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Regulation and Finance in the Port Industry

Lessons from Worldwide Experiences

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Introduction: Book Rationale

Essentially, all models are wrong, but some are useful.

—Box G., Draper N. (1987). *Empirical Model-Building and Response Surfaces*, p. 424, Wiley.

The present volume has been developed starting from 2018 when we were involved in an assessment of different funding and planning schemes applied by EU ports. In gathering information on different practices, the editors recognised how different legislations and cultural elements did impact on planning practices and financial tools, giving port management bodies a quite diversified array of implementing strategies, independently from the governancemodel that most EU ports were actually subject to. As such, we thought that a volume collecting major case studies could increase current understanding on the link between planning tools, funding solutions, and regulatory practices, thus increasing current awareness beyond the traditional port governance literature. The rationale for the current volume is then linked to the necessity for a better understanding of the differences between general governance models and their local applications.

Another input we found out from the initial research which kicked off the current project was that the continuous modifications of port competitive arenas generated a series of rapid changes. These modifications were related to the merging of several port management organisations (one of the latest being the announced merge between Zeebrugge and Antwerp), the investments needed to cope with new technological standards (e.g. blockchain, ship and terminal automation, new energy sources), and the modifications of the competitive conditions of several interconnected markets (e.g. trade frictions among China, USA, and European Union; alliances; Belt and Road Initiative). All these elements pushed port regulators to either innovate governance models or promote stronger cooperations with main market players, as often done through the promotion of integrated solutions. In doing so, we spotted a clear critical issue: most of the traditional literature on port organisation and regulation is based on national case studies while most of the possible "lessons to be learnt" from these new applied solutions could be only based on comparisons among different experiences. The current book aims at filling this gap, providing the reader with the possibility to compare current regulatory and planning solutions in a vast set of port systems that cover all major world regions.

We are aware of the risks of promoting such comparisons, even when a vast sample of case studies—thanks to the contributions of many experts—is used: managing the development of such a project and assuring the consistency of the information provided have not been an easy task but we feel the final outcome is of incredible value.

One of the key findings of the current book is that several diverging trends can be observed in terms of port management tools even though general objectives (e.g. increase efficiency, attract investments) are often shared among different country regulators. Among the key trends, the most common ones are the different forms and levels of privatisation, the country openness to foreign investments and the links with macro-regional funding schemes.

Furthermore, the book—planned to include contributions from different scholars around the world—contains critical discussions of the elements that characterise port planning and management, as well as how those elements are driving investment decisions. The presence of

a general (and more theoretical) part as well as specific country-based discussions improve the capability to compare theory with current practices, increasing the potential transferability of the outcomes as well as giving insights to both practitioners (e.g. regulators, potential investors) and policy makers.

The final aim of the book is to provide a guide for both scholars and practitioners on how different port organizational and regulatory contexts affect investment patterns and related financial tools. Academics can then use the book for better understanding and comparing different port regulatory frameworks, planning tools, and related financial solutions. Practitioners could be interested in the better understanding of different frameworks, as well, but their main interest will probably lie on the specification of relevant legislations and financial tools.

In our opinion, the present book also allows students to benefit from the insights of the book in order to allow them to find out how ports are managed and organised in different port regions and how these differences impact on the development strategies and related funding schemes.

The book organisation has been affected by both general book development issues (e.g. delays, merge of content among different chapters) and by the ongoing modifications of the port industry that were thought to be reflected in some of the book related parts.

Considering different audiences, the structure of the book is thought to provide value to students, mainly with a first part dedicated to general theory (Part 1) and policy comments and perspectives for the future of the industry (Part 3) and a second part that is dedicated to the application of general principles on specific port systems (Part 2). The Part 2 of the book is thought to generate most of the value for both practitioners and academics, given the relevant level of information included per port system, the wide range of represented countries, and the differences in industrial and trade structures.

While the book focuses on the link between planning, funding, and regulation of different port activities, a series of overarching issues have been indirectly mentioned in several chapters: the ongoing industry challenges in coping with the environmental issues has been highlighted by several authors either in the form of new investments for adapting port

infrastructure to climate change or in mitigation strategies that might impact on funding schemes and regulatory tools. During the development phase of the book, for instance, several countries adopted the United Nations Sustainable Development Goals to be used in their port industry development strategies. Similarly, the International Association of Ports and Harbours (IAPH) reiterated many times how sustainability will represent a key issue for the future of port development and the related industry competitiveness.

As such, while the present book does not include a specific discussion on the environmental challenges, it provides an ample array of examples on how different national regulators are developing solutions to promote investments to boost port sustainability. Similarly, links with the new technologies currently under development and macro-regional investment issues—the most famous one being the Belt and Road Initiative—are all treated from a port system point of view in order to allow the readers to compare the local point of view, appreciating differences in both the perceived importance of the specific topic and the peculiarities of each national approach.

