

## CASE ANALYSIS OF THE GEORGIAN RAILWAY TRANSPORT SECTOR INTEROPERABILITY AND INTERMODALITY WITH THE EUROPEAN SYSTEMS

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**Abstract:** *This paper presents the results of research about the Case Analysis of the Georgian Railway Transport Sector Interoperability and Intermodality with the European Systems, Herein are listed challenges and problematic issues of compatibility of Georgian railway and its infrastructure and technical parameters to the EU standards and also some directives and regulations required for Georgian Railway Transport Sector in the context of “the EU – Georgia Association Agreement”. Also, article is giving a brief information about the “intermodal transportation” and the general importance of the role of rail transport in it. In author’s opinion, the development of Georgian railway into a railway with real European standards, in the context of Intermodality will have influence to rise of the cargo volume, which directly is connected to the economic development of the Country. Specific literature has been processed, description, synthesis and comparative analysis methods has been used for this research. The article is prepared on the bases of the Young Scientist Grant of the Shota Rustaveli National Science Foundation (NYS-2016-41).*

**Keywords:** *transportation, transportation infrastructure, Georgian railways, EU standards, regional development.*

**JEL Classification:** *R40, R42.*

### 1. Introduction

Due to the strategically important geographical location, Georgia has a key transit function within the entire Caucasus, as well as beyond its limits. During the Soviet empire, economics of the Caucasian republics, including transport infrastructure, belonged only to outskirts, deadlocks and/or objects inside the country and did not have a practical value in terms of the economic development and global integration in the rest of the world. After collapse of the Soviet Union, Georgian traffic arteries have regained their functions.

Under the conditions of deepening economic globalization, the connection between countries is unimaginable without international standards in transportation system. Taking into consideration strategic geographical location, Georgia's urgent task at this stage is a new understanding of the country's role in the global world and the necessity of acquiring additional international functions, which cannot be achieved in accordance with all kinds of high international standards without interconnecting transport with European systems. In this context it should be noted that, due to the enormous advantages, it is known that the preconditions for integration into the European Union are to carry out certain economic and institutional reforms, a set of criteria, without satisfying which EU membership and regional integration are impossible.

It is natural that the perfection of foreign economic ties is the greatest reserve of economic efficiency of each country. In the context of foreign economic ties, the EU market is attractive for Georgia due to various advantages. Georgia has greatly deepened relations with the EU in recent years, which has been strengthened with the most powerful and comprehensive so-called “EU-Georgia Association Agreement” in the history of EU-Georgia relationship (The Agreement is officially called "Association Agreement on the one hand, between the European Union and the European Atomic Energy Union and their Member States and on the other, Georgia"), a part of which is "Deep and Comprehensive Free Trade Area Agreement" DCFTA.

Since then the relationships between EU and Georgia have moved to a new, historically unprecedented level. The VI Title of the Association Agreement deals with

transport and related issues and, first of all, envisages modernization of transport sphere and the introduction of European standards.

For its part, intermodality and interoperability of the Georgian railway transport sector with the European transport systems is the necessary condition to fully exploit the Georgian transportation corridor.

## **2. About Georgian Railway Transport Sector**

In the context of Georgian transit function, Georgian railway is considered to be an alternative way of communication between regions of Caspia and Central Asia with Europe. Strategically important ports and terminals are directly connected with railroad lines of Azerbaijan, Ukraine, Russia, Bulgaria. Also main railroad of Baku – Tbilisi – Karsi soon will be operationalized in full capacity and that will directly connect Georgia with Turkey and transeuropean transport infrastructure. Traseca corridor that can operate a main stream of the transit from and to Europe via Caucasus attracts active attention of international society and big transport companies. In this context we can also consider “The Silk Road” project that Georgian government pines great hopes on.

Negative results of Georgia’s recent history made an impact on the Georgian railway. Despite the hard economic and political situation Georgian railway managed to successfully accomplish the role of economic improvement stimulator at first. Georgian Railway was established as a profitable enterprise. But the mentioned success was achieved by increase of manufacture volume (in this case it means increase of transit volumes), which was caused by an influence of political and economic factors and not by production development, increase of service quality and effectiveness.

