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PROBLEMS OF DEVELOPMENT OF TRANSPORT INFRASTRUCTURE OF UKRAINE

Summary. *The article is devoted to analysis of the current state of transport infrastructure in Ukraine. Drawing from the results of this analysis, the author performs assessment of the prospects for development of the national transport infrastructure. The comprehensive analysis of problems and develop the transport sector of Ukraine in the light of threats and risks including the crisis processes. Special attention is paid to achieve stabilization and optimization of functioning transport sector due to competitive advantages and potential opportunities. The author elaborates a set of strategic directions for the development of transport infrastructure, as well as road, railway, air and waterborne transport, and reveals the problems that impede effective development of transport industry in Ukraine. The problem of lowly quality in transport sphere in Ukraine has put its mark on all elements of infrastructure. The situation gets further complicated by insufficient interaction between different industries within the transportation sector, scant investment inflows, outdated system of regulations, and rapid physical deterioration. Transport, as an infrastructure branch, should provide timely and efficient cargo and passenger transportation and promote the integration of the Ukrainian economy into the European and world economic system. This justifies the urgent need to search for way that would help to improve the transport infrastructure. Infrastructure transformation must be based on a systematic approach, which will include the justification of the strategy for its*

development and detailing in perspective and current plans at the macro and micro levels. The main result of the work of the logistics infrastructure should be minimizing the cost of service of material flows and their environmental safety.

Key words: *air transport, railway transport, road transport, transportation industry, transport infrastructure, waterborne transport.*

Statement of the problem. Exports of transport services from France, Germany and Great Britain, the European countries that can match Ukraine in territory and population, range between USD 20 to 30 million per year. It could be possible for Ukraine to achieve similar export performance as well, primarily thanks to high rates of tourism development inside the country. The problem of lowly quality in transport sphere in Ukraine has put its mark on all elements of infrastructure. The situation gets further complicated by insufficient interaction between different industries within the transportation sector, scant investment inflows, outdated system of regulations, and rapid physical deterioration. Infrastructure is one of the main competitive advantages of Ukrainian regions. Certainly, Ukraine can and must generate high incomes from transportation services. This is preconditioned by its advantageous geopolitical location. A significant share of transportation capacity is used to provide transit services, which develop thanks to favorable geographical location and availability of international transport corridors. Taking into account the fact that international transport corridors can produce a positive impact on the surrounding territories within the 200 km bound, it would be feasible to create new high-quality logistics centers in areas adjacent to major railway and road gateways into Ukraine. Besides, global tendencies must also be taken into account.

In this regard, it is worth mentioning that transport industry generates nearly 10% of GDP, transportation services account for 20% of all private investments, and approximately 5% of the world's territory is occupied by transport infrastructure facilities [1].

Analysis of recent researches and publications. The problems of transport sector location and development in Ukraine were studied by Pashchenko [2]. Tsvyetova, Makarenko and Lashko [3]. and Eitutis [4] concentrated their attention on questions of railway transport development. Novikova, Myronenko and others [5] investigated the modern state, tendencies and development prospects of Ukraine's transport connections with other countries, whereas Fylypenko and Baryshnikova [6] made an inquiry into the problems of economic reforms in ports. Bludova [7] study the integration of national transport system into the European transport system and the development of transit potential of the country.

Formulation purposes of article (problem). The goal of this article is to consider the process of developing preconditions for socio-economic growth of the country, enhancing the competitiveness of national economy by way of improving the quality of transport services, developing transport infrastructure and satisfying social and commercial needs of the society.

The main material. Infrastructure development is high on the agenda today, especially in view of the challenges and unsettled issues faced by this sector. The analysis of Ukraine's competitiveness shows that transport infrastructure is the most dysfunctional component of the country's overall infrastructure.

Transport industry in Ukraine is facing five key problems: limited traffic capacity, transport fragmentation, lack of financing for support and development of transport infrastructure, lack of engineering and construction technologies and competences, and insufficient conditions for participation of private sector in infrastructure development.

The exploitation of geo-economic advantages is negated by the insufficient use of transit potential stemming from the deficient network of international transport gateways and their current congestion levels. Implementation and management of transport corridors should contribute to sustainable development

of the economy and tourism, expansion of tourist flows, and integration with the international transport system.

