# Efficiency of Governance Model and Ownership Structure of Ukrainian Seaports

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**Abstract:** The purpose of this study is to examine the differences and efficiency in governance style of public and private owned seaports in Ukraine. Observation and comparative analysis of models of public and private seaports ownership in the Ukrainian context, considering the experience of other countries, conclude that a private ownership model for seaports is more flexible in conditions of modern political and economic transformations in Ukraine. Private seaports have higher levels of investment attraction and better financial results than public seaports. Worldwide experience in port infrastructure privatization demonstrates that seaports governed according to private ownership models are predominantly much more effective than public-owned seaports particularly in style of cooperation with investors and possibility of rapid development due to investment attraction. However, the current Ukrainian legislature predominantly considers seaports as the objects for concession in order to save public ownership of seaports. This investigation attempts to contribute to future studies that relate to an important issue such as efficiency of Ukrainian seaports in global economic development.

**Keywords:** seaports governance model; private-owned seaports; public owned seaports; Ukrainian seaports; privatization of seaports

**JEL Classification:** D470; O470; O520; R400

## 1. Introduction

Governance Model and Ownership structure of seaports have been recognized as an important problem in seaport management nowadays. Ukrainian seaports have been undergoing an inconsistent reforming process since 1991 by public administration. Corporatization or total privatization of the public seaports are considered as the priority tasks of the reforming process. However, rationale of these public reforms

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is rather obscure. This paper aims to investigate the efficiency of models of public and private seaports ownership in Ukraine, considering world experience of this issue. Many scholars refer to the efficiency of port governance models applied to Australia and other maritime countries - Meersman (2014), Chen (2012), Sakalayen (2014) and others. However, current unique political and geographical factors of Ukrainian development determine the relevance of this paper. The primary focus of the paper is an efficiency analysis of public and private seaports ownership models in the Ukrainian context in comparison with the experience of other countries. This was implemented via such methods as comparative analysis, interpretation of statistical indexes of seaports efficiency and documentary research method. The research described in this paper also adds further subjects for analysis in the Ukrainian seaports sector, building on previous studies referring to maritime economic complex development in Ukraine. (Kischak, Porudeyeva, Glubochenko, 2017) The paper has been organized as follows:

Section 2 provides a literature review on seaports efficiency, in particular the influence of seaports ownership model on their efficiency.

Section 3 highlights the world experience and peculiarities of Ukrainian background of seaports efficiency are considered.

Section 4 discusses development prospects in Ukraine.

## 2. Literature Overview

The literature on this topic remains limited, with studies predominantly focusing on the general models of seaports ownership. (Meersman et al., 2014) (Fawcett, 2007) (Tull & Reveley, 2001) (Bandara & Nguyen, 2015) Only a few Ukrainian studies have been developed regarding the subject in Ukraine. (Vlasova, 2014), (Losevska & Lebedev, 2012) (Stepanova, 2017) These investigations include analysis of public-private partnership as the recommended direction for seaports development. Privatization and corporatization of Ukrainian seaports as alternative directions are almost not considered in Ukrainian literature.

According to Sakalayen (2014), the level of port privatization as well as corporatization models of seaport ownership are the subject of discussion between economists, politicians and officials and scholars. “Increased private sector involvement in larger ports can support effective commercial interests, however, the public interest in ports cannot be avoided”. (Sakalayen, 2014, p. 56) Therefore, state, municipality or private companies are able to be owner of the seaports. Meersman (2009) divides market players of seaport industry into 2 groups such as port users (shipping companies, shippers, industrial companies nearby) and service providers (agents, towage servicers, ship repairers, pilotage, forwarders, etc). Relationships between these groups generally define organization and management structure of a

seaport. The corporatization model of seaports ownership is also widely discussed. According to Chen (2012), the corporatization model of seaport ownership can be implemented in such forms as SSOC (Statutory State-owned Corporation) and GOC (Government Owned). Both models are regarded as forerunners to a more effective privatization model.

According to the World Bank (2008), the port ownership model regards the degree of privatization and defines seaport ownership as public, private, public-private or private-public. (World Bank, 2008) The main objective for private-owned ports is to maximize their profit, whereas the official purpose of public seaports predominantly is to achieve optimal resource efficiency. This is being provided via cost-benefit approach to port pricing, the main objective of which is to charge the seaports users for the benefits they receive from the seaports' services. By contrast, private-owned seaports tend to be a cost-based approach, where tariffs and charges are designed based on seaports costs.

