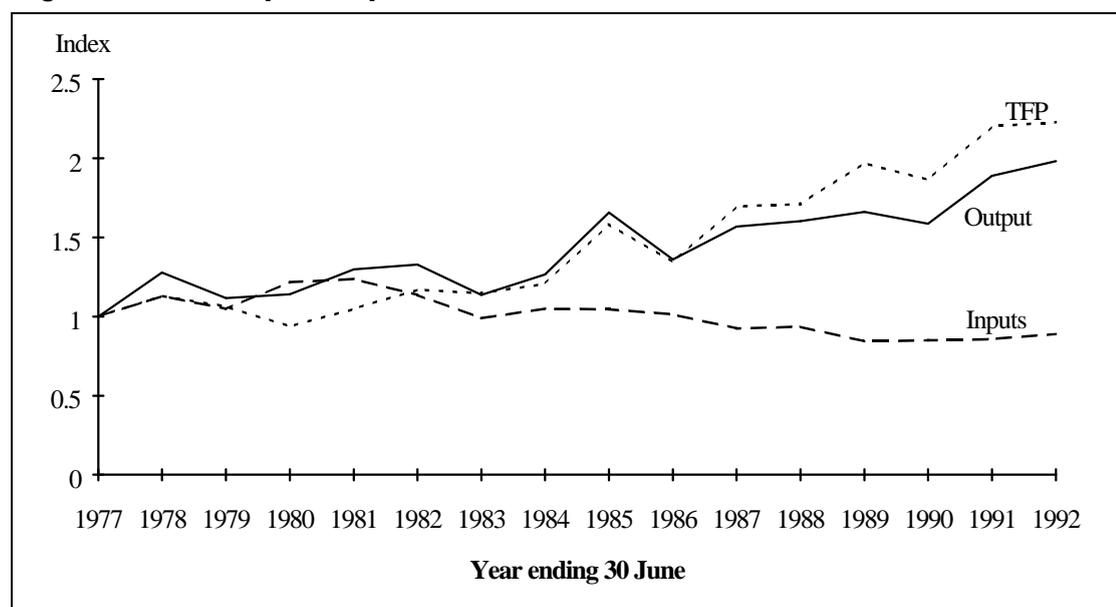


Note: The Queensland Statistician's PBA study covered the period from 1981-82 to 1990-91.

Source: Steering Committee on National Performance Monitoring of Government Trading Enterprises 1992 and IC estimates.

The IC's output, input and TFP indexes from 1976-77 to 1991-92 are shown in Figure D10. Between 1976-77 and 1981-82, there was only a small increase in the level of TFP. Growth in TFP has been strong since 1981-82, growing at an annual average rate of 7.8 per cent a year compared with 1.2 per cent over the previous years (see Table D3). In 1980-81 the first facilities at Fisherman Islands were opened. Fisherman Islands has many advantages over the river port of Brisbane including: a deep harbour to allow large container and bulk ships to enter the port; a shorter distance from the ocean; modern facilities designed to suit the changes that have occurred in shipping and cargo technology; easy access to both road and rail transport; proximity to some manufacturers (an industrial site is also included in the Fisherman Islands installation); and larger facilities to meet efficiently the increasing levels of trade. The new technology has allowed the port authority to provide more services without proportionately increasing input use.

Figure D10: Output, input and TFP indexes for the PBA



Source: IC estimates.

The improvement in the PBA's performance is borne out in Table D**Error! Bookmark not defined.**, where growth in TFP is partitioned into that due to growth in input use and that due to growth in output. (A detailed explanation of the relationship between growth in output, input use and TFP is provided in IC 1990, pp. 59-60.) Over the study period the PBA's output grew by 3.8 per cent annually, while input use declined by 2.1 per cent, resulting in an average annual rate of growth in productivity of 5.9 per cent.

Between 1976-77 and 1981-82, that is before Fisherman Islands was commissioned, output grew by 4.2 per cent and input use grew by 3.0 per cent resulting in productivity growth of only 1.2 per cent per annually. Since 1982-83, the high annual growth in output has actually been achieved with negative input growth. The ability of the PBA to reduce input use resulted in a significant productivity improvement and TFP has grown by 7.8 per cent a year on average.

The change in the rate of growth of TFP since 1982-83, which can be attributed to improvements from the Fisherman Islands complex, can be estimated using a dummy variable in time series regressions. This is shown in Attachment 2.

**Table D3: Annual average growth in output, inputs and TFP**  
(per cent)

<i>Period</i>	<i>Output</i> [1]	<i>Inputs</i> [2]	<i>TFP</i> [3]=[1]-[2]
1976-77 to 1991-92	3.8	-2.1	5.9
1976-77 to 1981-82	4.2	3.0	1.2
1982-83 to 1991-92	5.2	-2.6	7.8

*Note:* Growth in output, inputs and TFP was found by regressing the natural logarithm of these variables against time.

Source: IC estimates.

## D2.4 Other financial indicators

Other financial indicators provide supplementary information to the three economic indicators discussed above. Financial indicators relating to assets, debt and equity are shown in Table D4. They indicate that the PBA is in a strong financial position.

The PBA has significantly reduced its ratio of debt to assets over the last 5 years. High operating profit has been used to finance new investment and to retire debt and terminate financial leases early. Since 1987-88, the PBA has reduced its debt by approximately 70 per cent while assets have increased by 30 per cent and equity by 166 per cent. Its sound financial position is reflected in its high return on assets and equity.

The PBA has not been required to pay a dividend to the Government based on profits, but it does pay a levy. In 1987-88, the levy was 5.5 per cent of revenue earned in the previous financial year. While the levy is not fixed at 5.5 per cent, the total amount paid stayed at roughly the same level until 1991-92, when there was a significant increase.

**Table D4: Financial indicators**

<i>Financial indicator</i>	<i>Unit</i>	<i>1987-88</i>	<i>1988-89</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
Total assets <sup>a</sup>	\$m	137.7	147.5	166.1	177.4	179.2
Total liabilities <sup>a</sup>	\$m	84.7	83.9	76.1	58.8	38.2
Equity <sup>a</sup>	\$m	53.0	63.6	90.0	118.6	141.0
Debt <sup>a,b</sup>	\$m	73.5	71.0	60.2	41.7	22.3
Operating profit <sup>c</sup>	\$m	6.2	19.7	25.0	24.3	26.3
Interest expense	\$m	9.2	9.0	8.8	6.7	2.9
EBIT <sup>d</sup>	\$m	12.2	25.4	28.7	27.3	27.8
Levy	\$m	2.3	2.5	2.5	2.6	3.2
Debt to assets ratio <sup>a</sup>	%	53.4	48.1	36.2	23.2	12.4
Return on assets	%	8.8	17.2	17.3	15.4	15.5
Return on debt	%	12.5	12.6	14.7	16.0	13.2
Return on equity	%	11.7	30.9	22.9	20.4	18.7

<sup>a</sup> Average of opening plus closing values. <sup>b</sup> Sum of overdraft, long term debt and capital leases. <sup>c</sup> Operating profit before extraordinary items and taxes (levy) and after abnormal items. <sup>d</sup> Earnings before extraordinary items, taxes and interest and after abnormal items.

Source: PBA 1992, and earlier issues.

### **D3 Conclusion**

Using the three measures of economic performance, real prices, real rates of return, and total factor productivity, the PBA has performed well. Much of this can be attributed to the replacement of old facilities on the Brisbane River with the new facilities at Fisherman Islands. Productivity growth is attributed mainly to new technology rather than higher productivity from facilities already in place.

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## **Attachment 1 to Appendix D: Port of Brisbane Authority data**

Calculation of a TFP index requires value and quantity series for each output and input. The principal data sources used in this study for outputs and non-capital inputs are the annual reports of the PBA. The data and results are shown Tables D5-D11 below.

### **Outputs**

The PBA provides a number of services to facilitate the movement of cargo. It charges: ships to enter and leave the port; users for deepening and widening the channels and for a myriad of other services such as leasing of sites, electricity and water. As well, it provides dredging services to nearby ports. For this study, separate data could only be obtained for two of its services, the movement of cargo in the port of Brisbane and the dredging of nearby ports. All the remaining services have been treated as a single output.

The revenue from the movement of cargo was measured as the sum of harbour dues and wharfage. This accounts for the main charges applied to users for bringing cargo in and out of the port. The quantity of trade was measured in total mass tonnes of cargo through the port, including containerised cargo.

The PBA provides dredging services to other nearby ports. The value of this dredging was measured as total revenue generated from dredging services provided for outside customers (ie outports of Weipa, Cairns, Townsville, Port Alma and Bundaberg). The quantity was measured as the total annual production hours spent dredging outports. Charge hours are a better measure, as it incorporates such factors as time taken to get to the dredging site etc, but these data were not available over the whole study period.

‘Other services’ was calculated as the residual of total operating revenue after deducting interest received, harbour dues and wharfage and dredging income. It includes items such a rental income from leased land and facilities and revenue from the Cairncross Dockyard. An implicit quantity for other services was derived by deflating the value of other services by the ABS implicit price deflator for gross domestic product (ABS 1992, Tables 3 and 77, pp. 3 and 60).

## Inputs

Labour and capital are the two main inputs used by the PBA. All remaining inputs were grouped into the 'other' inputs category.

Little information was available on the cost of labour. For the period 1981-82 to 1991-92, total labour costs were taken from the Queensland Government Statistician's study of the PBA (Steering Committee on National Performance Monitoring of Government Trading Enterprises 1992, p. 88). However, that study excludes all operations of the Cairncross Dockyard. Therefore to account for the higher costs of labour associated with this component of the business, the labour costs were scaled such that the ratio of labour costs to employment was consistent with those in the above study. For the earlier years, labour costs were extrapolated backwards using data on labour costs in the later years, total costs and employment. The quantity of labour was represented as the total number of people employed each year.

The stock of capital or assets was divided into five categories: land; buildings; plant and equipment; Fisherman Islands; and channels and reaches. The category Fisherman Islands consists of both depreciable and non-depreciable assets such as vested land, buildings and wharves and other infrastructure on the Islands. While it would be more accurate to separately identify each asset type, the results are unlikely to be significantly affected. The PBA has been transferring some assets between accounts for land and buildings etc. These changes explain the large fall in investment in Fisherman Islands in 1989-90 and 1990-91.

Time series estimates of the current cost of the PBA's fixed assets were derived from the Queensland Government Statistician's study (Steering Committee on National Performance Monitoring of Government Trading Enterprises 1992) point estimate for 1990-91 and investment information calculated from the PBA's annual reports.

The value of investment in Fisherman Islands in the first year of operations gave a point estimate of the value of the capital stock on the Islands. This estimate was then updated by adding the current value of the investment stream adjusted for depreciation costs, based on an assumed asset life of 24 years. The remaining asset values were calculated from the point estimate less the current value of Fisherman Islands assets. The point estimate was allocated among the four asset categories (land, buildings, plant and equipment and channels and reaches) by the share of the net book value of each asset type in the total net book value of assets in 1990-91. These point estimates were then backdated and updated using the

investment stream, measured in constant dollars and adjusting for an assumed rate of depreciation.<sup>2</sup>

The value of the annual user cost of capital inputs is derived as a proportion of the current value of the capital stock allowing for depreciation, financing charges and capital gains.

'Other costs' were calculated as the residual of total operating costs after deducting labour and interest costs. The quantity of other inputs was estimated by deflating other costs by the ABS implicit price deflator for gross domestic product.

**Table D5: Estimated annual investment in fixed assets by the PBA (\$m)**

<i>Year ending 30 June</i>	<i>Land</i>	<i>Wharves and buildings</i>	<i>Plant and equipment</i>	<i>Fisherman Islands</i>	<i>Channels and reaches</i>	<i>Total investment</i>
1977	1.33	3.91	9.11	0.00	3.20	17.55
1978	0.00	0.11	3.78	0.00	-0.05	3.84
1979	0.47	0.35	0.03	0.00	0.31	1.16
1980	0.19	0.04	-0.04	0.00	0.08	0.28
1981	0.02	0.35	1.18	0.00	0.32	1.87
1982	0.00	-0.05	-0.09	40.97	0.02	40.86
1983	0.00	0.15	0.29	16.35	0.03	16.83
1984	0.00	-0.23	3.63	2.93	-0.03	6.30
1985	0.00	-0.27	-0.98	2.93	0.05	1.74
1986	0.00	-0.32	-0.55	11.30	0.01	10.44
1987	0.53	-1.06	-1.84	4.54	0.12	2.28
1988	2.94	7.96	4.28	25.00	0.07	40.25
1989	0.00	0.32	0.59	9.02	0.14	10.07
1990	-2.69	27.38	12.25	-21.29	0.00	15.65
1991	0.00	20.80	1.20	-23.84	3.89	2.06
1992	0.00	17.47	5.05	8.95	0.00	31.46

Source: IC estimates.

<sup>2</sup> The method used to calculate the capital stock was based on the method used in IC 1990, p. 57.

Table D6: **Estimated capital stock for the PBA<sup>a</sup>**

(\$m)

<i>Year ending 30 June</i>	<i>Land</i>	<i>Wharves and buildings</i>	<i>Plant and equipment</i>	<i>Fisherman Islands</i>	<i>Channels and reaches</i>	<i>Total assets</i>
1977	2.34	26.33	33.07	0.00	10.23	71.98
1978	2.54	28.01	36.01	0.00	9.92	76.48
1979	3.18	29.53	34.55	0.00	9.82	77.08
1980	3.81	32.81	35.23	0.00	10.11	81.96
1981	4.37	36.79	37.17	0.00	10.65	88.99
1982	4.96	40.76	37.83	40.97 <sup>b</sup>	10.88	135.41
1983	5.69	45.70	39.18	60.50	11.22	162.29
1984	6.14	47.88	41.58	64.32	10.83	170.75
1985	6.38	48.28	37.79	65.79	10.15	168.39
1986	6.84	50.17	35.81	77.62	9.77	180.21
1987	7.79	50.90	32.28	82.04	9.42	182.44
1988	11.07	59.71	34.46	105.40	8.88	219.52
1989	11.52	60.92	32.77	112.14	8.43	225.78
1990	9.64	90.97	43.71	91.54	8.10	243.96
1991	10.20	114.73	42.72	67.27	11.58	246.50 <sup>c</sup>
1992	10.33	130.84	43.87	73.03	10.53	268.61

<sup>a</sup> The capital stock is calculated assuming a declining balance rate of depreciation for land of zero, wharves and buildings of 2 per cent and Fisherman Islands of 6 per cent, plant and equipment and channels and reaches of 10 per cent. <sup>b</sup> Point estimate of the capital stock on Fisherman islands that is equal to the investment in Fisherman Islands in its first year of operation. <sup>c</sup> Point estimate of the PBA's capital stock calculated by the Queensland Government Statistician's Office for the PBA (Steering Committee on National Performance Monitoring of Government Trading Enterprises 1992, Ch. 7).