For Ukraine to resurge as a "sea power", it is necessary to upgrade and further develop the Danube steam navigation and its base port in Izmail. The port's capacity use reaches only 25%, mainly due to insufficient technical condition of ships, berths, lack of locally-produced modern passenger liners, underdeveloped infrastructure in port surroundings, low use of IT, and inadequate support from international organizations overseeing the International Transport Corridor No.7 (the Danube corridor). Because of the abovementioned reasons the advantages of the Danube steamship line are gradually deteriorating compared to Romanian and even Moldavian ports on the Danube river, which shows itself in the decreasing volumes of passenger traffic. At the same time, it is necessary to admit to the fact that enhancing the positions of Ukraine in the Danube region is a challenge not only for the transport industry – it takes on special political-economic significance in the light of the declared course for European integration [8]. Moreover, it is necessary to add that in order for Ukraine to regain its "sea power" status and implement its Sea doctrine, it is necessary, first, to prepare and enact a set of legislative acts regulating maritime activities, in particular the laws "On maritime policy" and "On sea ports", and second, to elaborate and approve a national (state) program for maritime transport development, as well as other industry-wide programs targeted at prospective development of infrastructure objects in the coastline area (by region), renovation and addition of new ships to the sea fleet, including locally-produced vessels, setting up an information and logistics centre at the Danube transportation junction. The construction of ships for the sea fleet of Ukraine would be facilitated by implementing public-private partnership schemes (The Law of Ukraine of July 1, 2010, no. 2404-VI) based on the new opportunities provided by the Tax Code of Ukraine [9].

The Conception of State Target Economic Program for Road Transport Development from 2018 until 2022 reveals that the state of the majority of motor

roads is unsatisfactory: 97% of all roads are highly deteriorated and require major or minor repair; 39% of all principal motorways do not satisfy strength requirements, while 51% of principal motorways do not satisfy flatness requirements [10].

The strategic goal for the development of road infrastructure should be to increase output of vehicles and passenger transportation facilities produced by national enterprises in compliance with international standards of environmental and energy efficiency. Ukraine has sufficient capacity to increase output at Kremenchuk (in cooperation with 'Renault' corporation) and Lviv auto plants, as well as to increase production of buses and motor-vehicles at Zaporizhzhia (in cooperation with well-known foreign companies) and other auto plants of the country. According to estimates, the country needs to repair 37.6 thousand kilometers of old roads and build 400 kilometers of new roads each year so that it could comply with modern standards [11].

Ukraine has a considerable potential to develop air transport and increase air traffic of passengers travelling by national and foreign air carriers. However, in order to use this potential, it is important to adjust local regulations to international standards, upgrade material and technical facilities, update airport infrastructure, and assure that national interests are protected in the process of Ukraine's air market liberalization.

Increasing the number of low-cost passenger flights should become a strategic benchmark for Ukraine. The development of low-cost airlines in Europe was so remarkable over the last five years that passenger traffic has been growing at an average annual rate of 46%, whereas airline companies have already entered more than 20 countries including Ukraine. Today, the world aviation market can boast more than 200 low-cost airline companies [12].

Air transport industry is facing significant challenges in providing the construction, renovation and modernization of airports. Moreover, it is necessary to support the dynamic development of internal and related infrastructure by

promoting lease and concession agreements. Finally, it is particularly important to create a solid foundation for information technology development that would enable the creation of a single ICT system for the transport sector that could further be integrated into the global information network.

The elaboration of strategies for the development of international transport services should be based on the complexity principle. This means that the transport system should be represented by all kinds of transport that are equally developing wherever possible. Along with transportation services, it is important to develop national innovation-intensive and technology-intensive production of transport vehicles. This approach to development of the transport market can only be realized by boosting modern and convenient networks of motorways and railways, sea ports and airports, along with increasing the share of transport vehicles owned by national companies. This requires that the state policy be implemented for renovation of the transportation fleet, services and objects of transport infrastructure inside the country.

It is strategically important for the transport system of Ukraine to achieve world standards in technical parameters and quality of services rendered. All efforts and resources should be directed towards most efficient applications of technological developments in the sphere of transportation. Directions for implementation of technological developments should be selected based on a competitive selection procedure, and only the most efficient projects should be implemented. For this purpose, it is necessary to create a mechanism of coordinating the economic interests of investors, developers, producers, and consumers of the new transport technology. Industries that supply technology for the transportation sector should receive government support.

Thanks to renovation of the vehicle fleet, modernization of infrastructure and application of advanced technologies, the technological level of all modes of transport will increase. This concerns the renovation of the rolling stock, motorway vehicles and equipment, navigation systems including equipment for

the integrated air traffic control system mostly under the auspices of national target programs for industry development. Technological upgrading of transport requires that a special fund be created to finance urgent scientific research and development projects and that government support be provided in order to preserve scientific potential and to carry out fundamental research.

In the sphere of innovations, efforts and resources should be concentrated in those directions of fundamental scientific research that allow to generate the most substantial practical results. However, a more urgent problem for existing companies is to assess the efficiency of investing into reconstruction and technological renovation of enterprises, and their funding.

Insights from this study and perspectives for further research in this direction. The abovementioned problems halt the development of transport infrastructure, which in turn slows down economic growth in the entire country. That is why infrastructure development remains high on the agenda of national economic reforms. After all, it is the transport infrastructure that connects all the regions, enterprises and citizens of Ukraine into a single state and integrates the Ukrainian economy into the world economy. Successful transformation of the transport industry can only be achieved by updating and adjusting the respective legislative base.

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