

**ADSTEAM MARINE LIMITED INITIAL SUBMISSION**

**Introduction**

1. Adsteam Marine Limited (“Adsteam Marine”) welcomes the opportunity to make an initial submission to the Competition Commission (the “Commission”).
2. Adsteam Marine considers that in reaching its decision to refer the Transaction (as described below) the Office of Fair Trading (the “OFT”) wrongly concluded that SvitzerWijismuller and Adsteam Marine were the most likely entrants into UK ports in which the other currently provides harbour towage services. In fact, the true constraint on Adsteam Marine’s UK business comes from actual entry by or the threat of entry from operators other than SvitzerWijismuller (referred to in the OFT decision as “low cost operators”). Adsteam Marine looks forward to providing further argument and evidence to the Commission during the course of the reference, including material that was not available to the OFT that will help to demonstrate that the Transaction would not lead to a substantial lessening of competition for this reason.
3. Adsteam Marine considers that whilst the relevant economic markets for the provision of harbour towage in the UK are single port areas, an analysis of how competition operates on those markets should have reference to the economics of and trends within the global shipping and towage industries rather than the national perspective taken by the OFT.
4. Adsteam Marine also considers that the Commission’s analysis of the transaction and the conditions of competition in the provision of harbour towage would be assisted by analysis conducted by the Productivity Commission in Australia.
5. Accordingly, this initial submission is set out in the following sections:
  - The Company
  - The Transaction
  - Adsteam Marine’s UK activities
  - Overview of the Towage Industry
  - The Report of the Australian Productivity Commission

## **The Company**

6. Adsteam Marine is a company quoted on the Australian Stock Exchange. It is a leading international provider of harbour towage and related maritime services. Its turnover in the year to 30 June 2006 was AUS\$321.5m. Adsteam Marine's principal activity is harbour towage and it also offers a range of maritime services, including line running/mooring, work boat and offshore services, vessel management, salvage, emergency response and ships' agency. The three main operational units are Adsteam Australasia, Adsteam Europe and Adsteam Agency.
7. Adsteam Europe is the operational division of Adsteam Marine based in the UK. Adsteam UK Limited ("Adsteam UK") is the parent body for Adsteam Marine's European operations. Adsteam UK is a wholly owned subsidiary of Adsteam Marine and its main activity comprises the provision of harbour towage services in the UK. Adsteam UK also has a salvage capability through its subsidiary United Salvage and it supports marine construction works through its subsidiary FelixArc Marine. The turnover of Adsteam UK Limited was £47.6 m in 2006.
8. The current business activities of Adsteam UK essentially result from a series of acquisitions either of towage operations at a single port, most recently Red Funnel at Southampton, or of smaller towage companies operating at more than one port.

## **The Transaction**

9. As the Commission is aware, SvitzerWijismuller announced on 3 July 2006 a Public Offer under the rules of the Australian Stock Exchange to purchase the entire share capital of Adsteam Marine.
10. The Commission will also be aware that on 21 September, SvitzerWijismuller announced an extension to and variation of that Offer. Attached as Annex 1 is the Australian Stock Exchange announcement made by Adsteam Marine on 21 September 2006 supporting the extension of the Offer.

## **Adsteam Marine's UK Activities**

11. Adsteam Marine's operations in the UK are described below:
12. **Humber**
  - 12.1 The Humber port area consists of three significant enclosed ports – Hull, Immingham and Grimsby – as well as numerous river terminals. Hull's operations are mainly concerned with general cargo and ferries, while Immingham is the UK's major bulk port, with oil, coal, iron ore and ro-ro ferries. Grimsby is the UK's second largest motor vehicle port.

12.2 Adsteam UK services all three ports, with Immingham being the major source of revenue, followed by Hull. Adsteam Humber currently operate with 12 tugs and Humber Tugs, a subsidiary of Adsteam UK operate 3 tugs. [•]

12.3 [•]

12.4 Rival towage operators on the Humber are SMS Limited, Harvey and Dean.

### 13. **Felixstowe**

13.1 On the east coast of the UK, on the River Stour, Felixstowe is the UK's largest container handling port (2.7m teus). It is the 7<sup>th</sup> largest in Europe.

13.2 Adsteam UK operates 4 tugs at Felixstowe, [•]

13.3 [•]

13.4 There are no other towage operators at Felixstowe.

### 14. **Thames and Medway**

14.1 On the east coast of the UK, the River Thames is navigable by ships for over 50 miles. At its mouth, larger ships berth at oil refineries, while further to the west the enclosed port of Tilbury attracts significant business. Still further west, there are numerous berths and terminals, as far as Tower Bridge in the middle of London. A multitude of cargoes are handled, the main ones being oil, containers, vehicles, ro-ro ferries, grain and sugar.

14.2 The River Medway enters the Thames from the south. The port of Sheerness is the base for Adsteam UK operations in the area, which covers the ports of Sheerness and Chatham, the Thamesport Container Terminal (0.5m teus), the LNG terminal on the Isle of Grain and Thames river work as far west as The Havens. Recent operational changes on the Thames have resulted in Medway tugs supporting Thames tugs in their work – and vice versa. The main cargoes in the Medway are motor vehicles, fruit, timber, containers and fuels, including aviation fuel and LNG.

14.3 Adsteam UK operates a total of 11 tugs in the Thames and Medway operational centre. [•]

14.4 [•]

14.5 Rival operators are Targe Towage which services BP's Coryton facility and GP Marine.

### 15. **Southampton**

15.1 On the south coast and on the Solent estuary, the port of Southampton includes one of the UK's major container terminals (1.4m teus) as well as the large Exxon oil refinery. It is also the UK's major motor vehicle port and, within the port complex, there is also a military port.

15.2 Adsteam UK operates 7 tugs at Southampton, [•]

15.3 [•]

15.4 Rival operators are Itchen Marine which provides harbour towage and Ostenjo which services the Fawley oil terminal.

## 16. **Liverpool**

16.1 On the UK's west coast, and standing on the River Mersey, the port of Liverpool has a complex dock system whose main trade is with Ireland and North America. The main cargoes handled are containers, oil, grain, coal, scrap metals, ferries and general cargo. Adsteam UK's operation also covers the port of Birkenhead.

16.2 Adsteam UK operates 6 tugs from this base, [•]

16.3 [•]

16.4 Rival operators are SvitzerWijismuller and Carmet Tugs servicing the Manchester Ship Canal.

## 17. **Falklands**

17.1 In the Falkland Islands Adsteam UK provides harbour towage services to the Ministry of Defence.

17.2 Adsteam UK operates 1 tug, [•]

17.3 The Ministry of Defence announced earlier this year that the Falklands work was going out to tender. The outcome of the tender will be announced in October 2006.

17.4 Adsteam believes that tenderers included: Adsteam UK, DSB Offshore, EA Gibson, Edda Supply Ships, Fendercare, J&A Gardner & Co Ltd, GSS Plant, Holyhead Towing, Lamalco, Maritime Craft Services, Sea Tow Ltd, Seascope, Serco Denholm, Smit, Stone Investment & Trading, SMS Limited, Stanley Services, SvitzerWijismuller, Swire, Swire Pacific Offshore, Vanstee and Vosper Thorneycroft and that the following qualified to the second round: Adsteam UK, Fendercare, J&A Gardner & Co Ltd, Holyhead Towing, Lamalco and Sea Tow Ltd.

## **Overview of the Towage Industry**

18. Adsteam Marine is preparing answers to the Commission's questionnaires that will provide detail on its UK operations and the conditions of competition under which they operate. Adsteam Marine considers that the Commission would also benefit from an overview of the international towage industry. In order to provide relevant background information, we have attached at Annex 2 a paper by Rod Atkin and Merv Rowlinson dated 2000 outlining the development of towage markets in Europe and at Annex 3, a paper by Merv Rowlinson dated 2002 detailing trends in competition in harbour towage.
19. The papers illustrate the trend in the European towage sector towards increasing competition. Deregulation of port services, easy access to capital at reasonable cost, a ready market for tugs (new or second hand), international standards and free movement of labour have all combined to facilitate entry into individual harbour towage markets in Europe, including the UK. The increasing concentration of shipping and port companies and their improved supply chain management have also increased bargaining power of major customers and increased the strength of a threat by customers to induce entry.
20. The paper attached as Annex 2 identifies new entry into harbour towage markets in Europe in the period to 1997, including the emergence in the UK of previously unrecognised competitors such as BI Tugs on the Medway, Carmet Tugs on the Manchester Ship Canal and West Coast Towage in Wales.
21. Adsteam Marine considers that these trends have continued and the entrance of SMS Limited on the Humber, BP introducing its own tugs on the Thames (operated by Targe Towage under a manning contract), Targe Towage at Aberdeen and Kotug into Le Havre provides further examples of more recent entry.
22. In assessing possible entry in the UK, Adsteam considers that likely entrants would be those companies, whether existing operators or new entrants to the market, able to operate using a low cost labour model. [•]
23. On the other hand, the least likely entrants to provide harbour towage at a port in the UK would be SvitserWijsmuller and Adsteam UK. If either company were to seek to enter a "new" port in the UK, crew costs and potential industrial relations problems would represent a very significant barrier to entry. [•]. Therefore, as between the parties to the proposed merger, barriers to entry are high. This is evidenced by the fact that Adsteam UK has never pursued a strategy of entering the ports in which SvitserWijsmuller operates.

## **The Report of the Australian Productivity Commission**

24. Attached as Annex 4 is a report dated 20 August 2002 by the Australian Productivity Commission entitled "Economic Regulation of Harbour Towage and Related Services" (the "Report").
25. The terms of reference of the Productivity Commission Inquiry are set out at pages ii et seq of the Report. The Commission was asked to report on:
- "a) the impact of structural reforms on the provision of harbour towage and related services (eg mooring lines), including the extent to which efficiency and productivity gains have been passed on to the users of these services;*
- b) other measures that could be taken to increase the level of competition in harbour towage and related services, where desirable; and*
- c) whether there is a continuing need for price oversight of certain harbour towage services and, if so, the most effective forms of price oversight".*
26. In preparing the Report the Productivity Commission heard evidence from industry participants and reviewed the market structure in the provision of harbour towage including the effectiveness of competition. Whilst Adsteam Marine acknowledges some important differences between the markets for harbour towage at ports in Australia and equivalent markets in the UK as well as differences in regulation between Australia and the UK, it believes that the Report offers a useful insight into the nature of competition in the provision of harbour towage which will assist the Commission in consideration of this reference.
27. The Commission is directed, in particular, to the section of the Report entitled *"6.2 Competition in the Supply of Harbour Towage Services"* at pages 73 et seq. The Commission will note that in Australia, as in the UK, there tends to be a single towage operator at each port, reflecting the basic economics of towage provision. The Productivity Commission considered whether this structure which has some of the characteristics of a "natural monopoly" at an individual port might thereby imply an "absence of competitive pressure". In particular, it considered whether the threat of other providers entering the market if the incumbent operator sets prices too high or provides inappropriate quality of service would constrain that incumbent. In this context, it considered whether barriers to entry were high and after hearing evidence from a range of industry participants concluded, as follows:
- "Barriers to entry into the towage market include the cost of transporting tugs, losses on resale of tugs, development of a customer base, training of crews and redundancy payments on exit. Available evidence suggests that these barriers, while not insignificant, are not large. There is a pool of alternative towage operators able to enter the Australian market". (page 92)*