Source: IC estimates.

Table D7: Estimated annual user charge for PBA capital

Year ending 30 June	Government bond rate <sup>b</sup>	Capital price index <sup>c</sup>	User charge for capital <sup>a</sup> (\$m)					Total assets
			Land	Wharves and buildings	Plant and equipment	Fisherman Islands	Channels and reaches	
1976	0.10	0.42	na	na	na	na	na	na
1977	0.10	0.45	0.03	0.94	3.77	0.00	1.16	5.89
1978	0.09	0.49	0.01	0.82	3.87	0.00	1.07	5.78
1979	0.10	0.53	0.10	1.66	4.65	0.00	1.32	7.74
1980	0.12	0.60	-0.08	0.15	2.91	0.00	0.84	3.82
1981	0.13	0.68	-0.03	0.63	3.54	0.00	1.02	5.16
1982	0.16	0.78	0.13	2.10	4.91	3.56	1.41	12.12
1983	0.15	0.89	0.01	1.25	4.13	3.78	1.18	10.35
1984	0.14	0.96	0.36	3.97	6.69	7.59	1.74	20.35
1985	0.14	1.00	0.61	5.80	7.50	10.22	2.01	26.14
1986	0.13	1.07	0.39	4.11	5.73	9.09	1.56	20.89
1987	0.13	1.14	0.51	4.62	5.45	10.32	1.59	22.49
1988	0.12	1.19	0.85	6.08	6.20	14.44	1.60	29.17
1989	0.14	1.24	1.09	7.25	6.46	17.29	1.66	33.76
1990	0.13	1.32	0.61	8.05	7.29	11.32	1.35	28.61
1991	0.11	1.40	0.54	8.96	6.68	7.62	1.81	25.60
1992	0.09	1.42	0.78	13.15	7.84	9.90	1.88	33.56

na. Not applicable.

Note: A negative value for the user cost of capital implies that the prices of the assets are growing at a higher rate than the costs of holding the assets resulting in a capital gain on assets.

<sup>a</sup> Calculated as (Bond rate + Depreciation rate – inflation) \* current value of capital.

Source: <sup>b</sup> Reserve Bank of Australia 1991 and earlier issues. <sup>c</sup> ABS implicit price index for non-dwelling, non-building construction, unpublished data.

**Table D8: Value and quantity of PBA services**

<i>Year ending 30 June</i>	<i>Cargo</i>		<i>Dredging</i>		<i>Other</i>	
	<i>Value (\$m)</i>	<i>Quantity (mmt)</i>	<i>Value (\$m)</i>	<i>Quantity (hours)</i>	<i>Value (\$m)</i>	<i>Quantity<sup>a</sup></i>
1977	3.54	8.86	0.40	2 914	1.93	3.80
1978	6.19	8.68	3.37	3 613	4.20	7.67
1979	7.94	8.74	2.06	2 047	4.15	6.97
1980	9.38	9.74	2.01	1 838	4.18	6.35
1981	9.42	9.52	3.65	2 312	6.55	9.01
1982	13.11	9.39	3.50	2 734	7.27	9.08
1983	13.93	8.98	1.93	990	7.68	8.67
1984	16.67	10.84	2.66	1 180	7.64	8.06
1985	19.04	12.11	6.05	3 513	9.85	9.85
1986	22.67	13.19	1.14	268	11.15	10.44
1987	23.14	13.22	5.79	2 776	8.77	7.86
1988	23.95	14.21	6.10	3 238	7.85	6.34
1989	28.22	15.21	6.16	2 236	10.71	7.90
1990	29.11	15.57	5.77	1 754	9.95	6.95
1991	30.99	16.12	8.35	4 058	11.74	7.95
1992	31.18	16.67	7.04	3 197	15.26	10.20

mmt. Millions of mass tonnes. <sup>a</sup> The quantity of other services is implicitly derived by deflating the value by the ABS implicit price index for gross domestic product.

Source: PBA 1991 and earlier issues.

**Table D9: Value and quantity of PBA inputs used**

<i>Year ending 30 June</i>	<i>Labour</i>		<i>Other</i>		<i>Land</i>	
	<i>Value (\$m)</i>	<i>Quantity (no.)</i>	<i>Value (\$m)</i>	<i>Quantity<sup>a</sup></i>	<i>Value (\$m)</i>	<i>Quantity<sup>b</sup></i>
1977	3.51	437.00	1.30	2.55	0.03	5.15
1978	4.22	436.00	3.01	5.49	0.01	5.15
1979	4.47	415.00	2.97	4.99	0.10	6.03
1980	5.20	406.00	6.21	9.42	- 0.08	6.35
1981	6.08	398.00	7.60	10.45	- 0.03	6.38
1982	8.80	420.00	6.64	8.29	0.13	6.38
1983	10.75	402.00	3.70	4.18	0.01	6.38
1984	10.09	377.00	6.95	7.34	0.36	6.38
1985	11.13	366.00	9.01	9.01	0.61	6.38
1986	10.82	354.00	8.85	8.29	0.39	6.38
1987	11.26	343.00	7.05	6.32	0.51	6.84
1988	9.64	278.00	7.20	5.81	0.85	9.32
1989	9.23	251.00	4.38	3.23	1.09	9.32
1990	9.58	245.00	5.40	3.77	0.61	7.29
1991	9.93	245.00	7.99	5.41	0.54	7.29
1992	10.59	238.00	9.46	6.32	0.78	7.29

Continued

Table D9: Contd

Year ending 30 June	Wharves & buildings		Plant & equipment		Fisherman Islands		Channel & reaches	
	Value (\$m)	Quantity <sup>b</sup>	Value (\$m)	Quantity <sup>b</sup>	Value (\$m)	Quantity <sup>b</sup>	Value (\$m)	Quantity <sup>b</sup>
1977	0.94	57.91	3.77	72.73	0.00	0.00	1.16	22.50
1978	0.82	56.69	3.87	72.90	0.00	0.00	1.07	20.08
1979	1.66	55.95	4.65	65.46	0.00	0.00	1.32	18.61
1980	0.15	54.63	2.91	58.67	0.00	0.00	0.84	16.83
1981	0.63	53.79	3.54	54.35	0.00	0.00	1.02	15.57
1982	2.10	52.40	4.91	48.64	3.56	52.68	1.41	13.99
1983	1.25	51.28	4.13	43.97	3.78	67.88	1.18	12.59
1984	3.97	49.77	6.69	43.22	7.59	66.86	1.74	11.26
1985	5.80	48.28	7.50	37.79	10.22	65.79	2.01	10.15
1986	4.11	46.79	5.73	33.39	9.09	72.39	1.56	9.11
1987	4.62	44.70	5.45	28.35	10.32	72.04	1.59	8.28
1988	6.08	50.30	6.20	29.03	14.44	88.79	1.60	7.48
1989	7.25	49.32	6.46	26.53	17.29	90.78	1.66	6.83
1990	8.05	68.81	7.29	33.07	11.32	69.24	1.35	6.13
1991	8.96	81.98	6.68	30.52	7.62	48.07	1.81	8.28
1992	13.15	92.87	7.84	30.94	9.90	51.50	1.88	7.43

<sup>a</sup> The quantity of other inputs is implicitly derived by deflating the value by ABS implicit price index for gross domestic product. <sup>b</sup> The quantity of capital assets is value of the capital stock in constant 1984-85 prices. The implicit price series used to deflate the capital stock is shown in Table D7.

Source: PBA 1992 and earlier issues; IC estimates.

Table D10: Output, input and TFP indexes

Year ending 30 June	Output	Input	TFP
1977	1.00	1.00	1.00
1978	1.28	1.13	1.13
1979	1.12	1.05	1.06
1980	1.14	1.22	0.94
1981	1.30	1.24	1.05
1982	1.33	1.14	1.17
1983	1.14	0.99	1.15
1984	1.27	1.05	1.21
1985	1.66	1.05	1.58
1986	1.36	1.01	1.34
1987	1.57	0.92	1.70
1988	1.60	0.94	1.71
1989	1.66	0.84	1.97
1990	1.59	0.85	1.86
1991	1.89	0.86	2.20
1992	1.98	0.89	2.23

Source: IC estimates.

**Table D11: Real rates of return earned on capital**

<i>Year ending 30 June</i>	<b>Profit and loss</b>				<i>EBIT (\$m)</i>	<b>Depreciation</b>		<i>Capital stock (\$m)</i>	<i>Real rate of return (%)</i>
	<i>Operating revenue (\$m)</i>	<i>Interest earned (\$m)</i>	<i>Operating expenses (\$m)</i>	<i>Interest paid (\$m)</i>		<i>Historic (\$m)</i>	<i>Current (\$m)</i>		
1977	6.12	0.25	5.83	0.60	0.64	0.42	na	71.98	na
1978	14.59	0.82	9.55	1.06	5.27	1.26	5.55	76.48	1.28
1979	14.81	0.66	9.64	1.03	5.53	1.17	5.79	77.08	1.18
1980	16.22	0.65	13.54	1.02	3.04	1.11	6.02	81.96	-2.29
1981	19.96	0.34	18.54	2.30	3.38	2.56	6.24	88.99	-0.33
1982	24.26	0.39	21.70	3.54	5.72	2.72	6.63	135.41	1.34
1983	24.45	0.91	21.94	4.75	6.34	2.74	9.71	162.29	-0.39
1984	27.78	0.81	26.02	5.23	6.17	3.75	10.72	170.75	-0.47
1985	36.15	1.21	30.67	5.73	10.00	4.80	10.84	168.39	2.35
1986	37.21	2.25	29.66	5.88	11.18	4.11	10.79	180.21	2.50
1987	40.36	2.67	32.81	6.80	11.69	7.70	11.23	182.44	4.47
1988	41.16	3.25	35.29	9.21	11.83	9.24	10.90	219.52	4.63
1989	48.30	3.22	28.64	8.96	25.40	6.07	12.74	225.78	8.30
1990	50.02	5.19	29.38	8.84	24.28	5.56	13.33	243.96	6.77
1991	54.69	3.61	30.44	6.69	27.33	5.83	13.82	246.50	7.85
1992	54.95	1.48	28.61	2.94	27.81	6.73	12.61	268.61	8.16

Source: PBA 1992 and earlier issues; IC estimates.

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## Attachment 2 to Appendix D: Modelling the impact of Fisherman Islands

The TFP for the PBA, after the installation of the Fisherman Islands facilities in 1982-83, grew at a much higher rate than earlier years. The new facilities at Fisherman Islands brought with them significant technological improvements over the river port and consequently improved the efficiency of the PBA's operations. To test this proposition, regression analysis was used to determine if there was a reduction in the inputs the PBA required to produce its services from 1982-83 onwards. This was modelled using Diewert's (1974) factor requirements function. A dummy variable was used to represent Fisherman Islands. This permitted an estimate to be made of the inputs that would have been used in the absence of Fisherman Islands given the observed output. The estimated function was used to predict an adjusted input index, removing the effect of the Fisherman Islands facilities, and the calculation of an adjusted TFP series. This technique was first applied by Christensen, Christensen, Degen and Schoech (1985, p. IX-3) and has been applied in Australia by Zeitsch, Lawrence, and Salerian (1992).

The PBA's factor requirement function is the inverse of the production function and is defined, in its simplest form, as follows:

$$I = \frac{C}{W} = f(Y) \quad (1)$$

where  $I$  is the aggregate index of inputs used by the PBA,  $C$  is the total cost incurred by the PBA,  $W$  is a measure of the PBA's unit input prices and  $Y$  is the index of the PBA's output.

More specifically, assuming a Cobb-Douglas functional form,

$$I = a_1 a_2^D Y^{b_1} Y^{b_2 D} \quad (2)$$

In natural logarithm form the factor requirement function is:

$$\ln I = \ln a_1 + \ln a_2 D + b_1 \ln Y + b_2 D \ln Y \quad (3)$$

where  $D$  is the dummy variable included in the model to test for structural change in the form of improved technical performance from the installation of Fisherman Islands. Thus  $D$  takes the value of zero in the period 1976-77 to 1981-82 and is one otherwise. The parameters  $b_1$  and  $(b_1 + b_2)$  measure the elasticity of input with respect to output before and after Fisherman Islands came into operation.

**Regression results:**

*Model 1:*

$$\ln \hat{a}_t = 0.03 + 0.04D + 0.52 \ln a_t - 0.83D \ln a_t$$

(0.53) (0.51) (1.84) (-2.66)

Durbin-Watson Statistic = 1.27 (inconclusive);  $R^2 = 0.74$ ; and figures in parenthesis are the student t statistics, with 12 degrees of freedom, for each coefficient.

