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What Major Product Characteristics of Dry Bulk Cargo Terminal Create Competitive Positioning of Georgian Port industry, the Case Study of Poti and Batumi Ports

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Abstract

This study aims to identify factors which give the Georgian port industry (particularly, Poti and Batumi ports) a competitive advantage in comparison with such competitive ports as Novorossiysk, Odessa, Bandar Abbas and the Russian railway system that acts as the main rival for the Georgian transportation transit route. The product and value comparison study is based on a multi-level approach which allows transferring and using the quantitative and qualitative information gained during the project work for a numerical calculation/projection model. Research identified key bottlenecks of Georgian Ports and its functional benefits within the core and physical port infrastructure. Recommended directions in the value creation process is given.

Keywords: competitive advantage, differentiation, Georgian port industry, product structure, value creation

JEL: L9

Introduction

When considering the competitiveness of a particular organization in the industry, it is necessary to identify the factors that determine the competitive advantage of the organization and, thus, ensure successful functioning of the organization at the market. In the light of this, we conducted a competitive positioning of the Georgian port industry to identify major product characteristics that are important for operating a dry bulk cargo terminal.

At first glance, it is crucial to underline that, generally, Poti and Batumi Ports have a highly strategic location as one of the core elements of the large east-west trade corridors, namely TRACECA, Trans Caucasian Trade Corridor TITR and the New Silk Road as part of China's "One Belt One Road" that links Europe with the South Caucasian and Central Asian countries and even China or India.

The Georgian port industry unlocks a primary market (Georgia, Azerbaijan, Armenia) of 18 million people from the Caucasus region and another 145 million people from landlocked countries in Central Asia (Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan and Tajikistan).

Accordingly, research is interested to identify if dry bulk cargo terminal design and its value creation processes can generate sustainable competitive advantage in comparison with competitive ports like Novorossiysk, Odessa, Bandar Abbas and Russian railway system that acts as main rival for Georgian transportation transit route.

At the same time, it is worth underlining that Caucasian and Central Asian countries are rich with key commodities like wheat, coal, fertilizers, copper concentrate, manganese and other ores. With the increase of the world population, given raw materials play a decisive role in international trading activities.

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Research Methodology

The methodology for conducting the product and value comparison study is based on the multi-level approach, which allows transferring and using the quantitative and qualitative information gained during the project work for a numerical calculation/projection model. The following figure reveals main steps and points out different aspects and methodology used on various levels like Macro, Meso and Micro as well as the involvement of the related market players.

To start with, the research interest area was narrowed down with the actual problem generated through the Georgian marine dry bulk terminal operational system and concerning its structure, as well as the effect of product design on the competitive advantage of the local ports located on the Black sea area. Hence, the research problem is to understand the effect of the product and the imbedded value on the rivalry forces and analyze individual variables which build up five levels of the product and support generation of positive operational perceptions among customers. Accordingly, the research question was narrowed down as follows: Does terminal as a product design create the competitive advantage in the Georgian port system?

As Stanage (1987) states, the scientific paradigm of the research should be represented to show what should be observed and through what questions, how questions should be structured and how the result should be interpreted. Thus, research observes the product design and the value creation process of Georgia-based marine terminals. Questions are asked about the following five sustainable parts of the product: core benefit, physical product, expected product, functional benefits and emotional benefits. Questions are structured as open-ended ones to collect flexible answers to them. Finally, interpretation of results obtained after research should be considered as objective rather than subjective with a certain level of error, due to taking sample not whole population – due to the fact that the whole population was not used when taking the sample.

The epistemology of the research is designed (Holloway, 1997) at the third stage when representing the problem, research area, topic and scientific paradigm. The epistemological position of the given research can be formulated as follows: data are contained within the practical knowledge of commodity traders, clients and port specialists involved in day-to-day operation of Georgian marine operation and trading sectors; because of information endowment in those three parts of the public, it should be collected through personal and focus group interviews.

To sum up, research integrated desk analysis and observation tools within the quantitative data collection process (Saunders, 1997).

