Analysis of the Ukrainian transport system economic development
(regional perspective)

In this paper presents the results of the econometric analysis and define the prerequisites and particularities of some economic aspects of Ukrainian transport system development.

The transport industry and the economy of the country and its regions are under the constant mutual influence. From one side socio-economic development generates demand for transport product. From the other side, the well-developed transport system contributes to the employment, people income, and generates an increase in GDP. It is important also to remember the huge amount of misallocated investments which had been done [11].

For each country, region and even the project, there is a large number of features of the functioning and development of the transport system. Achieving maximum effectiveness of its development is possible only if all components are balanced. Weighed and competent investment decisions can serve as a positive push for the development not only of the transport industry but also for the economy as a whole. Nowadays the question of investment in transport can be considered in several dimensions: 1) priorities among sectors of the economy which require investment (e.g. the choice between transport system development, welfare, defense, and social security); 2) from the point of view of choosing the location and scale of the transport project.

Analysis of the previous experience of investment in the transport sector and the changes they have caused should be the basis for further decisions for both policymakers and commercial investors.

In the case of Ukraine the transport sector has several particularities which are to be taken into account for performing a comprehensive analysis of the transport sector:

- the country's economy has been affected by the grave political crisis [2,7], the loss of control over parts of the territories and military operation in the east of the country [4];
- the distribution of productive forces, population density and other socio-economic factors are not balanced distribution throughout the territory [3, 8].

Development of the Ukrainian transport system is an integral part of the Association Agreement with the European Union [1] and it has a significant impact on the state strategy for the transport industry development and support for certain investment projects [6]. Population density and level of economic development are not evenly distributed through the territory of Ukraine the country.

The transport system of Ukraine includes road, rail, aviation, sea, river and pipeline transport. The basic structure of the transport system was formed during the
Soviet Union, and its main mission was to meet the needs of the USSR, and not Ukraine as a sovereign state.

After gaining independence, a number of projects aimed at modernizing and improving the efficiency of transport infrastructure (airports modernization, road reconstruction, «inter-city» railway connection, etc.) were implemented. At the same time, some projects were not completed or they did not reach their goal (e.g. Project of the organization of railway passenger service Kyiv - Boryspil International Airport). The system of factors which are usually influencing this type of projects is complex and has various layers (Fig.1).

Thus, as of 2017, a significant number of objects of transport infrastructure (length of highways, railways, the number of airports, ports, length of the gas pipeline) are located in Ukraine. But according to international experts, "Transport capacity is underutilized, the available infrastructure and services are substandard, and end users face high logistics costs" [12]. The Ministry of Infrastructure of Ukraine, together with the World Bank Group, developed the "Strategy for
Sustainable Logistics and the Action Plan for Ukraine", according to which, by 2030, it is planned to attract investments of about 1,400 million euros for the development of the transport system countries [5]. Much of the planned investment will be directed to the development of freight multimodal terminals.

Along with the tactical and operational aspects of international logistics networks, its strategic level has high influence on its performance [9]. Design of the logistics network includes prescribing facility locations, production technologies and plant capacities. Logistic strategy should be considered as a system which composes not only different layers but also modal split.

Basing on the data provided by State Statistics Committee of Ukraine [10] analysis of some indicators of the transport industry development was conducted. As a result, it was estimated that cargo transportation turnover of Ukrainian companies influence of different socio-economic parameters is not the same for all the stakeholders of the transport system.

From another side, the analysis of the financial results of transport enterprises shows that amount of profitable enterprises is permanently increasing since 2010, but at the net profit of this type of enterprises has a different trend (Figure 3). It can be explained by the fact that there is not uniform percentage of profitable enterprises among small and large businesses.
From the geographical point of view it is important to pay attention to the fact that distribution of the number of profitable transport companies in the regions of Ukraine is much higher in the west of the country (Fig.4), although the magnitude of the profits received from enterprises located in the south and in the center is higher (Fig.5).

**Fig. 4.** Distribution of the number of profitable transport enterprises by regions of Ukraine, % of the total

**Fig. 5.** Distribution of profits of transport enterprises by regions of Ukraine (million UAH)

**Conclusions**

As a result of the conducted analysis of Ukrainian transport enterprises profitability, were defined important prerequisites and specificities. The unequal distribution of the efficiency of the transport companies (not only from the location but also from the size of the business) has to be taken into account while taking decisions about investing in the sector and transport system development not only on the national level, but also on the regional level.
References