The constant terms are not significant, the third term is significant at the 90 per cent confidence level and the fourth term is significant at the 95 per cent confidence level. Re-estimating the equation after dropping constant terms gives:

*Model 2:*

$$\ln \hat{a}_t = 0.64 \ln a_t - 0.81D \ln a_t$$

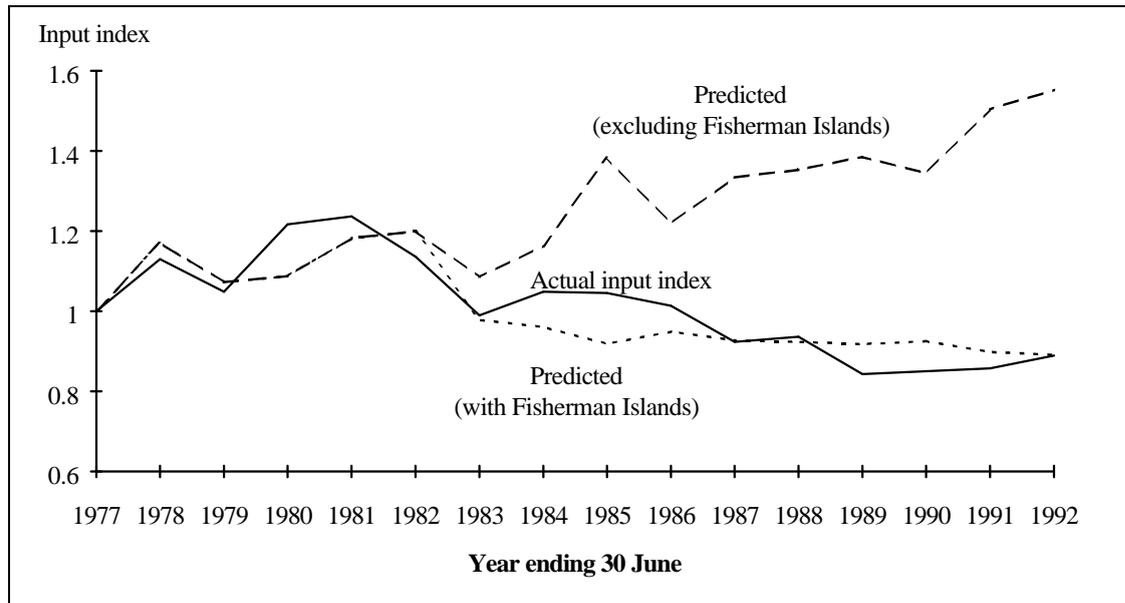
(4.60) (-5.52)

Durbin-Watson Statistic = 1.05 (inconclusive);  $R^2 = 0.71$ ; and figures in parenthesis are the student t statistics, with 14 degrees of freedom, for each coefficient.

Model 2 is the predicted level of the input index with Fisherman Islands in operation. The coefficient on the dummy variable for Fisherman Islands is negative and significantly different from zero (using the student t-test with a 95 per cent confidence interval), suggesting that Fisherman Islands had a strong influence on reducing costs for the PBA. Excluding the dummy variable gives an estimate of the level of input use if the installation at Fisherman Islands was not built.

Figure D11 shows the predicted input index from the regression analysis and a predicted input index when the effect of Fisherman Islands is removed. The input index in the absence of Fisherman Islands is predicted to be significantly higher than at present. It continues to rise over time largely in line with the output index.

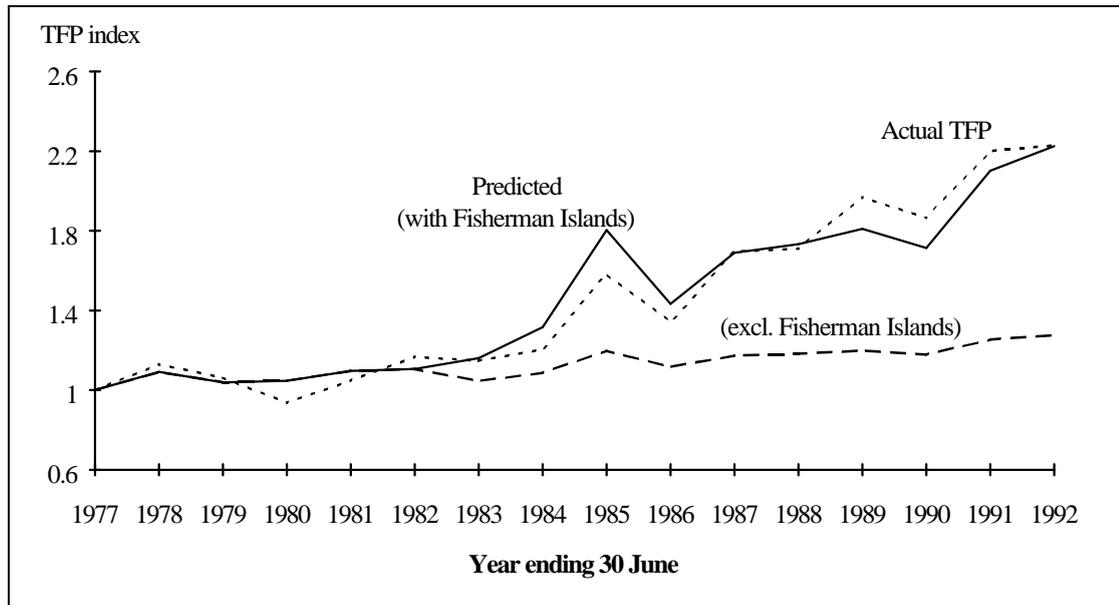
Figure D11: Impact of Fisherman islands on input use



Source: IC estimates.

The effect of Fisherman Islands on the PBA's TFP can be seen more clearly by calculating the TFP index using the predicted input index. This is shown in Figure D12. The predicted TFP tracks the actual TFP closely. The results suggest that there would have been almost no growth in the PBA's TFP if the facilities at Fisherman Islands had not been built. The replacement of old river port facilities with the new facilities at Fisherman Islands has enabled the PBA to meet increasing output with a decline in inputs used.

Figure D12: Impact of Fisherman Islands on TFP



Source: IC estimates.

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## REFERENCES

- ABS 1992, *Australian national accounts national income and expenditure*, Cat. no. 5204.0, AGPS, Canberra.
- Christensen D, L. Christensen, C. Degen and P. Schoech 1985, *United States postal service real output, input and total factor productivity, 1963-1984*, A report to Charles Guy, Director, Office of Economics, United States Postal Service, Christensen Associates, USA.
- Diewert, W.E. 1974, 'Functional forms for revenue and factor requirements functions', *International Economic Review*, Vol. 15, No. 1, pp. 119-50.
- IC 1990, *Measuring the performance of selected government business enterprises*, Information paper, Canberra, August.
- PBA 1990, *Port of Brisbane general information*, Oct.
- 1992, *Annual report 1991/92*, and earlier issues, PBA, Queensland.
- Queensland Government 1990, *Queensland Government Gazette*, Queensland, and earlier issues.
- Steering Committee on National Performance Monitoring of Government Trading Enterprises 1992, *Measuring the total factor productivity of government trading enterprises*, Industry Commission, July.
- White, K.J., Haun, S.A. and Horsman, N.G., (1987), *Shazam: The Econometrics Computer Program Version 6 User's Reference Manual*, Department of Economics, University of British Columbia, Vancouver.
- Zeitsch J, D. Lawrence, and J. Salerian 1992, 'Apples, oranges and electricity: comparing like with like', Proceedings of *The 1992 Economics in Business & Government Conference on Micro-economic policy and reform for international competitiveness* — The Economic Society of Australia (Queensland) Inc., Queensland, September.

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## APPENDIX E: CASE STUDY OF THE ECONOMIC PERFORMANCE OF THE PORT OF MELBOURNE AUTHORITY

The aim of this study is to evaluate the economic performance of the Port of Melbourne Authority (PMA) over the period 1976 to 1992. Three economic indicators are used to evaluate its performance: the real price of PMA services over time, the real rate of return earned on assets and total factor productivity (TFP).

The importance of considering these three indicators was outlined in section D2, Measuring Economic Performance, in Appendix D.

### E1 The Port of Melbourne Authority

The PMA is a statutory body and is empowered to regulate, manage and improve the operations of the Ports of Melbourne and Hastings (Western Port) along with certain portions of the Yarra and Maribyrnong Rivers. In addition, under the Marine Act the PMA is responsible for the administration of the Associated Ports,<sup>1</sup> the maintenance and upgrading of navigational aids in all Victorian coastal waters, oil pollution control in all Victorian coastal waters and hydrographic surveying of Victorian ports.

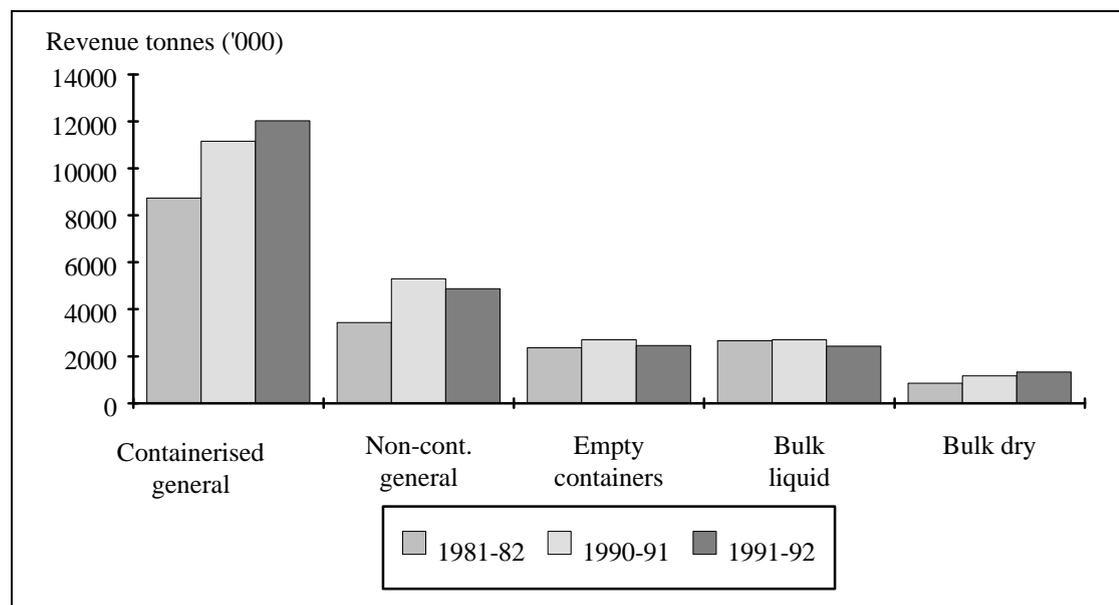
The Port of Melbourne is one of Australia's oldest and its largest port in terms of container throughput. It accounts for 43 per cent of container trade through Australia's mainland ports. The port serves an extensive hinterland that includes not only the State of Victoria but also areas of South Australia, New South Wales and Tasmania. It is estimated that 40 per cent of Australia's population resides in these regions. Approximately 24 per cent of the value of the nation's international trade passes through the port.

The Port of Melbourne has five docks and three piers providing 49 berths for commercial shipping. It also has extensive cargo handling and storage facilities and is linked to the nationwide network of railways, roads and sea transshipment services. Further, it provides facilities to load and unload containerised, non-containerised general, liquid bulk and dry bulk cargoes. The relative importance of these cargo types is shown in Figure E1.

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<sup>1</sup> Port of Port Phillip, ports at Corner Inlet, Port Albert, Gippsland Lakes, Mallacoota, Anderson Inlet and Snowy River and along the Victorian coastline east of Melbourne.

Figure E1: Throughput by cargo type<sup>a</sup>



<sup>a</sup> Revenue tonnes is defined as the greater of volume (1 cubic metre) or mass (1000 kg) for each commodity. Source: PMA 1982-83, Annual report, and PMA 1992.

Over the last few years the port has undergone a number of reforms. For example, it has actively participated in the Waterfront Industry Reform Authority initiatives. The current Victorian Government has begun to restructure the PMA under its comprehensive program of reform for State Owned Enterprises (SOE). The Government has amended the Port Authority Acts so that boards can be appointed in accordance with the SOE Act 1992.

The Victorian Government has also appointed a consultant, Coopers and Lybrand, to review operations of the PMA in order to make recommendations about policy, operational and organisational issues and priorities (sub. DR152, p. 2).

The Government has decided to limit port authorities to core activities: only with Ministerial approval and under special circumstances will they directly provide port services. It has also decided to make port authorities directly accountable for the performance of their ports (assessed against a three-year business plan), to change the procedure for appointing board members (with appointments based on skill rather than representation of specific interest groups), to create a separate Port of Hastings Authority, and to establish a new Marine Board to take over environmental management outside port boundaries (sub. 79).

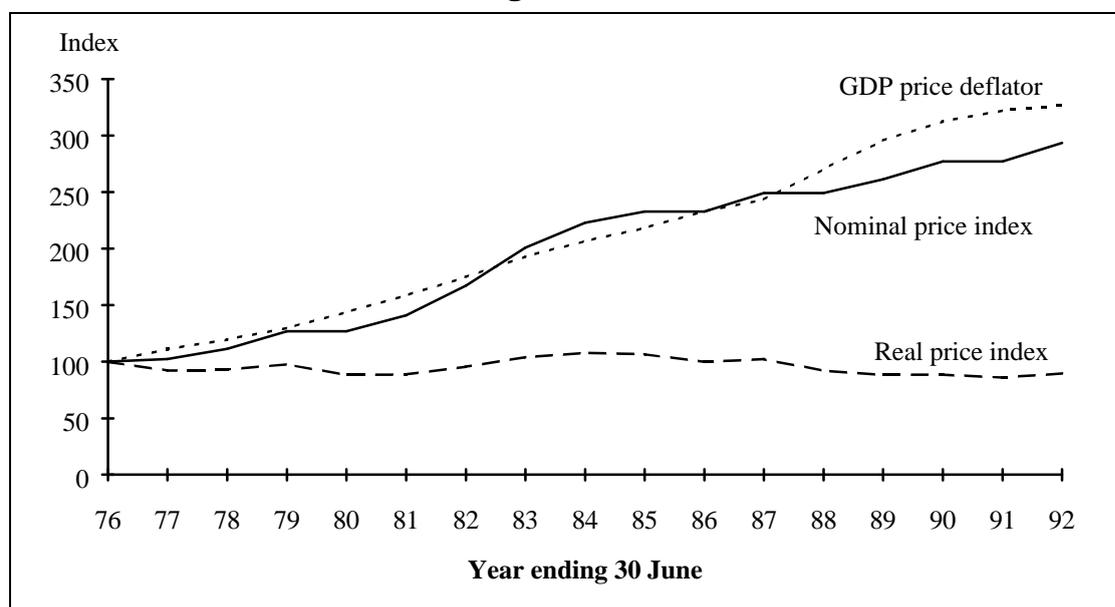
With a view to a more commercial operation of its ports, the Victorian Government has made a commitment to fund directly community service

obligations relating to the PMA's involvement in commercial fishing, recreational boating, local communities and tourism. The PMA spent approximately \$10.6m in 1991-92 to fund operating and capital expenditure (excluding depreciation) for these services, with the State Government directly contributing only \$0.6m.