28. In Australia Adsteam Marine is by far the largest towage provider with no established second player. The pool of alternative towage operators identified by the Productivity Commission would include towage companies outside Australia, including PSA, HUD, and the Ports of Auckland. In fact, entry has subsequently incurred from a start-up operator backed by two major shipping lines, AMS, which currently provides harbour towage at Melbourne, Brisbane and Port Botany (Sydney). Hunter Towage Services also entered at Newcastle, backed by a number of major shipping lines at the port.
29. The Productivity Commission also considered countervailing power on the part of towage users, concluding as follows:
- “Countervailing power of towage users has the potential to limit or even eliminate the market power of individual towage providers. At ports with a small number of users, their negotiating power should be sufficient to temper significantly the market power of towage providers. At ports where there are a large number of users, the cost and complexity of organising them to negotiate as a group will limit their countervailing power. In these situations, shipping industry organisations or port authorities could provide a lower cost and more effective forum for organising towage users”. (page 100)*
30. Adsteam Marine considers that similar competitive constraints exist in the UK. The conditions of competition vary between harbour towage markets in the UK depending on factors such as the topography of the port, the identity of the port authority, the number of tug jobs and the nature of shipping at each port, but at all affected ports in the UK, the combination of the threat of entry and countervailing buyer power would continue to act as an effective constraint on the merged entity should the Offer proceed. That threat would be potent because any new entrant would use a low cost labour model compared to that of the merged entity.



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**21 SEPTEMBER 2006**

**FOR IMMEDIATE RELEASE**

**ASX ANNOUNCEMENT**

**ADSTEAM SUPPORTS SVITZERWIJSMULLER'S OFFER EXTENSION  
AND ADSTEAM ANNOUNCES INTERIM DIVIDEND PAYMENT**

The Adsteam Board supports SvitzerWijsmuller's decision announced today to continue their Offer to purchase all of the outstanding Adsteam shares under revised terms.

Key elements are:

- an extension of the Offer until 27 October 2006;
- approval for Adsteam to pay a dividend of 4.1 cents per share (in lieu of the final year 2006 dividend) whilst retaining the \$2.54 per share offer price; and
- the removal of the break fee.

Full details of changes to the Offer are set out in SvitzerWijsmuller's announcement dated 21 September 2006.

The Offer remains conditional, including the satisfaction or waiver of the UK regulatory condition and 90% shareholder acceptance.

**DIRECTORS' RECOMMENDATION**

In assessing whether to support the extension of the Offer, the Adsteam Board considered various matters including the impact of an extended offer period and the length of the UK Competition Commission (**UKCC**) process which is expected to conclude in February 2007. A copy of an indicative timetable for the UKCC process is attached. The Board also considered the possible effect of that process on Adsteam's business and its shareholders.

In deciding to continue its support for the Offer, the Board has taken the view that the Offer is in the best interests of the Company's shareholders particularly given that:

- no higher offer has been received; and
- agreement has been reached on changes to the Offer including the payment of a dividend.

With respect to the UKCC process, Adsteam and SvitzerWijsmuller will work together to assist SvitzerWijsmuller to present the case to the UKCC. SvitzerWijsmuller has undertaken to reimburse Adsteam's reasonable external costs directly associated with assisting in the UKCC process up to a limit of GBP£1.0 million.



21 SEPTEMBER 2006

FOR IMMEDIATE RELEASE

ASX ANNOUNCEMENT (cont'd)

As a consequence, the Board continues to believe that, in absence of a higher offer, the SvitzerWijsmuller Offer represents the best value for Adsteam shareholders. Accordingly, the Board continues to recommend that, in the absence of a higher offer, Adsteam shareholders accept the SvitzerWijsmuller Offer after the UK regulatory condition has been satisfied or waived.

#### **DIVIDEND PAYMENT**

Adsteam will pay an interim dividend of 4.1 cents per share, franked to 23%.

The Record Date for the interim dividend will be 3 October 2006. Registered shareholders as at the close of business on the Record Date will be entitled to receive the interim dividend.

The payment date for the interim dividend will be 30 October 2006.

The Company's shares will trade "ex-dividend" on 26 September 2006.

Eligible shareholders who have already accepted the SvitzerWijsmuller Offer will still be entitled to receive payment of the interim dividend.

While the SvitzerWijsmuller Offer remains open, the Directors consider it appropriate to suspend the Dividend Reinvestment Plan (**DRP**) for this interim dividend because the Offer would not extend to new shares issued under the **DRP**.

#### **BUSINESS AS USUAL**

During the bid process, Adsteam has and continues to operate on a "business as usual" basis.

Adsteam's Australian and UK businesses are trading satisfactorily in the early stages of the FY2007 financial year. An update on Adsteam's operational performance will be provided at the Annual General Meeting on 7 November 2006.

Costs associated with the Offer will be included in the reported results for the six months ended 31 December 2006.

**SVITZERWIJSMULLER A/S / ADSTEAM MARINE LIMITED MERGER INQUIRY**

**Administrative timetable\***

\*Published on 19 September 2006, as required by Rule 6 of the Competition Commission's Rules of Procedure. Any revisions made to the timetable will be published on this website.

31 August 2006	Merger reference made
September/October	Gathering information; issuing questionnaires; hearing third parties; site visit/s to main parties
October	Publish issues statement; first main party hearings
Early/mid-November	Second main party hearings
November	Verifying information; considering provisional findings
27 November	Final information deadline (prior to provisional findings)
Early December	Notifying provisional findings and (if required) possible remedies
Mid-December	Remedies hearings (if required)
Late January/early February	Publish report on CC website
14 February 2007	Statutory deadline



## Competition in ship handling: a study of market turbulence in North European harbour towage

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This paper addresses the issues of an increasingly competitive towage industry in Northern European ports. Enhanced competitiveness reflects the trends in the global mobility of capital, labour, enterprise and management within the context of deregulated port markets. Up until the early 1990s, the long term trend in major North European ports had been towards market concentration. Many small towage firms have been taken-over, bought out or merged. Alternatively, a pattern of consortia has emerged with co-operation and market sharing seen as preferable to ruinous competition. A contrasting trend has occurred in the 1990s, with new entrants into hitherto stable markets. In a number of ports—Antwerp, Rotterdam, Bremerhaven, Hamburg, Southampton, Thamesport, Bristol Channel—new fleets have brought competitive challenge to the incumbent towage fleets. The process of enhanced competitiveness raises questions of safety, reliability, investment and professionalism. The movement towards an openly competitive shipping industry has been in evidence from the 1960s onwards. The momentum of a dynamic shipping industry, with its competitiveness sharpened by the use of global supply factors, has intensified from that period. The movement in European tonnage towards flags of convenience and global labour supplies began in the tanker and bulk carrier markets; more recently this has spread to deep sea liner, short sea and even cabotage trade shipping. The towage industry is the last North European shipping sector to make this transition, following the trends towards port deregulation in the 1990s. From this perspective, this paper considers the impact on the towage market of global mobility and deregulation in North European towage markets—the impact of increased competition on the traditional operators and the likely effect on operational towage standards.

### 1. Introduction

Competitive developments in UK and North European harbour towage have been of interest to maritime business analysts in recent years. The long term trends of market concentration—leading to reduced competition—can now be seen as under threat, shaken by a period of market turbulence. Long-standing contracts enjoyed by incumbent companies have been lost to new market entrants. As a result, towage rates have fallen, vessels have been sold and redundancies have occurred. Some ports have experienced 'territorial raiding' and resulting retaliation, as fleets have been

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deployed in search of new markets. The once significant linkages between towage companies and their port communities are becoming weakened by global movements of capital and labour.

The pensive mood of the industry in 1998 has been well summarized by towage correspondent, Jack Gaston [1]:

A tug naming ceremony, held at Rotterdam's Parkkade... , sent further tremors through the ranks of traditional European harbour tug operators when the new German owned *Fairplay 21* was introduced to prospective clients at the Dutch port.

The implications of this competitive upsurge are of considerable interest to the shipping industry. At first sight, it is obvious that competition serves port user interests, given the inherent benefits of lower rates and increased customer choice.

It was estimated, in 1996, that the initial response of the incumbent Hamburg tug companies was to reduce tariffs by up to 25% following the arrival of the new entrant, Kotug [2]. This may be seen within the short-term context of shipowners' cost savings on towage; longer term considerations include the issues of investment and maintenance of high standards of operation. This is particularly important given the propensity for the large owners to invest heavily. 1996, for example, saw the UK market leaders Howard Smith Towage and Cory Towage investing £18m and £10m respectively [3].

### 1.1. *Key objective*

The key objective for this paper is to

consider the specific market conditions under which competitive upsurges have occurred or are likely to occur. Emphasis will be on the contemporary forces of global mobility in ownership, investment and crewing and market deregulation.

In considering these objectives, Dibner's [4] strategic analysis of the world towage industry into the 21st century is utilised to stress the relationship between market characteristics and the extent (actual or likely) of new entrants and their competitive behaviour. At the 1996 International Towage and Salvage Conference in Seattle, Dibner [4] juxtaposed the two possible market outcomes facing tug operators: (a) increased market concentration, approximating towards monopoly; and (b) market fragmentation and intensified competition, with towage rates reduced to the margin of economic survival [5]. Porter's [6] identification of the five forces critical to economic activity in the global market are considered in this context. By assessing trends and behaviour in North European tug markets against the background of Porter's five forces, analysis of the level of competitiveness and its implications are made [7].

## 2. **The problem defined**

The localized nature of the towage industry, through its historic linkages with regionally based labour and capital markets, has brought about a certain degree of market stability. This followed from the historic process of excessive competition which gave way to rationalization, concentration and market sharing. Trends towards market concentration appeared to be consolidating in the late 1980s. This followed the revolutionary changes in shipping, port technology and ownership which took place between 1965–1985. The container revolution, accompanied by developments in ro-ro, tanker and dry bulk shipping, had a pronounced impact on the towage industry. Specifically, these developments led to fewer ship calls in European ports, albeit with larger vessels. The decline in numbers was compounded

Table 1. Towage new entrant profile, 1989-1998.