For the purpose of studying the compatibility and accordance of Georgian railway transports with the Euro Standards and with the aim, to make general analysis of this issue it is important to evaluate overall condition of the Georgian Railway. For this purpose, one should evaluate amount of power that is used for the functioning of Georgian Railway. Only after this it will be possible to evaluate the intermodality of the railway branch and its future potential, which is the main aim of our topic.

Georgian Railway is divided into three branches: cargo transit, passenger transportation and infrastructure branches. These branches include such activities as cargo transit, passenger transportation and management of main infrastructure of the railway.

In general, cargo transit is the main source of the railway profit. Passenger transportation is mainly unprofitable operation because, the low rates of train travel are not enough for railway maintenance and service.

Georgian railway is profitable enterprise as the portion of cargo transits in full amount of transportations is enough to cover the loss caused by passenger transportations and to have some additional profits.

According to the research made by Consulting company “Booz Allen Hamilton” (BAH), nowadays, the operational railway network of Georgian Railway is in normal state, freeway is completely electrified, and main railroad allows traffic in both ways.

Infrastructure of Georgian Railway consists of multiple components: Bridges, Tunnels and Railroad, communication tools, electrification, depots, stations and their equipment. At this stage most part of infrastructure are more than 85 y.o.

Despite the fact that the state of all the infrastructure allows to operate continuously renovation works in the most parts is important. It is also important to prevent pollution of environment caused by railroad functioning.

Also, the big problem in the aspect of compatibility with the European railing system is the sizing of railings. Railing in Georgia doesn’t have so called “European Size”, change

in raiing requires big investment decision and expenses. At the same moment, there are multiple ways of solving this problem.

With the renovation of infrastructure and change of trains certain capital investment will be required to found modern diagnostic center, which will allow avoiding late or insufficient reparations of mobile equipment. To establish diagnostic center, purchase of the appropriate equipment will be as essential as requalification of support staff. That will allow the usage of new equipment and its support. Therefore, to guarantee safe and effective work of Georgian Railway, big financial investment will be required.

The operational functions in Georgian Railway became commercialized. Third party is allowed to organize passenger and cargo transportation on Georgian railroads (at the same time new vehicles should be compatible with requirements and have proving certificate), which, according to already existing experience, helps Railroad to develop as profitable commercial enterprise. It also should be noted that according to the opinion of western experts full commercialization of Georgian railroad is advisable.

Since 1992 Georgia is the member of the Organization for Cooperation of Railways (OSJD), which creates advantageous environment for railway, to operate cargo transportation on the territory of membership countries with preferential fees. Also in 2011 Georgia joined The Convention concerning International Carriage by Rail (COTIF).

From 2017 digital signature system for cargo documentation was implemented, which gives an ability to make commercial and finance records of local cargo transportation digitally (without paper). New system gives the ability to railway clients to see and agree with cargo operations from every part of the world, which makes managment and service parts much more easier and flexieble. Work is prepared in virtue of young scientist scholarship of Shota Rustaveli National Scientific Fund (N YS – 2016-41) - Georgia.

### **3. Directives and Regulations required for Georgian Railway Transport Sector in the context of “the EU – Georgia Association Agreement”**

According to EU – Georgia Association Agreement, Georgian Railway should implement 8 main regulations. Regulations should start to work step by step in 2018-2021 years. Certain preparational steps were already made towards this. Main aspects of the European railroad guidelines are:

- ✓ Compatibility of technical and safety conditions (2004/49/EC Guideline about safety of the Railway union);
- ✓ Market opening and allowance on infrastructure (N 913/2010 Guidline for particular cargo of European railway network and 2012/34/EC Guidelane, which facilitated creation of united European railway zone);
- ✓ Qualification of the system staff and labor conditions of the drivers who operate the trains and locomotives in the railroad network of the union (2007/59/EC Guideline);
- ✓ Establishment of the railroad infrastructural compatibility tariff in the frame of the railroad system unification (2008/57/EC guideline);
- ✓ Matters regarding the rights of the passengers, public railray and auto transport services, duties and cargo transit operators (Guideline EC - N 1370/2007) and EC N 1371/2007);
- ✓ Important guidelines exist according to environment protection from local transportation of dangerous cargo, that are implemented gradually (2008/68/EC Guideline).