## E2 Pricing

The first of the economic indicators to be examined is a price index of PMA charges. Figure E2 shows the price indexes from 1975-76 to 1991-92 for the Gross Domestic Product (GDP) price deflator and PMA nominal and real prices for wharfage. Wharfage is a charge on cargo and is usually designed to recover the cost of loading and unloading cargo. Until recently, it accounted for 86 per cent of revenue. The GDP price index is used to compare changes in PMA wharfage charges with prices in Australia generally. From 1975-76 until 1986-87 the PMA increased its wharfage charges generally in line with the level of inflation. It has since increased the charges by slightly less than the general level of inflation. (They have fallen in real terms.)

Figure E2: **GDP price deflator and PMA nominal and real price indexes for wharfage**



Source: PMA calculations and ABS 1992.

In 1987 the PMA began a review of the structure of its charges in order to develop a policy that meets the objectives given in Box E1. As a result of the review the PMA Board decided to restructure its charges, with a decrease in

wharfage and an increase in berth hire, area hire and tonnage charges. The aim of the reform was to provide a pricing structure that conveyed to port users the cost of providing each service. The new structure was introduced in July 1990.

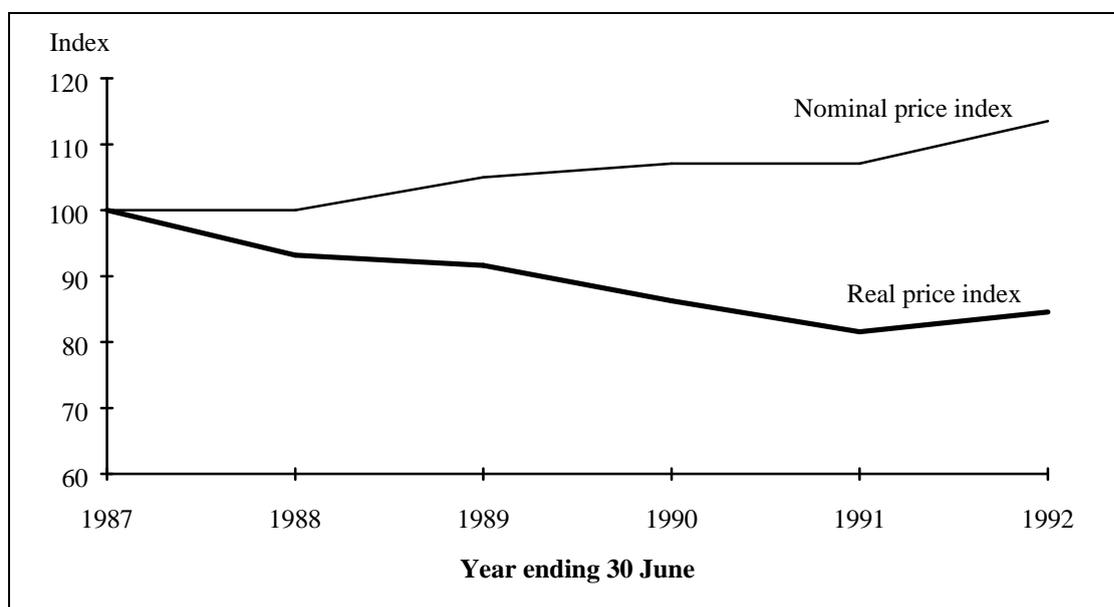
**Box E1: Objectives of PMA pricing**

- Should encourage efficient use of port facilities and promote trade growth.
- Should be equitable, simple and transparent.
- Should be cost-based where possible. Costs which cannot be associated with a specific, direct user are to be recovered through general cargo-type charges (wharfage).
- Should be revenue neutral to the PMA, with revenue neutrality being defined as revenue generated under a revised pricing policy over a six month period is within  $\pm 2\%$  of the estimated revenue which would have been generated if the 1989/90 pricing policy had operated over the same six month period after adjusting for cost escalation.
- Should recover channel and navigation charges from shipowners through a combined charge levied on the cargo carrying capacity of the vessel and the volume of cargo exchanged.
- Berth and area costs should be recovered through either an hourly charge from the ship's agent or annual charges levied against the terminal operator.
- Wharfage would be a balancing item to preserve revenue neutrality and would be recovered from the cargo owner.

Source: sub. 79.

Figure E3 shows a composite price index for the Port of Melbourne for the last six years because a single index based on wharfage is no longer representative of charges. (Wharfage has fallen from 86 to 54 per cent of revenue.) The composite index includes tonnage, area hire, berth hire and wharfage. It shows that real prices fell consistently until 1991-92 when prices rose by 6 per cent.

Figure E3: Port of Melbourne nominal and real composite price indexes



Source: PMA calculations.

A comparison of the new and old rate structures is shown in Table E1. The new structure has a greater emphasis on ship-related charges (tonnage and berthage) and less on cargo-related charges (wharfage). It was designed to eliminate cross-subsidies between port users. In addition, prices were set to achieve a target real rate of return of 4 per cent on the written-down current cost of assets in service.

Table E1: Comparison of revenue from the restructure of charges

Charges	<i>Previous rate structure<sup>a</sup></i>		<i>Current rate structure<sup>b</sup></i>	
	<i>value (\$m)</i>	<i>share (%)</i>	<i>value (\$m)</i>	<i>share (%)</i>
Berth Hire	1.7	2	16.8	23
Area Hire	2.2	3	3.6	5
Tonnage	6.2	9	12.9	18
Wharfage	61.7	86	38.5	54
Total annual revenue	71.8	100	71.8	100

<sup>a</sup> Based on tariffs applying as at 1 February 1989. <sup>b</sup> Based on the new tariff applying as at 1 July 1990.

Source: sub. 79.

The PMA originally planned to introduce the new pricing structure in three phases, with the final stage completely eliminating all wharfage. It was envisaged that some shippers would experience decreases in charges, others

increases. However,

The PMA's initial moves to reform its pricing structure met with an extremely negative response from many users. The effect was to seriously threaten the PMA's relationship with many of its most important users (sub. DR152, p. 3).

Consequently, in early 1991 the Minister for Ports gave approval for the PMA to defer the introduction of stages two and three. The PMA now places greater emphasis on agreements with particular users or market segments when setting prices.

The first phase of the PMA's plan was designed to be revenue-neutral. However, the PMA has calculated that the reduction in revenue due to changes in port pricing was \$2.1m in 1990-91 and \$2.3m in 1991-92 and is forecast to be \$2.9m in 1992-93. The new charges recover a greater proportion of revenue from ship-based charges, such as berth hire, which is a charge for the time a ship occupies a berth. The PMA considers that this change has increased the incentive to improve the productivity of loading and unloading. A ship that is loaded or unloaded more quickly will spend less time in port, thus lowering its costs. The estimated reduction in revenue as a result of efficiency improvements was \$1.1m in 1990-91 and \$2.8m in 1991-92. The PMA estimates that for the first six months of 1992-93 revenue foregone exceeded \$2m, with a tentative full year estimated impact of \$4.2m.<sup>2</sup> The PMA has decided to accept this loss of revenue and does not plan to increase charges to compensate.

### **E3 Real rates of return**

The real rate of return is calculated as the ratio of net earnings (operating revenue less operating expenses and current cost depreciation) before interest, taxes and extraordinary items and after abnormal items to the current value of performing assets.<sup>3,4</sup>

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<sup>2</sup> Values for lost revenue from port pricing reform and more efficient operations were obtained by the Commission through correspondence with the PMA.

<sup>3</sup> The preparation of the current cost financial statements is in accordance with the guidelines set by the Victorian Government which establish an assets value based on the lower of market, replacement and reproduction values. In its valuations the PMA excludes its non-performing assets (assets under construction, recreational or similar land, assets relating to the PMA's operations at Associated Ports other than the Port of Western Port, and specific assets which are used solely for recreational purposes and do not have any commercial value to the PMA).

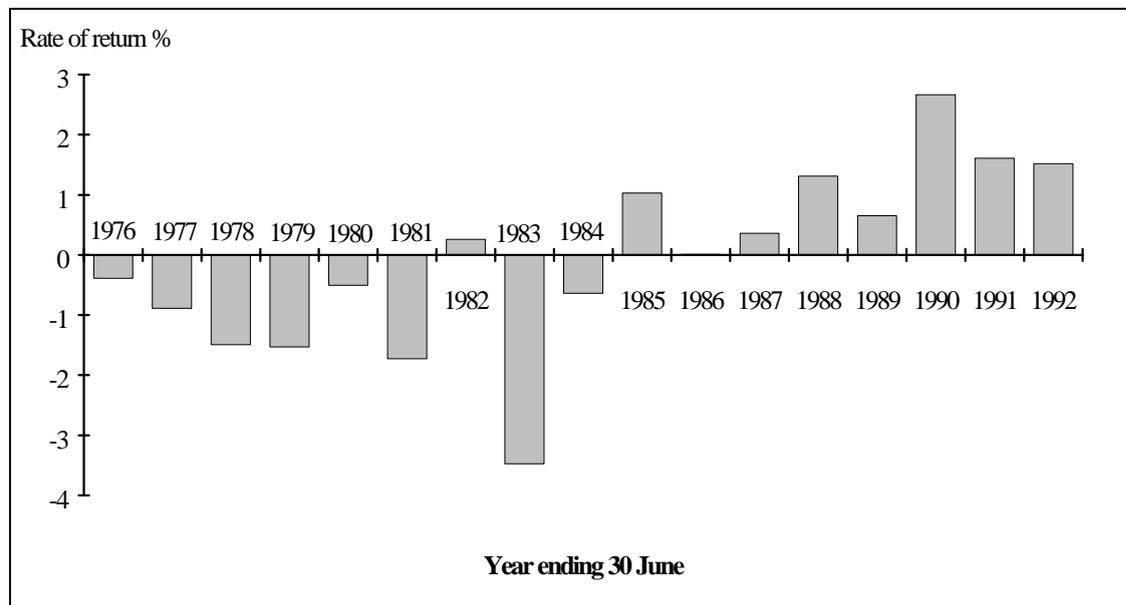
<sup>4</sup> This definition is widely used and is the definition currently used by the Steering Committee on National Performance Monitoring of Government Trading Enterprises. When comparing this number with target rates of return and return on equity (dividend rates), it should be noted that extraordinary items are excluded.

The former Victorian Government set a target real rate of return on assets in service of 4 per cent for some Victorian public authorities, including the PMA. It also required the PMA to prepare current cost financial statements, which the PMA has published since 1982-83. The real rates of return the PMA has earned from 1975-76 to 1991-92 are shown in Figure E4 and are based on the PMA's financial statements.

For the first half of the study, the PMA generally earned a negative real rate of return. This means that the PMA was under-recovering the cost of the assets it was using to provide its services. The PMA has achieved positive real rates of return for the last six years. However, these rates were well below the target rate of 4 per cent. Recent improvements in the rates of return have been accompanied by real price reductions.

Although the value of the assets declined in 1990-91 and 1991-92, the real rate of return also declined as a result of large abnormal expenditures. In 1990-91 the PMA allocated an additional \$8m to provision for superannuation to make up for a shortfall in the fund, and in 1991-92 it paid out \$10m as severance allowance under a voluntary employee departure scheme. If the severance payout in 1991-92 were excluded, the PMA would have earned a real rate of return of about 3 per cent in that year. In 1991-92 the PMA cut its staff by over 300 employees, which will provide ongoing cost savings and may increase the rate of return in the future.

Figure E4: PMA's real rate of return on current value of assets



Source: IC estimates.

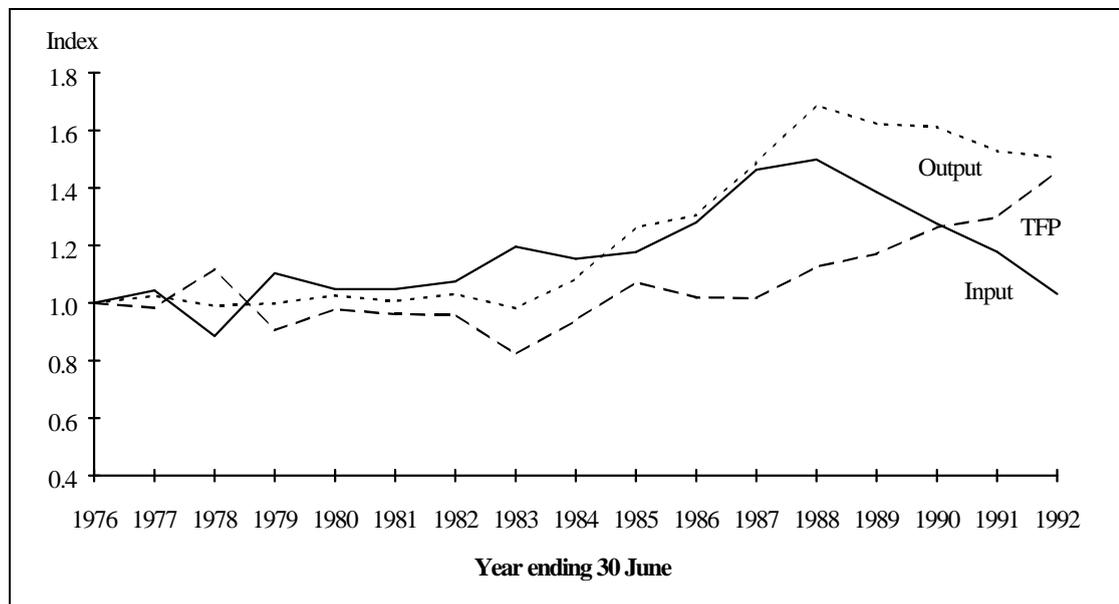
## E4 Total factor productivity

The methodology used to estimate TFP for the PMA is outlined in *Measuring the total factor productivity of government trading enterprises* published by the Steering Committee on National Performance Monitoring of Government Trading Enterprises in 1992. The data and assumptions used to calculate the TFP index are provided in an attachment to this appendix. Fluctuations in trade, economic conditions in the rural and manufacturing sectors, and changes in shipping patterns are all factors that affect a port authority's operations and are reflected in the TFP index.