Literature Review

Competitive Advantage; Customer Value Creation

Many factors are important for the successful operation of a company among which its competitive advantage is worth noting. It allows a company to outrun its competitors, attract customers and increase the probability of successful operation at international and local markets (Dash & Das, 2010). Many studies have been conducted in this area (Thompson et al, 2003; Dess et al, 2005; Huang et al, 2015) and continue to be of interest to many researchers. The existence of competitive advantage is crucial both in-country and at the company level, especially today, in the context of the globalization of the world economy.

Technological advancements, qualified staff, access to natural resources, convenient geographical location and ow cost can serve as the competitive advantage. It must be unique and hard to copy. Michael Porter (1985) identified the following types of competitive advantage that an organization can achieve relative to its competitors: low cost or differentiation. Differentiation can be done by the characteristics/attributes of the product, services, distribution channels, human resources or company reputation.

Companies need to deliver products that create customer value as it has been considered as the source of competitive advantage (Woodruff, 1997; Smith & Colgate, 2007, Kotler & Keller 2012). Furthermore, they need to go beyond the scope of the actual product or service to determine total customer value, as the total value of a product cannot solely be obtained from the core product and its functions and functional and emotional benefits of the product or service should be taken into account (de Chernatony, Harris & Riley 2000; Leek & Christodoulides, 2012).

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Middle Corridor (as Part of the Trans Caspian Trade Corridor CTC)

According to Faruk and Zou (2019), the Middle Corridor represents Turkey's vision for connecting China to Europe via Central Asia and the South Caucasus as a kind of reminiscent of the EU's TRACECA project. Turkey has considerable presence both in South Caucasus and Central Asian countries, areas with which Turkey has cultural ties. In South Caucasus Turkey was ranked as number one import partner of Azerbaijan and Georgia in 2015.

As Viehe A. (2015) underlines, Turkey's cooperation with Azerbaijan and Georgia led to regional economic projects, including, Baku-Tbilisi-Ceyhan (BTC) oil pipeline and Baku-Tbilisi-Erzurum (BTE) gas pipeline as well as the Baku-Tbilisi-Kars railway Project. In 2015 Turkey and China signed a memorandum of understanding to align Turkey's Middle Corridor Initiative with China's "One Belt One Road" Initiative including transportation and logistics cooperation as well as cooperation schemes such as people-to-people contacts. At present the Middle Corridor is operational via a highway system extending from Turkey to Georgia and Azerbaijan crossing the Caspian into Kazakhstan or Turkmenistan.

The Baku-Tbilisi- Kars railway that includes the rail system into the Middle Corridor link began in 2007 with the signing of an agreement between Turkey, Georgia and Azerbaijan. This link is likely intended to bypass Armenia considering the Armenian-Azerbaijani conflict over Karabakh.

Azerbaijan is the main investor in this railway scheme also making a loan of 770 mill USD to Georgia for the construction of the missing link on the Akhalkalaki – Kars section and for the rehabilitation of the existing route through Georgia. The railway links to the Trans-Caspian connection reaching out to markets in Turkmenistan and in Kazakhstan and further into Asia to China (Aliyeva, 2018).

As it is presented by Colakoğlu S. (2019) in western Turkey, the newly built Yavuz Sultan Selim bridge in Istanbul, including a railroad, aims to ensure a corridor for a seamless flow of goods and people between Asia and Europe. The Middle Corridor is estimated to have the capacity to transport 1 million passengers and 6.5 million MT of cargo per year. By 2034 the capacity is expected to reach 3 million passengers and 17 million MT of cargo per year (Ministry of Transport, Maritime Affairs and Communications of Republic of Turkey, 2016). This rail connection of the Middle Corridor would be in direct competition to Georgian Ports, especially, regarding trade to Europe (South Europe, South-East Europe and even Ukraine).

However, currently, even after competition of the infrastructure works, the Middle Corridor has not shown significant volume growth so far. The main problem that is still not solved refers to connection deficiencies. Notwithstanding the completion of the Baku -Tbilisi – Kars railway, Turkey lacks the effective railway network linking Kars to western Turkey and then to the EU.

