



International Handbook of Maritime Business

Edited by **Kevin Cullinane**



This book is dedicated to two great mentors and friends, Richard Gray and Geoff Millward

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Contents

<i>List of contributors</i>	vii
1 Editor's introduction: the maritime industry means business <i>Kevin Cullinane</i>	1
2 Business models, supply chain efficiency and port efficiency: new strategic imperatives <i>Ross Robinson</i>	13
3 Process modelling: a method to increase the performance of container terminals <i>Thomas Pawlik and Phanthian Zuesongdham</i>	38
4 Knowledge management systems in maritime logistics <i>Eon-Seong Lee and Dong-Wook Song</i>	50
5 Synchronisation of seaborne cold chains <i>Jasmine Siu Lee Lam</i>	68
6 The multimodal transport of flowers between Taiwan and China <i>Anthony Beresford and Chang Zheng</i>	80
7 The logistics functions of shipping lines: perceptions of international shippers in South Korea and the UK <i>Ki-Soon Hwang, Richard Gray and Kevin Cullinane</i>	103
8 Bundling transport and logistics services in global supply chains <i>Hercules E. Haralambides and Michele Acciaro</i>	123
9 Maritime networks: a source of competitiveness for shipping lines <i>Antoine Frémont</i>	150
10 Organisational effectiveness in seaports: a systems approach <i>Cimen Karatas Cetin and Güldem Cerit</i>	174
11 Unravelling dynamics in inter-container port relationships through an examination of liner service patterns <i>Wei Yim Yap and Theo E. Notteboom</i>	198
12 The economics behind the awarding of terminals in seaports: towards a research agenda <i>Christophe Theys, Theo E. Notteboom, Athanasios A. Pallis and Peter W. De Langen</i>	232

vi *International handbook of maritime business*

13	Mergers and acquisitions in the shipping industry: the effect on corporate value <i>Oswaldo Rodrigues de Araujo Rios and Heather Leggate McLaughlin</i>	268
14	Private equity investment in the European ferry market <i>Alfred J. Baird</i>	283
15	Ownership equity and efficiency: the case of Australian bulk ports <i>Sophia Everett and Rae Weston</i>	305
16	The hedging performance of the Capesize forward freight market <i>Manolis G. Kavussanos and Ilias D. Visvikis</i>	331
17	The potential for the use of single- versus dual-purpose officers in firms: a theoretical analysis based on resource-based, transaction cost and labour market economics <i>Ioannis Theotokas and Maria Anne Wagtmann</i>	353
	<i>Index</i>	377

1 Editor's introduction: the maritime industry means business

Kevin Cullinane

Over the past decade or so, the maritime sector has increasingly been considered a part of a wider international logistics industry that supports, contributes to, and represents an integral element of, global supply chains. This emergent change in perspective certainly reflects what has occurred within industry – both inside and outside the maritime sector – but is also manifest in the academic literature of maritime business. It seems appropriate, therefore, that this work is launched with the initial chapters serving to emphasise this context and to provide a background for this relatively novel and, certainly, more macroscopic perspective. At the same time, however, while acknowledging that the wider supply chain or logistics context does provide an alternative and supplementary perspective on maritime business, it should be recognised that it has not supplanted the more traditional microscopic focus on matters germane to either or both the shipping and port sectors in isolation. As is illustrated by the contents of this work, both these perspectives are well represented in the range of research which is currently being undertaken on maritime business.

As one of the most ardent and vociferous proponents of the adoption of a wider supply chain perspective on the maritime sector, the first substantive chapter of this book is by Ross Robinson (Chapter 2). He presents a scene-setting exposition of the implications of this wider supply chain context by analysing the competitive position of ports and suggesting that they need to alter their perspective if they are to remain competitive. Underpinned by a convincing logic, the author asserts that ports are embedded within complex matrices of supply chains. Precisely because of this, it will be necessary to understand the architecture and dynamics of port-linked supply chains in order to adequately define the functionality of a port. Given that supply-chain architecture is a function of its underlying business model, he argues that it is beholden upon port authorities to understand not only what freight might be concentrated through their port, but also the business model which is determining why and how it is moving at all. By so doing, an understanding will then be gleaned as to the demands on the functionality and value to be delivered by the port. The author illustrates and clarifies these arguments in two detailed case

studies of new demand–pull strategies that have impacted upon some of Australia's largest coal export ports and its metropolitan ports handling significant import flows of consumer goods. On the basis of this analysis, Robinson avows that operational efficiency is a necessary, but not sufficient, condition for port growth and that the emergence of new value pools in globalising supply chains requires new thinking about port development strategies. He concludes that the primary objective of ports, therefore, should rest with capturing value by establishing their role within the wider supply chain, rather than adopt the more traditional focus of looking simply at competition within their hinterland.

