THE CHANGING LANDSCAPE OF PORT GOVERNANCE: CASE OF BALTIC STATES

Valters Bolēvics
Riga International School of Economics and Business Administration
e-mail: valters.bolevics@gmail.com

Tatjana Volkova
BA School of Business and Finance
e-mail: tatjana.volkova@ba.lv

Abstract

Global changes in transportation sector and technological development have outlined the recent worldwide trend towards port devolution, which, in turn, has generated researchers' interest in studying port governance models and their implications for improving port performance. There are many measurable indicators of port performance, but not many researchers analysed how port governance models impact these indicators. Therefore this research delivers a conceptual framework which integrates various relevant port performance indicators, such as efficiency and effectiveness that could be used for a comprehensive port governance models evaluation and improvement of existing port governance models afterwards.

Aim of the study – The aim of this research is to explore changes in global economy landscape and how they have impacted port governance models worldwide, to analyse current port governance models in the Baltics, identify key challenges and propose possible solutions for sustainable port governance models and development.

Materials and methods – Theoretical scope of the paper includes international researcher's insights on different strategic port governance models. Empirical part gives an insight into the existing models of port governance in Baltic States and worldwide. The main methods used for achieving research goals involve: theoretical – literature analysis; empirical - observation; monographic or descriptive method. Description method is based on the framework to assess congruence of the port governance models in Baltic States and the global trends on port governance.

Main results – Different port governance models within Baltic States identified and analysed in correlation with port performance components. Key challenges and proposed possible solutions for economically viable and efficient and effective model development are explored. Lithuania and Estonia, major seaports, have followed a corporatisation or commercialisation path leading to decentralised government involvement and transformed port authorities into institutions which are commercially efficient and effectively responsive to market conditions and trends. Meanwhile, port governance models in Latvia are one of the few that has not been substantially modified and improved following modern market economy and regional development trends and thus limiting port performance results.

Conclusions – This research, along with the empirical evidence provided by port authorities, leards to the conclusion that port governance decisions are based on very little or no assessment of port performance.

Keywords: port governance, shipping, logistics, port economics, reform.

Introduction

Global economic changes, technological development in transport sector and the consequent restructuring of fundamental transportation processes through advanced logistics and supply chain management highlights substantial immerses on port governance and policies. Worldwide industry replication is reforming port governance structures, aiming to enable ports to provide specialised services, integrate in even more complex supply chains, and efficiently execute both public and private responsibilities. The several distinctive variables of the increased commonality of the problems faced by international ports leads various institutions, including inter-governmental organisations like the World Bank, to recommend prototype practices that may be employed by all (World Bank, 2007). Scientists advise that public agencies, port authorities and relevant municipality, government managing bodies often apply generic solutions, distinctive from those occurring in other sectors of the economy on the basis of unique characteristics of the port sector (Notteboom, Winkelmans, 2001; Brooks and Cullinane, 2007). Port reforms, including governance models, are recent phenomenon, propelled by indirect factors such as changing economic situation and due to new technological solutions and improved processes (Blauwens, Baere, Voorde, 2005). According to Brooks (2004, 2006, 2007) scientifically proved theories, it is the existing economic situation in the shipping and logistics sector which forms the fundament for structural changes from state or municipality governed ones to more efficient modes of port governance.

Aim of the study

Provide the result of a synthesis of the literature on port governance models worldwide, port performance and insight about the existing situation in Baltic States. In order to achieve these aims, the research provides the outcome of a synthesis of the literature on port governance, port performance effectiveness and efficiency measures. Port governance models are mainly based on assessment of port performance or its effectiveness, neglecting the need for increased efficiency or port reform. This paper aims to measure port governance reform effectiveness as a trigger to port efficiency.

Materials and methods

The present paper is based on bibliometric tools, publicly available data from the Baltic ports to provide quantitative and qualitative information on port governance and its efficient and effective management. For achieving settled aims authors used research papers dealing with port economics, policy and management, the role of ports in maritime, logistics and intermodal transport networks, ports logistics functions, clustering of activities in ports, spatial developments in port regions, studies of port performance and market structures in ports. Research papers on port engineering, terminal equipment, waterfront development, port history, terminal operations management, terminal lay-out and other technical development articles were not analysed due to distinctive differences to prior research field.