The Turkish government prioritizes the construction of a high-speed railroad network between Edirne on the EU border and Kars crossing eastern and central Anatolia. Costs considerations are behind delays for the Kars- Erzincan- Sivas – Ankara connections, for which, Turkey is looking to the Chinese cargo. Earlier China invested in Turkey's first high speed rail between Ankara and Eskisehir. Possibly due to the absence of an effective internal rail network in Turkey, DHL, which started its operations on the Trans-Caspian international corridor route in 2015, chose the route over the Black Sea (Ministry of Foreign Affairs, 2011).

The first container cargo train from Lianyungang in China passed through Kazakhstan over the Caspian Sea to Azerbaijan onto Georgia's Poti Port from where its cargo was shipped to Istanbul. Another serious problem which is difficult to be solved is the gauge difference along the Trans-Caspian route. Central Asian and South Caucasian countries use the 1.520m gauge, a legacy of the Soviet era, while China, Turkey and the EU use the 1.435 mm, known as the standard gauge. Trains coming from China (and, subsequently, entering Turkey and the Europe) must undergo a change in gauge adding to delays and costs. Along the Baku Tbilisi Kars line, the gauge is changed at Akhalkalaki in Georgia.

All-in-all, the middle corridor project and improvements have to be taken into account for designing proper business cases for Georgian Ports, especially, for bulk handling processes that still favors the use of Poti Port as the connecting hub point for Trans Caspian Corridor (see Figure 1 Poti Port- the connecting hub point for Trans Caspian Corridor)

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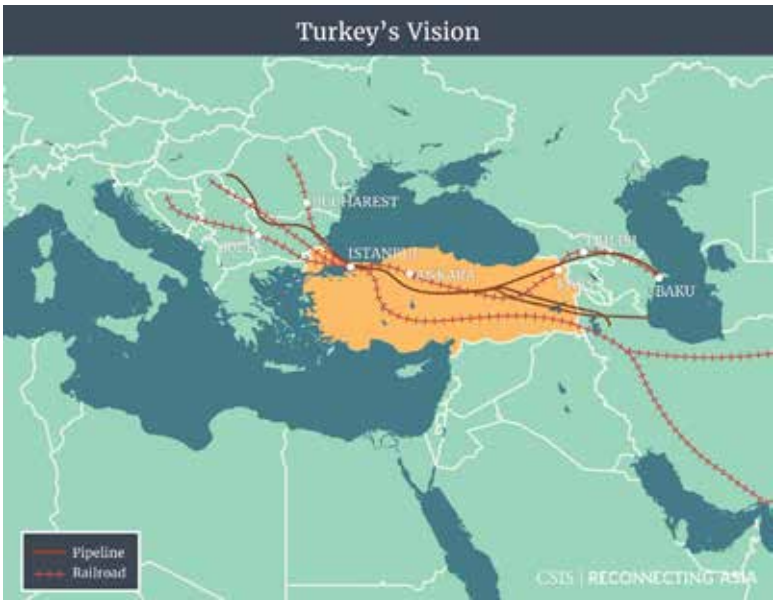

Figure 1. Poti Port- the connecting hub point for Trans Caspian Corridor

Source: Reconnecting Asia CSIS 2019

South Corridor (North South Corridor)

Most recently, there were substantial improvements of the north-south connection to/from PNTC Catchment Area to Iran and its Seaports Banda Abbas (Shahid Rajaee) and Banda Imman Khommeni. The rail connection between Baku und Astara was completed in 2017 on the Azerbaijan side. However, Astara (Iran) is still not connected to the Iranian main railway system (owing to difficult geography at this area this also is not expected soon) and again there is the problem of the gauge difference between these two countries (Ministry of Roads and Urban Developments, Ports and Maritime organization 2019).