In Chapter 3 by Thomas Pawlik and Phanthian Zuesongdham, the emphasis is again placed upon fulfilling customer demand and maximising customer satisfaction within a supply chain by ensuring maximum internal operational efficiency and effectiveness. Paying particular attention to the port of Bremerhaven, the authors adopt a conceptual framework based on the value-adding transformation model from operations management and seek to apply it to container terminals. While the authors acknowledge that all transformation processes within a container terminal have to be performed in the most efficient and effective manner, their focus is on the container transfer subsystem which links the activity of loading or discharging a ship to the storage area. They highlight the fact that this particular transformation process must be optimally planned and implemented so that any delay or congestion within the terminal area does not affect other operations.

In analysing this particular subsystem, Pawlik and Zuesongdham advocate the application of a process modelling approach which facilitates the measurement and development of a series of process-based indicators or key performance indicators (KPIs). At the process level, these may be compared to any available industry-comparable benchmarks which then might facilitate their optimisation. However, it is the performance of a container terminal across the full range of subsystems and their processes which ultimately has an influence over the actual competitiveness of a container terminal. Thus, in tandem with external environmental factors over which a container terminal exerts little influence or control, it is ultimately the basket of process-related KPIs (which are functionally dependent upon internal factors) that exerts a strong influence over customer perceptions and, in consequence, the competitive position of container ports and terminals.

Irrespective of the external factors at play, it is clearly important that decision makers within container ports strive to optimise the value of these KPIs across as many processes as possible. The authors conclude that within the basket of all KPIs, those attracting the greatest weight are those

related to the 'transfer' subsystem which moves containers to and from the apron to storage. Once the dynamic optimisation of internal processes has been successfully achieved, the authors point to the importance of pushing back the boundaries still further by pursuing research into understanding and influencing the external factors which affect perceived competitiveness.

Again emphasising the role of maritime players within the context of the wider supply chain and international logistics, Chapter 4 by Eon-Seong Lee and Dong-Wook Song, revolves around maritime logistics value; a concept which refers to the extent to which shipping and port operators meet logistical demand, for example through the efficient and effective flow of physical goods, service and information. The authors suggest that if maritime players satisfy customers in seeking to achieve their logistical goals, the value of maritime logistics within any supply chain becomes greater. They also point out that the delivery of maritime logistics value is predicated on operational efficiency and service effectiveness.

The authors go on to advocate the implementation of a knowledge management system as a viable strategic option for shipping and port operators to provide enhanced maritime logistics value. Particularly when exploring the competitiveness of a firm in a highly uncertain environment (such as the case in international logistics), this form of knowledge-based approach has received wide acceptance in the strategic management discipline, where it is recognised that knowledge-based benefits accrue in the areas of innovation, uniqueness, productivity and service quality and so on. It is suggested that knowledge acquisition and application will, more specifically, enable maritime transport operators to play a crucial role in the whole logistics system by reducing lead times and costs and improving service flexibility and reliability. On the basis of an exploratory case study, the authors conclude that maritime transport operators acquire their most valuable knowledge through being embedded in cooperative/coopetitive networks and that by effectively applying this acquired knowledge, they can efficiently improve the maritime logistics value which they offer.

Chapters 5 and 6 provide practical case studies that reveal how the more holistic thinking in respect of the position of the maritime sector within international supply chains has been applied in practice. Both case studies share the important characteristics of relating to high-value perishable products that are time-sensitive and situations where shipping competes with air transport for the 'pole position' of preferred mode of transport.

In Chapter 5, Jasmine Lam presents a case study of a cold chain; a specific form of supply chain, dealing mainly with the handling of temperature-sensitive products, such as perishable food, confectionery and pharmaceuticals. Sea and air are the major competitor modes of