Meersman (2014) considers popular price setting concepts in seaports such as price differentiation, revenue management, and auction scheme, etc. (Meersman et.al., 2014, p. 19) However, the majority of seaports do not have one particular model in their pricing, but obviously combine the elements of some approaches. So, seaports efficiency is able to be measured via such methods as evaluation of quantitative (throughput etc.) and qualitative (impact on regional economy) indexes of seaport efficiency. Anyway, these indicators of seaports efficiency should be estimated in dynamics (comparing with recent years).

According to Chen (2012), privatization of the port in order to increase its efficiency has two stages – labor market deregulation and restructuring of seaport management. The first stage considers improvement of seaport productivity and efficiency and aims to deregulate the labor market. The next stage focuses on consolidation, corporatization, rationalization and privatization of seaports. The type of seaport is also a significant factor of port model defining. Niavis & Vagellas (2016) defined elements that affect the potential of a cruise port to become a homeport. Wan (2018) also identified the main modeling approaches that allowed him to define the different types of hinterland access systems in seaport management. (Wan et.al, 2018) Santos & Suares (2017) developed a generic model for evaluating the potential demand for short sea shipping.

## 3. Ukrainian Background

The transport complex is an important part of the economic system of any maritime country, including Ukraine, in spite of the fact that Ukraine has been losing ground in the recent decades. Significant reduction of the competitive fleet and high

expenses in ship repair and shipbuilding industries highlighted the priority of merchant seaports in the maritime economic complex of Ukraine.

Ukraine has the most powerful port capacities among all Black Sea countries. 13 continental merchant seaports (there were 18 seaports before annexation of Crimea) and 12 port stations are situated on the Ukrainian Black Sea coast. Their capacities are circa 262 million tons per year. Nearly 600 port cranes, thousands of loaders and other equipment facilities as well as 25 thousand employees serve the berths and seaports territories. Ukrainian seaports have more than 330 thousand square meters of indoor storage and more than 2.5 million square meters of outdoor storage facilities. (Ministry of Infrastructure of Ukraine, 2017) The most significant merchant seaports in Ukraine such as Odessa, Chornomorsk and Yuzhny are situated nearby. They account for more than 60% of total cargo turnover in Ukraine. These seaports have the most equipped berths and are able to receive ships with draft up to 19 meters.

However, nowadays economic activity of Ukrainian seaports is in nearly critical condition. The active parts of their fixed assets (first of all, crane systems) have already completed their operating periods. Depth and length of the berths are insufficient. 30 % of berths demand overhaul or prophylaxis. Nearly 5 kilometers of breakwaters, jetties and groins are in emergency condition. General average level physical deterioration level of seaports infrastructure is more than 90 %. Although Ukrainian seaports are profitable enterprises, the industry requires investments of more than 3 billion USD. Therefore, government tries to attract investments in seaports infrastructure by changing their ownership model from public ownership to public-private partnership. In 2017 seaports were excluded from the list of objects which are forbidden to be privatized. However, the government was inclined to save its control function regarding seaports, so this reforming process is rather slow.

According to Stepanova (2016), world experience of public-private partnership can be implemented in Ukraine. However, government should take into consideration such risks as the possibility of monopolization, lack of investors' interest in strategic seaports development and manipulation with calculation of concession payments. (Stepanova, 2016, p. 62) So, with the intention of successful Ukrainian seaports' integration in global transport network it is necessary to pay special attention to their reconstruction and development according to world market needs. In order to implement this, it is necessary to create favorable conditions for investment process and clearly develop regulatory framework for successful and beneficial cooperation with private capital. According to the Transport Strategy of Ukraine, by 2020, government is going to attract 26 billion UAH (1 billion USD) in private investments for the development of Ukrainian seaport infrastructure (Decree of the Cabinet of Ministers of Ukraine. On Approval of the Transport Strategy of Ukraine until 2020, 2010)

