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Productivity Commission
Harbour Towage Inquiry
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Dear Sir/Madam

Inquiry into the Economic Regulation of Harbour Towage

Thank you for the opportunity for the Department of Infrastructure (DOI) to make a submission to this inquiry. The comments provided do not reflect the position of the Victorian Government. Rather, the submission represents the views of DOI and are provided in the spirit of adding input to the inquiry as distinct from communicating a formal policy position.

The DOI, through its Ports and Marine Division, has a key role in developing strategies and implementing policies for Victoria's ports and marine sectors. It is also responsible for regulatory and safety issues in the marine and aviation fields.

The division liaises closely with Victoria's commercial ports at Melbourne, Portland, Hastings and Geelong as well as the Victorian Channels Authority, Melbourne Port Corporation and Marine Safety Victoria as part of its role in applying Government initiatives to improve the efficient operation of Victoria's sea freight networks.

In terms of the regulatory framework applicable to the harbour towage industry, the primary issue is whether the industry should continue to be regulated. The secondary issue is the nature of this regulation. While not making a formal position on the primary issue of whether regulation is warranted, DOI contends that arguments can be made in favour of price deregulation.

The justification for regulation is market failure. In the case of economic market failure, the market produces too much, or too little of a product (or service) in response to private costs. Economic regulation is intended to correct the divergence in costs so that private and social costs are equal and an efficient level of output is produced.

Safety regulation could be seen as a response to a specific form of market failure, because the private sector does not factor into its decision making process efficient levels of safety. Alternatively, the government can form a view on a desirable level of safety irrespective of efficiency (say a safety quota). This issue of safety is of critical importance in the harbour towage industry given that the risk of maritime incidents is high both in terms of environmental costs and damage to expensive land-side port infrastructure.

The economic objectives of regulation are the same irrespective of social, political, or other justifications for it. In all instances, an economically efficient level of regulation will be one that ensures that production reflects its full resource cost.

The existence of the *Trade Practices Act 1974* reflects concerns that certain businesses will behave inconsistently with competitive market behaviour. First, where businesses have the potential to exploit market failure they will do so to their own advantage. Secondly, due to natural monopoly characteristics, it might be appropriate for a single firm to produce all the industry output, but not let it determine its own market price.

The justification for regulating harbour towage is probably a hybrid of both of these issues and derives from concerns that the harbour towage industry is not disciplined by competition. That is, although towage exhibits the characteristics of natural monopoly, combined with safety concerns, there remains the potential for the incumbent operator to charge inefficiently high prices.

It is worth reflecting on the importance of time in this assessment. In the short term, the harbour towage industry is difficult to enter due to the capital intensive and highly skilled nature of the industry. In addition, a multi-port presence by the incumbent operator allows pan-Pacific rates (price discounts) to be offered to customers thereby significantly disadvantaging a new entrant who may only have a single port operation. Consequently, occasional increases in prices suggest that the incumbent may have some form of market power. However, in the long term, technical substitutes such as bow and stern thrusters will become cheaper relative to towage. Thus, both technological change and contestability will erode any form of market power that might exist in the short term.

DOI contends that any decision to regulate towage should be based on the failure of the market to provide adequate safety, not harbour towage operators exercising market power. The relevant economic question is how to provide the determined level of safety at the least resource cost to society. A way to deal with the provision of the government determined level of services would be to auction (negative bid) the right to provide the level of services. Bidders would be encouraged to determine their own technology for providing the service and the government could contract with the lowest bidder. It is likely, if the natural monopoly assumption regarding towage applies, that the winner of the negative bid will also be the provider of the efficient level of services.

It can be argued that economic regulation of prices is warranted because new entry and/or technical substitution in Australia may occur at an inefficiently high price. However, this argument may not apply to the Australian market due to the nature and characteristics of the sub-markets in contrast to overseas markets. Consequently, any such regulation will have to take into account the nature of the Australian industry and the dynamic changes required to drive efficiency in the long term. It is critical that the price be allowed to adjust to the point where it entices new entrants or technological change.