From empirical standpoint the authors narrowed our scope to port governance in main European ports, especially analysing latest industry trends within Baltic Sea, Mediterranean region and Benelux, as a result of this process, 79 articles on ports governance and management were analysed and 43 ports examined.

1. Port performance correlation with port governance

Port concept as seen today has developed throughout the second half of the 20th century (UNCTAD, 1992) into four generations. Generation approach provides useful knowledge in the development of the 21st century free market trade ports or multi-purpose gateway ports, despite industry evolvement, elements of previous generations are still present at vast majority of Baltic State and other ports worldwide (Table 1).

Table 1

UNCTAD generations of ports

Generation	Time frame	Port functions description
First generation	Prior to 1950	Sea approach, transfer of goods, temporary storage, delivery
Second generation	From 1950 to 1980	First generation functions plus industrial and commercial activities which give added value to the goods. Port is a handling and services centre
Third generation	Since 1980	First two generations plus structuring of the port community, strengthening links between town and port and between port-users. Extension of the range of services offered beyond the port boundary, and an integrated system of data collection and processing. Port has become a logistics platform for trade.
Fourth generation	Since 2000	Network of physically separated ports (terminals) linked through common operators or through a common administration

Source: UNCTAD (1992, 1999)

According to UCTAD, since 1980`s ports have evolved from locations where transfer of goods and temporary storage takes place into complex business hubs. In addition, the claim referring to third generation ports whereas ports have strengthened ties with town, for instance, in case of Baltic States, the state involvement also has to be noted, since ports of Klaipeda and Tallinn are 100% state owned enterprises, and ports of Latvia, Ventspils and Riga, have both mix of city and state governance foothold.

Competitiveness and sustainability of a port are not only referred to operational elements, but also depend on integration of operational, spatial and societal factors such as ecosystems and human factors. The interaction between operational, spatial and societal factors may nevertheless generate various forms of conflict which are essentially the result of conflicting dimensions between the stakeholders involved (De Langen, 2007). Treating a port as a single unit would indeed lead to partial and even wrong conclusions (Slack, 2007).

Due to significant input of port terminal operators to overhaul growth, port performance indicators are one of the triggers for changes in port governance. Notably, in 1976 UNCTAD invented two categories of

port performance: macro performance indicators quantifying aggregate port impacts on economic activity and micro performance indicators evaluating input and output ratio measurements of port operations. UNCTAD monographs deliver a range of port indicators by ratio type and category of port operations, for example, on port performance indicators included revenue per ton of cargo, capital equipment expenditure per ton of cargo, berth occupancy, turn-around time and number of gangs employed within port (UNCTAD, 1969). In a recent decade, the situation has changed dramatically. Nowadays operational efficiency of terminals is the most important factor (Heaver, 1996), as they stand as one of the key pillars of port function in transport chain and port performance indicators such as physical indicators, factor productivity indicators, economic and financial indicators (Trujillo and Nombela, G1999), normally calculated as operational deliverable to a board of port authorities and their economical impact in accordance with an overhaul port management.

Table 2

Ports of Latvia and Lithuania efficiency comparison 2008 – 2010 (%, th. /tonnes)

Port	Cargo turnover th./tonnes			Total terminal capacity th. /tonnes	Terminal capacity utilisation %		
	2008.y.	2009.y.	2010.y.		2008.y.	2009.y.	2010.y.
Ventspils (LV)	28570	26640	24815	83000[13]	34	32	30
Klaipeda (LT)	29887	27966	31273	40000[14]	75	70	78
Riga (LV)	29566	29723	30476	45000[15]	65	66	68