All Ukrainian seaports since 2017 have been officially announced as the enterprises that are going to be privatized. (Ministry of Economic Activity and Trade of Ukraine, 2017) There are 13 seaports of Odessa, Mykolaiv, Kherson, Zaporizhzhia and Donetsk regions. "Ukrainian Sea Gates" Odessa-Chornomorsk-Yuzhny seaports are the deepest, most developed and, therefore the most attractive for investors. However, this process might take significant time because of lack of necessary legislation. Therefore, the government was inclined to transfer seaports to the concession, which allows it to save the model of public ownership for seaports while attracting private capital investments. This process is quite widespread in the world. According to Park (2014), "concessions are regarded as a very efficient tool to cope with monopolies. Concessions are becoming more common in that they reduce the considerable operational risks and financial burdens of governments, and at the same time, allow governments to maintain vital ownership of the port land. (Park, 2014, p. 31)

Seaport "Mykolaiv Sea Port" is considered as one of the first Ukrainian ports that will transfer to concessions. It has 69.3 ha of total area, 13 berths with 2.42 km quay length. Seaport's max depth is 10.3 m. On the contrary, Nika-Tera, another seaport of the Mykolaiv region situated nearby, is governed according to the private ownership model. Characteristics of the seaport are rather similar. It has 6.4 ha of total area, 7 berths with 1.7 km quay length and depth up to 11 m. The main transshipment subject of both seaports is the same (grain). Port management was able to attract 1,329 billion UAH of investments for last three years. So, it is expediently to compare the seaports' dynamics of cargo turnover during recent years (Table 1).

**Table 1. Cargo turnover of Nika-Tera and Mykolaiv Sea Port, thousand ton**

| Seaport | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| **Nika-Tera** | 3,9 | 3,7 | 4,5 | 4,2 | 4,02 |
| **Mykolaiv Sea Port** | 2,07 | 2,03 | 2,08 | 2,23 | 2,24 |

*Source: Personal contribution according to Ministry of Infrastructure of Ukraine (2017)*

Therefore, we are able to observe that Nika-Tera as a privately owned seaport turned out more flexible. The port was able to respond on political factors of 2014 (annexation of Crimea) more effectively, which is demonstrated in Figure 1.

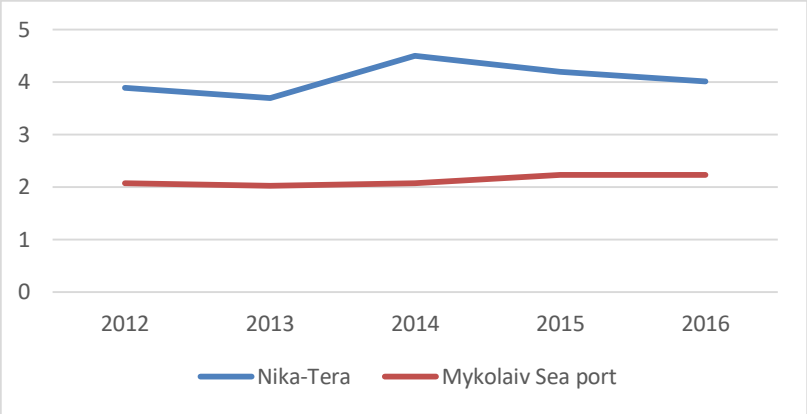


**Figure 1. Dynamics of Cargo Turnover of Nika-Tera and Mykolaiv Sea Port, thousand ton**

## 4. Development Prospects in Ukraine

According to Sanders (2014), "Ukraine lacks maritime infrastructure, including deep water ports which limit its ability to effectively utilize the maritime domain for commercial benefit". (Sanders, 2014, p. 87) That is a common problem for all Ukrainian seaports. However, Sanders admitted that "the creation of the deepest harbor in the Black Sea at Yuzhny would allow Ukraine to enter the prestigious pool of countries working in the deep sea transshipment market". (Sanders, 2014, p. 90) However, to implement the seaport of Yuzhny as well as other Ukrainian seaports need a significant amount of investments. It is quite complicated to attract them, because Ukrainian government is inclined to transfer Ukrainian seaports to concession, but not to privatize them.