The output, input and TFP indexes from 1976-77 to 1991-92 are shown in Figure E5. The PMA has achieved a 46 per cent improvement in productivity since 1976-77. The level of TFP remained relatively stable between 1976-77 and 1981-82. In 1982-83 TFP declined, primarily due to a rise in inputs used. In that year the PMA completed the World Trade Centre and the No. 5 Dock, which added to the capital stock.

Since 1987-88 the level of TFP has continued to increase despite declines in the level of output. This has been achieved by making even larger cuts in the use of inputs, particularly labour and capital.

Figure E5: Output, input and TFP indexes for the PMA



Source: IC estimates.

## E5 Other financial indicators

Financial indicators supplement the information provided by the three economic indicators discussed above. Table E2 contains information on financial indicators relating to debt, equity and assets.

The PMA has generally achieved low nominal rates of return on assets. This is reflected in generally negative rates of return on equity. During the period 1987-88 to 1991-92, the PMA achieved a positive return on equity in 1989-90 only, but paid dividends in 1990-91 and 1991-92. Under the Public Authorities Dividend Act 1987, the PMA was required to pay a dividend to the Victorian Government each financial year of up to 5 per cent of the public equity it held in the preceding financial year. In both 1990-91 and 1991-92 the Government required the PMA to pay a dividend of \$10m, which in each case was greater than return on equity in the preceding year. This would have increased the PMA's borrowing requirement. The new Victorian Government amended the Act in November 1992; it now requires the Victorian Treasurer, after consultation with the Minister, to determine the dividend the PMA has to pay.

**Table E2: Financial and technical performance indicators**

<i>Performance indicator</i>	<i>Unit</i>	<i>1987-88</i>	<i>1988-89</i>	<i>1989-90</i>	<i>1990-91</i>	<i>1991-92</i>
<b>Financial - Historical cost</b>						
Total Assets <sup>a, b</sup>	\$'000	526 171	507 258	522 416	561 903	568 669
Total Liabilities <sup>a</sup>	\$'000	399 326	381 292	352 058	358 174	379 153
Equity <sup>a, c</sup>	\$'000	126 846	125 966	170 359	203 729	189 516
Debt <sup>a, d</sup>	\$'000	296 530	280 813	260 438	258 772	277 762
Finance charges	\$'000	46 159	44 709	38 124	31 088	29 737
EBIT <sup>e</sup>	\$'000	29 498	29 245	45 519	27 745	24 538
Operating profit <sup>f</sup>	\$'000	-14 116	-11 535	11 315	-1 827	-3 458
Dividend and/or levy	\$m	-	-	-	10	10
Debt to assets ratio	%	56.36	55.36	49.85	46.05	48.84
Return on assets	%	5.61	5.77	8.71	4.94	4.31
Return on debt	%	15.57	15.92	14.64	12.01	10.71
Return on equity	%	- 11.13	- 9.16	6.64	- 0.90	- 1.82

<sup>a</sup> Average of opening and closing values. <sup>b</sup> Assets are defined as current, non-current assets and deferred expenses. <sup>c</sup> Equity is defined as assets minus liabilities. <sup>d</sup> Debt is overdraft, long-term debt and capital leases. <sup>e</sup> Earnings before interest and tax (EBIT), including abnormal and before extraordinary items. <sup>f</sup> Operating profit after abnormal items and interest and before taxes and extraordinary items.

Source: Industry Commission estimates and PMA 1992a (and earlier issues).

## **E6 Conclusion**

The PMA's real rates of return and growth of TFP have been low in the past, but are now showing that the Authority can improve productivity and profitability while decreasing prices in real terms. To enable real prices to resume a downward trend, while simultaneously improving the return on assets, the PMA will need to achieve further improvements in productivity and sell its under-performing assets. This will be aided by the new Victorian Government's approach to port authority reform, which gives the Authority a clearer commercial focus and directs it to limit its role in port operations.

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## Attachment to Appendix E: Data

The primary source of all data for this case study was the PMA's annual reports.

### Outputs

In this study three classes of output are used. These are the number of ship visits per year, the annual quantity of cargo (revenue tonnes) passing through the port, and other services which is an implicit quantity derived from total revenue that is not allocated to ship visits and cargo.<sup>5</sup>

The revenue allocated to ship visits includes revenue from berthage, tonnage, mooring and unmooring vessels, cleaning sheds and wharves, shed rental, the sale of water, and other ancillary services.

The revenue allocated cargo comes mostly from import, export and transshipment wharfage rates.<sup>6</sup> Some revenue comes from other charges on exports and imports and from rent for wharves and other storage facilities.

The revenue for other services was calculated as the residual of total operating revenue (including any abnormal revenue items) after deducting interest received and the revenue from the sources listed above. An implicit quantity of other services was derived by deflating the value of this service by the ABS implicit price deflator for gross domestic product (ABS 1992).

### Inputs

In this study, three classes of inputs were used. These are labour (employees), other costs (an implicit quantity), and capital (an implicit quantity of capital stock).

The PMA provided expenditure data on total wages and salaries, including oncosts, for the period 1984-85 to 1991-92. For the earlier years labour costs were estimated by extrapolating backwards, using data on labour costs in the later years, total costs, employment and time.

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<sup>5</sup> In 1986-87 and 1987-88 the PMA did not report charges on ships or goods for the associated ports. For those years revenue is assumed to be zero. This assumption is unlikely to affect the results as revenue from the associated ports accounts for less than 1 per cent of total operating revenue.

<sup>6</sup> Transshipment wharfage is defined as wharfage charged on a container that is unloaded at the Port of Melbourne, but does not leave the port as it is reloaded and transported to another destination.

The category *other* is made up of costs associated with maintenance, administration and general port services. It is calculated as a residual of total costs (including abnormal expenditure items, but excluding interest paid and historically valued depreciation charges) after deducting labour expenses. An implicit quantity was derived by deflating other costs by the GDP price deflator (ABS 1992).

The stock of capital is measured as the written down value of fixed assets in constant dollars (1984-85). From 1982-83 onwards the PMA supplemented the historic cost asset accounts with current cost asset valuations (see Box E2) and depreciation charges. These current cost asset valuations were used to estimate the quantity of capital stock. The PMA values assets at the lower of the market, replacement and reproduction values. Non-commercial assets (these include assets under construction, recreational or similar land, assets relating to the Authority's operations at Associated Ports other than the Port of Hastings, and specific assets that are used solely for recreational purposes and do not have any commercial value to the Authority) are excluded, and assets such as dredged channels were included.

Prior to 1982-83, estimates of investment in fixed assets were used to backdate the capital stock series. Depreciation was based on a declining balance rate of 2.27 per cent for buildings, 10.29 per cent for capital expenditure on newly constructed channels (maintenance of channels is treated as an operating expense) and plant and equipment. In addition, it was assumed that 62 per cent of assets are buildings, 13 per cent are plant and equipment and 25 per cent are channels.

The value of the annual user cost of capital inputs was derived as a proportion of the current value of the capital stock allowing for depreciation, finance charges and capital gains using the method outlined by the Industry Commission in its 1990 information paper titled *Measuring the performance of selected government business enterprises*.

**Box E2: Asset valuation**

The objective of current cost accounting is to ensure that, having regard to changes in the general level of prices and prices specific to the authority's activities, the accounting results and resources of the authority are realistically measured.

Guidelines for producing these accounts are documented in Accounting Policy Statement No. 1 — Rate of Return Reporting, issued by the Comptroller-General of the Department of the Treasury.

The PMA values assets periodically and indexes the valuations in the intervening years. The PMA values its assets using the following primary guidelines:

- Where assets similar to existing fixed assets are available in the market and still represent best-practice technology, the current cost of the existing assets will be determined by the current buying price of similar assets.
- Where similar assets are not available in the market and existing assets still represent best-practice technology, the current cost of the existing assets would be obtained from an assessment of their current reproduction or replacement cost.
- Where similar assets are not available in the market, or are available but are technologically outdated, and there are more technologically advanced assets available, the current cost of the existing asset will be lesser of:
  - the replacement cost per unit of service potential of the most appropriate modern asset available, and
  - the reproduction cost per unit of service potential involved in either constructing a replica of the existing asset or purchasing a similar asset.

The new Victorian Government is reviewing the present asset valuation methods as part of its approach to GBE's.

Source: sub. 78.

**Table E3: The current value of PMA assets**

<i>Year ending 30 June</i>	<i>Asset price escalation rate<sup>a</sup> (%)</i>	<i>Investment<sup>b</sup> (\$m)</i>	<i>Current value depreciation<sup>c</sup> (\$m)</i>	<i>Current value of assets<sup>c</sup> (\$m)</i>
1976	-3.26	13.84	13.68	251.40
1977	9.31	14.65	14.91	274.09
1978	8.63	13.98	16.06	295.06
1979	6.83	16.90	17.11	314.48
1980	13.78	-47.25	15.81	290.55
1981	13.91	-4.58	16.75	307.85
1982	13.71	33.76	19.82	364.21
1983	14.59	106.14	23.62	500.14
1984	6.64		22.66	534.76
1985	3.85		24.77	583.05
1986	5.17		30.56	728.98
1987	6.34		38.49	944.18
1988	5.27		40.63	997.83
1989	6.23		34.16	1 042.31
1990	5.94		37.02	998.38
1991	4.35		38.16	892.04
1992	4.34		37.72	823.78

<sup>a</sup> Based on the percentage change in the ABS (1992) implicit price index for plant hire (unpublished). <sup>b</sup> Used to estimate the current value of assets for 1976-77 to 1981-82 only. From 1982-83 onwards investment figures were not required as the PMA reports the current cost value of assets. <sup>c</sup> Depreciation was based on a declining balance rate of 2.27 per cent for buildings, 10.29 per cent for channels, and plant and equipment. In addition, it was assumed that 62 per cent of assets are buildings, 13 per cent are plant and equipment and 25 per cent are channels. For 1976 to 1982: IC estimates. From 1983 onwards: taken directly from PMA (1992a) and earlier issues.

Table E4: Estimated annual user cost of capital

<i>Year ending 30 June</i>	<i>Ten year government bond rate<sup>a</sup> (%)</i>	<i>Asset price escalation rate<sup>b</sup> (%)</i>	<i>Current value depreciation<sup>c</sup> (\$m)</i>	<i>Current value of assets<sup>c</sup> (\$m)</i>	<i>Annual user cost of capital<sup>d</sup> (\$m)</i>
1976	10	42	13.68	251.40	46.99
1977	10	46	14.91	274.09	17.92
1978	9	50	16.06	295.06	17.44
1979	10	53	17.11	314.48	27.08
1980	12	61	15.81	290.55	9.93
1981	13	69	16.75	307.85	14.27
1982	16	79	19.82	364.21	29.63
1983	15	90	23.62	500.14	24.90
1984	14	96	22.66	534.76	60.67
1985	14	100	24.77	583.05	81.03
1986	13	105	30.56	728.98	87.28
1987	13	112	38.49	944.18	99.47
1988	12	118	40.63	997.83	107.34
1989	14	125	34.16	1042.31	109.92
1990	13	132	37.02	998.38	111.49
1991	12	138	38.16	892.04	101.91
1992	9	144	37.72	823.78	75.31

Source: <sup>a</sup> Reserve Bank of Australia 1992, and earlier issues. <sup>b</sup> ABS implicit price index for plant hire, unpublished and IC estimates. <sup>c</sup> PMA 1992a, and earlier issues and IC estimates. <sup>d</sup> Calculated as [(Bond rate - inflation) \* nominal value of capital] + current depreciation.

Table E5: Value and quantity of PMA outputs

Year ending 30 June	Charges on ships		Charges on goods		Other	
	Value (\$m)	Quantity (Ship visits)	Value (\$m)	Quantity <sup>a</sup> (RT)	Value (\$m)	Quantity <sup>b</sup>
1976	3.85	2433	16.47	16.66	7.09	154.69
1977	4.25	2496	18.66	17.68	7.43	145.99
1978	4.44	2483	17.80	17.12	7.53	137.37
1979	4.82	2446	20.62	17.56	8.05	135.23
1980	5.18	2403	23.98	18.83	8.38	127.13
1981	6.68	2330	27.85	18.64	8.87	122.15
1982	8.58	2348	34.62	19.31	9.81	122.51
1983	7.87	2272	37.16	17.46	12.07	136.40
1984	8.40	2248	44.37	18.47	17.09	180.50
1985	9.99	2425	51.06	20.28	24.91	249.09
1986	10.17	2497	51.49	19.97	30.23	282.83
1987	10.64	2374	53.95	19.85	46.94	408.84
1988	10.98	2454	60.08	21.69	61.08	492.54
1989	17.17	2594	72.88	25.04	50.42	372.08
1990	21.68	2655	74.13	25.90	49.44	344.78
1991	30.20	2569	61.28	23.00	51.99	352.70
1992	29.20	2749	62.43	23.10	48.32	322.79

<sup>a</sup> Revenue tonnes. <sup>b</sup> The implicit quantity for Other services is derived by deflating the value by the ABS implicit price index for gross domestic product.

Source: PMA 1992a, and earlier issues.

