

Chapter 1

Introduction

Theo E. Notteboom, César Ducruet and Peter W. de Langen

In many coastal areas ports are located in proximity to each other. Location qualities, demand characteristics and actors' strategies define the potential of locations to develop port functions such as transshipment activities, warehousing/distribution, port related manufacturing activities, trading and value-added logistics. The growth in cargo volumes around the world has allowed smaller or new ports to enter the global scene and to start competing with large established ports.

The interaction between ports constitutes an important research topic. In many studies that focus on the analysis of seaports located in the same region, authors have avoided considering ports individually while attempting to look at groups of ports forming larger functional or spatial units. The often complex linkages in the governance and management of port areas and terminals within the same port system receives much attention in academic literature. Wang and Slack (2000) analyse the complex port interactions in the fast growing Pearl River Delta. Cullinane et al. (2005) discuss competition between Shanghai and Ningbo in the Yangtze Delta. Several chapters in Cullinane and Song (2007) are dedicated to competition, cooperation and governance issues in the Yangtze Delta, the Pearl River Delta, Singapore and Tanjung Pelepas and the South-Korean twin hub Busan and Gwangyang. The port governance book edited by Brooks and Cullinane (2006) also discusses the situation in many European gateways. Charlier (1996) and Notteboom (2007a) pay special attention to the Benelux seaport system. Marti (1988) zoomed in on the Pacific load centres on the North American west coast, while Starr (1994) and Shashikumar (1999) discuss port dynamics in North American gateways along the east coast. However, the diversity of local contexts motivates the search for generalization and conceptual synthesis, which is one goal of this book.

Ongoing economic integration, including integration of value chains, transport infrastructure and tax laws may create a case for cooperation and coordination between ports in different regions or countries. While most port users are international companies (this applies to shipping lines, see Heaver et al. 2000, terminal operating companies, Slack and Fremont 2005, and forwarding companies), many ports are still strongly 'territorially constrained', e.g. the institutional structure of such organizations prevents investments outside their 'territory'. This territory is often a municipality. Some ports have actively aimed to develop port networks (Van Klink 1997), with the aim to strengthen the competitive position of the 'home port'. Furthermore, these port networks are often not the

result of the strategy of the port authority, but an issue of the port community at large (De Langen and Chouly 2004). This internationalization of all types of port users leaves many ports as ‘pawns in the game’ (Slack 1993) and leads ports to reconsider their spatial scope. Consequently, ideas of port competition and coordination have emerged (Song 2003).

This book aims to unravel the factors contributing to the dynamic development of ports in proximity. Adjacent ports are typically fierce competitors, a competition that often contributes to the strong market positions of the respective seaports. However, the relationship between adjacent ports has also grown stronger in the sense that port executives as well as the private sector stress that, while maintaining a healthy competition, opportunities for cooperation and coordination can be further explored.

This book not only provides an overview of the state-of-the-art of research in this field, but also sets an agenda for further research on ports in proximity. Consequently, the book develops a clear academic view on opportunities for cooperation and identifies avenues for further joint research which is useful to ports in proximity all over the world.

The book aims to provide multidisciplinary insights on ports in proximity. Throughout the book, concepts of strategic management, supply chain management, port and transport economics and economic and transport geography are applied to offer an in-depth understanding of the processes underlying spatial and functional dynamics in port systems. The book also discusses policy outcomes and implications relevant to port systems all over the world. By doing so, the book aims to advance research in the fields of the interaction (competition and coordination) between adjacent seaports in a logistics-restructured environment and the implications for port governance structures and policy makers.

The first part entitled ‘Conceptualization of Ports in Proximity’ provides a methodological and conceptual background to the main themes of this book.

Chapter 2 by César Ducruet, Theo Notteboom and Peter de Langen discusses the potential to apply insights from New Economic Geography (NEG) to ports. The authors demonstrate that NEG has moved beyond traditional economic geography in the early 1990s by applying a modelling approach to the explanation of changing spatial structures, and by attempting to put economic geography in the economic mainstream. By bringing together international trade theories, micro-economic theories, and spatial analysis, it proposes a renewed framework explaining the uneven distribution of activities across geographical space, understood in terms of agglomeration, dispersion, and regional integration. The chapter identifies two important issues where NEG can be applied to ports: the changing concentration of traffic within a port system, and the uneven agglomeration of economic activities around port areas.

In Chapter 3, Peter V. Hall and Wouter Jacobs deal with the question of how proximity influences relationships between ports and among major port users. They argue that proximity within and between ports in this global age cannot be understood in geographic terms alone. Proceeding from the position that

proximity is important for learning, innovation and resolving collective action problems, they discuss five dimensions of proximity in the ports context. Each of these dimensions must be appropriately balanced; too much proximity can be as harmful to innovation and collective action as too little proximity. Focusing on the geographic dimension, the authors differentiate between proximity within ports and between ports, so generating a typology of four 'ports in proximity'. Each type faces particular challenges with regards to port innovation and upgrading. Given the importance of port infrastructure and hinterland connections, institutional proximity emerges as a key dimension.

