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**RAILWAY TRANSPORT OF THE CHECHEN REPUBLIC:
TERRITORIAL ASPECTS OF DEVELOPMENT, PROBLEMS,
PROSPECTS**

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Abstract

There are direct relationships between formation of the railway network and development of the petroleum production industry in the Chechen Republic. Rail transport played a crucial role in the Great Patriotic War. During the War, a railway line from Grozny to Astrakhan was built. The influence of freight and passenger rail transportation volume dynamics on the level of economic activity in the republic (the peak is during restoration operations) was identified. Various construction materials from neighboring and remote regions, including Moscow oblast and the Ural economic regions, were supplied to the Chechen republic. Priority sections of the railway network were established to restore transport permeability of the republic in the east-western direction - from Grozny to Magas, Prokhladny in Kabardino-Balkaria and near the Argun-Chir-Yurt industrial area – a junction between the settlements. The article justified the need for renewing the project of the Transcaucasian railway along the Assinsky gorge using modern environmentally-friendly technology.

Territorial organization of the Chechen economy has been transformed. The role of Gudermes as a logistics center for the wholesale trade has increased. Due to restricted railway connection in the western direction, passenger traffic from Grozny to central regions of the Russian Federation has significantly decreased. The socioeconomic activity of 3-4 western regions of the Chechen Republic and interregional relations with some republics of the North Caucasus (Ingushetia, North Ossetia, Kabardino-Balkaria) are limited..

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Keywords: Transit, Transcaucasian highway, Argun-Chir-Yurtovsky industrial hub.



1. Introduction

Restoration and development of the economy and social sphere of the Chechen Republic requires development of all modern types of transport. Railway transport which played a key role in the development of Grozny oil industry and in the Great Patriotic War is crucial for recovery and development of the economy and social sphere of the Chechen Republic in the post-crisis period.

The relevance of the article is due to a large volume of restoration work and active development of the Chechen Republic. Territorial changes in the economy and social area of the Chechen Republic are also of interest. A very important issue is logical inclusion of the transport system of the republic into inter-regional and global communications.

Transport and communication problems, including rail issues, generate interest among Russian researchers. Methodological aspects of formation of traditional modes of transport were described by S.A. Kovalev, Yu.G. Saushkina (Kovalev, 2003; Saushkin, 2001). G. A. Golts, B.S. Khorev (Golts, 1981) dealt with optimization of transport systems. Contingency of the territorial economic organization and railway networks in various conditions were described in a number of publications (Alekseycheva, 2016; Gulak, 2017). The road infrastructure of the all-season resort of the republic is also described.

2. Problem Statement

Due to relatively high rates of socio-economic construction, all types of communication in the region are of particular relevance, including one of the key ones - railway transport. The task is to establish transport security for restoration of the economic development in the Chechen Republic and priority ways of further development.

3. Research Questions

The research deals with the railway network, cargo-passenger transportation in the Chechen Republic.

4. Purpose of the Study

The article aims to establish railway network development dynamics caused by economic activities in the Chechen Republic, relationship of these processes with transformation of the territorial economic organization.

5. Research Methods

Statistical, historical, geographical, and logical methods were used for the research purpose.

6. Findings

The railway network of the Chechen Republic has not experienced any significant changes: the operational length decreased from 306 km to 304 km. The transport and geographical role of the republic has significantly changed. It lost its role as a transportation node. The role of Gudermes as a logistics hub and a wholesale center has increased (Ustaev, 2013; Ustaev, 2017).

6.1. Formation of the railway network. Retrospective development

The railway transport of the republic began to develop in 1893, when the interregional highway Rostov-on-Don-Beslan-Grozny was included into the regular transport communication system of Russia. In 1896, the railway was extended to Port-Petrovsk (now Makhachkala) and Balajars in Azerbaijan, and in 1900 - to Baku. Regular high-speed, all-weather transportation of petroleum products to many Russian regions has become a powerful incentive for extraction and refining of oil in Grozny.

In 1916, the second railway branch (Terskaya branch) from Prokhladnaya to Gudermes and the railway from Chervlennaya-Uzlovaya Kizlyar – were built. During the Great Patriotic War, the road was built to Astrakhan with an access to the Volga region, Kazakhstan and Siberia. This highway played a huge role in the defense of the Caucasus and in the defeat of fascist German forces aiming to seize oil reserves of Grozny and Baku.

