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## **MARITIME TRANSPORT CLUSTER DEVELOPMENT IN GEORGIA**

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**Abstract.** The location of Georgia creates unique opportunities for maritime cluster development. Developing intensively sea transport, ports and marine products: fishing, tourist and recreational infrastructure. Ports constitute one of the most important nodes of transport networks. The functioning of the international transport corridor depends also on the ports and maritime transport. Strengthening Georgian transit function and their logistics infrastructure will improve competitiveness and the development of the Georgian economy.

The purpose of this article is possibilities of establishing maritime clusters in Georgia. Creating a cluster provides synergies and new opportunities for innovative handling of technological operations in port logistics. Creation of a maritime cluster on the basis of Batumi and Poti sea ports should increase the competitiveness of both the port and other companies – as a cluster members. Creating a cluster provides synergies and new opportunities for innovative handling of technological operations in port logistics.

**Keywords:** Cluster, Maritime, Transport, Transit, Logistic

**Introduction:** The cluster approach has hardly been used to analyze ports. The first step to construct a cluster is to identify the economic specialization of the cluster. In the case of seaports the core specialization is the arrival of goods and ships. All activities related to the arrival of goods and ships are included in the port cluster. Five broad groups of port cluster activities are identified: transport activities, cargo handling activities, logistics activities, manufacturing activities and trading activities. The development of Maritime transport cluster network will significantly improve Georgia's competitiveness.

**Purpose:** Georgia is situated in a strategic location on the "One Belt One Road" route, positioned along the shortest route between China and Europe, acting as a gateway for cargo to enter into the landlocked Central Asian and Caucasian regions. The development of Maritime Cluster gives Georgia the function of international importance and enriches more opportunities for sustainable development.

**Results:** M. Haezendonck (2001) is the first scholar who uses the term 'port cluster' and draws from cluster theories. She defines a port cluster as 'the set of interdependent firms engaged in port related activities, located within the same port region and possibly with similar strategies leading to competitive advantage and characterized by a joint competitive position vis-à-vis the environment external to the cluster' (Haezendonck, M., 2001, p. 136). Seaport Clusters is presented by (Langen 2004) contributing on performance analysis of seaport clusters and their structure.

M. Haezendonck analyzes the performance of a port cluster with an adapted version of Porter's diamond framework (Porter, 1990, Krugman et al, 1995). She identifies 14 factors that influence the competitiveness of seaports, including internal competition, internal cooperation and relationships in the cluster, the presence of related and supporting industries and the behavior of the government. This study is a major contribution to understanding port clusters, but has the following shortcomings:

- The issue of identifying firms in the cluster is not addressed. This is relevant since the question of *what actually is* a port cluster is still unclear.
- A focus on two commodity groups: containers and break bulk. An analysis of the competitiveness of a complete port cluster is still lacking.
- Throughput volume is used as performance indicator. This indicator is at best a partial

Indicator of performance. It might be a good indicator for the performance of the cargo Handling industry, but the port cluster encompasses many activities whose performance is not directly related to cargo throughput.

The first step is a ‘qualitative value chain analyses. Transport activities are part of a port cluster, since a port is a part in a transport chain. Most cargo is transported further by means of inland modes, such as road, rail and inland waterway. Transport firms are located in ports and are so strongly related to the arrival of goods and services that they are included in the port cluster. This applies to all firms involved in freight transport.

The multi-scale cluster model as perceived is shown below with firms, sectors, relating institutions and bodies that are agents.