Chapter 4 by César Ducruet proposes clarifying the concept of 'port region' by synthesizing dispersed elements from various disciplines such as transport geography and regional science. He retains the idea that the port region is a regional area where economic structure is influenced by port activities and the port sector. One interesting finding from the data analysis on OECD port regions is that in general, specialization in the industrial sector has a negative influence on traffic size and growth compared with regions specialized in the tertiary sector or which concentrate economic wealth and unemployment. Such evidence provides useful insights on the impact of globalization (e.g. shift of manufacturing to less-developed countries) on the role of ports in developed countries on a regional level.

Chapter 5 by Theo Notteboom aims to unravel the factors contributing to the dynamic development of multi-port gateway regions and multi-port hub regions. Two questions lie at the heart of this contribution: what mechanisms drive port system development and why do distinctive port systems follow other development paths? The chapter provides a discussion on existing models on port system development and particularly analyses the role and sources of path dependency and contingency in port system dynamics. The author concludes that a certain degree of path dependence in the development of ports at a regional scale exists, but the sequence of events makes a difference for the outcome. Port development processes also show a certain degree of contingency. Strategies and actions of market players and other stakeholders may deviate from existing development paths.

Part II of the book extends the discussion on ports in proximity to the level of port governance. The contribution by Brian Slack, Elisabeth Gouvernal and Jean Debrie deals with the relationship between proximity and port governance (Chapter 6). The authors consider some of the issues raised by port decentralization drawing upon the examples of two national cases, France and Canada, where different but parallel processes have taken place. It is demonstrated that in the case of France, regional governments play a larger role today in port administration which we suggest may lead to a greater degree of cooperation between the ports under each regional government. In contrast, Canadian ports have devolved to purely local agencies, without any regional and very limited national control. The chapter puts forward the hypothesis that governance proximity, defined as the relational distance separating the port authority from the government tier exercising jurisdiction over

the port, can play a very important role in shaping port policy orientations. The authors conclude that proximity in port governance is an important factor shaping cooperation and competition, but may under certain circumstances give rise to very different results.

Chapter 7 deals with regional integration and the concept of a maritime range. Arnaud Lemarchand and Olivier Joly argue that ranges are key elements in a new understanding of emerging interdependences through globalization processes and the new modalities of cooperation and competition. This calls for a new analysis of the insertion of port city economies within maritime ranges, based on existing port studies. One of the key research questions put forward relates to the way containerization and globalization influenced the emergence of maritime ranges.

The contribution of Athanasios A. Pallis and Patrick Verhoeven (Chapter 8) scrutinizes the relevance of the concept of proximity in the European context. Based on a critical review of many EU official documents on port policy and of the literature on port development, they assess some key European policies such as the integration of transport systems, sustainable port development and level playing field. They underline important gaps between theory and practice, such as the preference given to bigger ports, the lack of investment in port infrastructure and intermodal solutions, and the lack of horizontal coordination among neighbouring seaports. Of course, the consciousness about such issues exists, but has appeared in EU official reports relatively recently. Therefore, the authors suggest referring to air transport policies, and to develop specific instruments fostering the advantages of proximity, such as guidance on the application of environmental legislation and state aid guidelines.

The third part of the book contains the first set of case-studies: three chapters discuss contemporary issues in the North American gateways and corridors, which form key constituents of the ports in proximity discussion in the region. Robert J. McCalla in Chapter 9 proposes a thorough review of the concept of ‘gateway-corridor’ in which he includes the political, jurisdictional, and private/public dimensions influencing port development. Using Canada as an ultimate example, the chapter demonstrates which factors make the Asia-Pacific gateway successful and the Atlantic gateway less successful. Besides classical factors such as spatial organization and legacy of the past, the work of Robert McCalla makes clear there is a lack of coordination among different parties in the Atlantic case. So far, the Asia-Pacific gateway has been more able to answer important challenges such as the growing Pacific trade while profiting from the prominent position of Vancouver as a naturally eligible gateway port for the region. He concludes that a successful gateway should be planned early by multiple actors beyond local boundaries while involving private players in a concrete way.

After discussing recent changes inflicted by containerization on port competition and the organization of port hinterlands, Chapter 10 by Jean-Paul Rodrigue and Changqian Guan argues that a process of divergence is currently taking place at the Northeast American seaboard. Traffic distribution and growth is modified by new challenges for ports and new strategies of carriers. Their conceptual approach

based on port site, shipping networks, port policy, hinterland and supply chain management provides a clear picture of the situation at Northeast American ports. Evidence is drawn upon recent traffic statistics by port and by range (i.e. St. Lawrence, Upper, Mid and Lower ranges). Changes in global services on the world map and in local policy directions in a context of port regionalization have led to a drastic redistribution of forces among concerned ports, showing the usefulness of the concept of divergence in port studies.

