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Evaluating the effects of the latest change in Spanish port legislation: Another "*turn of the screw*" in port reform?

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ABSTRACT

This article examines the determinants of traffic generated by Spain's port authorities, using data from 2003 to 2012. The interest of the study lies on examining the impact of recent legislative measures that have implied an increasing liberalization of port charges. We find that port charges influence the amount of traffic that a port is able to generate, while traffic is also affected by geographical attributes, economic wealth, the extent of industrial activity and population. Our main result is that we find evidence that the legislation of 2003 did not have a significant impact on traffic while the impact of the legislation of 2010 seems to have been stronger. Political conflicts associated to a lack of consensus on the approbation of the 2003 legislation plus a clear decline in tariff freedom wiped out the inter-port competition slightly promoted by earlier laws, versus the 2010 reform featured by a strong political agreement and a flexible port charges framework.

1. Introduction

Since the late 1980s, a radical revolution has been taking place worldwide regarding the traditional role of seaports (hereinafter 'ports') as critical nodes integrated into logistics supply chains (Brooks, 2004; Brooks and Cullinane, 2007). In an attempt to adapt to a changing environment defined by the current expansion of global trade, continuous economic changes, far-reaching technological development and progressively more regionalized systems (see e.g., Notteboom and Winkelmans, 2001; Woo et al., 2012), governments, public management agencies and port authorities (PAs) have shown a strong interest in applying multi-dimensional reforms to the port sector (Brooks and Cullinane, 2007).

As the literature highlights, reforms have taken place in many ports with similar key objectives, e.g., to improve productivity by providing specialized services (Musso et al., 2001); to obtain financial autonomy and economic benefits through competition (Notteboom and Winkelmans, 2001); to rationalize port structures and reduce bureaucracy in decision-making and to reduce the role of the government in port operations (Pallis et al., 2010, 2011); to become more business-orientated in the face of growing demands, while also reducing costs (Slack and Frémont, 2005), and, as Chen (2009) and Woo et al. (2012), among many others, state, to deregulate the labor market and introduce business-based criteria to attract private capital and reduce needs for public investment, and to facilitate integration between different social and spatial levels.

Therefore, the global markets' demand for competitiveness has forced the shipping industry and PAs to make greater efforts to implement institutional modernization strategies and equip the ports with new levels of efficiency, capacity and investment. The World Bank Port Reform Toolkit (World Bank, 2007) contains a set of recommendations in this respect that are based on a devolution process where port policy-makers would gradually move away from full direct public management toward an autonomous hybrid regime of mixed forms of ownership; the ports' operational responsibility would be transferred to local/decentralized public/private entities, and private capital and management incorporated into the operation of ports and terminals. A '*new port culture*' has developed through different but equivalent reform mechanisms – *decentralization, devolution, liberalization, deregulation, corporatization, commercialization, privatization and competition* (Cullinane et al., 2002; Xiao et al., 2012) – that have impacted on conventional

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organization and management, traditional concepts (Bichou and Gray, 2005) and port classification, reshaping the usual models of port governance and ownership structure (Pallis et al., 2010).

In a true 'centripetal movement' these port reform processes have resulted in the governance model that currently dominates port administration being the so-called '*Landlord Port*'. Of the four types of port organization, which are classified by their relative levels of private and public ownership and operation, this is the form that is most widely promoted by the World Bank (World Bank, 2007). The concept of the Landlord Port involves a public authority owning and maintaining the land and infrastructure (as ports have the characteristics of a public good, with the responsibility to remain in the public interest (Chen, 2009). The public authority then leases these to private operators as a concession, with equipment and operations (fully or partially) in the hands of private companies (see e.g., Brooks and Cullinane, 2007; Cullinane et al., 2002 and Xiao et al., 2012, for an approximation to this popular option of port governance in its various forms).

In the academic field, during the 2000s maritime economic research themes have been enhanced and have diversified in response to all these changes (Chen, 2009; Cullinane et al., 2002; Pallis et al., 2010, 2011; Notteboom and Winkelmans, 2001; Tongzon and Heng, 2005; Woo et al., 2012). Also, according to empirical evidence, these policies seem to have successfully achieved change in most ports, facilitating increases in investment and improvements to productivity, as well as significant reductions to user fees. However, in other cases these studies have also revealed rising capacity deficits, problems with the facilitation of trade and transport, restrictions on access systems and weak connectivity and port integration in the hinterland, demonstrating that these policies may not be sufficiently robust to address the biggest and newest challenges facing foreign trade and ports.