We are grateful for the many contributions included in the book: world experts gathered to contribute to the present volume with specific inputs and a unique understanding of local dynamics. While several colleagues directly contributed to the book, others indirectly participated towards a series of discussions, insights, and information sharing: we are thankful to all these silent contributors as well.

Last but not least: during the development of the present volume, Covid-19 pandemic kicked-off, impacting all our lives. This event did not just impact on different economic sectors but drastically change social and personal lives as well. A special (final) thought goes to all those friends and colleagues that have been impacted by the pandemic.

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Part I

The Port Structure: Managerial and Operational Issues

1

Port Governance Models and Their Historical Development

Claudio Ferrari, Hercules Haralambides, and Alessio Tei

Introduction

Ports are key gates to coastal regions and their hinterlands. As such, they are infrastructure nodes representing strategic interchanges among different logistics chains, both at sea (i.e., commercial ships, cruise vessels, fishing boats, and yachts) and on land (e.g., road/rail transport,

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pipelines, industrial plants, leisure facilities, and touristic attractions) (Haralambides, 2021). Given their importance to a variety of different industries, the development of ports has often been influenced by several external factors (e.g., local and national politics and industry needs) as well as by the needs of port users (e.g., energy supply, vessel types and sizes, and cargo specialization). Thus, the complexity of port activities and the possibility of having ports that are either specialized (e.g., containers, cruise, fishing, and bulk cargo) or multipurpose ports have often shaped views on local port planning as well as its regulation.

At present, port systems handle the majority of world trade, both in terms of value and volume. UNCTAD, the Geneva-based United Nations Conference on Trade and Development, estimates that a consistent value of over 80% of total international trade is using seaports (UNCTAD, 2019). In the aftermath of the Covid-19 pandemic, seaborne trade had been regularly used as a proxy of the status of the world economy, by a number of international bodies (UNCTAD, 2020).

The economic role of ports makes them fundamental and strategic nodes in national and international logistics networks, being, as it may, essential elements for both industrial production chains and related consumption markets (Bottasso et al., 2014; Wilmsmeier et al., 2007). Together with this strategic role for the world economy, ports represent also key social and local assets for every hosting region, in terms of generating local value-added (e.g., increasing local accessibility and connectivity to remote areas), employment, and incomes. Moreover, ports have recently assumed a new role in important policy measures, aiming to mitigate the environmental impact of transport operations (e.g., through the development of the so-called *Motorways of the Sea*) (Casaca & Marlow, 2007).

From a historical viewpoint, the strategic significance of the port industry both for foreign trade and national industrial development has led many national governments to seek an active involvement in the development and control of port infrastructure. In more recent times,

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however, the scarcity of public financial resources; the unwillingness of the public sector to assume the market risk of specialization; the limited ability of the public administration to run complex, risky, and increasingly commercialized activities, such as those of container terminals; the interest of carriers in having their own *dedicated terminals*; and the increasing appetite of the private sector (Global Terminal Operators—GTO) in the often very lucrative port terminal investments have given ways to the devolution of decision-making authority from the 'centre' to the 'periphery'.[1] A period of national port reforms has thus started, which is still underway in most countries.

Port reforms range from the simple commercialization of port operations to corporatization, and all the way to full port privatization (Baird, 1995, 2002; Everett & Robinson, 2006; Haralambides, 2017). A part of the extant literature (e.g., Baird, 2004, 2013; Everett & Pettitt, 2006) has indeed claimed that port reforms kicked-off when the financial needs of the port business exceeded either the capability or the willingness of the public sector to accommodate them. Finally, it should also be said that the private sector's involvement in port business has often given rise to conflict between port and city administrations, particularly municipalities, many of which still believe that it ought to be themselves the lawful managers of 'their' ports.[2]

Thus, in spite of the increasing incursion of the private sector in port business, the importance of ports for the local economy still represents a political and regulatory factor, resisting the more pervasive forms of reform (full privatization). This has created a heterogeneity of, one could say, *customized* regulatory solutions, in an effort to reconcile the new needs of trade and industry with local context and in this way allow public bodies to still be involved in port planning and control, either directly or indirectly, depending on the specific local circumstances

[1] A reversal of this trend can however be observed at the time of writing, i.e., a *recentralization* of decision-making powers, through the integration of regional ports under a single authority. The trend is championed by China, followed by Italy and other European countries.

[2] During his years as the manager of the Italian port of Brindisi, Professor Haralambides vividly remembers the then-mayor of the city, and member of the port's supervisory committee, never missing an opportunity to declare that he did not participate in committee meetings just in order to raise his hand and vote, but he was coming there to actually manage the port!