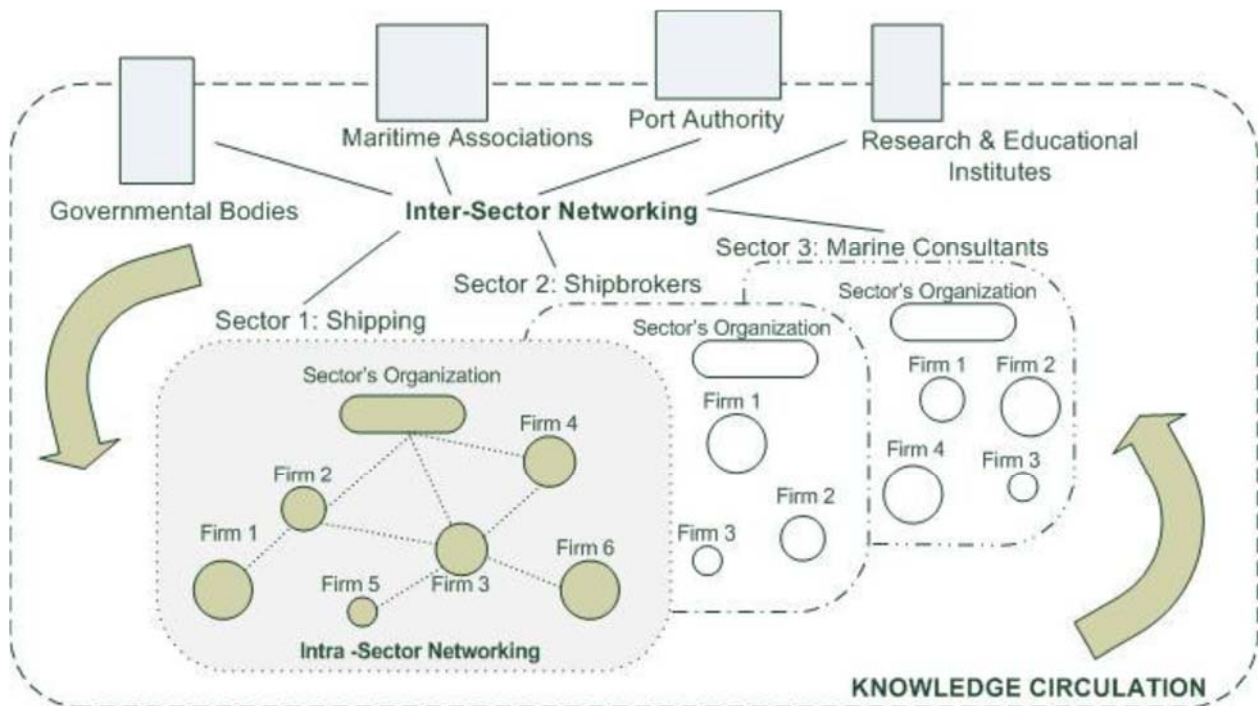


Figure 1: Multi-scale Cluster Organization for ABMS modeling.

The cluster approach has been recently used to analyze ports. A good example of a port cluster case study is the Antwerp's port cluster which is annually reported by Bank of Belgium. In this study, a cluster population of about 1000 firms, including logistics and industrial firms, is identified. The development of the value added of this cluster is calculated.

Georgia's port system comprises two ports of Poti and Batumi, as well as Supsa and Kulevi specialized oil terminals [4]. Poti and Batumi represent gateway to the eastern coast of the Black Sea, the road goes west to the Black Sea, Turkey and Europe, and east to the Caucasus and Asia. Both ports serve regular ferry and container routes linked to other ports of the Black Sea and Mediterranean Sea. Batumi port is a significant link in the Europe-Caucasus-Asia Transport Corridor, crossing Bulgaria, Romania and Ukraine through the Black Sea, it ties the Caspian Sea region countries - Azerbaijan, Kazakhstan, Turkmenistan and other country. The main competitors of Batumi port in the Black Sea region are: the ports of Odessa and Ilyichevsk in Ukraine, and

Novorossiysk and Tuapse in Russia. Batumi port has a container terminal and a harbor complex for servicing of ferries, as well as the dry cargo and passenger terminals.