The Kazakhstan-Turkmenistan-Iran railway link is part of the North-South Transnational Corridor and is a 677 km long single-tracked railway line connecting Kazakhstan and Turkmenistan with Iran and the Persian Gulf. It links Uzen in Kazakhstan with Bereket – Etrek in Turkmenistan and ends at Gorgan in Iran's Golestan province. In Iran, the railway is linked to the national network making its way to the ports of the Persian Gulf. The project cost was about 620 mill USD being jointly funded by the governments of Kazakhstan, Turkmenistan, Iran and Asian Development Bank.The railway link has been inaugurated in May 2013 to make sure that technically it is fully operated. Comparison of the transport cost from the Catchment Area (east side of the Caspian Sea, e.g. from Asgabat = about 98 USD/MT FOB from Poti Port) shows a high cost advantage for the North-South Corridor (about 53 USD/MT FOB Banda Abbas Port) of 41.8 USD/MT. This could have an important impact on some of Georgian Port key commodities, especially, export of fertilizer to Middle East or East Africa (Railway of Islamic republic of Iran, 2019).

On the other hand, the North-South Corridor is currently totally blocked for international trade because of US sanctions on Iran. Furthermore, the capacity on the Iranian side, especially, for change of gauge and regarding adequate rolling stock (locomotives) is very limited. Nevertheless, any substantial improvement at the North-South Corridor should be considered of relevance for competing with Georgian ports (see Figure 2).

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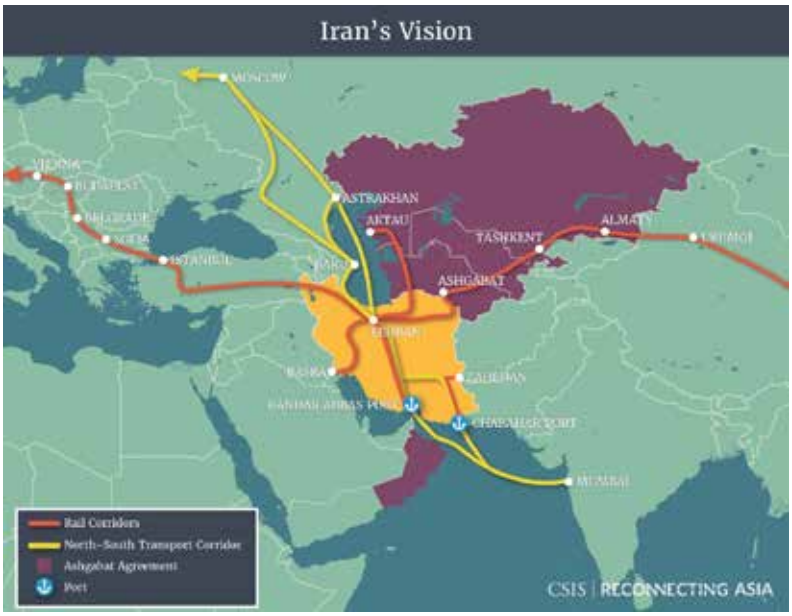

Figure 2. North-South corridor

Source: Reconnecting Asia CSIS 2019

Trans-Eurasian Land Bridge (North Route and South Route)

Currently, with some estimated 20 mill MT/a the so called Trans-Eurasian Land Bridge absorbs the highest of the east-west transport volumes. New block train relations between China and Central/North Europe are announced almost weekly. For certain trade relations from the Catchment Area, e.g. from Kazakhstan to Central Europe, this corridor has reasonable cost advantages compared to the Trans Caspian Trade Corridor. A comparison of the transport cost from the Catchment Area (east side of the Caspian Sea, e.g. from Astana = about 137.8 USD/MT FOB from Poti Port) shows a cost advantage for the Trans-Eurasian Land Bridge (about 80 USD/MT FOB Riga Port) of 57.8 USD/MT. On the other hand, these partly existing advantages are overcompensated by the pure port handling costs. All-in-all, the Trans-Eurasian Land Bridge is considered of not providing too much competition pressure on the key commodities for Georgian ports and it is more the other way around, i.e. having the chance of attracting reasonable volumes for the Trans Caspian Corridor and Poti Port (see Figure 3) (Georgian Railway, 2019) .