Year	Port	Company	Work	Capital	Labour
1987	Rotterdam	Kotug	General	Local	Local
1989	Manchester	Carmet	Tanker/Gen	Local	Local
1993	Southampton	Ostensjo	Tanker	Norway	UK*
1996	S. Wales/BC	W. Coast	Bulk/Gen	Global	UK
1996	Hamburg	Kotug	General	Dutch	E. German
1997	Hound Point	BP	Tanker	Global	UK
1997	Medway	BI	General	Spain	UK
1997	Flushing & Terneuzen	Van den Akker	General	Dutch	Local
1997	Cork **	Ostensjo	Tanker	Norway	Eire
1998	Rotterdam	Fairplay	General/Salv	Germany	Local
1998	Brussels Sea Canal	W Coast	General	Global	Local
1999	Hamburg	Smit	General	Dutch	Local
1999	Bremerhaven	Kotug	General	Global	E. German

\* Ex off-shore personnel; \*\* Exxon Whitegate Terminal.  
 Source: Authors' Field Research.

by innovations in ship manoeuvring technology which reduced the reliance on tug assistance. Despite the period of apparent market stability that followed the changes in trade and technology, the 1990s saw a number of entrepreneurial activities taking place, in which global mixes of labour and capital were utilized. The extent of the new waves of competition is outlined in table 1.

Additionally, European political economy trends towards privatization, deregulation and the widespread process of industrial downsizing have done much to destabilize the market. The implications for the towage industry and the quality of its operations are evident here. The question arises as to whether deregulation and global mobility will lead to uncertainty and sub-standard operations or whether market stability and standards will be maintained regardless of the competitive situation? Dibner's [4] study of the towage industry has concluded that the current situation lends itself to an 'auction place' market. Within this context, two possible scenarios can arise. First, where the dominant towage company focuses strongly on its market power, leading to reduced competition, and secondly, an openly competitive market place where no one firm has clear leadership. Dibner has contrasted the former in which,

dominant players tend to focus on using their power to reduce competition through superior service, reputation and economies of scale,

with the latter where,

towage companies find themselves hustling and bidding for business, worrying about excess capacity, and constantly operating in a marginal manner [4].

It can be seen from Dibner's contrasting scenarios that the towage industry's fortune is shaped by the degree of competitiveness. From this context, global mobility in the towage industry has major implications for investment and professional standards.

### 2.1. Towards global mobility?

The new waves of competition in the industry can be seen as paralleling the process of global mobility in the deep-sea shipping industry. Competitive developments in towage are starting to mirror the global forces that have shaped the deep-sea sector

since the 1950s. From this period onwards, one of the most dramatic and dynamic developments in world shipping has been the rise of flags of convenience shipping. This provided for the economically attractive global mix of capital and (low wage) labour supplies, associated with tax haven registries. Initially, the process was dominated by the desires of US shipowners to circumvent the relatively high wage costs of American crews [8], but this strategy was eventually followed by Japan, Greece and the leading North European and Scandinavian maritime nations [9]. This particular form of global mobility has spread not only from the low value dry bulk/tanker sectors to the high value container and ro-ro liner shipping markets, but also, from the deep-sea to the short-sea and coastal trading vessels. The effect in Europe has been to cause ships to flee from their national flags to those of flags of convenience registries. The historic trend in European shipping can be illustrated as follows.

- 1960–1970s: Flagging out bulk carriers and independent tankers.
- 1970–1980s: Professional management of deep-sea fleets: divestment and diversification from shipowning to ship management.
- 1980s: Flagging out and downsizing of major oil company fleets.
- 1980–1990s: Flagging out ferries, off-shore support vessels, coastal fleets, container fleets, and cruise vessels.

The extent of the process is illustrated by the flagging out of Thames sand barges to the Antigua registry and the award of the Scotland-Isle of Grain Channel Tunnel stone contract to a Chinese flagged and crewed bulk carrier. The relocation (to Baltic ports) and flagging out of long-established Hamburg owner, Petersen and Alper's tug, *Johanna* (renamed *Tak 4*) to the Lithuanian registry, can be seen as a response to the 'tug wars' following the Kotug assault on the port.

As part of this global mobility process, a large part of the national labour force has been displaced by low wage crews from the developing nations. Eastern European ratings serve on North Sea supply vessels, Cape Verde and Romanian deckhands man coastal bulkers and even *Queen Elizabeth 2's* deck department comprises predominantly Filipino ratings. The rapid appearance of the Chinese tug, *De Yue*, on station at the 1996 *Sea Empress* grounding at Milford Haven also serves as a reminder of the global mobility process in even coastal towage and salvage [10]. Similarly, the presence of Polish officers on the tugs of leading Netherlands salvage tug operator, Smit Internationale, moves the process a stage further to the European coast. Such evidence points to an incipient move towards a deregulated and globally mobile towage industry in Europe.

## 2.2. The standards issue

The evidence of global mobility in shipping is one of declining standards in certain subsectors of the world fleet, in particular dry bulkers and independently owned crude oil tankers. This is not to say that all owners and ship managers in these subsectors practise substandard operations; there is, however, a propensity for low standards to prevail under the less well regulated flags. In overtonnaged markets depressed as a result of ever expanding speculative investment and new entrant fleets, the pressure on freight rates has led to a 'free fall' in standards [11]. The 1990s surplus of ageing conventional tugs in the global market—replaced by modern tractor and azimuthing vessels—offers opportunities for similar low cost market entrants in European towage [12]. The potential impact on towage standards is immense, in

that unbridled competition could tip the balance away from professionalism towards a cost-focused lowering of standards.

### 2.3. *The investment issue*

The issues of standards and investment are concomitant. If the advantages of competition are improved market performance and lower costs, negative impacts include the possible dearth of new investment leading to technological stagnation. Dibner's second hypothesis of overcapacity and marginal operations suggests an economic climate not conducive to sustained investment. The lessons learned from deep-sea dry bulk and tanker markets are that investment does not flow into depressed markets characterized by surplus tonnage. The result is an ageing fleet and technological inertia. The paradox facing these sectors is that attempts to improve world standards by such initiatives as new double hulled tankers are thwarted by the inability of the market to provide funds for sustained investment. Similarly, in the salvage and ocean towage industry, market instability has inhibited new investment [13].

From this perspective, it follows that significantly increased levels of competition in the towage industry could lead to a collapse in investment and a long term deterioration of quality in the European towage fleet.

The following section examines the historical movement away from aggressive competition towards a more investment conducive process of market concentration.

## 3. The historical context

Analysis of current events in towage markets suggests that an historical sequence of events is about to complete its cycle. This covers a period from the initial stage of unbridled competition in the mid 1800s to the market concentration and stability which appeared to have settled by the 1980s. The emergence of new market entrants in the 1990s, resulting in increasingly competitive 'tug wars', heralded a return to the industry's combative origins.

### 3.1. *From competition to market stability*

Entrepreneurial activity can be traced to the early days of steam technology in the 1830s. Advances in steam propulsion opened up the niche market for the coastal towage of large deep-sea sailing vessels. A number of tug operators entered the market and the process of 'seeking' out ship handling business intensified.

The forces of supply and demand were clearly evident, in that weather conditions, the value and degree of urgency of the cargo and the availability of tugs influenced an erratically priced, buccaneering market. During these early days, the extent of aggressive competition led to unethical and unsafe practices, with tug skippers practising a number of 'tricks' in order to manipulate towage rates. The conditions associated with the excesses of the free market were far from compatible with the safe passage of ships, these proving untenable as advances in safety awareness and maritime professionalism together with a more effective regulatory system and increased vigilance of the insurance market all contributed to the improvement of standards. Shipowners became more discerning over the quality and reliability of towage operations: the constant updating and improvements in salvage legislation, culminating in Lloyd's Open Form (LOF) [14], can also be seen as part of the move away from the excesses of the free market towards greater professionalism, this

worked towards higher standards of ship safety as well as their crews, and improvements in the maritime environment.

#### **4. The concentration process**

From the late 19th century onwards, the patterns of concentration in the industry were evident. Gradually, the number of competing firms reduced and with this came respectability and professionalism. On the Tees, entrepreneurship was shown by the Crosthwaite company, which managed to take-over six of the river's competing fleets [15]. Concentration on the Tees was typical of the experience of many of the UK and German owners located in industrial ports suffering from the economic downturn of the inter-war years. Concentration, cooperation and work-sharing agreements were seen as ways of limiting the damage caused by depressed rates and under-utilization of vessels.

#### **5. The modern industry: organization and economics**

Although the industry only comes to the attention of the public when a maritime disaster occurs, it can nevertheless claim to be an important and highly capital intensive industry. Recent new tug buildings have each cost between £3.5–6.0 m. In addition to state of the art towage, life saving, salvage and fire fighting equipment, the tradition of tug crewing is one of highly developed skills and expertise.

Continuity can be seen as one of the strengths of the industry, with fleets building up considerable local reputations. For example, Southampton's Red Funnel, Liverpool's Alexandra Towing (now Howard Smith Towage) and the Bristol Channel's Cory Towage fleet which, despite a series of conglomerate take-overs, have connections with their home ports stretching back into the mid-19th century. In Hamburg, four of the five incumbent operators (excluding Kotug) have a port history which reaches back to the late 1800s [16]. In port areas, a strong tugboat community exists. This is reflected in recruitment to the industry. McGinnis [17] found that 76% of crews in the fleets of operators on the UK West Coast had been recruited via friends and relations. Additionally, company loyalty enforces the community feeling; in 1992, over 50% of crews in South Wales and Merseyside had more than 30 years service with the same company [17]. Loyalty can also be seen as a factor in the high value/high risk area operations: a recent tanker towage and escort contract was awarded to Cory Towage on the strength of past performance and continuity, despite the availability of lower cost operators [18].

It is precisely this continuity that is destroyed by the inroads of new entrants. The competitive assault of Kotug on the Hamburg market did much to disrupt the continuity and stability that had been brought about by the pooling arrangements of the five co-existing tug companies. The perception of this competitive assault held by the 'pool' crews is one of disruption, a 'cherry picking' of contracts and, ultimately, job losses. One particular instance—when Kotug were unable to cover all their work and pool tugs were called in—caused particular concern. The pool employee representative (and tug Captain) summarized the mood in an interview with the Hamburg press:

We cannot understand why on the one hand Kotug is taking away our livelihoods and cutting jobs, and in the end we have to do their jobs [19].

In the UK, the trend has been towards a process of fleet rationalizations, mergers and take-overs. In 1960, 43 ship handling companies existed in UK towage, but by

the 1990s this figure had fallen to 14 [20]. The two main UK groupings are Howard Smith Towage and Cory Towage. Both companies form part of globally oriented conglomerates, stemming from a heritage of deep-sea shipowning. The former is a subsidiary of the Australian conglomerate, Howard Smith Holdings, while the latter is owned by the transport and storage specialist, Ocean Transport and Trading Group. The three continental ports selected here feature contrasting forms of towage organization. Antwerp's tug services have been dominated by the Union de Remorquage et de Sauvetage S.A. (URS) for channel and river operations and the municipally owned port authority fleet for dockwork. Rotterdam's towage history has featured a competitive balance until the emergence of Kotug in the late 1980s.

In recent years, however, new entrepreneurial fleets have appeared in competition with the traditional port incumbents. In the UK, the two majors have been challenged by new entrants. In South Wales, the arrival of the internationally financed West Coast Towage drastically reduced Howard Smith's British Steel contract work as well as Cory's local dock work. In the Medway-Thamesport vicinity, the entry of BI Towage has brought competition for Howard Smith in the handling of container and ro-ro ships. Additionally, in Antwerp, Hamburg and Southampton, the traditional operators have been challenged by non-domestic towage enterprises. The impact in Hamburg was particularly traumatic, with the maritime press reporting on the resulting 'tug wars' between the traditional port incumbents and the new (outsider) challengers [21].