Chapter 11 by Claude Comtois and Brian Slack provides a critical reflection about gateways in light of the economy/environment nexus. As it has become increasingly recognized that environmental concerns can also be beneficial to economic players themselves, the chapter proposes an application to the case of port gateways. Such approach provides a good complement to McCalla's chapter because it widens the definition of the gateway to dimensions such as air and telecommunications networks passing through a given port or corridor, beside land and sea networks. Their new definition also embraces trade flows and specialized activities, calling for an integrated approach. Following a review of some cases of negative gateway impacts, the proposed solutions include internal efficiency, unimpeded accessibility, capacity expansion, and the emergence of new practices. Such reflection provides full support to the successful Asia-Pacific Gateway project led by the Canadian government.

Part IV consists of five chapters elaborating on regional cases in Europe: Dunkirk in France, the Ligurian ports in Italy, a Danish-Swedish port combination and two cases for the UK port system. The case of Copenhagen Malmö Ports presented by Peter de Langen and Michiel Nijdam in Chapter 12 is both unique and offers an example of best practice. The authors offer a useful overview of existing multi-port organizations in the world, insisting on the fact that most of them have not emerged through bottom-up initiatives. Without any doubt, the CPM project has emerged from two geographically adjacent main partners, benefiting from historical relations and locating within a vast cross-border urban region. Therefore, sharing culture and knowledge has facilitated the implementation of this unique project, while common practice already existed before the merger of the two medium-sized ports Copenhagen and Malmö in 2001. Despite some legal and political difficulties, the project has successfully lowered costs through capacity sharing. In the end, the authors conclude that such integration of two port authorities is not likely to happen anywhere else due to the specificity of the case, such as low pre-existing competition and a common threat due to bridge construction.

Embarking on geographical proximity and competition as prime factors, Chapter 13 by Antoine Frémont and Valérie Lavaud-Letilleul provides a critical assessment of the case of the French port Dunkirk. Ideally located in Northwest Europe, Dunkirk shows a remarkable example of a little-known port situated in a medium-sized industrial city strongly hit by changing economic cycles. Based on a review of port development processes worldwide, the authors propose a conceptual synthesis of the possible relations between a mega-port and a secondary port

within a given area. Possible solutions to the domination of a huge gateway like Antwerp are highlighted without ignoring the specificities of Dunkirk as a state-run port, having little synergy with adjacent ports, and suffering from industrial crisis and isolation. Signs of change locally and regionally call for a rethinking of the position of Dunkirk, notably in light of pressures felt at competing ports such as Zeebrugge in Belgium.

Chapter 14 presents a case study of Ligurian ports in Italy. Different ports are located in close proximity in Liguria: Genoa, La Spezia and Savona. The chapter demonstrates the current legal and institutional structure is not adequate for dealing with the challenges faced by the ports. Consequently, Claudia Caballini, Laura Carpaneto and Francesco Parola make a plea for a further decentralization of the Italian ports (that currently are managed rather centrally) as well as the establishment of a platform for cooperation in the Ligurian region.

Chapter 15 provides a case from the UK. Anthony Beresford and Stephen Pettit discuss competition between ports in the UK. They show the relevance of inland transportation costs in port competition and also suggest that ports located outside metropolitan areas may benefit from congestion and high prices for road transport from ports in congested areas.

Chapter 16 by John Mangan, Amy Proctor and David Gibbs discusses the influence of external factors on the role of ports. The contribution in particular focuses on the ports along the Humber Estuary, the largest concentration of port activity in the United Kingdom. The chapter considers the impact of various disparate external influences on the Humber ports (economic activity in the UK, changes in ports ownership, and developments in port-centric logistics) and how these might impact the ports into the future. As such, the chapter aims to give the reader an insight into some of the disparate issues currently impacting the ports sector generally in the UK.

After these European cases, Part V of the book discusses cases from Asia. Masato Shinohara discusses port competition and Japanese port clusters. He describes a fundamental transition in Japan, away from a focus on competition of Japanese ports with gateways in China and Korea, and towards more attention for a balanced development of the port system, with more attention for regional ports.

Sung-Woo Lee and Geun-Sub Kim discuss Korea's two-hub port strategy in Chapter 18. They suggest that Korea's policy of developing two hub ports has made Korea an important gateway in North-East Asia. They suggest further integration between the two ports would add to Korea's competitiveness. In the short term, this may take the shape of joint projects to improve flows between the two ports, while in the longer run, a unified governance structure for both ports is suggested.

In the last chapter, James J. Wang discusses the transition of Hong Kong from a hub port city to a global supply chain management centre. The case of Hong Kong shows that containers shift easily between ports. Thus, ports in metropolitan areas, that have to ensure that economic activity related to logistics activities remains in

the hub-city while no longer aiming to maximize port throughput. This is certainly a relevant insight for the development of ports in large gateway regions.

The contributors to this book and the case-studies presented in this book are from different parts of the world and different disciplinary backgrounds. We sincerely hope the book will provide our readers with multiple perspectives and fresh ideas on how to evaluate and solve current issues in multi-port regions around the world. We hope this book contributes to the ongoing policy discussion in many parts of the world on sustainable inter-port relations that not only add value to the port users, but also guarantee a development pattern respecting societal and environmental goals and objectives. Finally, we would like to express our acknowledgements to the Series Editors, Professors Richard Knowles and Brian Graham and the anonymous reviewers for their supportive and constructive comments.