

**THE SEAPORT OF GDANSK  
AS THE HUB OF THE INTERNATIONAL TRADE**

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**Abstract:** *The analysis of the main characteristics of the port of Gdansk (Poland) has been made. The geographical location, the strong and weak economic sides, the main stages of its development, as well as the main cargo transshipment have been studied: (1) as a distribution center, the port of Gdansk is becoming a major link in the Trans-European sea-lane connecting Scandinavia with the South-Eastern Europe; (2) in recent years, the cargo turn-over of the port has significantly increased: annual growth was 10.2%, reaching 35.91 mln tons in 2015; (3) DCT Gdansk is the only port in the Baltic Sea, technical characteristics of which make it possible to accommodate Triple-E container carriers with a depth to the point of 16.5 m. There was concluded whether the port refers to the definition of the port hub.*

**Keywords:** *port, logistics, transshipment, transportation hub, container terminal*

**INTRODUCTION**

In this article, we will look at the third-largest Baltic seaport: the port of Gdansk (Poland). The port is located in the central part of the Southern Baltic Sea coast, one of the fastest growing regions in the EU and is a major international transport hub. As a distribution center, the Gdansk port is becoming a major link in the Trans-European sea-lane connecting Scandinavia with the South-Eastern Europe.

**MATERIALS AND METHODS**

The Gdansk port is formed by two districts: the inner port located along the river Vistula and the canal, and the outer port, which lies near the Gulf. Inner port consists of the following infrastructure facilities: container terminal, passenger ferries terminal and RORO ships, transshipment point for motor cars and food products (citrus fruits), the point for the sulfur processing and other bulk-loaded cargo, phosphorite transshipment point. Other berths equipped with the special equipment and infrastructure are all-class berths and allow to process conventional and bulk cargo (steel products, heavy and OOG, crops, fertilizers, ore and coal). In the outer port, there are wharves, berths and build-up platforms. In this part of the port, there are

the points for the energy commodities transshipment: fuel oil, coal and liquid gas. In the outer port, a modern Deep-sea Container Terminal (*DCT*) is situated. The two-district port structure allows strengthening the terminals specialization increasing the number and length of the berths, promoting the effective environmental problems solution due to the *dirty duties* removal to the outer port (Markusen, 1996).

Establishing the efficient transport routes from Gdansk port and neighboring Gdynia may allow to the Polish seaports extending its own hinterland beyond national borders. However, it should be noted that the Polish ports hinterland significantly crosses the attraction zone of the other European ports, especially port's chain *Hamburg – Havre*. The only managerial body of the port is JSC Gdansk Port Authority – *PGA* with the registered office in Gdansk. *PGA* is a trading company established in 1998 and operating in accordance with the law on ports and harbors, and the Trading Companies Code of Poland.

Thus, in this article the theoretical scientific method on the basis of *synthesis* has been used, i.e. the unification in a single system of all results of the analysis that has been done allowing expanding knowledge to construct something new.

## RESULTS

In the recent years, the cargo turn-over of the port has significantly increased, viz. the average annual growth was 10.2% in 2012-2015, reaching 35.91 mln tons in 2015. The most measurable increase can be observed on the containerized cargo indexes, viz. containers turnover rose by almost 16 times in 2005-2015. The maximum index 1.21 mln TEU was in 2014. In 2015 the container transshipment capacity of the port decreased by 10% to 1.09 mln TEU (*Table 1*). Since 2010, *DCT Gdansk* starts to accommodate the direct shipping routes of the Danish company called *Maersk Line* from the Far East to the EU with vessels carrying up to 8.000 TEU; and in 2011 even larger vessels: Triple-E with the capacity of up to 18.000 TEU. *DCT Gdansk* is the only port in the Baltic Sea, which technical features make possible to accommodate Triple-E container carriers with a depth to the point of 16.5 m.

**Table 1**

### Cargo turnover of the Gdansk port in 2012-2015 (kiloton)

Type of cargo	2012	2013	2014	2015
Crops	1018	1479	1629	1455
General cargo (including wood)	8888	10514	11229	11814
Other dry cargo	4328	2650	3613	3445
Coal	1989	4589	3322	4487
Fuel oil	10741	11026	12483	14710
<i>Total</i>	<i>26898</i>	<i>30259</i>	<i>32277</i>	<i>35913</i>

*Source: JSC Gdansk Port (2016)*

This fact has become one of the most fundamental in the decision making on the inclusion of *Maersk Line* in Gdansk linear ocean route AE10 from Southeast Asia to Europe (as the final ship entry port). This circumstance has allowed the Gdansk port to start specialization in the transshipment operation and transit in Russia, Sweden, Finland and the Baltic countries. With the introduction of the *Maersk Line* direct vessel calls, the transshipment level has risen in the Gdansk port. In fact, the port

become a hub, the majority of processed cargo in the *DCT Gdansk* had the country of origin (for export) or country of destination (for import) other Baltic countries, mainly Russia and Finland. The percent of the cargo transshipment in the total cargo turnover of the Gdansk port has increased, viz. in 2004 the part of transit cargo passing through the port was 5.0%, according to the experts, in 2008 it rose to 31.0% and in 2012 those cargoes were already 60,3%. Let us consider how the Gdansk port corresponds to the concept of port-hub (*Table 2*).

**Table 2**

**Gdansk port correspondence to the Port-hub Concept**

<i>Features</i>	<i>Variables</i>	<i>Port-hub</i>
Location	Sea network	Corresponds: Strategic location on the main routes of the sea network and the vast back area of the cargo gravity
	Back network	
The role of the hinterland	Transshipment (sea/sea)	Corresponds: 60,3%
	Hinterland coverage	Corresponds: over 500 km is the territory of Poland, Ukraine, Belarus, Russia, Slovakia and Hungary
	Multimodal connections (% of the total cargo capacity)	Corresponds: railroad (43%), motor car (57%)
Service features	Vessel size	Corresponds: the biggest vessel is 18 thnd TEU
	The service frequency of lines route: South-East Asia and vessels over 13 thnd TEU	Corresponds: 2 (Domination of the Maersk Line, a weekly service of AE10 Shanghai – Gdansk)
	The capacity of the container flow	Corresponds: 1,1 mln TEU

*Source: developed by authors*

**CONCLUSION**

*PGA Gdansk port* works as a hub, viz. it has a strategic position on the main routes of shipping companies; a distinct role in the *Marine Network*; a high level of transshipment and it can accommodate larger vessels than the region neighboring ports. The port is regularly entered by *Maersk Line* vessels.

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