There are vast numbers of economic analysis studies that address the effects of implementing any aspect of port reform in terms of efficiency and competitiveness (see e.g., Woo et al., 2012 for an in-depth analysis of this topic in maritime economics research). There are scholars who have studied the political aspect of devolution (Brooks, 2004) and privatization (Cullinane et al., 2002; Tongzon and Heng, 2005) processes; others have reflected on the consequences of public action and the challenges facing port authorities tackling the transition to the landlord model (Notteboom and Winkelmans, 2001); others have considered the link between different types of governance reform and port performance (Brooks and Pallis, 2008) and, more specifically, between capacity investment and pricing (Xiao et al., 2012); there are still others who have examined the consequences of risk-sharing agreements in public-private partnerships or joint-venture contracts in the transition to a landlord system (Oliveira Cruz and Cunha Marques, 2012); and, more recently, authors who have compared the effects of privatization on efficiency and performance in the airport and port sectors (Gong et al., 2012) with the suggestion that partial privatizations are a more effective way to increase port competitiveness.

Debrie et al. (2007) show how from a geographical or territorial perspective the theoretical models of port governance and devolution processes are incomplete and how, in reality, subsequent port performance produces a much greater range of governance responses. Thus, as Cullinane et al. (2002) argue, no standard model exists for the best possible form of ownership and organization structure, but after port privatization, the situation reflects the adoption of a range of administrative, management and operational systems and styles. Thus, various empirical studies have investigated the evolution of port reform in all five continents.

For example, the impact of port governance reform is explored by Pallis et al. (2010) to evaluate Canadian port reform; Estache et al. (2002) analyze efficiency gains from the reform of Mexico's port system; a recent study by Gong et al. (2012) considers the impact of port privatization on efficiency and performance in developing countries; Everett and Robinson (2007) examine privatization and corporatization strategies in the Australian experience; Notteboom et al. (2012) and Verhoeven (2009) give an overview of the main governance challenges to European ports and the harmonizing influence of European Union (EU) law, with special attention to the awarding of port services to private operators; Lee and Flynn (2011) propose a third governance approach in addition to the *European Anglo-Saxon*, *Hanseatic* and *Latin* tradition by describing the reform process during the emergence and dominance of Asian hub container ports, which have ousted European ports as leaders in efficiency and created a new order of hub and spoke ports in the world shipping systems (as Cheon et al., 2010 and JOC, 2013 show).

In this context, our paper analyzes the reform process of the Spanish Port System from 2003 to 2012. Over the last 20 years, Spanish ports of general interest have experienced significant and ongoing change, with five successive legal frameworks. A number of measures have been implemented to separate port operations from PA functions and achieve the goal of giving the port sector and PAs their own managerial, financial and organizational autonomy.

Our study builds upon the above literature in two ways. Firstly, as Gong et al. (2012) highlight, the connection between port reform and port governance needs further investigation and clarification to enable a reliable assessment to be made of the success or failure of change, privatization, devolution and deregulation processes (and the factors that influence them). In fact, an apparent paradox seems to exist because authors such as Bergantino and Musso (2011) and Da Cruz et al. (2012) provide evidence to the effect that the introduction of greater autonomy has increased efficiency, productivity and self-funding levels in Euro Mediterranean ports as a whole, while others like Verhoeven (2009) and Verhoeven and Vanoutrive (2012) find that reform in the EU's Latin ports is still not complete, and that there is limited functional and financial autonomy influenced by political interference. Following a review of the previous literature, our contribution sheds light on the specific case of Spain with an empirical analysis of the most recent legal changes that occurred in 2003, 2010 and 2011.

The successive reforms that have been passed have dug deeper into the issue but not necessarily in a straight line, i.e., with significant contradictions between the various Laws in what is clearly a liberalization and deregulation process paralleling other countries (González Laxe, 2011). The literature published in recent years on the effects of the reforms on the Spanish Port System gives contradictory and non-homogeneous results for each of the changes in the law considered individually (see Castillo-Manzano et al., 2008 or Rodríguez-Álvarez and Tovar, 2012). However, whatever the findings of these studies, it is the high number of reforms that is the best empirical evidence that some may not have achieved their expected outcomes; perhaps because, despite all these efforts to reform, the Spanish Ports themselves are subject to their own 'path dependence'.

Two of the main and original objectives of this study are: firstly, to provide some initial econometric-based results for the latest 2010 and 2011 reforms implemented at the height of a deep economic crisis (see González Laxe, 2011, 2012 for an analysis of the Spanish port response to the economic crisis). Secondly, it offers an overview and broad evaluation of all the changes to legislation and port reforms that have taken place in the Spanish port system since the early nineteen-nineties.

The article addresses all these issues within the following structure: after this Introduction, Section 2 briefly outlines the key