Source: based on the authors' analysis

Port efficiency measures pertain to physical terminal capacity utilisation, evaluated by dividing port total cargo turnover with total terminal capacity. For instance (Table 2), ports of Klaipeda and Riga are using its capacity to acceptable industry standards and port authorities should focus on different scale development plans to avoid costly vessels downtimes resulting in financial losses for cargo and ship owners, and terminal operators should seek ways how to increase terminal capacity. Eventually, both ports, Riga and Klaipeda, have enough capacity to grow cargo volumes for the next years to come, but crucial development plans of new infrastructure projects should be assessed today and implemented within the near future to avoid drop in ports efficiency and maintain customers' satisfaction. Port of Ventspils has enough terminal capacity to at least double its existing total cargo turnover, but in line with statistics the port is facing decline in cargo turnover. Landlord port authorities leave port related commercial activities to the private sector; thereof Ventspils port authority has to strategically solve problems to stop cargo decline, stabilise existing situation and increase turnover by attracting new cargo volumes. Collective action has to be initiated in order to result in positive common benefits, port authorities are in the right institutional position to create and stimulate collective action (De Langen, 2004). Port authorities can do this by creating platforms that facilitate collective action, or by joint investment in collective action activities (Lugt, 2006).

Port terminal efficiency performance measures pertain to physical quantities of cargo loaded, shifted, moved, etc. per quantity of energy used in correlation with minimum of waste products or physical moves. Assets utilisation is the key factor to foster the greatest financial returns; the aim of improved operations is to expand the gross margin extracted, increase port competitiveness and market awareness. From the port governance perspective effectiveness is measured from accomplishment of targets or ability to accomplish them with a minimum expenditure of time and effort. Measurements of performance for efficiency focused ports benchmark financial, production and marketing activities against prior year performance and against competitor performance in order to deliver efficiency objectives (Brooks, Cullinane, 2007).

According to professor of maritime studies Koi Yu Adolf NG (2006), improved efficiency does not necessarily lead to improved competitiveness, for competitiveness is a product of effectiveness in delivering a desired services to users. Efficiency and effectiveness are related concepts, for example, if a terminal operator wishes to improve its cargo-handling efficiency so as to improve berth utilisation through faster vessel turnaround, it may also improve its effectiveness as vessel time at berth drops and the customer may be more satisfied. However, if a terminal operator improves its asset utilisation by leaving more vessels at

[13] Source: Ventspils Freeport terminal capacity from Latvian port development program 2008-2013
[14] Source: Klaipeda Freeport official statistics yearbook
[15] Source: Riga Freeport official statistics yearbook

anchor so as to minimise downtime, its utilisation is improved but the customer's service expectations may not have been met. In this case efficiency has come at the expense of effectiveness. Various stakeholders may have different performance objectives in this illustration. Effectiveness is related to the objectives of those seeking it (Brooks and Pallis, 2008).

On the contrary from terminal operators effectiveness-oriented port authorities aim to be more customer-focused as stipulated by European Commission in 1997 which has put the improvement of port efficiency as the major goal of the EU port policy (Chlomoudis and Pallis, 2002). In such scenario effectiveness measures relate to how well the port authority uses its strategies, structures, and task environment to meet its mission and stated goals. If one of the goals is increased cargo throughput, value added cargo operations or profit-maximising in effectiveness-oriented port authorities, there will be a companion goal of developing and retaining those customers who generate the greatest margins, while cancelling cooperation contracts with those who are not profitable or meeting settled goals.

In conclusion, the process of evaluating port performance depends on objectives of both the port and its sustainable development from government and municipal perspective and the objectives of port authority. By linking outcomes to the objectives it may enable us to assess whether settled goals have been met. In case of dissatisfaction from either government or municipal perspective, there might be an interest in making changes to government policy or existing port governance model to meet effectiveness objectives. Port performance is a dynamic attribute, which has to be assessed on regular bases taking into account numerous external factors, such as political regime changes in consignor country or any other major events which may disturb cargo flow. Performance of the ports is a complex issue which could be measured against identified shareholders goals and ambitions or against performance of other ports, and particularly those ports which are seen as direct competitors and act within the same regional geographical boundaries and markets.