**Table E6: Value and quantity of PMA inputs used**

<i>Year ending 30 June</i>	<i>Labour</i>		<i>Other</i>		<i>Capital</i>	
	<i>Value (\$m)</i>	<i>Quantity (no.)</i>	<i>Value (\$m)</i>	<i>Quantity<sup>a</sup></i>	<i>Value (\$m)</i>	<i>Quantity<sup>b</sup></i>
1976	6.26	1382	8.45	0.18	46.99	5.97
1977	11.91	1410	11.39	0.22	17.92	5.95
1978	18.45	1417	5.57	0.10	17.44	5.90
1979	22.81	1396	18.57	0.31	27.08	5.88
1980	28.38	1429	20.41	0.31	9.93	4.78
1981	31.05	1425	23.44	0.32	14.27	4.44
1982	36.99	1436	26.82	0.33	29.63	4.62
1983	24.64	1434	34.43	0.39	24.90	5.54
1984	41.85	1470	32.13	0.34	60.67	5.55
1985	46.04	1455	33.90	0.34	81.03	5.83
1986	48.38	1382	38.24	0.36	87.28	6.93
1987	48.81	1521	42.31	0.37	99.47	8.44
1988	44.01	1424	53.37	0.43	107.34	8.48
1989	46.86	1300	47.79	0.35	109.92	8.33
1990	55.97	1313	43.99	0.31	111.49	7.54
1991	61.51	1265	47.11	0.32	101.91	6.45
1992	53.13	946	49.47	0.33	75.31	5.71

<sup>a</sup> Implicit quantity of Other is derived by deflating the value by the ABS implicit price index for gross domestic product. <sup>b</sup> Implicit quantity of capital is approximated by the constant value of the capital stock.

Source: PMA 1992a and earlier issues.

**Table E7: Output, input and TFP indexes**

<i>Year ending 30 June</i>	<i>Output</i>	<i>Input</i>	<i>TFP</i>
1976	1.00	1.00	1.00
1977	1.03	1.04	0.98
1978	0.99	0.89	1.12
1979	1.00	1.10	0.91
1980	1.03	1.05	0.98
1981	1.01	1.05	0.96
1982	1.03	1.07	0.96
1983	0.98	1.20	0.82
1984	1.08	1.15	0.94
1985	1.26	1.18	1.07
1986	1.31	1.28	1.02
1987	1.49	1.46	1.02
1988	1.69	1.50	1.13
1989	1.62	1.39	1.17
1990	1.61	1.28	1.26
1991	1.53	1.18	1.30
1992	1.51	1.03	1.46

Source: IC estimates.

Table E8: PMA real rates of return

Year 30 June	Profit and loss							Assets (\$m)	Real rate of return (%)
	Operating revenue (\$m)	Interest received (\$m)	Operating expenses <sup>a</sup> (\$m)	Interest paid (\$m)	Depreciation		Economic profit <sup>b</sup> (\$m)		
				Historic	Current				
1976	27.92	0.51	23.26	3.72	4.84	13.68	- 0.98	251.40	- 0.39
1977	31.10	0.76	27.49	4.20	5.44	14.92	- 2.43	274.09	- 0.89
1978	30.62	0.86	28.62	4.61	5.90	16.06	- 4.41	295.06	- 1.50
1979	34.23	0.74	32.52	4.94	6.39	17.11	- 4.81	314.48	- 1.53
1980	39.36	1.81	37.58	5.80	8.58	15.81	- 1.47	290.55	- 0.51
1981	45.38	1.99	46.89	6.70	8.22	16.75	- 5.33	307.85	- 1.73
1982	55.75	2.74	51.05	9.08	9.72	19.82	0.95	364.21	0.26
1983	59.38	2.28	77.97	16.72	10.38	23.62	- 17.39	500.14	- 3.48
1984	71.54	1.68	83.95	22.54	10.81	22.66	- 3.41	534.76	- 0.64
1985	85.95	0.00	92.57	25.61	11.80	24.77	6.01	583.05	1.03
1986	96.90	5.01	110.27	35.78	13.13	30.56	- 0.03	728.98	0.00
1987	115.41	3.88	133.74	50.64	13.47	38.49	3.41	944.18	0.36
1988	134.68	2.55	144.25	46.16	19.68	40.63	13.09	997.83	1.31
1989	144.39	3.93	164.04	44.71	19.80	34.16	6.78	1 042.31	0.65
1990	149.17	3.92	139.45	38.12	19.70	37.02	26.60	998.38	2.66
1991	144.99	1.52	146.81	31.09	24.75	38.16	14.34	892.04	1.61
1992	141.68	1.74	143.99	29.74	24.54	37.72	12.52	823.78	1.52

<sup>a</sup> Operating expenses are net of contributions to consolidated funds. <sup>b</sup> Net profit after current cost depreciation.  
Note: Industry Commission estimates differ from those of the PMA because of differences in the treatment of capital leases and non-monetary assets.

Source: PMA 1992a, and earlier issues and IC estimates.

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## REFERENCES

- ABS 1992, *Australian national accounts national income and expenditure*, Cat. No. 5204.0, AGPS, Canberra.
- IC 1990, *Measuring the performance of selected government business enterprises*, Information Paper, Canberra, August.
- PMA 1992, *Trade and Transport Review 1990-91, Port of Melbourne and Port of Hastings*, PMA, Melbourne.
- \_\_\_ 1992a, *Annual Report* and earlier issues, PMA, Melbourne.
- Reserve Bank of Australia 1992, *Reserve Bank Bulletin February*, and earlier issues.
- Steering Committee on National Performance Monitoring of Government Trading Enterprises 1992, *Measuring the total factor productivity of government trading enterprises*, Industry Commission, July.

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## **APPENDIX F: PORTS AND PORT AUTHORITIES IN OTHER COUNTRIES**

This appendix presents information about selected foreign ports and port systems. It does not pretend to be comprehensive, but aims to indicate the great variety of port systems across the world. The information has been gathered from inquiry participants; through discussions with port authorities, government representatives and other organisations in some other countries; and from port authority annual reports, information papers and statistical publications.

In this appendix, the term ‘port authority’ means government bodies, departmental bodies, statutory or semi-statutory bodies, corporations or companies engaged in regulating or controlling the operations of a port. Where applicable, the term covers privately owned or controlled corporations and companies operating a port for commercial gain.

Information is presented for Singapore, Malaysia, the United Kingdom, Belgium, the Netherlands, France, USA, Canada, Japan and New Zealand. Between them, these countries operate a number of different port arrangements.

### **F1 Singapore**

#### **Role of port authority**

Port operations in Singapore are managed by the Port of Singapore Authority (PSA) which was established in 1964. The Minister of Communications appoints the Chairman and other 8 members of the Board as well as the Executive Director. Current members include people from government (eg the Permanent Secretary of the Ministry of Communications), users (eg Shell), shipping lines and unions.

The PSA’s principal functions are to provide and maintain adequate and efficient port services and facilities in the port; to regulate and control navigation within the port and its approaches, and to provide pilotage services; to provide and maintain adequate and efficient lighthouses and navigation aids; to promote the use, improvement and development of the port; and to provide local ferry services.

The PSA operates seven terminals to accommodate all types of vessel. In the three container terminals (all common-user), the PSA provides the equipment and much of the stevedoring labour. Some activities such as in-port truck and fork lift

driving may be supplied by non-PSA labour, which is also used in the non-containerised terminals.

A wide range of marine services including pilotage, ferry, tug, waterboat and garbage collection services, is also provided by the PSA. Further, the PSA provides warehousing and distribution services. It also has significant land and real estate holdings, owns and operates a Cruise Terminal, World Trade Centre and Maritime Showcase. Each is established as a separate cost centre.

### **Nature and extent of activity**

In 1991, Singapore was the world's second largest port (after Rotterdam) in terms of cargo volume—206 million tonnes in 1991. In that year, Singapore handled 6.35 million TEUs, making it the then busiest container port in the world. It also handles significant amounts of bulk cargo, including petroleum. Over 70 000 vessels arrived in Singapore during 1991.

Containerised traffic is expected to grow significantly. Additional capacity is being installed and, once the new Brani container handling terminal comes fully on stream, capacity will be about 10 million TEUs.

The PSA's revenue comes from container handling services (54 per cent), marine services (12), commercial services (12), cargo handling services (10), and sundry services (12).

### **Competition**

Singapore is strategically placed to fulfil its vision to develop as a 'Global Technoport and Distriport'. It faces competition from ports in nearby countries such as Malaysia and Sri Lanka.

Singapore and Hong Kong are sometimes considered competitors, but charges in Hong Kong are significantly higher, which suggests that the two ports serve different markets.

The PSA itself operates or controls most vessel-related services in the port. It is also involved, often through subsidiary or associated companies, in many ancillary services such as storage. Because of this, direct intraport competition is limited.

However, measures are taken to enhance efficiency—eg container terminals are managed separately, with the performance of each carefully monitored, and reasons for differences in performance analysed. Shipping lines are free to move their trade from one terminal to another.

## Pricing

Port charges (dues and levies) are determined by the PSA, subject to approval by the Minister. They are published in the *PSA Tariff* and set to achieve a 'reasonable' return on investment, but with an eye to what is charged in competing ports in the region. According to the PSA, only one service is subsidised—the ferry service to the southern islands of Singapore.

The charges are service- and user-based, with incentives to ships and cargo to move in and out of the port as quickly as possible. Thus, charges for services such as navigation, dredging (of which there is little), pilotage, towage and berthage are to the account of the ship. Other services such as the use of cranes and stevedoring are charged to the shipper. 'Dockage' (the ship-based charge) applies on a basis of GRT and time (sometimes off-peak charges apply); and 'wharfage' (the cargo-based charge) applies per tonne of cargo handled.

## Financial arrangements

According to the PSA's 1991 Annual Report, the return on fixed assets (on historical cost) was 15.3 per cent for that year. The value of assets does not include all land held by the Authority.

The 'net surplus' of the PSA is not subject to income tax. However, the PSA is required to pay 20 per cent of its net surplus to the Government's Consolidated Fund. A similar amount was paid in 'property' tax in 1991.

Investment is largely funded by the PSA from its own funds, with some minimal borrowings. Port users are not expected to contribute capital towards investment by the PSA.

## Employment

In 1991, the PSA employed just over 7000 persons. There has been a gradual decline in recent years. However, there have been no compulsory redundancies of workers willing to be retrained. Value added per employee has increased markedly over recent years, with a real gain in 1991 over 1990, for example, of some 17 per cent.

Wages in the PSA are generally linked to Civil Service rates, which are negotiated at the national level. Various forms of bonus and incentive payments operate. For example, incentive schemes operate in the container terminals. Shift allowances apply. No extra is paid for working on a public holiday, but a day is added to annual leave (of 21–28 days a year, plus about 11 public holidays).

Two unions represent port employees. The Port Officers' Union represents the 1000 professional and white collar employees (including pilots), while the Port Workers' Union has over 6000 members. Membership is not compulsory, but 80–90 per cent of employees join these unions. Their main functions appear to be to negotiate conditions of employment, represent grievances of individual members, and provide a range of welfare, social and recreational benefits.

The PSA and the unions strongly encourage training of employees at all levels. In 1991, training accounted for 2.7 per cent of payroll, representing an average of 44 manhours of training per employee. Much of the training is provided through the PSA's Singapore Port Institute, which offers a wide range of courses covering management, operation and technology. The Institute markets its services to port authorities in other countries.

### **Technology**

Much of Singapore's equipment embodies the latest technology. For example, its new Brani terminal will have fourth-generation quay cranes, and high stacking yard cranes. Some of the quay cranes will have a double-trolley system, and automated chassis positioning system. Containers can be stacked seven high.

Double stacking trolleys are used to move containers around the terminal yards.

Singapore makes widespread use of information technology, artificial intelligence and neural technology. For example, shipping documents can be submitted electronically, operational moves in container yards are being automated, and 'automation at the gate' is being introduced to eliminate paper documents. EDI links have been established with a number of other ports, including Adelaide. Singapore is considered to be at the forefront of electronic and computer applications technology.

## **F2 Malaysia (Port Klang)**

### **Role of port authority**

The Malaysian Government has been pursuing privatisation of the country's ports. The container terminal at Port Klang (which accounts for over one-quarter of the country's trade) was privatised in 1986 for a consideration of \$M111 plus annual lease rentals. The rest of the operational services of the port were privatised in 1992. A consortium made up of companies involved in port activities is paying about \$M360 million (including lease rentals) for the right to

run the port for 21 years. This group is expected to open the second container terminal in July/August 1993.

Only the operational services of Port Klang have been privatised. The port authority continues to be responsible for trade facilitation, planning and developing the port, property management, as well as maritime regulation in port. In contrast, all activities at Johore port, except for regulation, have been corporatised as a prelude to privatisation at a later date.

The following details mainly relate to 1991, when the Klang Port Authority was responsible for all operations of the port, except the leased container terminal.

### **Nature and extent of activity**

In 1991, Port Klang handled a total of about 26 million tonnes of cargo, with about 6000 vessels arriving in port. Containerised cargo accounted for about 12 million tonnes. The port handled just over 600 000 TEUs, but this increased to about 770 000 TEUs in 1992.

### **Competition**

Although two other Malaysian ports have container facilities, Port Klang is being developed as the main container port. According to the Sixth Malaysia Plan, covering 1991–95, the government intends to adopt ‘a national approach towards increasing port efficiency and productivity ... with ... a mechanism to plan, implement, monitor and evaluate port performance, particularly after privatisation of the various ports’. The effectiveness of the cabotage policy is to be reviewed to ‘promote competition through greater liberalisation’. In the longer term, Malaysian ports may offer significant competition to Singapore.

Intraport competition has been relatively limited to date in Port Klang. The stevedores are mainly employed by the authority, and there is only one container terminal at present. The second terminal, which is being developed to include post-panamax container quay cranes, should provide intraport competition. However, the operating consortium appears to have some common ownership interests with the operator of the first terminal.

### **Pricing**

The port authority received income from ship charges, cargo handling services, and lease of the container terminal. That lease was apparently awarded on the basis of maximum rates for stevedore charges.

## **Financial arrangements**

The authority paid tax on its surplus, but did not seem to pay a dividend. It appeared to retain its after-tax surplus, and had a considerable amount in government loans (which seem to be at below commercial rates).

The 1991 accounts show a return on investment of 10.5 per cent, based on historical cost.

## **Employment**

Employment by the Klang Port Authority totalled about 4500 in 1991. This excludes container terminal employees. The port stevedores were employed directly by the port authority although, due to increased trade, some private stevedores were allowed to work in the port during the year.