The construction of the railway to Astrakhan provided the shortest way out of Eastern Ciscaucasia and Transcaucasia to the regions of the lower and middle Volga region, the Urals and Siberia making it possible to reduce cargo mileage from Grozny to Chelyabinsk by almost 800 km, and significantly unload the main North Caucasian highway Rostov-Grozny-Baku (Khorev, 1981). The operational length of railways in the Chechen Republic in the post-crisis period remained the same (306-304 km).

During the military-political crisis of the end of the 20th century, the transportation and geographical position of the Chechen Republic changed significantly - a bypass branch was built through Kizlyar. Through Kizlyar, bypassing Grozny, trains ply from Moscow to Makhachkala, from Kharkov to Baku, from Moscow to Baku, etc.

A significant disadvantage of the transport system is a lack of highways in the meridional direction which would provide direct cargot traffic from Eastern Ciscaucasia to the north and south. Cargo flows going to the north and northeast are directed in a circular way through Rostov and Tikhoretskaya which extends the distance by hundreds of kilometers (Martynov, 2012). Revitalization of the economy of the Chechen Republic and densely populated North Caucasus will contribute to construction of a high-speed railroad *Krasnodar-Grozny* which is planned as a part of the megaproject “Spatial Development of the Russian Federation”.

6.2. Restoration during the post-crisis period

In the post-crisis period, the railway network was being restored and constructed. Station buildings (in Grozny, Ishcherskaya, Dzhalka, Argun, Alpatovo, Naurskaya, Terek, Chervlenaya, Chervlenaya - Uzlovaya, Gudermes, Khankala) - points of loading and unloading operations, arrival of external and internal tourists to the republic – were repaired. It is planned to construct a modern station in Grozny. A new station is being built in Gudermes. The following railway lines pass through the Chechen Republic: *Rostov-on-Don - Mineralnye Vody - Grozny - Makhachkala - Baku; Mozdok - Chervlennaya - Nodal - Grozny; Chervlennaya - Uzlovaya - Kizlyar - Astrakhan; Grozny - Gudermes - Khasavyurt - Makhachkala - Baku*. Transportation volume depends on the level of economic activity in the republic. For example, since 2005, cargo transportation by ferry decreased to 0.4 million tons in 2016 (5.5 times).

Passengers transportation by ferry decreased from 382 thousand people in 2011 to 111 thousand in 2015 (5, p. 107). It might be due to completed recovery of economic and social sectors of the republic.

6.3. Innovation and transformation

It is advisable to continue development of the road network in the mountain regions of the republic taking into account prospects for their economic development: construction of the Argun hydroelectric power station cascade, urbanization, creation of the Caucasus National Park, formation of a large national sanatorium-resort and tourist zone (Kezenoy-Am, Veduchi, Lake Galanchozh), construction of All-Russian children's recreation and rehabilitation centers in Avtury, Serzhen- Yurt, Benoi of Shali district, Shalazhi.

Active development of internal tourism in Russia and the North Caucasus requires interconnected, coordinated development of tourism in the regions of the Pre-Caucasus region (Gladyshev, 1987). Travel companies are interested in development of interregional routes and cooperation of the tourist business of all regions of the North Caucasus. Favorable geographical, nodal position of the Chechen Republic (Gudermes, Chervlyonnaya-Uzlovaya) and convenient logistics allow tourist to visit most of the subjects of the North-Caucasian Federal District in a short time. Up to 40 percent of tourists visiting Chechnya come here for short, one-day study tours from the All-Russian recreational region - Caucasian Mineral Waters and neighboring republics (Ustayev, 2017). Comfortable, reliable and affordable transport services for tourists arriving from Kavminvod is a very promising development direction as far as about one million tourists come to that All-Russian recreational area every year. The interest in the Chechen Republic is steadily increasing.

It is planned to provide transportation services to Chinese tourists in the North Caucasus section of the Silk Road. Inclusion of republican road, railway and air transportation systems into the all-Caucasian system can significantly increase their profitability. The quality and comfort of transport services provided to foreign tourists will increase if there are modern transport corridors, road signs and restaurant and café menus in national and foreign languages. Since the end of 2016, mobile application and plastic “traveler cards” have been used in the Russian Federation. All Russian citizens under 30 years can receive them for free. These cards will contribute to growing tourist flows, allow discounts on accommodation, transport and entertainment. In this regard, restoration operations on the the North Caucasian Railway lag “Grozny - Beslan – Cool” in the western direction from Grozny are relevant. At present, trains from Grozny to Gudermes and in the opposite direction use diesel locomotives. Meanwhile, accumulator trains can be used for both electrified and non-electrified railway sections (Morozova, 2017). They will not pollute the environment with soot, lead and sulfur emissions.