2. Changing port governance landscape

Traditionally, port authorities have assumed three typical functions: landlord, regulator and operator (Baird, 1995), which corresponds to the legal status of port authorities (Van Hooydonk, 2003). Port authorities which are distinguished as being as a landlord type ports of public nature and own the infrastructure of the port which is in most of scenarios leased out to terminal operators. Namely, in respect to "landlord ports" there are also "service or tool ports" which on the contrary owns also terminal superstructure and leases it to private service providers or terminal operators. Tool ports or comprehensive ports as often mentioned within literature (Winkelmans, 2006) can be either privately owned or in public ownership.

Table 3

Port Governance models

Models	Port functions		
	Landowner	**Regulator**	**Utility**
Pure public sector	Public sector	Public sector	Public sector
Public/private	Public sector	Public sector	Private sector
Private/public	Private sector	Public sector	Private sector
Pure private sector	Private sector	Private sector	Private sector

Source: Baird (1995)

Baird distinguishes four main types of port governance models (Table 3), by allocating utility cargo handling function within the port, the regulatory function and question of land ownership within the port (Baird, 1995). Usually ports are owned and managed by the public sector whether it would be directly by government departments or indirectly by public port authorities. Institutional reform of seaports by shifting from government governed entities to more enterprise-based systems, allows greater flexibility and efficiency in the market and a better response to consumer demands (Notteboom, Winkelmans, 2001). Port management reform is motivated by reasons of economic efficiency with the objective of reinforcing the port authority as an entity which reconciles private and public interests (Verhoeven, 2006). Pursuing economic efficiency is not the only element determining port reform – ports are places where social utility and private profitability are both present.

Port governance decentralisation often referred to as reform is frequently presented as "privatisation" of port authorities, however this term can be interpreted widely and therefore causes misapprehensions. Privatisation means the transfer of public assets to the private sector, in case of ports, it can encompass the whole port, a certain port service or a specific set of port operations (Notteboom, 2001). Privatisation most often refers to the bringing in of the private sector in operational matters, mainly cargo handling and

terminal operators, it is rarely used to privatise the port wholly and notably the landowner and regulatory functions (Baird, 1995).

Reforms of the landowner and regulatory functions of ports are more often a matter of corporatisation and commercialisation whereby the actual management of ports remains in public hands. These models aim to make public port authorities act on commercial criteria and make them responsive to changing market conditions (Heaver, 1995). Corporatisation introduces professional management structures and comes down to a shift from public sector organisations to autonomous companies owned by the public sector but with accounting procedures and legal requirements similar to the private sector and with very limited direct government control. In case of commercialisation, government retains control of the port organisation, but in a business-like environment with some management autonomy and accountability (Notteboom, 2001).

Port reform, whether it would be through corporatisation, commercialisation or privatisation, aims to decentralise direct government involvement and transform port authorities into institutions which are commercially efficient and effectively responsive to market conditions and trends.

Table 4

Degree of public intervention in the seaports

Country	Government level	Port Governance		
		Govt. direct	Public entity	Private entity
Belgium	Municipal/regional	-	X	-
Cyprus	National	-	X	-
Estonia	National	-	X	-
Latvia	National/Municipal	-	X	-
Lithuania	National	-	X	-
Los Angeles	Municipal	-	X	-
Netherlands	National	-	X	-
Portugal	National	-	X	-
Slovenia	National	-	X	-
Spain	National	-	X	-
Sweden	Municipal	x	X	-

Source: ESPO (2008)

The table above reveals port governance models by the example of particular countries. It shows that none of the examined countries handed over port governance and port authority`s functions in particular into the private sector explaining it with the ports' import role in the economy. Meanwhile, the table above indicates that many of governance models have remained under the influence of national governments or local municipalities, except Latvia and partly Belgium, which uses the mixed model of national and municipal government level collaboration, where political influence is inevitable given the fact that owner or shareholder consists of government and municipality.