Under the present arrangements, Adsteam has reduced control over its revenue except to increase prices – thus, arguably the motivation for Adsteam to increase its prices as a consequence of its market position is different to a profit-maximising monopolist in other

markets where the firm has more control over its revenue base. In the case of harbour towage, it is the pilots in consultation with the ship's Master, who determine the quantity of services Adsteam produces (the number of tug jobs).

In addition, Marine Safety Victoria also determines minimum marine safety requirements which impacts on harbour towage profitability. Demand for harbour towage services over recent times has remained relatively stable or decreased due to modest decreases in the number of ship visits (due to the use of larger vessels) to some ports and some ships not requiring tug service.

Competition and its effectiveness can be usefully analysed in terms of the Structure of the relevant market and the resulting Conduct and Performance of participants operating within the market structure. Under this analytical model, the following examines some of the issues in respect of the harbour towage industry in Australia taking into account key questions raised by the Commission in its Issues Paper.

Structure of the Relevant Market

A market can be defined as the service (or product) market and the geographic market. The structure of the relevant market is an important determinant of (a) the conduct of the market participants and (b) the economic performance of the relevant market.

What factors have driven rationalisation of harbour towage?

Rationalisation of the harbour towage industry in the past few years appears to be consistent with broader trends throughout the international maritime world. Factors which appear to have driven this trend include the following:

- The need to capture economies of scope and scale through the integration of various operational activities due to the large capital with associated long term investment and highly skilled nature of the harbour towage industry.

- The need to capture efficiency benefits through the integration of management structures, reporting standards, the development of new and improved products, services and technology.

Are there significant efficiency benefits in having one operator provide harbour towage in any one port and/or across a number of ports?

The market for towage services comprise of a number of geographic sub-markets which are defined on a port by port basis because of limited demand and supply substitutability between individual ports. Proximity of some ports implies that competition may be stronger between these ports than it is with other ports. Thus the sub-market may be defined more widely than a single port in some cases. The towage market characterised

by joint ventures and vertical integration is partly a reflection of the size of the sub-markets[1].

In most cases given the existence of capital barriers to entry, efficiency benefits (for example benefits from allocative efficiency) are best generated and sustained where the towage sub-market(s) is serviced by a single operator. This could reduce the likelihood of significant excess capacity and unit cost(s) in towage being generated during periods of weak trade activity, thereby minimising the extent of any inefficiencies through idle resources.

What other services do harbour towage operators provide (eg fire-fighting, salvage)? To what extent is there joint production of these services (that is, to what extent do they share equipment and other inputs)?

The service market for the provision of tug services by tug operators provides services for the berthing, shifting and departure of ships from a port. Due to Australia's extensive coastline, the harbour towage operators can also undertake salvage and deep-sea towage work. Differences in technology between different types of tugs mean that not all tugs can perform the salvage and/or deep-sea towage work. The nature of these differences may result in different types of tugs being used for the provision of different types of services. Hence the joint production of some types of services by harbour towage operators is unlikely.

Similarly, the lines service market[2] offers services for ships approaching or positioned at a berth or departing a berth. Lines services include lines boats, mooring and unmooring gangs. These services are provided in a way which ensures that the mooring process is carried out quickly and safely. The Adsteam Marine Group is a provider of lines services in Australia.

The above market structures suggest that sometimes (but not always), services provided by harbour towage operators may share certain inputs of production for example labour.

Market Conduct and Competition

Is there evidence of misuse of market power at ports where harbour towage is unregulated?

A firm's market power can be manifested on the supply side through increased prices and lower quality/service to consumers, or through predatory conduct with respect to its rivals.

[1] ACCC (1995) "Inquiry into the harbour towage declaration".
[2] www.adsteam.com.au.

On the demand side, a firm's market power can be manifested through lower prices being paid for inputs, and reduced terms and conditions for its suppliers; or the ability to extract more favourable terms than those of its rivals[3].