#### *5.1. Towage economics and competition*

It is the particular economic characteristics of towage that lend itself to new entrants in the global, deregulated market. The nature of the industry is shaped by its function as a port service. In order to survive in this service market, the tug operator will seek a balance between demand and supply. This requires a fleet large enough to handle the peaks of an erratic demand for ship assistance. The high capital cost burdens of 'state of the art vessels', plus the remuneration of professional crews, regardless of the level of tug activity, places emphasis on the contribution factor. Towage tariffs reflect the high fixed costs of the operation; and each assignment will need to make a positive contribution to these. This makes the market attractive to new entrants, able to survive on discounted tariff rates due to a blend of non-market financed capital, second hand tugs and lower cost crews.

#### *5.2. The impact of port deregulation*

The changing pattern of organization and business behaviour in ports and shipowning has also had competitive implications for the towage industry. The moves towards privatization, deregulation and decentralization have brought about increased focus on cost-based competition. The impact has been most pronounced in the UK ports industry, which has undergone a radical change in ownership and business behaviour. Privatization and deregulation in the port labour market has placed a heavy emphasis on competitiveness and has largely diminished the trade union power of organized labour [22]. Under these conditions, ports seek to reduce costs in order to enhance competitiveness. Nowhere is this more evident than in the formerly nationalized port group, Associated British Ports (ABP). The aftermath of privatization has seen a rationalization and decentralization of the port service employees and ABP's competitive assault on many of the ports which had hitherto enjoyed the market advantages of their deregulated status. Under these conditions,

the economic performance of the towage company is keenly scrutinized as a major cost element which could influence the shipowners's choice of port. The emergence of the Anglo-Spanish joint venture, BI tugs, in the comparatively new port, Thamesport, exemplifies this point [23]. Thamesport initially staged a competitive assault on other major UK container ports—Felixstowe, Tilbury, Southampton, and Liverpool. Lower port costs have been a feature of Thamesport's strategy, and this has proved beneficial to the new entrant towage company.

The arrival of Kotug in the port of Hamburg was aided by a relaxation of the rules regarding vessels operating on the Elbe. Hitherto, Hamburg tugs had been classified as seagoing; and this was the case regarding the incumbent pool fleet. Needless to say, this involves considerable expenditure in the procurement and maintenance of seagoing equipment and crew training. By registering as inland vessels, Kotug were able to avoid the costs attached to seagoing registration, a point not lost on the aggrieved incumbent Hamburg owners [2]. Moves towards decentralization in the municipally owned ports—Antwerp, Rotterdam, and Hamburg—will also lead to increased emphasis on profit centres, increased competitiveness and cost control [24].

### 5.3. *Strategic priorities in the shipping industry*

In order to assess the issues of competition in the towage industry, the strategic priorities of the customer require some consideration. The customer's valuation of towage services is a function of both cost and quality. Determining factors tend to be concerned with value. In the liner trades, the emphasis is likely to be on a premium tug service. High value, time sensitive cargoes demand rapid port turnaround times. Tug performance is an integral part of this objective. In the lower value bulk trades, towage costs will take priority over service requirements. The risk element in tanker trades places an emphasis on the professionalism of specialized handling, escort and fire fighting skills.

It now remains to employ Porter's five forces in the analysis of future competitive changes.

## 6. **Competitive threat and Porter's five forces**

Porter's five forces provide the context for analysis of the competitive elements that have shaped the current turbulence in the market. This perspective provides for (a) identification of the conditions under which competitive changes are likely to occur, and (b) the likely impact on the towage market.

### 6.1. *New entrant towage firms*

The historic development of the industry has been one of continuity, stability and regional concentration. The emphasis on local skills, expertise and knowledge created a powerful barrier to new entrants.

The position has, in recent years, started to change, with a number of entrepreneurial assaults on the concentrated market. A number of factors have contributed to this wave of new entrants. The general mood of liberalism in the European economy has proved conducive to new entrants, particularly in conjunction with the global mobility process. Global combinations of capital and labour have been much in evidence in the shipping business. Between 1975-1995, the UK merchant fleet suffered a loss of almost 30 million gross tonnes (gt) of vessels, representing 80% of the total, during a period when total tonnage of cargo handled at UK ports

increased by 40% [25]. It is evident that the global division of labour has occurred in shipping. Global combinations of capital, enterprise and labour have emerged as key elements in the modern shipping industry. Particularly attractive has been the blend of developed nation capital and management, and low wage Eastern European and Third World crews. In Hamburg, the new entrant, Kotug, was able to offer a tariff of Dm. 5500 per tug, comparing favourably with the cartel's, Dm. 7330 [26]. This reduction was achieved by the employment of lower wage East German crews. Evidence from Hamburg points to the difference in rostering and pay conditions experienced by the tug crews in the competing fleets. The East German crews in the Kotug fleet adhere to a duty regime of 14 days on, 14 days off. In this respect, their conditions are analogous to the coastal seafarer, leading to a deterioration in the trade union negotiated pay and conditions of tug crews.

This represents a major shift towards increased competitiveness as the benchmark in pay and conditions has shifted from the well established, localized, status quo of harbour towage industrial relations, to the global ships' crewing market. It can be seen that such processes move the towage industry clearly towards Dibner's 'auction market' scenario. The evidence from deep-sea shipping markets suggests that once this particular aspect of global mobility is in place, constant attention to reducing crewing and management costs becomes synonymous with economic survival policies in the competitive marketplace.

The progress of this global process has been in evidence over the last 2 decades. Supplies of both 'bargain basement' tugs and displaced crews have combined with 'footloose' international capital. The process is typified by the action of the Star Offshore (Vestey Group) in 1988-1989 when UK seafarers who went on strike in support of Dover colleagues were dismissed and replaced by low wage Third World crews [27].

On the demand side, moves towards economic liberalization of trade has facilitated the process. The entrance of the entrepreneurial West Coast Towage into the sizeable British Steel trade of the British Channel features all of these factors. The privatization of British Steel has led to a cost centre approach towards transportation. The emphasis has been on foreign flagged and crewed vessels at the expense of UK flagged and crewed vessels, including British Steel's own fleet [28]. In 1975, the Select Committee on Nationalized Industries was critical of the fact that the British Steel Corporation's Shipping and Transport Department lacked a cost centre approach to management:

The only direct incentive to provide the most cost-effective service is personal satisfaction. There are no normal management disciplines or yardsticks [29].

British Steel's transition towards a cost centred approach mirrors the historical movement away from Keynesian emphasis on a full employment industrial policy to the market led 1980/1990s. The transfer of the towage contract to the untested West Coast Towage can now be seen as a final stage in the global mobility process. The blend of 'footloose' finance capital, Russian built, South African stationed tugs and displaced UK crews only requires the replacement of the latter by low wage East European and Third World crews for the process to be complete. Similar evidence of new entrants at Fawley, Thamesport and Hamburg, suggests that the traditional industry is under attack from a wave of globally oriented market entrants.

A factor affecting the new entry threshold is that of technology. Investment in 'state of the art' tugs can provide a barrier to new entrants lacking the financial

capital to embark on similar investments. These circumstances are particularly evident in the high-value and high-hazard trades. The competitive assault of new entrant BI Tugs on Howard Smith's monopoly of Medway towage has raised the question of technological barriers. With £18m invested in five new tugs in 1996, Howard Smith's claim is that they are improving the quality and safety of ship handling services [3]. From the perspective of Howard Smith's management, investment in new tugs is a requirement of the forward looking shipping and port industry, where constant improvements in technology and efficiency are essential:

It is clear where the fast moving leading edge ports are heading and what kind of towage services their international shipping line customers need and want; leading towage companies are working hard to ensure that these are met [30].

For the new entrant in the Medway, BI Tugs, such investments are seen as a high-cost barrier to competition. Facing such new investments as Howard Smith's 60 tonne bollard pull, *Lady Madeline*, BI's response was the claim that such high cost assets are an attempt by the incumbent company to

... establish itself in an unassailable position by raising the apparent specification and investment in tugs such that the port and pilots may object to anything less than the latest models of tugs... [31].

### 6.2. Rivalry in towage

Long term trends in the industry have led to a process of co-existence rather than aggressive competitive rivalry. The regional emphasis in the industry has placed a geographic limit on rivalry. Where port regions have been served by rival tug firms, the avoidance of ruinous competition has taken precedence over aggressive pricing.

The extent of rivalry in ports where two or more companies operated was more likely to be limited to prestige, tradition and image. This existed not only in the ownership but also with the crews, where each company's workforce took a great deal of pride in their history and modern skills. In Southampton, two companies have shared the majority of ship handling work, Red Funnel Towage and Howard Smith Towage; despite the latter having a history within the port stretching back to 1919, Red Funnel crews still regard themselves as the 'home fleet', having been the first tug company in the port, commencing in 1861.

The excessive rivalry between Kotug and the incumbent Hamburg tug owners has become manifest in a number of ways. Berth allocation and sharing in the Port has proved contentious [32]. Additionally, the work sharing cooperation between tug companies on the Elbe, enshrined in local legislation, has intensified the rivalry between Kotug and the pool companies [19].

### 6.3. Supplier power: tug crews

The major supply factor in tug operations is that of labour, i.e. tug crews themselves. Managerial choice over crew supply has traditionally been limited by the historic role of the trade unions. Along with dockworkers, lock gate and swing/lift bridge operators, the power of waterfront trade unionism in the tug industry was a major influence on economic performance as well as competition. The 'closed shop' (100% union membership) operated in all major ports. In addition to pay, the trade union joint committees exerted influence on conditions, seniority and redundancy. On the River Thames, the power of the unions was enhanced by the adherence to the Thames Watermans' Licence. This served as a further extension of supplier power,

and was clearly demonstrated in the 1980s, when two German owned tugs tried to enter the Thames towage market. Such was the power of the unions that these new entrants were effectively blocked and unable to begin operations [33]. It can be seen that this union-generated supplier power not only protected the labour supply but also the incumbent tug owners, very much to the detriment of potential new entrants. The 1980s (and onwards) saw the erosion of this particular brand of supplier power. Up until the 1980s, a tug strike would have severely paralysed the deep-sea trade of a port; such actions were by no means uncommon in such ports as London, Liverpool, Hull and Southampton. In the 1990s, however, strike action would provide an obvious opportunity for new entrants to take on the work of the strike-breakers. The entry of West Coast Towage into the South Wales/Bristol Channel towage markets was indeed assisted by the industrial action occurring in the incumbent fleets.

Testament to the shifts in the industrial relations regime are the concessions made by the hitherto powerfully unionized Hamburg crews following Kotug's market assault. Reports of a 60% loss in members' jobs and up to 50% reduction in rates of pay were made in the Hamburg press in May 1997 [19].

