



# ΣΠΟΥΔΑΙ / SPOUDAI

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Special Issue:  
Shipping and Ports at Crossroads

Guest Editors:  
Athanasios A. Pallis and Ioannis N. Theotokas

UNIVERSITY OF PIRAEUS



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## **Editorial: Shipping and Ports at Crossroads**

Competitiveness, efficiency and effectiveness stand as core targets of today's corporate strategies of shipping and ports, and mark relevant regulatory initiatives at national, peripheral and global level. Meanwhile, shipping companies and port service providers jockey to exploit global sourcing opportunities in order to compete effectively at a global scale.

The continuous development and formation of global players, and the (de)regulatory approaches that are associated with these trends are indicative. Financial sources, human resources, operational strategies, performance measurements, horizontal and vertical integration practices, environmental considerations and greening operations, technological advancements, transport systems integration, and not least marine and maritime education systems, are all reassessed under the prism of a maritime sector speedily adopting new structures.

These developments were the focal themes of the second edition of the European Conference on Shipping, Intermodalism & Ports – ECONSHIP 2015. The Conference was organized by the Department of Shipping, Trade and Transport of the University of the Aegean in Chios, Greece an island of maritime tradition. With its theme being “Shipping and Ports at Crossroads: Competition, Global Sourcing and Regulatory Challenges”, ECONSHIP 2015 attracted leading maritime economists and researchers with an interest in shipping, transport and trade from 23 countries, advancing knowledge on the driving forces and the potential shapes of modern forms of competition in shipping, ports, and related intermodal transport systems, as well as on the implications and regulatory challenges associated with them.

The present volume of SPOUDAI presents five empirical papers which have been co-authored by young maritime economists (i.e. at post-doctoral or doctoral level) and more senior colleagues working at Universities in Greece, were first presented at ECONSHIP 2015, and succeed to advance our knowledge on the way that modern shipping and ports are shaped.

These five papers examine the modern structures of shipping in several market segments, including the second-hand market, explore tools that will enable improvements as regards forecasting and risk minimisation in shipping and ports, the ways that environmental challenges, like waste handling and port reception facilities, evolve and the operational responses implied by relevant regulatory developments, and the corporate relations developed within the maritime world.

Since their selection by the editors, the five studies have been extensively revised and as the peer review process concluded they offer useful insights of both scientific and practical-managerial value.

Shipping is an industry marked by the presence of most dynamic and active second-hand markets. Ship-owners involved in these markets are exposed to considerable risk, with transactions made under conditions of uncertainty and limited predictability about market trends. The opportunity of entry or exit is linked with investment decisions influenced by expectations about the phase of the shipping circle. Therefore, the understanding what determines second-hand prices and the sources of fluctuations allows better determining the size of asset play in a specific time period.

This is the topic of the first article of the volume. Geomelos and Xideas examine second-hand shipping markets aiming to model and analyse the level of risks in which participants in this

market are exposed. In particular, the scholars question the relationships among second-hand prices, spot rates, and new-building prices. They do so applying an econometric analysis on second-hand prices for five different types of tankers using observations for over 40 years, which allows investigate price differentiation according to types of tankers.

Geomelos and Xideas focus on the heterogeneity among variables, proceeding to estimation of both fixed and random cross section and time effects. Spot prices are found to be stationary, but second-hand and new building prices are not. The variables of second-hand, spot, and new building prices are cointegrated leading to a direct dynamic causal two-way relationship. This relationship is confirmed for all categories of vessels, with capacity playing an important role in the determination of second-hand market, and random effects decreasing as the vessels size increases. The spot market has been found to interacts more with the second-hand market in large capacity vessels (VLCC, Suezmax, Aframax), while new-building prices interact more in the case of Panamax and Handysize vessels.

Methodologically, this study provides the foundations for research that would explore additional variables - either shipping or/and macroeconomic ones - to compare the forecasting performance of panel data models in second-hand shipping markets.

The second paper of the volume also deals with forecasting in the shipping market, expanding research to an understanding of the levels of risk. In particular, Lyridis, Manos, Zacharioudakis, Pappas, and Mavris measure risk in shipping markets and provide a decisional framework to manage it. The study models shipping markets in order to obtain useful information regarding future values of shipping market risk in relation to current market fundamentals.

Future market risk has always been a critical question in decision-making processes. Acquiring information regarding future prospects in a volatile market such as shipping freight rates has been particularly difficult. In the era of risk management, measuring shipping markets risk or selecting between spot and period charter to place a vessel, are difficult questions, which can be successfully approached by using the appropriate risk management tools. This is especially true as tools hedging shipping risks emerge to a growing parallel market next to the physical one. The estimation of future market risk is, undoubtedly, a most needed process.

Lyridis et al provide a simulation exercise in the case of tankers, more specifically in the case of Very Large Crude Oil Carriers (VLCC). Feeding the forecasting model with different scenarios, the study generates a stochastic ‘description’ of the future. A tanker market analysis since 1979 establishes that the most important factor affecting the market is the OPEC oil production level. On this ground, the scholars simulate the behavior of this variable to forecast values of freight rates at different point in the future. Within this exercise, shipping market parameters such as active fleet or scheduled deliveries play a predetermined role in future freight rate levels. Additionally crucial parameters that affect freight rate levels and have unpredictable random behaviors are stochastically generated in the corresponding simulation time period.