## **F3 United Kingdom**

### **Role of port authority**

Since the early 1980s, the UK port system has been subject to a number of radical changes: abolition of the National Ports Council in 1981 (which had sought to regulate investment); legislation for ‘democratisation’ of the trades unions (which applied generally, not just to ports); privatisation of the Associated British Ports (formerly the British Transport Docks Board) ports in 1983 to 1984; reform of pilotage in 1987 making pilotage the responsibility of each port authority; abolition of the Dock Labour Scheme in 1989; and the Ports Act (1991) which enables the privatisation of the Trust Ports (ports set up under individual Acts of Parliament as self-governing statutory bodies).

Although there still remain some publicly owned Trust Ports—five of the larger Trust Ports have already been privatised—many of the major ports are privately owned. These include Felixstowe (which has always been private, and which was acquired by Hong Kong interests in 1991), the Associated British Ports group (which operates about 22 ports including Southampton), Thamesport (a new deep water port near London), and the Port of Tilbury (privatised in 1992, as a result of a £32 million management/employee buy-out of part of the Port of London Authority).

Many privately owned ports carry out the conservancy and navigation (including pilotage) roles in those ports, as well as providing berths and cargo handling facilities. Exceptions are Felixstowe (where those functions are provided by the Harwich Haven Authority) and Tilbury (provided by the Port of London

Authority, which now operates as a regulatory and conservancy body, with some property operations).

The involvement of government in ports is quite limited, even in the Trust Ports. Indeed, these are 'non-profit' making bodies, with only limited accountability to government. Private ports are completely independent of government in their usual day-to-day operations, while normal company laws, local government planning requirements, etc., apply.

Some port authorities provide cargo services with their own equipment and employees. Others lease facilities to others.

### **Nature and extent of activity**

Provisional 1991 statistics show that freight traffic through UK ports totalled 493 million tonnes (Mt). London was the leading port with 53 Mt, followed by Grimsby and Immingham 40 Mt, Sullom Voe 36 Mt, Milford Haven 36 Mt and Southampton 29 Mt.

Unitised freight traffic (including containers and Ro-Ro vehicles and trailers) totalled 88 Mt, of which Felixstowe handled 15 Mt. Dover ranked second. In terms of TEUs, Felixstowe moves about 2 million per annum, Southampton close to 600 000, Tilbury over 300 000 and Thamesport over 200 000.

### **Competition**

UK ports compete with each other for trade and, to some extent, with other European ports.

Although there is increasing competition, with about 20 per cent of UK cargo transhipped via ports in other European countries, the use of those ports as hub ports for trade destined for or from the UK is limited by the volume of that trade and the costs of transshipment. Similarly, UK ports can only offer limited hub port competition for trade destined to or from the Continent (particularly as cargo for canals/rivers would need to be transhipped an extra time).

Recent competition between UK ports has been heightened by overcapacity (for both containerised and non-containerised cargo) in a time of economic downturn. This has caused box rates (ie container handling charges) to fall by one-third or more.

The opening of the Channel tunnel could have some effect upon the extent of competition between UK and Continental ports.

There is more than one container terminal in many of the UK ports. In some cases, there is competition between the terminals in a port. But in others, Felixstowe for example, the terminals (there are two) are operated by the port company itself.

## **Pricing**

Charges for conservancy and navigation services (provided by the ports, or the harbour authorities) are both ship- and cargo-based. They are subject to a right of appeal (to a government regulator) by customers, as the charges have to be 'reasonable'. It is often possible for regular customers to negotiate discounts on the published schedules.

Most coastal lighthouses, buoys and beacons are the responsibility of General Lighthouse Authorities. Dues are payable for these facilities, based on ship tonnage, but with limits on the number of times a ship is charged in a given period.

Charges for berthage and cargo handling etc. by the private ports are commercially negotiated. For example, ABP's charges are all service-related.

## **Employment**

Centralised bargaining was scrapped with abolition of the Dock Labour Scheme (DLS). Further, port authorities are not obliged to continue to negotiate with the trade unions. Tilbury, for example, negotiates with an elected consultative council of its employees—the unions are no longer recognised—and all its employees are on individual contracts. Employees of ABP at Southampton are also on individual contracts, and that company also does not recognise the unions. In contrast, the Port of Felixstowe, which was never subject to the DLS, does negotiate with unions.

Some ports do not pay performance bonuses to their employees—for example Felixstowe considers them inconsistent with the flexibility and mobility of the workforce, which is crucial to achieving profitable operations.

## **Technology**

Much equipment is modern and able to handle the largest vessels. For example, Felixstowe has several post-panamax sized quay cranes, and the facilities at Thamesport are new.

The larger UK ports make extensive and growing use of information technology to control the flow of cargo through the ports. Felixstowe, for instance, makes extensive use of EDI and is expected to eliminate paperwork during 1993.

#### **F4 Belgium (Antwerp)**

The information in this section relates to Antwerp. However, it is interesting to note that another Belgian port, Zeebrugge, operates as a publicly owned company, in contrast to Antwerp which is municipally operated.

##### **Role of port authority**

Antwerp is operated by the Municipal Authorities of the City of Antwerp. The management structure of the port forms a separate part of the city's administration system. As well as providing berths for ships, the port authority also owns some cargo equipment (leased to private operators) and storage facilities, operates tugs (inside the docks) and controls electricity distribution. The Flemish Regional Authorities are responsible for provision of access canals and share responsibility with the port authority for construction of docks, dams and landfills.

Most docks and sites are leased out by the port authority on a long-term basis to private firms. These leases often stipulate that those firms provide facilities for particular trades such as containers, Ro-Ro, cars or fruit.

The Belgian Government or the Flemish Regional Authorities (partly in conjunction with the Dutch Government) pay for dredging and navigation aids. Pilotage on the open sea and on the Schelde River is carried out by the Flemish Regional Authorities. In the docks, pilotage is privately provided. Towage is carried out by the port authority in the docks, and by private companies on the Schelde.

##### **Nature and extent of activity**

Antwerp is Europe's second largest port, in terms of total cargo (after Rotterdam), and about the third largest in terms of TEUs (after Rotterdam and Hamburg). It is a major transshipment centre both for onward dispatch by sea and for distribution through Europe by road, rail and canal barge.

There is general acknowledgment that, for container traffic at least, Antwerp is one of the most technically efficient ports worldwide.

In 1991, cargo loaded and unloaded totalled 101 million tonnes, with general cargo accounting for 45 per cent, liquid bulk 25 per cent and dry bulk 30 per cent. Containerised traffic accounted for 42 per cent of general cargo, with 1.8 million TEUs.

### **Competition and pricing**

Antwerp's charges are set against a background of intense competition from other North Sea ports. Its charges are among the lowest, if not the lowest, of those ports. Antwerp is further from the sea and, to remain competitive, it needs to set lower port charges to offset higher pilotage and towage charges.

Operation within the port is by private operators. They are encouraged to specialise to some extent by the port authority. But there is competition for trade—for example, there is more than one container terminal operator.

Harbour dues are paid to the port authority by the shipping lines. They are both ship- and cargo-based. Discounts apply for regular port users. The port authority tries to achieve 50 per cent of its revenue from ships/cargoes and 50 per cent from leasing.

### **Financial arrangements**

Although it is part of the Municipal Authorities, the port has a separate budget and separate accounts. Ten per cent of any profit made in the port is retained, and 90 per cent passed on to the municipality. Some taxes are paid.

Some national funds are available for infrastructure developments within the port. However, investment has to be supported by the National Port Investment Committee, after cost–benefit and input–output analyses have been made. Little national funding has been made available to Antwerp in recent years.

The Antwerp port authority invested BF885 million (about \$A40 million) in 1991, 80 per cent of which was provided by the authority and 20 per cent by the Flemish Regional Authorities. Return on investment in Antwerp is acknowledged to be 'not high'.

### **Employment**

Employment by the port authority is phasing down to about 2000 persons, working on tugs, locks, some cranes, in electricity distribution and as bridge operators. There are relatively few administrative staff.

All dock work in the port zone is reserved by law for recognised dockers. These workers (employed by private companies in stevedoring and on the wharves) are all casual but, in practice, about 85 per cent of them retain their jobs from day to day. There is a fixed wage per shift with shift penalties. Unemployed dockers get 70 per cent of their usual pay, funded from unemployment benefits and by port employers.

## **F5 The Netherlands**

### **Role of port authority**

The port of Rotterdam is a municipal port. The city owns the port infrastructure (basins, quays, and port and industrial sites). The day-to-day management of the port is entrusted to the Municipal Port Management. There are separate financial accounts and budgets. The Management is responsible for: developing and granting industrial premises and port facilities (by rent or long-term lease); safe and orderly shipping traffic; and initiating port-related research and technology. All industrial and cargo handling activities are undertaken by private companies. Extensive use is made of modern equipment, able to handle the largest vessels.

Not all Dutch ports follow the Rotterdam model. For example, the Port of Vlissingen Authority, a relatively small port (with trade of about 10 million tonnes in 1991), is a separate authority formed by joint agreement of the Dutch Government (50 per cent), the Province of Zeeland (25 per cent) and the municipalities of Flushing (16 2/3 per cent) and Borsele (8 1/3 per cent).

Access channels, lighthouses, buoys, and navigation aids are the responsibility of the Dutch and/or Belgian Governments. Canals are the responsibility of the State. Pilotage is provided by the State for a fee, and towage by private operators.

### **Nature and extent of activity**

In terms of cargo tonnage (290 million tonnes in 1991), Rotterdam is the largest port in the world. This volume was nearly three times that of Antwerp, the second largest European port. Rotterdam is the largest of the European container ports, handling nearly 4 million TEUs—followed by Hamburg with about 2.2 million TEUs.

Nearly 50 per cent of Rotterdam's cargo consists of liquid bulk goods, with over 30 per cent dry bulk and about 20 per cent general cargo, including containerised cargo.

## **Competition**

Rotterdam is intensely competitive with other North Sea ports. It is turning attention to developing specialist and value adding facilities: for example, dedicated facilities for special categories of freight, and storage, distribution and assembly facilities. Specialisation can lock in port operators without price cutting.

All cargo operators in the port of Rotterdam are private. This would encourage intraport competition. However, although several container terminals operate in the port, intraport competition could be limited through affiliations with shipping lines.

## **Pricing**

Port authority income is from harbour and quay dues (together accounting for about two-thirds of revenue), and the lease of land and buildings (about one-third). Harbour dues are charged for the use by seagoing vessels of the harbours, quays, mooring posts, buoys and other municipal public facilities, and are both ship- and cargo-based and vary between types of cargo. There are rebates for frequent and dedicated users of the port. (Vlissingen charges harbour dues on the same basis as Rotterdam.) Quay dues apply on a basis of GRT, length and time.

## **Financial arrangements**

The port of Rotterdam has received significant loan capital from the Municipal Finance Fund. The Port Management's 1990 accounts show a return on assets (historical cost basis) of 7.8 per cent, before interest. No dividend appears to have been paid. There is a liability to local taxes, but not apparently to income tax.

Some facilities can be financed by the Dutch Government. For example, it could contribute to planned investments at Rotterdam for the building of port basins, quays, roads, and rail and inland shipping service centres.

## **Employment**

Companies operating in the port of Rotterdam have their own permanent employees, with top-up labour from an employment pool. When persons in the pool are not required for work, they receive 100 per cent of their wages, made up by the Dutch Government from unemployment benefits (50 per cent) and from a joint employers fund (50 per cent).

The port authority itself has fewer than 900 employees.

Training in port-related disciplines is offered by various training institutions, universities and research centres, notably the Rotterdam Shipping and Transport College.

## **F6 France**

### **Role of port authority**

France has six major autonomous ports—Dunkirk, Le Havre, Rouen, Nantes/St Nazaire, Bordeaux and Marseille. As well, there are 17 ports said to be ‘of national interest’ administered by the French Maritime Service, and 44 decentralised ports administered by regional bodies. About 80 per cent of France’s harbour traffic by tonnage is handled by the autonomous ports. The other ports are, nevertheless, important to the fishing industry, commerce and passenger transport.

The rest of this section concentrates on the six major ports.

The day-to-day operations of the autonomous ports are controlled by Boards of Directors. Board members are nominated by, or representative of, various interests including government, local and regional authorities, port workers, industry and port users.

### **Nature and extent of activity**

Marseille is the largest French port, and third largest European port, handling about 90 million tonnes of cargo in 1991. The second largest French port is Le Havre, which handled over 900 000 TEUs in 1991, compared with about 450 000 at Marseille.

### **Competition**

The French Government has been concerned for some time that the competitive position of French ports has been deteriorating compared with ports such as Antwerp and Rotterdam. To remedy this, it has undertaken to modernise French ports by improving infrastructure, ensuring good links with land transport and streamlining work practices.

## **Pricing**

Harbour dues, which may be ship- and cargo-based, apply in the ports, as well as charges for pilotage, towage etc. Charges apply for publicly provided cargo handling equipment such as cranes, although equipment and storage facilities may be leased to private operators.

Since 1986, the autonomous ports have been relatively free to set their charges according to their own circumstances. However, these charges are subject to approval by the central authorities.

## **Financial arrangements**

The French Government supports investment in the autonomous ports to about 20 per cent of the total. An even higher proportion of capital expenditure is financed by the State in the 17 ports 'of national interest'. In addition, regional authorities contribute to port capital expenditure.

## **Employment**

Legislation was passed in 1992 to reform waterfront employment in France. It provided for the majority of dockworkers to be subject to general employment laws and employed directly by the freight handling companies. The central unemployment fund would be replaced (in 1994) by separate funds for each port. Measures would be introduced to encourage about one-third of dockworkers to leave the industry.

## **F7 United States of America**

### **Role of port authority**

There is no national port authority in the United States. Despite Federal powers over interstate and foreign commerce, port authorities are instruments of state or local government. Each US port authority is different in some respects, some markedly so.

Virtually all ports are subsidised by their owners, for capital and/or operational purposes. Support may arise through taxing powers given to the port, property taxes directed to the port, from fuel taxes, or from general tax revenues, for example. Only a small number of ports endeavour to be financially self-sufficient. Financial support is justified on regional development and employment grounds.

Some port authorities are autonomous or semi-autonomous bodies. But others are subject to certain state controls, with some being integral administrative divisions of state, county or municipal government. In some states, independent port or navigation districts function as special purpose political divisions of the state. There are also bi-state and regional port authorities.