#### 6.4. Buyer power: the shipowners

The most important source of buyer power affecting the tug market is that of the shipping companies themselves, together with their agents. The trends in deep-sea shipping have been towards fewer (but larger) capital intensive vessels. Organization became more concentrated as shipping lines merged, formed global alliances and became part of conglomerates. This has now enhanced the buyer power of the shipowners over the ports and port services they choose to employ. In the high value trades, the emphasis of buyer power will be placed on quality factors; in the lower value trades, costs are a greater consideration.

In the high value container and ro-ro trades, attention is given to the tug's performance in assisting with speedy docking/undocking. Vessels operating in these trades adhere to a liner schedule which features tight arrival and departure times. Additionally, the value of modern vessels in these trades is in excess of \$100m. The demands of the large shipowners for quality and reliability factors were recently exemplified by the container market leader, Maersk Line, who, having suffered a delay due to a tug strike in the Port of Hamburg, demanded DM 200 000 compensation for the hire of the 100 lorries necessary to divert cargo to Rotterdam [34].

The abolition of the National Dock Labour Scheme in the UK has served to intensify the pressure for performance by the liner companies exercising their buying power. The port that fails to provide the service required by these companies soon experiences a loss of business.

Where cost considerations take precedence over quality is in the low value and/or low volume trades. When the value of the bulk cargo is low, this will often be reflected in the quality and value of the vessel. It is in the low value dry bulk trades that ageing—often substandard—vessels predominate [35]. Towage contracts under these conditions are likely to be highly influenced by cost considerations. New entrants are most likely to be found in such markets. The incursion of West Coast Towage into British Steel's iron-ore trade in South Wales was clearly cost driven and can be seen as a result of the privatization of the steel producer and the subsequent emphasis on cost centre management. Similarly, BI Tugs' assault on Thamesport

was very much in line with the new port's desire to provide low cost competition with the more established UK ports.

The failure of Kotug to enter the Antwerp market in 1996 provides additional evidence of the extent of buyer power. Whilst many customers welcomed the prospects of Kotug's market entrance and the resulting price war, they were reluctant to support the new venture once the incumbent firm, Union de Remorquage et de Sauvetage S.A. (URS) had responded by reducing its tariff rates. Kotug president, Ton Kooren, was quoted as being,

... deeply disappointed in certain shipowners who instigated our Antwerp project but who were finally not prepared to stand behind us [36].

The buyer power of the customers was, however, evident in their desire to secure tariff decreases in the premature price war.

#### 6.5. *Substitutes for tugs*

From the earliest times of steam tug assistance to larger vessels, their engagement has represented a potentially escapable cost by shipowners. In the mid-1850s, sailing shipmasters were encouraged to navigate the English Channel and as far up the Thames as possible without the aid of tugs. Nowadays, it is likely to be technical navigational and manoeuvring aids that allow the shipmaster (and pilot) to manage with reduced tug assistance. In the coastal and short sea trades, the size of vessels is limited and this obviates the need for tug assistance. In the North Sea ro-ro liner trades, the vessel size has increased but technical aids permit self-manoeuving in all but the worst of weather conditions. In the deep-sea trades, the general criterion for vessels having technical aids is the total capital value of the ship, plus its cargo. Two contrasting examples illustrate this point. First, the \$380m luxury cruise liner *Oriana* has an impressive range of manoeuvring equipment; this enables docking and undocking to take place in the Port of Southampton with the assistance of just one tug even in inclement weather conditions, despite the size of the vessel at some 65000 GRT. For a bulk carrier of similar size with a current value of \$24m and a cargo of grain, three or four tugs would be required, depending on weather conditions.

The additional financial pressures that these technical substitutes place on the tugowners is that fewer tugs are needed and, when technical or weather conditions dictate the use of tugs, the emphasis will be on the deployment of high value, powerful craft.

#### 6.6. *Summary of the five forces application*

The value of Porter's work applied to the harbour towage industry lies in the focus on competitive strategy. The new entrant force draws attention to the conditions under which new firms may challenge market incumbents. Given the twin trends in (a) the global mobility of labour, capital and enterprise, and (b) deregulation within port industries, the barriers facing new entrants are diminished.

The historic rivalry between towage companies has traditionally accommodated a spirit of at least tolerance and, in many instances, cooperation. The new evidence from turbulent and deregulated markets suggests that rivalry is taking on a much sharper characteristic. Trade unionism and collective agreements have been identified here as a crucial force of supplier power. The dilution of trade union strength in the crewing of tugs heralds the way towards rationalization and cost cutting.

Trends towards concentration in ownership and, more importantly, the control of world shipping, have increased the supplier power of tug users. These new conditions are conducive to customers exercising choice through the encouragement of new entrants.

Finally, the economic pressure on all tug owners is a certainty brought about by substitute ship technologies—navigating and manoeuvring systems. The impact of these will always be to reduce the economic margins that tug owners face, possibly proving critical under 'Tug War' conditions.

### 7. Summary and conclusion

This paper has discussed the historical process of concentration, current competitive trends, and the implications for the North European harbour tug industry. The strategic forces behind the concentration process were revealed as the industry gradually moved away from its early *laissez-faire* beginnings. These led to the demise of the traditional family owned operator in all but the most marginal operations. Recently, new entrepreneurial operators, combining global supplies of capital and labour, have emerged as middle sized players, particularly in cost sensitive markets. The new wave of entrepreneurs do not possess the regional affinities and long term perspective of their predecessors. This suggests that, currently, the industry is finely balanced between lasting concentration and speculative fragmentation.

Returning to Dibner's twin scenarios, this study of towage market segments has revealed differing areas of strategic priority. Emphasis on quality factors in the high value/technology liner trades places a premium on 'state of the art towage', providing efficient all weather ship handling. Such conditions provide a high threshold for market entry. Similarly, dedicated tanker services are more likely to be determined by quality factors. In markets where cost considerations are paramount, new entrants are likely to find lower barriers to market entry. Such conditions are likely to prove conducive to Dibner's 'auction place' market scenario.

Evidence of 'Tug War' competition in North European ports already suggests that the twin catalysts of global mobility and deregulation are impacting on operations. The free movement of capital and labour and emphasis on cost-led competition is heralding a new scenario in the towage market. This could lead to a reappearance of the early *laissez-faire* excesses of intense competition. Under these conditions, tariffs will not support new investment, running costs are slashed, employment becomes transient and professional standards are diluted. Incumbent tug companies and crews will ignore these challenges at their peril. The available evidence from both deep-sea and short-sea shipping in Europe points to the dilution of standards in low value/risk markets, as global forces of capital and labour exert a 'ratchet effect' on decreasing costs. Much will depend on the managerial acumen and labour flexibility of the incumbent tug companies in responding to the competitive challenge. Whatever the outcome, it is evident that the industry is heading towards a challenging new era; the impact of 'Tug Wars' will reach all ports heralding radical changes to the operation of all fleets.

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#### References and notes

1. GASTON, J., 1998, New fairplay tug delivered to Rotterdam. *Maritime Journal*, March, 40.
2. Tug war could end up with job cuts. *Lloyd's List*, 3 November 1996.
3. Howard Smith investment protects UK ports. *Lloyd's List*, and 1996, Cory puts faith in major investment. *Lloyd's List*, 18 & 25 October 1996.
4. DIBNER, J., 1996, Strategic terrain for the towage industry in the 21st Century. *International Towage and Salvage Conference Papers*, Seattle.
5. Dibner's twin thesis rests well with the current trends in European towage, with the market position of the major fleets being challenged by new entrants in the de-regulated market.
6. PORTER, M., 1990, *The Competitive Advantage of Nations* (Basingstoke: Macmillan), pp. 469-474.
7. Porter's five forces define market conditions and the level of competition in terms of new entrants, rivalry, supplier power, buyer power and substitutes.
8. NAESS, E. D., 1972, *The Great Panlibhon Controversy: The Fight Over Flags of Convenience Shipping* (Aldershot: Gower), pp. 21-45.
9. METAXAS, B. N., 1985, *Flags of Convenience: A Study of Internationalism* (Aldershot: Gower), pp. 35-42.
10. Agents defend role of Chinese supertug. *Lloyd's List*, 24 February 1996.
11. *Lloyd's Shipping Economist Supplement, Costs: Pressure on Profits*, Winter, 1992.
12. GASTON, J., 1996, Recycled tugs, a blessing or curse? *ITS Convention Conference Papers*, Seattle.
13. HINTON, P., 1998, LOF salvage—the P&I Clubs' perspective. *International Towage and Salvage*, March, 32-33.
14. DARLING, R. D. and SMITH, C., 1991, *LOF 90 and the New Salvage Convention* (London: LLP), pp. 1-22.
15. PROUD, J., 1985, *Seahorses of the Tees: The Story of Tees Towing Company* (Middlesbrough: Tees Towing), p. 67.
16. DOLLENBACHER, M. and SCHNAKE, R. H., 1989, *Hamburg Tugs* (Kendal: World Ship Society).
17. MCGINNIS, E. A., 1992, Industrial Relations in the United Kingdom Harbour Towage Industry. MA Thesis, University of Stirling.
18. GASTON, J., 1996, Milford towage contract. *Maritime Journal*, 47.
19. Tug War—Hamburg firm must pay for other's mistakes. *Hamburger Abendblatt*, 1997.
20. Calculated from *Lloyd's Register List of Shipowners*, 1997.
21. Hamburg 'tug war' moves on. *Lloyd's List*, 12 March 1997.
22. EVANS, N., MAKAY, D., GARRATT, M. and SUTCLIFFE, P. 1993, *The Abolition of the Dock Labour Scheme* (Sheffield: Department of Employment).
23. New towage service at Thamesport set to start. *Lloyd's List*, 1 July 1997.
24. Calls for port sell off. *Lloyd's List Magazine Focus*, March 1998, 3.
25. NPC DIGEST, *Port Statistics* and BPF/DoT *Port Statistics* (Various years).
26. Maersk intends damages claim after industrial action in Hamburg. *Weekblad Schuttelevaar*, 1996, 7.
27. Aberdeen official faces jail threat. *The Seaman*, October-November 1989, 12.
28. ROWLINSON, M., 1995, The Decline of UK Merchant Shipping 1975-90: Beyond the Market View. Doctoral Thesis, London Guildhall University.
29. Second report from the Select Committee on Nationalized Industries, session 1974-5. 1975, *The Ownership, Management and Use of Shipping by Nationalized Industries* (London: HMSO), p. xxv.
30. Tugs responding to customers' needs. *Lloyd's List*, 2 December 1996.

31. Pulling in the right direction. *Lloyd's List*, 5, 13 November 1996.
32. Kotug switches Hamburg berths. *Lloyd's List*, 4 February 1997.
33. DUNN, L., 1992, *Thames Shipping* (London: Carmania Press), p. 105.
34. Kotug unleashes tugboat war with sharply lower rates in Hamburg. *Weekblad Schuttevaar*, 1996, 13.
35. MCCONVILLE, J. and TIMMERMANN, K. W., 1996, An analysis of the quality and redistribution of dry capesize tonnage. *Maritime Policy and Management*, 23, 45-53.
36. Kotug stands bloodied—but unbowed. *Lloyd's List*, 11 October 1996.