Supply Side

Demand for harbour towage services is price inelastic. Towage is a small component of port charges and shipping of cargo can be port specific. Hence it is less likely that ship operators would change harbour towage operators or their port of call in response to a rise in towage charges. Though there is no evidence of misuse of market power at ports where harbour towage is unregulated, in the short term, the harbour towage industry appears to be relatively difficult to enter. The capital intensive and highly skilled nature of the industry and occasional price increases suggests that the incumbent may have some form of market power in the short term.

However, in the long term, substitutes such as bow thrusters will become cheaper relative to towage. Thus, both technological change[4] and contestability will erode any form of market power that might exist in the short term.

Demand Side

Supplier terms and conditions as well as prices of certain inputs of production (for example cost of tugs[5]) are often driven by factors outside the control of towage operators. In the short to long term, the introduction of technologically advanced tugs, improvement in labour wages, etc, suggest it is less likely that towage operators are, or will be paying lower prices for certain inputs of production. Though there is no evidence of misuse of market power at ports where harbour towage is unregulated, the trend in input prices suggest that there is little or no scope on the demand side for a tug operator to exercise or misuse market power.

How real is the threat of entry into harbour towage services if prices are too high? Does the possibility of new entry vary between ports and, if so, why?

It can be argued that harbour towage is a capital intensive and highly skilled industry. Hence, barriers to entry essentially take the form of capital barriers although technical regulatory barriers also exist on safety grounds in terms of the licensing requirements imposed on operators.

International trend suggests that there are many suitable tugs available on the international market and some international competitors already active in Asia and Europe may in the medium to long term probe the Australian market. Business policies, managerial and operational improvements pursued by such international competitors could enhance competition and service delivery if they enter the Australian market.

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[3] ACCC submission to the Joint Select Committee on the Retail Sector, August 1999.
[4] Over time, there is a natural tendency for ship technology to improve and for vessels to become more manoeuvrable.
[5] The capital costs of tugs represent a large component of overall costs for a harbour towage operator in a port.

By definition these circumstances constitute a competitive threat to tug operators in Australia (especially in ports such as Melbourne for which future trade growth prospects are favourable). In view of the nature and characteristics of the service or geographic market for harbour towage services, the possibility of new entry could vary between ports.

Are there any recent Australian or overseas examples of new entry into towage markets?

Some international competitors already active in Asia and Europe may in the medium to long term probe the Australian market. The following article in the Lloyd's List Daily Commercial News highlights this view:

> *A well known Melbourne entrepreneur is preparing to enter the towage industry in Australia, directly challenging Adsteam Marine in the main container ports- Melbourne, Sydney and Brisbane... It is understood that Mr Chen and business partner Talent Lee Yung have tugs from a major international towage operator standing by for deployment... (LLDCN, 19 March 2002).*

How important are scale economies in the provision of harbour towage services? Do scale economies effectively restrict the number of providers of towage and related services at major Australian ports? Is a single provider of these services the most cost-efficient outcome at individual Australian ports?

The existence of economies of scale is important in industries characterised by large capital investment and significant fixed costs, such as towage. Towage operators who operate in more than one port enjoy economies of scale in administration and might be able to take advantage of bulk discounts for certain inputs of production. National operators are also able to relocate tugs in response to fluctuating demand in various sub-markets.

The towage market is characterised by joint ventures and vertical integration. This is partly a reflection of the size of the sub-markets. In most cases, economies of scale are such that towage services can most efficiently be supplied by a single operator.

Are there significant variations in towage charges across ports? In particular, how do prices for harbour towage services in ports where harbour towage services are declared under the Prices Surveillance Act (PSA) 1983 differ from charges at ports where services are not declared? What factors explain any variations?

Charges for towage services are specified in schedules published by harbour towage operators. These schedules vary between ports but some components are common to most ports.

In terms of Victoria's commercial ports, only the port of Melbourne is 'declared' under the *Prices Surveillance Act 1983.* In contrast, the Essential Services Commission (ESC) is

responsible for the economic regulation of the regional ports of Geelong, Hastings and Portland in respect of towage wherein towage remains a 'prescribed service' for the purpose of the *Port Services Act 1995*.