It should be noted that peculiarities of concession in Ukraine are set forth by Article 20 of the Law of Ukraine "On concession" which approved the legal regime of property transfer into concession or created due to concession agreement. According to Nitsevych and Popelyuk (2016), "concession neither facilitates transfer of title on such object to the concessionaire nor terminates the right of state or public ownership thereon". (Nitsevych & Popelyuk, 2016) Therefore, in spite of the concession agreement a seaport would be considered as public property, while the concessionaire obtains revenue from operations of the seaport according to the concession agreement. However, a seaport should not be privatized during the validity period of the agreement, remaining the object of public ownership. According to the World Bank (2015), 598 seaports in the world are functioning based on public-private partnership, 500 of them are sundry types of concession. (World

Bank, 2015) Therefore, privatization is not the only way to attract significant investments in the industry.

The main problems of Ukrainian seaports infrastructure functioning and development are the following: decrease in profitability of seaports due to significant depreciation of fixed assets; slow renewal of fixed assets of seaports; reduction of transit cargo turnover due to insufficiently developed seaports infrastructure; obscurity of customs and border crossing legislation; decrease in transshipment volumes of seaports because of the reduction of transit cargo turnover; reduction of export cargo turnover in seaports because of transportations by other types of transport (automobile, railway); undeveloped infrastructure in the seaports and driveways, etc. According to the World Competitiveness Forum report (2017), quality of Ukrainian seaport infrastructure was evaluated on 3.3 score (Figure 2). That is in 93th position in the list of 137 countries. In spite of the incensement of Ukrainian level in the rating during 2015-2017 it is not enough for sustainable development of seaport industry.

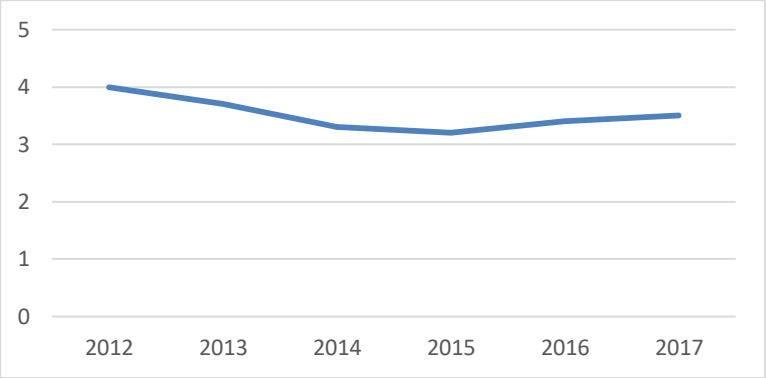


**Figure 2. Quality of seaports infrastructure in Ukraine**

*Source: Personal contribution according to World Competitiveness Forum (2017)*

The development of seaports infrastructure to serve exports would allow the increase in competitiveness of Ukrainian seaports and their capacities and enlarge cargo turnover. This means construction of new berths and terminals to transshipment in general, and dry and liquid balk as well as development of multimodal terminals. Dredging on approach channels and harbor areas and the creation of modern transport and logistics centers in the main marine transport node (for instance, in the Odesa region where capacities of Odessa, Chornomorsk and Yuzhny seaports are used together) require attraction of significant public and private investments, including foreign ones. This process should be based on public-private partnerships.

It is impossible to solve the problems of seaports and crane infrastructure, construction of modern terminals, and dredging for receiving large ships by gross

tonnage only by the state and seaports without attraction of private capital. Reforming of the seaport industry would contribute to attraction of private investments, which would allow restoration of old infrastructure and enlargement of seaports capacities, in order to attract additional cargo turnovers in seaports and increase competitiveness in the international transport market.

## 5. Conclusion

The main conclusion to be drawn from this discussion is that privatized seaports are more flexible in conditions of modern political and economic transformations in Ukraine. They have higher level of investment attraction and better financial results than public ports.

Worldwide experience in port infrastructure privatization demonstrates that seaports governed by private ownership model (in particular, stevedoring companies) are predominantly much more effective than public-owned seaports. The main advantages of privatization of Ukrainian seaports are managerial efficiency, flexible style of cooperation with partners and investors and possibility of rapid development due to investments attraction.

Unique political and geographical factors of current Ukrainian development influence the consideration of this issue by the government, which intends to develop seaports via public-private partnership (concession). This model is considered as a way to provide seaports reconstruction and development according to world market needs.

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