# Harbour Towage: Perfect or Imperfect Competition in the Global Market?

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## Abstract

The harbour tug sector is rapidly making the transition from a localised port service industry to a highly flexible, globalised, industry. Global influences in ownership, investment, management and crewing are already at work in the towage sector. The long term trend has been one of market concentration. However, this trend is intermittently interrupted by outbreaks of competition which are normally welcomed by the customers of the tugboat companies. As the industry oscillates between the two extremes of concentration and competition it is pertinent to examine how the tugboat market fits with the theory of perfect competition. The intention is to assess how the industry approximates towards the two positions. This paper explores the balance between the forces for competition and those for concentration and, furthermore, the implications for the future of the industry.

The emphasis will be on the recent take-overs in global harbour towage which appear to be heralding a new era of consolidation and market stability, particularly in Northern Europe. Attention will be given to the dramatic situation that occurred in the Port of Hamburg, which witnessed the excesses of the 1990s "Tugwars". Such confrontations appear now to be diminishing, mostly as a result of fleet rationalisations and market concentration. In the UK ports that were attacked by new entrant tug companies (during the same time period), the level of competition has now given way to monopoly. In the Port of Rotterdam the once fierce rivals, Hamburg based, Fairplay, and the home-port operator, Smit, have joined forces in a service accord (*Lloyd's List* 14.3.01). Following the period of 1990s "Tugwars", concentration now appears to be the direction of change. The buy out of the Wijsmuller fleet by the Danish world fleet leader and A.P.Møller's subsidiary, Svitzer Towage, as well as the Australian Adsteam Marine's A\$500m take-over of Howard Smith's fleet, provides vivid evidence of concentration. Both companies can claim significant maritime heritage and a world-wide reputation for direct, hands on business dealings. In the Mississippi there have been controversial moves towards limiting competition between tug companies. It is pertinent to discuss the impact of moves towards concentration in major world ports.

Such developments will be analysed as part of the larger trend towards globalised operations and practices. True world standards of service quality are now emerging. The industry is now entering into a new era with significant challenges. The recent downturn in shipping markets places

renewed pressure on all port expenditures; continued pressure on towage tariffs is likely to result.

### **Introducing the Problem**

The tugboat industry is a vital component of the port infrastructure. Although technical innovations have greatly increased large vessel manoeuvring capability in confined waters, there is still a reliance on the technology and skill of the tug operator. The movement towards larger vessels and the need to maintain schedules in all-weather conditions has reinforced the need for powerful, well run, tug support in all major ports. In recent years the tugboat market has been affected by trends towards deregulation and globalisation in capital, management and labour. Deregulation is occurring globally in world ports. Increasingly markets for terminal operators, stevedores, agents, pilots, as well as tugboats, are opening up. Global patterns of ownership and investment are manifesting; the port industry and its service providers are no longer locally focused organisations.

The shipowner has a vested interest in securing state-of-the-art technology and service in order to secure a safe but rapid port turnaround. Although tugboat costs may only be around five percent of total port costs (container ship), they do incrementally have a significant impact on annual cash flows, particularly in times of economic recession. For example, a container line with ten post-panamax vessels (achieving five round trips per year vessel) on the Northern Europe-Far East trade lane would have total annual tugboat costs well in excess of \$1m. The need to provide a high quality service – with safety becoming paramount - whilst minimising tariff costs is the dichotomy that the industry, therefore, faces. Competition may be the best way to achieve the latter but could this be at the expense of the former?

### **Perfect Competition in Harbour Towage?**

It is possible to detect two clear lines of argument here: the proponents of increased competition point to the benefits of lower tariffs and enhanced customer orientation. The defenders of the monopolistic (or oligopolistic) market can refer to high standards of safety and *state-of-the-art* investment in new tugs. In order to objectively appraise these polarised positions, the structure and business behaviour of selected towage markets will be considered within the context of the main elements of perfect competition theory:

- Lots of buyers and sellers;
- homogeneous product;
- the firm as a price-taker;
- easy market entrance and exit;
- perfect market information available to all.

In assessing current evidence from leading ports it will be possible to approximate the market characteristics of the towage sector.

## An Outline of the Current Issues of Competition.

Increased tugboat competition in a number of leading world ports has been welcome by many as a positive economic outcome in recent decades. During the early 1990s the stable oligopoly situation was replaced by intensified competition. This paper discusses developments in the operation and organisation of harbour towage. Primarily, the evidence is drawn from events in North European ports. However, additional information from Australia, Hong Kong and the Mississippi is discussed.

The contention here is that the competitive events of such major ports as Antwerp, Hamburg and Rotterdam have a big impact on all world ports. The major catalyst of tugwars in the 1990s was the entrance of Dutch owned, Kotug, into the Hamburg towage market; this sent shock waves around all of the major European ports and raised many questions over the prospects, challenges and limitations of competition in harbour towage. It was reported that the impact on the Hamburg tug community was a 60 percent loss in jobs and towage tariffs reduced by up to 50 percent (*Hamburger Abendblatt*, 5.4.97). In an act of retaliation, the Hamburg, Fairplay, operator was to launch a competitive attack on the Port of Rotterdam. This evidence demonstrates the relative ease of market entrance given a determined new entrant operator.

The context of this paper is that of the changing levels of competition in an increasingly globally focused market. Issues of skill, safety, reliability have risen to the forefront of the debate on change, as the industry has moved away from its localised roots. Conversely, questions over customer choice and service and the level of towage tariffs have become paramount. The harbour towage industry has passed through a number of critical phases in its development in recent decades. By the 1970s the industry in many ports appeared to have fully evolved from its early competitive heritage. Mergers and alliances were stabilising port markets. Investment could be undertaken safe in the knowledge that the market would remain untroubled by the excesses of competition. The impact of the Tug-Wars of the 1990s was to seriously disrupt the pattern of market stability. The question that arose during this period was whether: the industry's traditional skills and safe standards would be eroded by competitive cost cutting pressures?

The arrival of new entrant tug companies with untested (locally) crews in many ports was greeted with scepticism in European ports. After all, the incumbent companies and their crews had built up considerable local knowledge and expertise over several generations. Concerns over safety came to the forefront. In deepsea and coastal sectors much of European merchant shipping had surrendered to the cost driven globalised model of off-shore open registry operations and third world crews. Could the same mercenary impetus take off in the towage industry?

The issues of standards and investment are concomitant. If the advantages of competition are improved market performance and lower costs, the negative impacts include the possible dearth of new investment. This could result in a

stagnation of investment and technological advances. At the International Towage and Salvage Conference in Seattle, towage analyst, J. Dibner (1996) juxtaposed the contrasting positions of the stable and the unstable markets. In the stable uncontested market:

**Dominant players tend to focus on using their power to reduce competition through superior service, reputation and economies of scale (Dibner).**

Dibner's second hypothesis was one of an unstable, highly competitive market featuring, overcapacity and marginal operations, suggesting an economic climate not conducive to sustained investment where:

**Towage companies find themselves hustling and bidding for business, worrying about excess capacity and constantly operating in a marginal manner (Dibner).**

During the mid 1990s it did seem likely that the industry was destined for a period of ruinous competition. Concerns were expressed at the 1998 International Towage and Salvage, held in Capetown in the paper, "Tug Wars! Coming Shortly to a Port Near You? A Study Competitive Change in the North European Towage Business" (Atkin & Rowlinson, 1998). In particular this paper discussed whether "tug wars" would lead to an erosion of standards. Parallels were drawn with deepsea shipping: the lessons learned from deep sea dry bulk and tanker markets are that investment does not flow into depressed markets characterised by surplus tonnage. The result is an ageing fleet and technological inertia. The paradox facing these sectors is that attempts to improve world standards by such initiatives as new double hulled tankers are thwarted by the inability of the market to provide funds for sustained investment. The evidence of global mobility in shipping, then, is one of uneven standards in certain subsectors of the world fleet, dry bulkers and independently owned crude oil tankers in particular. This is not to say that all owners and ship managers in these subsectors practise sub-standard operations; there is, however, a high propensity for low standards to prevail under the less well regulated flags. In markets depressed by over-tonnaging, caused by an ever expanding source of speculative investment and new entrant fleets, the pressure on freight rates has led to a "free fall" in standards. The implications of prolonged tugwars could lead to a similar decline in towage standards.

The 1990s surplus of ageing conventional tugs in the global market - replaced by modern tractor and azimuthing vessels - offers opportunities for low cost market entrants in European towage (Gaston 1996). Similarly, in the salvage and ocean towage industry, market instability has inhibited new investment (Hinton 1998).

From this perspective, it follows that significantly increased levels of competition in the towage industry could lead to a collapse in investment, leading to a long term deterioration of quality in the world towage fleet.

The situation since the early 2000s is one of the latent threat of new entrants rather than actual competition. The Chief Executive of the leading Antwerp operator, Unie van Redding en Sleepdienst (URS), recently claimed that that worst of the ruinous North European "Tugwars" was over: "Tugwars appear to be diminishing, mostly as a result of fleet rationalisations". The Chief Executive was speaking at the naming ceremony of two new URS 65 tonne bollard pull stern drive tugs – a tangible sign of evidence to support the claims of a stabilising market (*Lloyd's List* 17.10.01). The controversial use of Dutch state subsidies to Kotug's German operations has now been ruled illegal by the EU Transport Ministry. This ruling has coincided with the withdrawal of Rotterdam based, Smit, from Hamburg and moves to increase tariffs to a more sustainable level (*Lloyd's List* 24.7.01) Despite such evidence, it is apparent that competitive threat is always just around the corner if tug operators fail to provide customers with the service they require at a reasonable price; or furthermore, if industrial relations problems were to have a detrimental impact on service. Additionally, it is difficult to predict the towage repercussions of the EU Directive on Access to Port Services. It is apparent that an uneasy truce between stability and tugwars remains.

### **Hamburg Tug Wars**

Traditionally the tugboat industry has developed highly localised expertise; it is precisely this localised continuity that is destroyed by the inroads of new entrants. The competitive assault of Dutch owned Kotug on the Hamburg market did much to disrupt the continuity and stability that had been brought about by the state initiated pooling arrangements of the five co-existing tug companies. The competitive tempo was intensified by the revelation that Kotug's assault on the port was financially assisted by the Netherlands state subsidies – much to the chagrin of the German incumbent tug companies! (*Lloyd's List* 21.7.00) The perception of this competitive assault held by the 'pool' crews is one of disruption, a "cherry picking" of contracts and, ultimately, job losses. One particular instance - when Kotug were unable to cover all their work and pool tugs were called in - caused particular concern. The pool employee representative (Tug Captain) summarised the mood in a interview with the Hamburg press:

**We cannot understand why on the one hand Kotug is taking away our livelihoods and cutting jobs, and in the end we have to do their jobs. (*Hamburger Abendblatt*. 5.4.97)**

Against this destabilisation of the local market the positive impact of competitive forces must be balanced. In 2000, Dutch shipping specialists voted Kotug founder, Ton Kooren, "Port man of the year" in recognition of his contribution to innovation and competition (*Lloyd's List*. 15.1.00). In addition, Kotug's tariff of Dm 5500 per tug compared favourably with the Hamburg tug pool's, Dm 7330 per tug (*Weekblad Schutlevaar* 24.2.96). The effects of Kotug's assault on firstly, Hamburg, then, secondly, Bremerhaven were the reverberations that this had on towage contracts throughout North European

ports. In the Bristol Channel and in the Thames/Medway, incumbent tug companies were challenged by new entrants. The predicted competitive Kotug attack on the Antwerp stronghold of URS resulted in the incumbent slashing rates by 40 percent and embarking on a programme of heavy job loss among crews.