This is a study that produces future freight rates realizations depended to the current state of the market; it thus provides support to decision support for trading Future Freight Agreements (FFAs) and shipping market derivatives, and to the development of chartering strategies and managing risk for shipping investments. Expanding its application to other markets – i.e. bulk shipping – seems the next step to further establish the validity of the tool developed in this study.

A different type of forecasting is the theme of the third paper of this volume. This time the focus is on ports, with Angelopoulos and Chlomoudis seeking competitive forecasts for individual incoming or outgoing cargo types, as well as port throughput. The intention is to outline ports potential as regional and global facilitators between demand and supply, and demonstrate their capacity for reflecting national economic activity and forecasting.

Angelopoulos and Chlomoudis use US ports as the sample to explore the issue in question. Given the importance of the port sector for national transportation, production, and international trade flows, this study explores possible relationships and co-movements of monthly port inputs and outputs both with each other, as well as with aggregate economic indexes.

The scholars utilize monthly inflows and outflows of several cargo types, as well as cruise passenger volumes from US ports, to analyse the added value of information carried by common factors shaped by ports with respect to the underlying forces of a national economy and provide competitive forecasts of disaggregate trade series from single ports (such as outgoing or incoming TEUs). The employed model displays a promising forecasting performance for individual ports and aggregate economic indicators versus benchmark models at four to seven months ahead, while explaining a high fraction of the US GDP and industrial production indices variance.

Methodologically, this is a contribution that, beyond its analytical capacity, provides, a background for the compilation of larger datasets, extending forecasting horizon. Its value from a practical point of view is also undoubtable: short and mid-term forecasting is of interest to port operators and authorities, in order to adapt to future incoming or outgoing trade volume fluctuations by adjusting their governance structures and strategies.

The port industry is the theme of the next paper as well. Pallis, Papachristou and Platias focus on the environmental dimension of port operations, an issue that has only recently entered the agenda at both research and industry levels. The paper examines the interplay between international and European environmental regulatory frameworks and port practices; in particular, it studies the state of ports compliance to the regulatory provisions as regards waste reception facilities.

Cruise ports, a rather understudied segment of the port industry, are the focus of the empirical part. With the growth of cruise activities continuing every single year for more than two decades, the cruise world takes initiatives aiming to handle the produced externalities and achieve a sustainable development. A key environmental issue is the handling of the various wastes produced on the ever-bigger cruise ships: how effective have been the efforts of ports to fulfil the requirements of the relevant part of the IMO MARPOL 73/78 or those imposed by the European legislation?

Pallis, Papachristou and Platias analyse the state of Port Reception Facilities (PRF) in the second biggest cruise region of the world, that is the Mediterranean and its adjoining seas that hosts more than 18% of cruise activities. The produced database of ashore waste reception and disposal facilities demonstrates the presence of a satisfactory state of compliance, and the availability of a variety of operational options and pricing schemes in place. The available facilities, technologies, and services suggest a widespread effective correspondence to required adjustments.

With European institutions continuing to discuss the update of the related policy initiatives, the paper provides an analysis of value for all those studying, or discussing, the introduction of port waste information management systems. It provides the essential know-how on

current management practices of cruise ship generated garbage, increasing the potential of reaching optimized waste management practices.

The final paper of the volume returns to shipping, with Pantouvakis, Krasanakis and Patsiouras examining the nature of the relationships between shipping companies and shipbrokers. During the procedures of chartering, selling, and purchase in shipping, a number of transactions take place between shipbrokers and shipping companies. The consistent efforts for the development of powerful relationships, that provide the foundations of beneficial cooperation between these parties is a practice that has been well acknowledged by both practitioners and those studying the maritime world. Besides, the importance of close contact with customers is an important feature commonly highlighted in marketing constructs. On these grounds, this contribution examines the importance of trust and partnerships in the competitive shipping area, searching for the core features of Business-to-Business (B2B) relationships in the shipping sector.

Pantouvakis, Krasanakis and Patsiouras present a conceptual framework based on the application in the maritime sector of types and respective features of relationships, as identified in the field of marketing, in order to explore the factors affecting partnerships between shipping companies and shipbrokers. The empirical part of the paper illustrates some of the key characteristics of these relations, with the use of a survey instrument that was developed and tested with exploratory factor and regression analyses. Following the collection of replies by more than 100 shipbrokers, the scholars conclude that three particular constructs affect the developed opportunistic relations. While two of them – the affective commitment and the calculative commitment of shipbrokers respectively - appear to be positively related to opportunism, the third one– which is trust - is found to be negatively related to such opportunism.

Given that few publication explore the principles of relationship marketing in the maritime sector, this is a study that provides a useful analysis towards the development of valuable constructs and the application of well developed constructs in other research fields (i.e. marketing) or industries. This is also an informative study for those practitioners interested in getting informed about the collaborations between shipping companies and shipbrokers in order to lead to more focused and structured partnerships.

While the above papers provide a useful addition to maritime studies – in most times combining conceptual advances with practical results and concrete recommendations - they open paths for further research on forecasting in shipping and port markets, risk management, relationships between key stakeholders, and responsible environmental and corporate policies as regards practical, operational and regulatory issues. The above papers also emphasise how conferences of international nature, like the European Conference on Shipping Intermodalism and Ports (ECONSHIP) held under the auspices of the International Association of Maritime Economists (IAME), can be proved to be platforms advancing research, stimulating discussions, and generating knowledge of both conceptual and practical importance.

Chios, Greece 2016

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