Container terminal throughput is 100,000 TEU per year. This terminal has the open storage spaces and load-carrying equipment, which are specialized in the handling of containers for the intended or storage purposes. The ferry runs between Varna, Ilychevsky and Batumi harbors. The ferry system is completely automated. Nominal annual throughput of terminal is approximately 700,000 tons. Dry cargo terminal provides servicing of large and small ships. It is specialized in handling of scrap metal (intended or storage purposes), bulk, liquid, general and break bulk cargo. Dry cargo terminal's maximum throughput is 2,0 million tons per years. The terminal's throughput is approximately 180 000 passengers per year. The passenger harbors provide servicing of passenger ships and the Ro-Ro type passenger cargo ferries. The main factor for the development of port was and remains the Caspian Sea oil. The Batumi Oil Terminal offers its customers the services for transportation of oil and oil products from Kazakhstan, Azerbaijan, Turkmenistan, Georgia and other countries. The terminal transport up to 22 types of oil and oil products. Oil is supplied to Batumi Oil Terminal via Georgian Railway, by railroad tank cars, unloading of which is carried out at the modern railway overpasses. The oil terminal's throughput is up to 15 million tons per year. The terminal is specialized in handling of crude oil and practically all types of oil products - diesel fuel, petrol, heating oil, etc. Poti Port is a connecting link for cargo transportation from Turkey, Middle East and Europe to Central Asia countries and Afghanistan. Poti Port carries out the carriage in three main directions: - the carriage from the border strip adjacent to Azerbaijan and Russia. Kulevi Oil Terminal The Kulevi LLC "Black Sea Terminal" construction began in 2000, and it was opened on May 16, 2008. The terminal's throughput is up to 10 million tones of oil products per year, including: 3 million tons of oil, 3 million tons of diesel and 4 million tons of heating oil. The overall storage capacity of the tank park is 320 thousand cubic meters, with the prospect of increase up to 380 thousand tons. There are two berths in the terminal for discharging oil products, which provide servicing of tankers with tonnage up to 100 thousand tons. The object has its own port-approach railway station, where 180 oil tank cars be placed simultaneously for discharging.[4]

The Supsa Marine Terminal, the last point of the Baku-Supsa pipeline, was opened on April 17, 1999, in a Supsa Village The terminal has 4 tanks, with tonnage of 40000 tons each. The quantity of cargo handled in 2015 was 4,2 million tons. Annual throughput is 7 million tones. .In the first seven months of 2017, Georgia's ports and the marine terminals handled 9.6 million tones of cargo, which was 3% less than in the previous year. The absence of a deep-water port is considered to be one of the weaknesses of the transport corridor connecting Europe and Asia. Large ships cannot

enter the ports of Poti and Batumi. This increases the cargo owner's costs of shipping. As a result of the analysis, it has been established that the possibility of servicing of large ships in the case of the existence of a deep-water port will reduce shipping costs by about \$160 per container.

2017 started the construction of the Anaklia's deep-water sea port, which is being implemented by the Anaklia Development Consortium [5]. The Consortium comprises the "TBC Holding" and the American Investment Holding "Conti International", which implements infrastructure and construction projects. The contractors of the Anaklia Development Consortium are also the well-known sea-port design company "Moffatt & Nichol" and Dutch consulting company "Maritime & Transport Business Solutions", which is specialized in the issues of port transactions. Anaklia Deep Sea Port will be the first Georgian container port with a deep water, state-of-the-art infrastructure and equipment. These factors will create port productivity, efficiency and reliability along with a superior customer service. Anaklia Deep Sea port will be designed over the course of 9 phases, with an aggregate investment of \$2.5 billion.

In the longer term, the port is expected to reach 100 million tons of throughput, but at the first stage it is planned to construct three phases are planned. The first 3 phases should be constructed within 12 years. For the first three years, the port's throughput will be 7 million tonnes, and by the 12th year, it will reach 40 million tons of cargo. [5]

**Conclusion:** The construction of the new ports in Georgia, as well as the development and expansion of the existing ones will result in the necessity of a new resettlement policy, which involves the creation of the new port settlements, and in some cases, the creation of new city or cities, terminals and technical service zones. [6] The result of maritime cluster should strengthen Sea ports position not only in Georgia, but also in Caucasus region.

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