Gradually, however, the excesses of tugwars in Hamburg has given way to a process of mutual tolerance, resulting in the market stabilising. In order to gain a perspective on the issues of competition it is pertinent to examine the historical trends that have prevailed in the industry.

### **The Competitive Antecedents of Harbour Towage**

In order to appreciate the contemporary forces at work influencing the tugboat sector it is necessary to discuss some of the key historical trends. The early days of steamboat technology heralded a period of intense competitive rivalry, often at levels very close to localised war. The early days of steam towage were characterised by the small owner burdened with heavy running costs trying to take every advantage of a highly erratic market. This created:

**...The pattern for the next century...one of small, usually under-capitalized, one man or one family businesses burdened with heavy running costs, highly vulnerable, competing for custom in a chancy market. Short lived, seldom foreseeable bursts of activity alternated with idle spells during which tugs and crews ate overheads and contributed nothing to revenues while they waited for customers(Nicholson 1990. p.21)**

The reckless ramming of competing tugs, coal fights, tow rope cuts, were all seen as part of the war of attrition. The potential for lucrative earnings, especially in inclement weather proved to be the spur for this unrestricted behaviour. Unethical and unsafe practices were also employed in order to secure higher towage tariffs.

The conditions were more compatible with the excesses of the buccaneering unregulated market than with professionalism and ethical business conduct. The need to provide a more ethical, efficient and transparent contract between tug and tow came with the Lloyd's Open Form (LOF) (Darling 1991).

Despite the vast progress made in the 20<sup>th</sup> century some of the antics between the rivals in the Hamburg tugwars of the 1990s suggested a return to the earlier state of anarchy.

### **Towards Market Concentration and Professional Behaviour**

The process of concentration in harbour fleets became evident in the latter half of the 19<sup>th</sup> century. With this economic process came an accompanying

move to professional standards. Typifying this dual process was the experience of the Tees towing Company. At least six companies were merged into the modern fleet of the towage entrepreneur, Crosthwaite. This enabled the ex sailing ship deck hand, owner, to not only build up the major tug fleet on the Tees but also to achieve business respectability in the community, being honoured as the very first Mayor of the fast growing industrial City of Middlesbrough (Proud 1985). The concentration process was seen as a way of maintaining standards whilst limiting the impact of heavy competition on tariffs, particularly in time of economic downturns.

In ports such as Liverpool, London and Hamburg the plethora of companies gave way to larger groupings, often acting as consortia or cartels. In Hamburg, the pooling of the tug companies into one service was facilitated by state legislation within the context of post world war two economic rebuilding. This process was a necessity given the radical changes occurring in the technical and organisational management of shipping and ports. The container revolution and the rapid leap in tanker and bulk carriers sizes reduced the aggregate demand for tugs whilst simultaneously demanding a new generation of powerful tugs. Financing this investment was beyond the means of the smaller companies; market concentration not only reduced the threat of ruinous competition but also facilitated the investment necessary to survive in the new market. By the 1970s this process seemed to have reached its final settled state. In the UK two main groupings Alexandra Towing and Cory Towage began to dominate in major ports. Similar trends were evident in most major European ports, including Antwerp, Rotterdam and Hamburg.

This stable and concentrated market situation appeared to have reached permanence by the late 1970s. The towage industry, like other port industries had suffered downsizing as a result of larger but fewer vessel calls in traditional ports. In addition manoeuvring technology in the form of such aids as bow thrusters had greatly reduced the demand for tugs. Conversely, however, increases in vessel size and ever increasing pressure on all weather turnaround times has placed great emphasis on modern highly powered tugs. The required investment proved more conducive to the larger tug operator in these changed market conditions.

### **Towage as a Localised Industry**

Continuity and localised focus can be seen as one of the strengths of the industry with fleets building up considerable port region expertise. The lineage of ownership and crews stretches back in many ports to the early days of steam towage. For example, Southampton's Red Funnel, and the Bristol Channel's Cory Towage fleet (now Svitzer Towage) which despite a series of conglomerate take-overs have connections with their home ports stretching back into the mid 19th century. Red Funnel crews traditionally referred to their traditional status as the "home fleet". This is to distinguish them from the "new entrant" Adsteam crews, who have only been on the Southampton scene since the Alexandra Towing Company accompanied the

Cunard White Star's Line's move south from Liverpool in 1919 (Hallam 1976). In Hamburg four of the five incumbent operators(excluding Kotug) have a port history which reaches back to the late 1800s (Dollenbacher 1989) In leading Australian ports Adsteam and Howard Smith Towage (prior to their sale to Adsteam in 2001) have maintained strong local affinities from the 1870s onwards. In port areas a strong tugboat community exists. In Hong Kong a tradition of young highly committed tug coxswains exists. In the larger vessels of the HongKong Towage and Salvage fleet this localised expertise is supplemented by the provision of a deepsea master on board in case of salvage and deepsea towage contracts. Thus the requirements of both harbour and seagoing towage are fulfilled.

The local tradition is evident in recruitment patterns in the towage industry. McGinnis(1992) found that 76 percent of crews of the crews of UK West Coast port operators - primarily Alexandra Towing and Cory Towage - had been recruited via friends and relations. Additionally, company loyalty enforces the community feeling; in 1992, over 50 percent of crews in South Wales and Merseyside had more than 30 years service with the same company(McGinnis *op.cit*). The localised *status quo* was traditionally protected by the power of the trade unions on the waterfront. This was the case up until the deregulation of the late 1980s-1990s era. The arrival of two German owned tugs on the Thames led to a physical blockade by tugs of the trade unionised incumbent companies (Dunn). Loyalty can also be seen as a factor in the high value/ high risk area operations: In 1996 a tanker towage and escort contract was awarded to Cory Towage on the strength of past performance and continuity, despite the availability of lower cost operators (Gaston 1996).

In the UK the trend has been for a process of fleet rationalisations, mergers and takeovers. In 1960 43 ship handling companies existed in UK towage but by the 1990s this had reduced to 14. (calculated from ***Lloyd's Register of Shipping List of Shipowners***) The two main UK groupings are Adsteam Marine and Svitzer subsidiary Wijsmuller Towage. Both companies form part of globally oriented conglomerates, stemming from a heritage of deep sea shipowning. The former is a subsidiary of the Australian ports and shipping group. Adsteam Marine Limited, whilst the latter is owned by the Danish leading world shipping, shipbuilding and ports operator, A.P.Møller. The two leading Continental ports feature contrasting forms of towage organisation. Antwerp's tug services have been dominated by the URS for channel and river operations and the municipally owned port authority fleet for dockwork. Rotterdam's towage history featured a competitive balance up until the emergence of Kotug in the late 1980s.

The strengths of the localised traditions lies in the wealth of knowledge and skill that accumulates in tug companies. On the (often slow) rise from deckboy to skipper considerable knowledge is acquired on such local factors as tide flows, channel characteristics, wind-wave patterns, the specifics of large vessel manoeuvring traits, assimilation with VTS methods and pilot ship handling behaviour. This range of knowledge and skills may be seen as

specific to the port conditions. By way of contrast, the generic skills of a tug captain will focus on the critical skills of ship handling, winch control, crew management and training.

A contrasting view of the localised tradition is that it is rooted in monopoly, conservatism and market complacency. The essential question to be asked is:

**Do the market benefits of aggressive competition outweigh the potential loss of localised skill and expertise?**

The case for new entrants may extend beyond cost issues. For example, the successful new bidders for tanker handling/escort contracts in both the Solent and the Forth estuaries introduced push-pull techniques with powerful stern drive tugs. This led to replacement of the incumbent tug companies, despite their significant experience in the trade. Increasingly it appears that the barriers of localised knowledge and expertise are being threatened by the development of globalised ownership and operational practice.

### **The Globalisation Process**

The once locally focused industry now find itself influenced by global forces. Investment, ownership, management and crewing are all increasingly being affected by globalisation. The rapid appearance of the Chinese tug, *De Yue*, on station at the 1996 *Sea Empress* Milford Haven grounding served as a reminder of the global mobility process in even coastal towage and salvage (*Lloyd's List* 24.2.96). Similarly, the presence of Polish officers on the tugs of leading Netherlands salvage tug operator, Smit Internationale moves the process a stage further to the European coast (*Lloyd's List* 17.6.97). Such evidence points to an incipient phase in the move towards a deregulated and globally mobile towage industry in Europe.

Following the period of 1990s "Tugwars" came the buy out of the Wijsmuller fleet by the Danish world fleet leader, A.P.Moller's, subsidiary, Svitzer Towage, and the Australian Adsteam Marine's A\$500m takeover of Howard Smith's fleet. Both companies can claim significant maritime heritage and a worldwide reputation for direct, hands on business dealings. However, tariff increases will always be scrutinised carefully by shipping companies and their agents. The recent controversy caused by Adsteam Marine's application for an 18 percent towage increase in five of Australia's main container ports illustrates the sensitivity of the market to monopoly situations. Against the concerns of the shipowners and their representatives is the Adsteam case that in many instances their tariffs have not increased in the past ten years (*Lloyd's List* 21.2.02). The possible vertical integration linkages between the Svitzer tug fleet and the large deepsea fleets of the parent company, A.P. Moller, will be eagerly observed by port users. This will be particularly the case if other tugboat customers feel prejudiced by any such arrangements. Conversely, vertical integration may prove to a barrier to possible new

entrants to the market. Similarly arguments were juxtaposed in the Mississippi in 2000 when the river's dry bulk terminals concluded exclusive towage deals with the river's larger tugboat operators (*Fairplay*. 6.4.00). This has negated tugboat competition but it can also be seen as a way of securing stability and guaranteed quality service on the river. The new arrangements were not, however, greeted unanimously by shipowners: one Piraeus based owner claimed that the exclusive contracts precluded his company using the smaller operators on the river with the result that tariff charges were forced 25 percent higher. The impact was not only increased costs for the shipowner but also that the smaller tug companies were being forced out of the market, leading to a reduction in choice (*loc cit*).