The line end formed in Grozny as a reminder of war destructions affects cargo and passenger transportation to a number of stations and territories west of Grozny located in three districts of the Chechen Republic. Through this traditional, most economical and convenient route Grozny was connected with neighboring Ingushetia, North Ossetia, Kabardino-Balkaria. This stirs discord into the transport and territorial system of the economy that has developed over the past decades and prevents from providing comfortable tourist services. The economic and social sectors of this railway section, the Chechen republic as a whole and neighboring republic bear significant losses.

There is another aspect of territorial transformation of the republic associatd with the loss of railway communication with Grozny. Gudermes has acquired an additional incentive to accelerate development. It has become a transport and logistics center. In particular, in 2013, the average per capita commodity turnover in Gudermes significantly exceeded the same indicator in Grozny (286.8 and 196.7, respectively).

It is very important for development of the Argun - Chir-Yurt industrial hub and restoration of the railway line between these industrially promising settlements. Restoration of the Grozny - Beslan section will significantly improve the availability of Sernovodsk-Kavadsy resort and restore passenger transportation through the republic, including tourist flows from the Caucasus to Kislovodsk, Simferopol, Kiev, Moscow, St. Petersburg, Astrakhan and along the Volga river to the north and east. The configuration of the railway network was formed due to the need for oil and production and refining products transportation, including during the Great Patriotic War (Zoyev, 1984). Therefore, the railway network has a latitudinal direction and lacks railway communication in the north - in the Priterek-lowland and mountainous natural-economic zones, i.e. in most parts of the republic (North Caucasus Resort, 2018).



Figure 01. Alpine lake Kezenoy-Am (1869 m above the sea level)

Comprehensive exploration of minerals, especially mining ores, in these zones will contribute to their development and require transportation support. The construction of hydroelectric power stations on the Argun River will facilitate this process. This should be followed by industrial development of the mountain zone, pioneering railway construction, development of industrial enterprises and hubs, a network of urban-type settlements and cities. Industrial development and urbanization are important for tourist industry development in the Chechen Republic. The Transcaucasian railway through the Assinsky gorge and the Targim basin, the Roki pass to Georgia would contribute to the republican economy, expansion of its cultural relations with Transcaucasian and Middle Eastern countries, tourism development (Alekseycheva, 2016).

In 1913-1914, they developed a project of the Transcaucasian railway through the Greater Caucasus Mountains to create a second exit from the Caucasus to the north back. The project has not been implemented. They started to construct the railway in the 1980s but stopped construction due to environmental considerations. However, the problem is still relevant. Construction of the environmentally-friendly Transcaucasian railway would reduce the mileage for the entire South of Russia in comparison with the existing highways along the Caspian and Black Seas by 750 kilometers, reduce transportation cost which is a significant component of the passenger, tourist, cargo transportation price (about 25%). A new railway which can be duplicated by the motorway can be connected with the existing railway in Sernovodsk

where there is one of the most national attractive resorts. It is obvious that such an infrastructural decision could be a serious incentive for social economic development of the Chechen Republic and the South of Russia, and their tourism industry.

The Russian railways company is planning to create passenger-class seats in reserved cars which will allow passengers to have personal space. Trains will also be equipped with Wi-Fi.

In the coming decades, passenger and cargo drones will appear in Russia. Experts in digital anomalies will predict and calculate failures of artificial intelligence in vehicles, including unmanned ones.

In general, population density and economic development of mountainous and foothill-plain zones of the Chechen Republic determined increasing transport permeability in the latitudinal direction (Idigova, 2016). At the same time, transport permeability of the territory in the south-northern direction is lower due to the factors mentioned. They require identification and development of resources (including tourist and recreational ones) of the lowland-lowland zone of the republic, an increase in population density which would be sufficient for optimal economic development of the transport system. The main trends in the sectoral development of the Chechen Republic are concentration of investment capital required for developing the infrastructure, labor resources in regions and regional cities which are poles of social and economic development (Idigova, 2016).

7. Conclusion

Due to the changes in the transport-geographical position of the Chechen Republic, the territorial organization of its economy has changed significantly. Social and economic development of Grozny and western parts of the republic is limited due to poor development of the transportation system. Two junction railway stations - Gudermes and Chervlennaya Uzlovaya – are of crucial significance.

The need for development of the project of the Transcaucasian railway in the Assinovsky gorge with regard to environmental requirements has been identified. The relevance of accelerated recovery of two railway sections within the Chechen Republic has been justified.

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