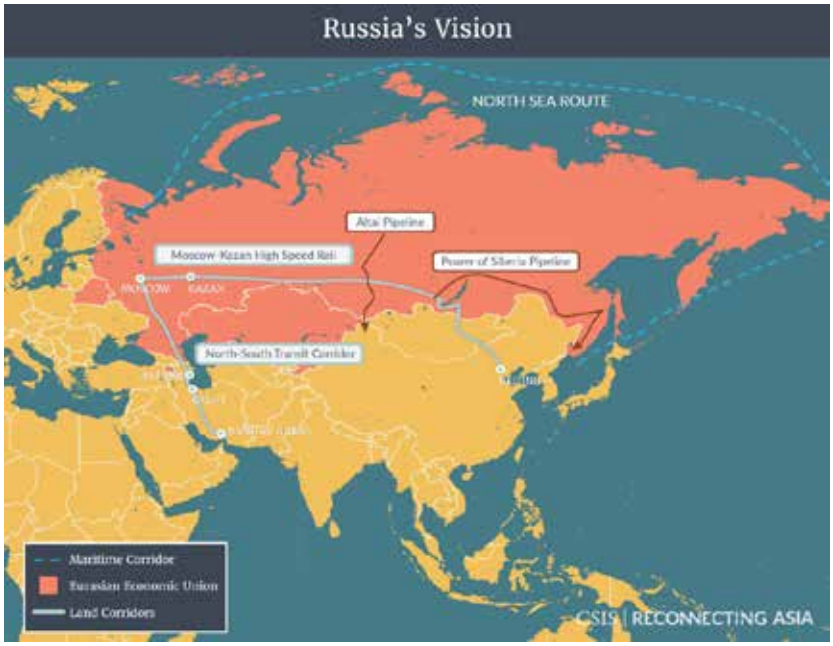

Figure 3. Trans-Eurasian Land Bridge

Source: Reconnecting Asia CSIS 2019

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Main Findings

Research identified that one of the key bottlenecks of Georgian Ports is five level product structure and its functional benefits within the core and physical port infrastructure.

The port, as a product in the value creation process, has two crucial benefits: emotional and functional. Emotionally, traders, logistic companies and governments of central Asia need the alternative transportation route that is considered as solid security for the entire region and sustains competitiveness of the whole transportation industry. Besides, the Georgian transit corridor overcomes one supplier risk in transportation industry and supports price elasticity of the cargo transportation. Functionally, both Batumi and Poti ports as a product have a generic weakness because they are constructed as inseparable parts of the soviet transportation system where the cargo owner, the trader, the railway and ports used to be under unified management system and considered as one product and logistic solution for the soviet commodities. Accordingly, both ports handle commodities with a direct method of loading and unloading of the cargo. To be more specific, the railway line directly goes to the marine terminal berth and commodity is directly loaded or unloaded into/from the railcar to the vessel without having any sufficient storage facilities to accumulate cargo for bigger vessels.

After the collapse of Soviet Union and the process of privatization, the cargo owner, the trader, the railcar owner and the port operator became different players at the market. Hence, the logistic solution as a physical product is split into three parts: the railway system, the railcar operator and the port operator. The commodity transportation price is formed from the combination of those three different products separately.

For a successful competitive edge with rival corridors, Georgian ports should create the expected product for allowing traders to unload commodities from the railcars without delays to avoid railcar delay charges that increases the transportation price and allows traders to store commodities at open and closed warehouses, at the terminal for transporting cargo in bigger lots with bigger vessels that creates the economy of scale and makes Georgian ports competitive with alternative routes.

Research identified the need of dipper terminal up to 14 meters deep to receive Panamax type vessels that can handle lots of up to 60 000 tons per shipment.

To sum up, Georgian Ports as a product should be reshaped in three main directions. Firstly, create closed and open warehouses for storing and accumulating commodity lots for bigger vessels and giving the opportunity to traders to wait for better market trends and keep the cargo at the terminal. Secondly, Georgian ports need special railway depots that will fasten the unloading process of the railcars and help to avoid railcar discharge delays to reduce the cost of transportation. Thirdly, deeper marine side of the ports should be provided to increase the vessel lot sizes up to 60 thousand tones per shipment.

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