A period of stability looks likely to occur in major ports. Such developments may be seen as part of a larger trend towards globalised operations and practices. True world standards of service quality are now emerging. However, the industry is now entering into a new era with significant challenges. The recent downturn in shipping markets places renewed pressure on all port expenditures; continued pressure on towage tariffs is likely to result. Of particular concern is the impending crisis in container trades, with recent fleet expansions coinciding with a reduction in demand on the major trade routes – Transpacific, N. Europe-Far East, North Atlantic. In addition, the tugboat industry is facing increasing safety scrutiny from regulatory authorities, including the recent extension of STCW stipulations to harbour/estuary towage. Another area of concern for fleet managers is the attention now being given to hours worked by crews. In Europe the Working Hours Directive could have a serious impact on crew availability.

The challenge now facing the industry is now one of responding to these challenges, adhering to global standards whilst retaining the strengths of its historic skills and traditions, usually rooted in the local port community.

The "Tugwars" of the 1990s in a number of European ports, led to conflict and animosity replacing the long standing spirit of professional co-operation. The changes have brought not only new patterns of ownership but, in many instances, changes in tug technology, crews and work practices. In short, the towage sector, once shielded somewhat by its strong regional affinities and barriers to market entry, has become as much a part of the global division of capital and labour as the deepsea sector.

The tugboat world finds itself getting smaller under these conditions. Rationalisations in the 1980s and 1990s led to a dispersion of localised skills. Experienced Masters and Mates found themselves in unfamiliar waters – some traded the sheltered waters of the Manchester Ship Canal for the open expanses of the Bristol Channel, Liverpoolians relocated in the South China Seas, Humberside crews could be found in the Gulf of Mexico and on station in the Falkland Isles. The traditional family operator J.P.Knight sold its Medway business and focused not only on tanker handling 500 miles north in the Cromarty Firth but also bulk carrier operations in Suriname! The political refigurement of Germany brought ex East German lower cost crews from the

Baltic to the Elbe and Weser ports, serving in the Kotug fleets, much to the chagrin of the higher paid Western Germany crews.

In addition to crew movements, tugboat deployment led to a global spread of technologies. The traditional towage techniques of many European ports were replaced by practices from the USA and Far East. The 1981 UK introduction of the Japanese built, **Kinross**, paved the way not only for tractor tugs in Europe but also towing practices in many ports (McGrath 2000). Likewise, new towing contracts were accompanied by new towing practices. This was the case in the Solent, when the local operator Red Funnel, lost out to The Norwegian Østenso subsidiary, Solent Towage. Also, at the Forth tanker terminal, Hound Point, when BP owned stern drive tugs replaced the conventional tugs of Forth Towing. More recently, the Hongkong Salvage & Towage (HKST) z-peller tugs, **Shek O** and **Sung Kong** caused a wave of excitement in the Gulf of Mexico and similarly when one of the vessels dry-docked in New Orleans. It was rumoured that many Mississippi skippers steered a zig-zag course across the River just to get a closer look at the unfamiliar design! The interest shown by the tugboat community and its customers soon translated into a surge of new z-peller tugs in the Mississippi and Gulf region. Increasingly as tug companies globalise their operations, the *state-of-the-art* in technologies and operational practices progresses towards to the global standard.

Crewing levels are also likely to be influenced by global standards – three men crew deals in certain ports are likely to be emulated around the world. Experiments in Germany and the USA with two-man crews will be assessed globally. Increasingly as global standards such as STCW determine quality it is evident that localised criteria will be diluted. The tradition of on-board training is likely to be supplemented by theoretical and simulation based training. Experiments with simulation in Hong Kong have already revealed how tug handling techniques can be greatly improved and tug-tow accidents reduced (Ip and Loynd 1998).

The spread of tanker escort duties provides further evidence of the globalisation process. The global standards of such oil majors as Exxon-Mobil, Shell and BP-Amoco are imposed on operations at tanker terminals around the world. In the liner trades the port experience of container and car carrying vessels is monitored on a global scale.

Recent port terminal consolidations have intensified this global comparison Hong Kong's Hutchinson-Whampoa's take-over of terminals in Rotterdam, Felixstowe and Thamesport and the Port of Singapore Authorities (PSA) inroads into Zeebrugge and Antwerp are examples of globalisation. Tug/Pilot performance will increasingly be scrutinised on using global comparisons. World standards of performance are becoming the norm. This rests easily with the perfect competition condition of perfect market information. Shipping and port companies are well placed to compare and contrast. When Medway pilots refused less capable tugs at the height of the Medway tugwar of the late 1990s it was clear that they were applying a globally defined criteria of acceptable tug service levels. Docking large vessels on tight port turnaround

schedules – particularly in storm conditions – demands and deserves the very best tug support available. Large automobile carriers or a post-panamax container ships can rightfully expect modern tugs with bollard pull in excess of 35 tonnes in any major world port.

New buildings from leading yards in the Netherlands and in Spain have reflected the economies of scale achievable from concentrating in select builders. Also, the link between the Damen yard and the hull builders in East European countries are a very real example of globalisation seeking out the best relationship between cost and quality. The lower costs of hull construction in the former Communist bloc nations are complemented by the technological skills and expertise of the Dutch builders who are able to off-set their higher costs against the added value components of tug construction.

The evidence, then, is of a rapidly changing industry; the impact in particular is being felt on the localised traditions of the industry. On the one hand the threat of tugwars ensures that operators and crews can never become complacent in the deregulated marketplace; on the other hand the influence of globalised forces is forcing the industry out of its localised perspective.

### **Summary and Conclusion**

This paper has sought to raise and analyse some of the critical issues of harbour towage competition and standards. The theory of perfect competition has been utilised as a framework for the analysis of the level of competition and its implications for the enduring quality of tugboat services. The threat of tugwars have been discussed. The potential impact on towage standards are immense in that unbridled competition could tip the balance away from professionalism towards a cost led lowering of standards. Parallels with other cost led shipping sectors have been drawn, very much as a way of alerting the maritime community of the long term risks if towage was to pursue this route and return to the chaos of its early years of operation.

It is evident that a reduction in both buyers and sellers has occurred as shipping companies and tugboat companies alike have either merged, been subject to buy-outs or have simply withdrawn from the market. It has become apparent that the historic trend has been towards concentration.

The supply and operation of tugboats has evidently become more homogeneous as globalised and deregulated influences in pricing, design, towing practices and certification have broken down the barriers of the once locally focused industry. In addition, the anticipation by shipping and port companies that world standards of safety and service will be delivered by tugboat operators in all major ports can be seen as a result of globalised patterns of ownership.

The firm as the price taker is a situation that can be detected in periods of competitive tugwars. The evidence from Hamburg was that the intense competition led to tariffs being forced down to break-even (and lower) levels.

Clearly the position was not sustainable and not compatible with the need to secure investment for the future. The outbreak of peace on the Elbe has been accompanied by moves to rise tariff rates.

Despite the well defined trend towards market concentration, the threat of new entrants remains latent. It has been shown that the lesson of Kotug's market entrance has been to remind incumbent companies that the competitive threat can easily be enacted in the deregulated market; that in certain circumstances, market entry becomes relatively easy. This is particularly the case when the incumbent monopolist tugboat company becomes complacent, and worse-still, abuses its advantageous market position. The easy availability of second hand tonnage, standardised new buildings and global labour supplies means that dissatisfied ship and port owners can easily promote a new entrant entrepreneurial champion of competition!

The concept of perfect market information rests well with the tugboat market. The customers of tug services are well placed to compare and contrast tariffs and standards of service. Likewise tugboat companies are well placed to assess the financial position of their customers by the level of freight rate pertaining.

From the evidence it seems that the industry is still moving towards concentration of ownership. However, the emphasis on quality and service is becoming benchmarked by the anticipation of world standards. Whilst tangible levels of competition may be in decline the lessons of recent history are that latent threat of competition exists. If any monopolist or oligopolist operators ignore this reality, it would prove tantamount to an open invitation for a new champion of competition!

## ENDNOTES

ATKIN, R. ROWLINSON, M (1998) "Tug Wars! Coming Shortly to a Port Near You? A Study of Competitive Change in the North European Towage Business". *International Towage and Salvage Conference Papers, Capetown, 1998.*

DARLING, R.D. SMITH, C. (1991) *LOF 90 and the New Salvage Convention*. London: LLP. pp.1-22.

DIBNER, J. (1996) "Strategic Terrain for the Towage Industry in the 21<sup>st</sup> Century". *International Towage and Salvage Conference Papers, Seattle 1996.*

DOLLENBACHER, M. SCHNAKE, R.H.(1989) *Hamburg Tugs*. Kendal: World Ship Society.

DUNN, L (1992) *Thames Shipping* London: Carmania Press.p.105.

"The Mississippi Method: Owners pay as tugs and terminal carve up the river", *Fairplay*. 6.4.00.

GASTON, J. (1996) Conversation with Towage Correspondent, Jack Gaston on Milford Haven towage contract.

GASTON,J. (1996) "Recycled Tugs a Blessing or Curse?" *International Towage and Salvage Conference Papers, Seattle 1996*.

HALLAM, W.B. (1976) *Blow Five: A History of the Alexandra Towing Company. Ltd.* Liverpool: Journal of Commerce. p.21.

"Tug War – Hamburg firm must pay for other's mistakes", *Hamburger Abendblatt*. 5.4.97.

HINTON, P. (1998) "LOF Salvage – the P&I Clubs Perspective", *International Towage and Salvage*. March. pp.32-3.

IP, K.M.H and LOYND, A. (1998) "Hong Kong Tugmasters' Perceptions of their Tugs' Manoeuvrability and Implications for Training". *International Towage and Salvage Conference Papers, Capetown, 1998*.

"Agents defend role of Chinese supertug", *Lloyd's List*. 24.2.96.

"Dutch owners hail success of flag initiative", *Lloyd's List*. 17.6.97.

"Dutch accused on tug subsidies", *Lloyd's List* 21.7.00. p.16.

"Votes for founder of Kotug as port man of the year", *Lloyd's List* 15.1.00.

"Fairplay joins forces with Smit in service accord", *Lloyd's List* 14.3.01.

"Germany welcomes EU halt to Dutch tugs aid", *Lloyd's List* 24.7.01.

"War of Tugs Levelling Out", *Lloyd's List*. 17.10.01. p.17.

"Probe into Adsteam bid to increase towage prices", *Lloyd's List* .21.2.02.

McGINNIS, E.A.. (1992) *Industrial Relations in the United Kingdom Harbour Towage Industry*. M.A. Thesis, University of Sterling.

McGRATH, T. (2000) "Harbour Tugs" *The Baltic Supplement, World Ports*. March 2000, pp.65-7.

PROUD,J. (1985) *Seahorses of the Tees: The Story of the Tees Towing Company*. . p.67.

“Kotug unleashes tugboat war with sharply lower rates in Hamburg”,  
*Weekblad Schuttlevaar*. 24.2.96. p.13

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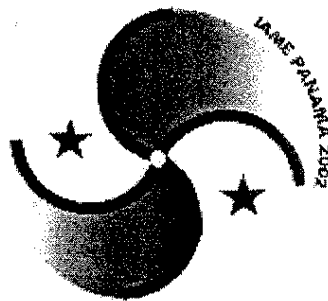


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