Many port authorities are run by boards, whose members may be chosen under a variety of arrangements; for example, they could be nominated by the State Governor (as in Charleston, South Carolina), or elected by local ratepayers (as in Seattle and Tacoma, Washington State). Some port authority charters specify geographical or professional criteria for the choice of board members (port commissioners). There are about 115 state, local county or independent public seaports in the United States and its territories. About two-thirds have appointed boards and one-quarter elected, while the rest have no separate governing bodies.

As well as the traditional port authority services of harbour planning and the provision of berths, some authorities provide cargo handling facilities and /or operate stevedoring and terminal operations themselves.

Some port authorities carry out non-port activities such as land and real estate operations, or the operation of airports, tunnels, or commuter rail systems. Some exercise regulatory powers.

Many port authorities have to meet CSOs, for example the provision of facilities for the fishing industry, or marinas for pleasure craft.

Generally services such as pilotage, towage and line handling are provided by private operators. In some states, however, pilotage is a regulated monopoly.

Navigation aids are a federal (US Coast Guard) responsibility, partly funded through user fees. Channels, dredging and harbour works are also federal responsibilities (US Army Corps of Engineers). New channels and channel modifications are funded about 65 per cent federally and about 35 per cent locally. A national uniform ad valorem tax on cargo is applied to fully fund channel maintenance—that is regardless of the dredging requirements of each port.

### **Nature and extent of activity**

Some US ports are large by world standards. For example, trade through Hampton Roads totalled over 71 million tons in 1991, with over 46 million tons going through New York/New Jersey.

Los Angeles container traffic exceeded 2 million TEUs in 1991. Several other US ports, for example Seattle and Tacoma, handle more than 1 million TEUs per

year. Charleston, South Carolina, one of the few US ports which tries to operate on a 'profit-making' basis handled over 800 000 TEUs in 1991.

### **Competition**

There is a good deal of competition, particularly between West Coast ports. For example, Columbus line has recently moved its container terminal operations to Seattle from Tacoma. Competition between ports is facilitated by the good road and rail infrastructure, and by competition between different rail operators.

Due to an exception to the general anti-trust laws, it is not illegal for US public port authorities to agree to suppress price competition by having uniform systems of port charges. Despite this, much price competition exists between ports.

Market factors can encourage or limit competition between ports. For example, because a large number of empty containers end up in California (having come from the East full of goods for the large population of that State), ships bound for the West Coast are virtually obliged to call at Californian ports.

There is a growing trend to shipping lines wanting dedicated facilities. But even when a shipping line has settled on a port, intraport competition can be considerable as there is often more than one provider of stevedoring and container terminal operation services.

### **Pricing and financial arrangements**

Port authority revenues are derived from a variety of sources including wharfage and dockage, tolls, facility leases, equipment rentals, stevedoring and terminal operations.

Port tariffs have to be filed with the Federal Maritime Commission, and are thus made available for public viewing.

Because competition between ports can be intense and because ports are generally supported financially by government, prices and charges are not set primarily to make a profit, and returns on funds are often low or negative.

Investments in port facilities by port authorities are financed in various ways: internally generated funds, general obligation bonds (secured by local government tax revenue), revenue bonds (secured by port authority revenue), other borrowings, and grants. Some port authorities raise funds by issuing securities under their own name.

## **Employment**

Port authorities often negotiate directly with their employees about terms and conditions of employment. However, wages for stevedoring labour (longshoremen) are set under master agreements negotiated collectively between the employing authorities and the union. Thus, for example, common wages apply for longshoremen in the East Coast ports. Similarly, common wages apply in the West Coast ports of the United States and Canada. Most longshoremen are hired on a daily shift basis from an allocation pool.

## **F8 Canada**

### **Role of port authority**

The Canadian ports system falls under Federal jurisdiction, under the Minister of Transport. It has several elements:

- Ports Canada which administers 15 ports under Crown corporation (state owned enterprise) status. It is governed by a Board of Directors. Seven of the ports have been granted the status of Local Port Corporation, and are considered Crown corporations in their own right with their own boards of directors. They are expected to be financially self-sufficient and must submit corporate plans and borrowing and investment proposals to Ports Canada for approval. The other eight ports are administered by Ports Canada on a divisional basis. These 15 ports account for about 50 per cent of Canadian trade.
- Nine Harbour Commissions, where the control and management is placed in the hands of local commissions. These ports, which account for about 20 per cent of trade, are also expected to be financially self-sufficient.
- Public Harbours, of which there are about 500. This group is administered by the Canadian Coast Guard and accounts for about 20 per cent of trade.
- Ports operated privately or by groups such as municipalities. These account for about 10 per cent of trade.

Ports Canada boards are representational, with members appointed by the Federal Government. The Harbour Commissions have both locally and federally appointed members, with the majority generally federal.

Ports are responsible for safety and navigation in designated waters, as well as the provision of berths. Generally they do not themselves provide cargo handling services. An exception is Montreal which operates grain elevators. In the public

harbour system, some ports operate their own terminals. Some ports own facilities which are leased out.

CSOs such as recreational parks, and holding or managing non-productive land, are met by many ports. Some ports carry out non-port activities, such as owning industrial parks or real estate operations.

### **Nature and extent of activity**

Vancouver is by far the largest of the Canadian ports in terms of tonnage throughput. In 1991, it handled over 70 million tonnes, of which over 85 per cent consisted of bulk cargo. It moved nearly 400 000 TEUs.

In 1991, Canadian container traffic totalled about 1.4 million TEUs, with Montreal handling the largest number—about 575 000 TEUs.

### **Competition**

Much of the cargo passing through Canadian ports is bulk. This limits competition between them. However, there is some competition for general (including containerised) cargo.

To some extent, Canadian East Coast ports compete with US ports to the south. The degree of competition between Canadian and US ports appears greater on the West Coast, where there is growing competition between Vancouver and ports such as Seattle and Tacoma. This applies particularly in the container trades, but competition in bulk commodities is expected to develop in future. Vancouver has offered tariff incentives to attract container shipping.

Intraport competition appears to be limited except possibly in containerised trade. In Vancouver, for example, there are two terminals. Each is owned by the Vancouver Ports Corporation, but operated by different private operators. Competition within the Port of Vancouver might increase when planned new container facilities are completed.

### **Pricing and financial arrangements**

Canadian ports derive income from harbour dues (vessel-based), berthing charges (vessel-based), throughput charges for using cargo facilities (wharfage), fees for ancillary services such as the provision of electricity, water or storage, and from leasing facilities. Surcharges may apply for major investments put in for special users.

There are no user charges for navigation aids, ice breaking or main channel dredging. The canal system is also partly subsidised. Within ports, dredging is paid for by shippers. Towage is commercial. Pilotage is provided by the state and fees apply.

Ports Canada pays dividends to the Federal Government. In addition, in some years (eg 1990) it makes substantial cash contributions. Its income arises only from charges and levies, and it receives no government subsidy.

Investment finance for Canadian ports is provided from internally generated funds, government grants and government loans. Larger investment proposals (of over \$C5 million in Vancouver's case) need approval by Ports Canada and/or the Department of Transport.

Port authorities do not pay Federal taxes such as corporate tax. However, they may pay provincial taxes such as property tax (or grants in lieu).

## **Employment**

At least on the West Coast, stevedoring and dock workers are covered by the centrally negotiated agreements between employers and the longshoremen's union. Port authority employees are not subject to this agreement. Their terms and conditions of employment are determined through enterprise based bargaining.

## **F9 Japan**

### **Role of port authority**

There are over 1000 ports in Japan, under the overall jurisdiction of the national government: 20 are categorised as 'specifically designated major ports', 113 as 'major ports' and the remainder as 'local ports'. The categorisation affects the level of national government funding provided.

It is important to note that about two-thirds of cargo passing through Japanese ports is domestic or ferry cargo.

The management/development of ports and harbours is undertaken by port management bodies established by one or more local governments (at prefecture or municipality level), or directly by the local governments themselves.

Management of terminals is primarily classified into two types: public terminal management and leased terminal management. Both types may exist in any one port. A public terminal is run by the port management body and must be open to

any carriers. A leased terminal is constructed by a public corporation or a private–public joint enterprise and leased to shipping companies for exclusive operation. The companies may choose one of several terminal operator companies to operate the terminal. The principal container terminals in Japan fall into the leased category.

Major exporters, steel and auto makers for example, operate dedicated port facilities adjacent to their plants.

Port management bodies do not generally control harbour master functions, nor pilotage and towage.

Ports are viewed in Japan as essential parts of the social and economic development of both the nation and the regions. For this reason, the national government plays an important role in port development. It formulates long term policies for port development, examines port development plans of major ports, assists in financing port construction, and executes construction work.

### **Nature and extent of activity**

Some Japanese ports are large by world standards. Kobe port, for instance, falls about third in terms of total tonnage (about 175 million tonnes); and about fifth in TEU terms, with up to about 3 million TEUs per annum.

Further, there may be several adjacent ports upon the one body of water. In Tokyo Bay, for instance, there are six ports. Their combined trade is very large, with at least four of them major ports in their own right: Tokyo with foreign trade of 25 million tonnes, Yokohama 64 Mt, Kawasaki 54 Mt and Chiba 93 Mt. Each of the ports has significant coastal trade.

### **Competition**

The national planning of ports in Japan does not seem to inhibit competition between ports. They are owned/managed by different bodies and where there are several ports on the one bay (eg Tokyo Bay), the different ports promote their own facilities heavily. However, whether this affects pricing by the port management bodies is not readily apparent.

The major shipping lines have their own leased container terminals in the ports. Generally, they call upon specialists to operate the terminals for them.

## **Pricing**

Municipal port charges may include port dues and wharfage (both based on gross tonnage of vessel). Discounts apply on port dues for vessels making frequent use of the port; and wharfage is time based. Charges also apply for services rendered, or the use of specific port facilities such as storage facilities and cranes.

Wharfage is set to cover the cost of maintaining and managing fundamental wharf facilities. The construction of facilities such as sheds and cargo handling facilities is funded through the issuing of bonds, subsequently recovered from charges for the use of those facilities.

Tonnage dues and special tonnage dues are national government taxes on foreign trading vessels based on net tonnage. Discounts apply to vessels which use ports frequently.

## **Financial arrangements**

Japanese ports are not expected to fully recover development costs through their operations alone. Port development relies on significant funding, in the form of grants, from national and local governments. Generally, the Japanese Government makes a higher contribution to 'specially designated major ports' than to 'major ports', and to 'major ports' than to 'local ports'. It also contributes loan funds (at concessional rates) for the construction of container and ferry terminals.

## **F10 New Zealand**

### **Role of port companies**

Prior to 1988, New Zealand's ports were controlled by elected Harbour Boards. They controlled harbour waters including safety and navigation, undertook port planning, and provided berths and cargo handling facilities. They had the exclusive right to own and operate mobile cargo handling equipment. They also had the right to tax ratepayers within their Harbour District and were exempt from paying taxes or dividends.

Legislation, passed in 1988, required each harbour board to form a separate Port Company to take over all commercial activities. These port companies are required to operate as commercially accountable businesses, free from legislative controls. The exclusive right of harbour boards to own and operate mobile cargo equipment was removed, and the provision of pilotage and towage services was

made competitive. Port companies themselves may own tugs and provide pilotage services. Dredging is usually undertaken by specialist companies.

At the same time, the New Zealand Ports Authority was abolished. This was a central planning body which had been required to assess and approve all significant items of capital expenditure at New Zealand's ports. It was claimed this requirement had led to lengthy delays in obtaining approval for investment.

Initially, the harbour boards were allowed to retain up to 100 per cent of the shareholding in the port companies, with the right to offer up to 49 per cent of it for sale as they thought fit.

Subsequently, harbour boards were abolished, and their statutory and regulatory responsibilities for safety, navigation and control of marine pollution were devolved to regional authorities. In most cases, these regional authorities received the boards' shares in the port companies.

In 1990, legislation was passed allowing the sale of 100 per cent of the shares in the port companies. To date, the Port of Tauranga has been partially privatised. Other ports are still fully owned by regional authorities.

Port companies are allowed to take up new business opportunities, and to explore particular marine-related market niches.

### **Nature and extent of activity**

New Zealand's ports are all relatively small. In 1991 overseas cargo totalled about 22 million tonnes. The Port of Tauranga was the largest in terms of tonnage, with about 6 million tonnes of cargo, the major items being logs and other forest products. It handled about 40 000 containers, and achieved a return on assets (valued on a historical basis) of about 20 per cent. The port company owns and operates tugs and provides pilotage services. It owns storage facilities and cranes, and provides crane drivers.

Some New Zealand port companies have expanded the range of their commercial activities beyond the port in order to attract port custom. For example, the Port of Wellington has been part of a consortium which bid for a government forest which was being privatised, and plans to establish a woodchip facility in the port.

### **Competition**

Under the new arrangements, port companies are required to operate commercially. Some, for example Tauranga, have made profits, declared dividends and paid tax.

They are free to compete with each other. They may provide cargo handling facilities such as quay cranes, and supply conventional stevedoring services. Both these factors can influence intraport competition.

### **Pricing**

Port fees and charges have become more subject to commercial negotiation than before. Since their formation, port companies have generally reduced charges to users, in real terms.

Port charges may have a vessel-fee and a cargo-fee component. For example at the Port of Tauranga, vessel fees comprise a tonnage fee, a tug service fee and a daily service fee based on the length of vessel. Cargo fees are based on the weight or volume, depending on the nature of the cargo, of cargo loaded or discharged.

Shipping costs have decreased markedly overall, due to decreases in stevedoring costs and big improvements in vessel turnaround times.

### **Employment**

Employment reduced significantly—from about 2700 to 1650—with the formation of port companies and the abolition of harbour boards. There have been further reductions since.

Stevedoring reform has progressed in New Zealand since 1989, with a halving of the number of waterside workers since that time (assisted by a government-funded redundancy package). Industry employment was abolished, work practices reformed, and multiskilling introduced. At Tauranga, for instance, cargo can be worked 24 hours a day, every day of the year; ship departures have increased, but average days in port have more than halved. A number of stevedoring and terminal operating (marshalling) companies work under contract to cargo interests, shipping companies or vessel charterers.