Regarding political influence, a scrupulous analysis should be made to assess whether the port authority follows technocratic or political management style. As it is indicated in the relevant ports, legislation which envisages that in main ports of Latvia the port board should constitute of four officials from the relevant local government or municipality and four officials from different ministries or national government. A board should act as a trigger to implement legislative changes in existing policy to move ports towards sustainable development and shift from national and municipal mixed port governance model to industry acceptable standards.

In general, port governance models reform tends to focus on retreat of direct government involvement as this is proved to create greater efficiency. From the perspective of port authorities, governance reform is essential to obtain strong and independent position to meet the challenges delivered by logistics and social environment. Governance reform schemes must be accompanied by an adequate legal framework that creates certainty about the institutional positions of port authority, whose responsibilities need to match public and commercial interests (Verhoeven, 2006). Researchers suggest that a corporatised port authority shifted from public sector organisations to autonomous companies owned by the public sector with accounting procedures and legal requirements similar to the private sector and with very limited direct government control, are the best possible option not only from economical perspective but also social and environment perspective. A good example in Baltic States is the port of Tallinn which has evolved from a traditional municipal and national port to a port which is being operated firmly independently as a limited liability company and at some point its shares were traded at the Baltic Stock Exchange (Table 5).

Table 5

Degree of corporatisation / commercialisation in Baltic States seaports

Country	Port	Owner	Legal form	Political board
Estonia (EE)	Tallinn	State	State enterprise, LLC	No
Latvia (LV)	Riga and Ventspils	Self- owned	Public body under city and state control	Yes
Lithuania (LT)	Klaipeda	State	State enterprise, LLC	No

Source: ESPO (2008)

On the contrary, from Port of Tallinn (EE) which has followed corporatisation model, Port of Klaipeda (LT) has implemented the similar reform scheme to the one examined in Port of Tallinn, where cargo handling has been privatised and ports have conformed to landlord model. But instead of corporatisation it has moved towards commercialisation, where government retains control of ports organisation, but in a business-like environment with some management autonomy and accountability.

Further research on the existing port governance model in Latvia would be desirable before drawing general conclusions, but following empirical evidence and internationally recognised port expert's recommendations, it shows us that port governance system in Latvia should be re-reformed and shifted towards corporatisation model with little or no government influence on port governance. For instance, present legislation system in Latvia defines that parliament and municipal elections are each after every two years, which impacts the structure of port boards and thus consistency of decision implementation, port management directly and the political portfolio within, which, on the contrary, delivers fragmented system and is not following sustainable development trends. According to Brooks (et al., 2007), the port governance system which is fragmented between municipal and national political opponents does not allow ports to sustain long-term investment plans and is not allowing port authorities to act efficiently and effectively as possible. Therefore, in case of Latvia, there should be additional research conducted to assess whether it is efficient to reform the port according to commercialisation schemes or corporatisation ones. Following existing theories and best practices, we may conclude that existing system needs fundamental changes to implement industry standards.

Conclusions

This paper describes an integrated framework on port governance reform models and fundamental differences among them. The port governance reform aim is to improve the economic attractiveness of a port by integrating spatial, socio- economic, ecological and political aspects. Only by combining these pillars, the economic port development can take into account the changed demand of the port world and ports actors as well as preconditions of nature, social aspects, logistics and mobility.

Technological and economic progress as well as political culture has led to commercialisation or corporatisation of ports, implementing adjustments with different institutional framework, governance structure and aiming at financial and political autonomy from state or municipality. Namely, every seaport has its own cultural, historical and political heritage therefore there is no single governance system which suits all, nevertheless ports tend to reform their structures and move away from models with strong political governance impact, which traditionally has been key pillars influencing directly port management and strategic development. The recent researches on port governance have identified a number of different port governance configurations ranging from private and public partnership to solely municipal or national. Governments have to assess whether they have achieved their objectives that have been set for ports and to discuss if there is a need for re-reform stage to facilitate port development and meet settled goals. Certainly each port has its own uniqueness and therefore we may not generally assess that only one reform model is most efficient. But in order to do so, we have to measure port performance through efficiency and effectiveness paradigm, and associate different types of performance measurement with different modes of port governance.

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