The main goal of enlisted guidelines is the improvement of Railway (Georgian one among them) positions on the European transportation market, also rise of its competitiveness on the market through improvement of technical parameters and

conditions. As a final result, we will get more flexible in operations and suited to European standards Railway.

#### **4. A brief explanation of the “intermodal transportation” and the general importance of the role of rail transport in it**

The terms “intermodal” and “intermodalism” are relatively new words. For example, at first it was used in Concise Oxford English Dictionary of 1980. Although meaning of Intermodalism was not the same as it is today. In 10<sup>th</sup> edition of the same dictionary (1999) the term “Intermodal” is explained as follows: Intermodal is a freight conveying process during which the transportation conveying process deems appropriate or permissible to involve two or more than two modes of transport; and in the majority of cases, freight receiver has no direct connection with various terminal stations, customs and other logistical processes (cases, there is no direct connection or access between the loading/unloading point and the rail, inland waterway, sea, or air transport system).

There are more definitions for intermodal conveying but there is a little difference in their meanings.

During the process of the research conducted by us we formulated our own definition of “intermodal conveying”: “Intermodal conveying” is freight conveying by several types of transportation vehicles. During this time one of the carrier manages the organization of the whole transportation process starting from departure point to the point of destination passing through one or several points of loading. There is no managing operator and the client sign agreements with each carrier who is responsible for own part of the transportation. Therefore, the responsibility is upon the carrier for each cycle of the logistical chain.

As it is known utilization of various types of transport and selection of transportation methods while planning the freight transportation, depends on different factors (geographical, infrastructural, safety, social-political, regulatory and jurisdictional, transportation characteristics of freight, etc.). All of these factors make the final impact on a possibility of freight to end up in a specific transport corridor.

At the same time, due to the diverse objective reasons, situation in international business environment got quite hard. Competitiveness on the market gets higher based on tariffs, quality of service, safety of cargo, speed of transportation, border/customs continues functioning and other parameters. Therefore there is a risk that in nearest future Georgian Railway might give up leading positions irreversibly, if required reforms won't be implemented in time.

If we consider the advantages and the opportunities offered by the Railway for the effective functioning of the entire transport system, the importance of the role of railway transport in intermodal traffic does not require many substantiation. It is obvious, that the most important function in intermodal traffic has railway transport. This is especially important for countries, where the transportation can also be done by sea transport. In that case, it is well known that the Georgian Railway System, between Black and Caspian seas, is one of the most important parts of the Eurasian transport artery which connects Europe and Central Asia with the shortest route. Accordingly, the Georgian Railway and its compatibility with European standards in the context of the development of intermodal transportation in the Georgian transport corridor has great importance.

#### **5. Conclusion**

Georgia is the part of the world and it is natural that its development goes in the course of common tendencies. Its economic growth and Development depend on the usage of its potential as a transit country, which means that the modernization of Georgian

transportation and its usage with full potential requires economic partnerships with neighbor countries and international business organizations. All the efforts would be directed towards the maximum support of the integration of the priority business sector of Georgia and its strategic partners into regional and European markets

Growth of the national enterprise, especially the transportation system will be impossible without the implementation of models appropriate to international standards and without the systemic transformation in general.

In the recent period, Georgia has made important steps towards approximation of national railway transportation standards to European ones, though as it is shown above there's still lots of work to do, to make actual changes. Most of the main European Union guidelines regarding railway transportation should be implemented in 2019-2022 years, as opposed to previous years, abovementioned will cause change in general work of field, which will result in improvement of transportation field and will give more perspectives and chances for it.

Therefore, taking into consideration the size and significance of the complexity of the measures that the transport provides for the economy of any country, It can be said that the modernization and adaptation with the European and international standards of the railway transport as the main direction of the transport system of Georgia in the context of regional integration can be a key point to a further economic development and a powerful tool for achievement of national long-term goals.

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