The regime applied to regional ports is analogous to that implemented by the ACCC for Melbourne, in that the towage operator is required to advise the ESC of proposed price increases which are then vetted through a public consultation process.

Demand patterns for towage services across Victoria's regional ports differ given the diversity of each port's trade and commercial profile. Compared with the port of Melbourne, regional ports are characterised by high-volume, low-value trades including dry and liquid bulk, as well as break bulk – very little containerised cargo is moved through these ports. Accordingly, vessel call patterns and vessel sizes differ thus impacting directly on the nature and charge of the towage task at these ports.

Performance of the Relevant Market

Market performance, measures the extent to which a firm's policies contribute to national objectives of efficiency, technological progress and equity (ACCC, 1995). The exercise of market power could lead to increased prices for towage services, which everything being constant could also lead to excessive profits. This trend in prices and subsequently in profits could in the medium to long term affect appropriate investment decisions in the industry.

What have been key factors contributing to changes in demand at some or all ports?

Demand for towage services is usually measured in terms of tug jobs provided. This demand is derived from the number of ship visits, the size of ships, the composition of cargo, the vessel's technology in terms of bow and stern thrusters, the technical competency and skills of the pilot, weather conditions and the general state of the economy.

Towage operators' ability to influence the size of the market is constrained by the derived nature of the demand as, unlike most markets, the price of towage plays a minor role in determining the size of the market (ACCC, 1995).

The decision as to how many tugs are to be used for a given ship's movement is left to the ship's Master, in consultation with the pilot. Pilots having regard to guidelines, determine the number of tugs to use per ship manoeuvre. Thus key factors affecting the demand for tugs are made by industry players not directly involved in the towage sector.

Has demand for harbour towage service been increasing or decreasing? Do demand patterns and changes in these patterns differ across ports?

Demand for harbour towage services over recent times has remained static or decreased, due to modest decreases in the number of ship visits to the port of

Melbourne. Over the period 1997-98 through 2000-01, the number of ship visits to the port of Melbourne has averaged 2,892. During 2000-01, ship visits were almost 2 percent lower than in 1999-2000. Although the gross tonnage of ships has increased over this period, the number of ships visiting the port of Melbourne has fallen. These figures confirm recent global shipping industry trends to utilise larger vessels and/or rationalise services.

The observed changes in demand patterns largely affect container vessels as distinct from bulk cargo vessels. As the port of Melbourne is Australia's largest container port, the impact of recent trends in container vessel activity on towage demand is more pronounced than for other Australian ports. In light of the differences in the nature and characteristics of individual ports and the trade they cater for, harbour towage requirements in these ports, demand patterns and changes in these patterns will differ across ports.

Is profitability of the industry excessive? How variable is towage profitability?

Profitability of harbour towage operators in terms of earnings before interest and tax is dependent on the revenue stream of these operators. An operator's revenue stream is dependent on the number of tug jobs and the charge per tug job. The derived nature of the demand for towage services and the nature and characteristics of the towage industry is such that, tug operators and for that matter Adsteam, have no control over their revenue stream. Though towage operators determine the charge per tug job, it is the pilots who determine the quantity of services that Adsteam produces (in this case the number of tug jobs).

Demand for harbour towage services over recent times, has remained relatively stable or decreased due to modest decreases in the number of ship visits (due to the use of larger vessels) to some ports[6] and some ships not requiring tug service. Adsteam has a declining revenue base through the evolution of shipping alone. Hence it can be argued that in view of the high fixed cost and relatively stable or declining revenue base, profit margins have remained relatively stable if not declined.

As fixed costs are a large proportion of total costs, demand fluctuations can have a large impact on the trend in towage profitability.

Again, thank-you for the opportunity for DOI to provide a submission to the review of harbour towage regulation. If you wish to discuss any issues raised, please contact Mr Des Powell, Executive Director, Ports and Marine Division, on telephone 9655 6857.

Yours sincerely,

Prof. Lyndsay Neilson
Secretary 23/4/02

[6]In particular the port of Melbourne.