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Feasibility Analysis of Establishing Logistics Clusters in Lithuania

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Abstract

Seeking to achieve higher effectiveness of state transport system, integration of transport corridors and different modes is required in parallel with the creation regional logistics clusters built around existing transport infrastructure.

The objective of paper is to analyse different scenarios of creating logistics cluster (also referred as logistics centres) in Lithuania. Subject of special interest in this paper are the key strategic elements, which have the biggest impact on decision of the location.

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1. Introduction

The European Union investments strategy for the transport sector requires that that each of member states must prepare and adopt national and regional innovation strategies. These strategies should be comprehended as a location-dependent and integrated economic growth plans, oriented to European and national priorities, based on an existing regional strengths and competitive advantages. Majority of member states identified transport sector as a main priority in their economic growth strategies, due to its economic significance and the added value of job creation.

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Although Lithuania have had a major investments into transport sector modernization and expansion during EU investment period 2007–2013, including construction of new intermodal terminals, construction of new ferry terminal in Klaipeda port and modernization of Vilnius and Kaunas international airports, national transport infrastructure is still lacking a proper logistic capabilities. Based on world-wide experience, there is a huge improvement possibility in national logistics infrastructure by establishing a logistics clusters in few transport hubs in Lithuania.

2. The concept of logistics centre

The United Nations Economic and Social Commission for Asia and the Pacific (further – UNESCAP) has published logistics centres typology, which differs the existing logistics intermodal centres into five types. Such typology was based on accentuating differences among logistics centres design, function and role in supply chains activities. However, the proposed methodology of UNESCAP was not agreed upon world-wide and did not become a standard in scientific publications referable to the logistics centres.

Higgins *et al.* (2012) developed a unified logistics centre hierarchy (see Figure 1), which serves as a good starting basement for further examination of the topic.

Level 1 of the hierarchy represents the smallest range of activities and the simplest tasks and responsibilities within the supply chain. As seen in Figure 1, this level includes the most basic warehouses and distribution centres. As outlined by various authors (Higgins *et al.*, 2012; Smith, 2013), warehouses mostly are used as a functioning buffer between suppliers, manufacturers and customers. The main difference between warehouse and a distribution centre is the emphasis on flow rather than storage of goods, also as facilities devoted to the rapid movement of goods.

Level 2 of the hierarchy consists of three main clustered logistics hubs: intermodal terminal, inland port and a freight village. The range of logistics activities within this level of hierarchy can vary from basic intermodal cargo shifting to complex transportation options, inland extension of a sea-port, integrated management of supply chain. This type of logistics hubs are known to have a significantly higher added value and influence on regional and national transport systems. Main focus area of this publication is freight villages, which can be described as a site or area hosting a variety of different transport infrastructure, as well as logistics services providers. According to Higgins (2012), a central feature of a freight village is high quality connections to intermodal and separate transportation infrastructure, customs and quarantine services, cleaning and repair areas, IT and telecommunications, security areas, amenities, etc. Furthermore, Higgins states that freight villages are the largest inland facilities at the top of the logistics hierarchy due to the sheer size of their influence and impact in freight and logistics by adding the most value to the supply chain. Logistics centres are offering a host of facilities, services, infrastructure, and activities related to freight and logistics that are both co-located and coordinated to encourage maximum efficiency between tenants on site. Bearing this in mind, the further subject of this publication is freight villages.

Level 3 of the hierarchy are major international terminals, which usually include a seaport and an airport and are designed as a part of global logistics infrastructure, not only connecting different freight corridors, but also having a vast economic impact.

Logistics centres (freight villages), by public understanding, are often not distinguished from a basic intermodal terminals, therefore public opinion on investing into development of such infrastructure can usually be unsupportive. UNESCAP states that the freight village should be understood as an area of land that is devoted to a number of transport and logistics facilities, activities and services which are not just located in the same area but also coordinated to encourage maximum synergy and efficiency, distinguishing features include an intermodal terminal and shared access to facilities and services. Smith (2013) outlines, that logistics centre is much more than just an intermodal terminal, and that logistics centre is greater than the sum of its parts. According to Meidute (2005) there are four main purposes of logistics parks:

- They increase intermodal cargo transportation;
- They catalyse regional economic activity;
- They improve local cargo distribution;
- They promote efficient land use.

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