THE MULTIPLIER EFFECT OF INVESTMENT AND INNOVATION SUPPORT FOR THE DEVELOPMENT OF TRANSPORT AND LOGISTICS SYSTEMS: FOREIGN EXPERIENCE AND PRACTICE FOR UKRAINE

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Abstract

The primary source of development of transport and logistics systems is an investment. In countries with developed economies, investment in the development of transport and logistics systems is one of the most effective tools for influencing economic growth, leveling socio-economic disparities in regional development, and stimulating business activity in priority areas. This research is devoted to theoretical and applied organizational bases to substantiate the use of foreign experience of the multiplier effect of investment development of transport and logistics systems and analysis of sound methodological approaches for Ukraine. The article tests the authors’ hypothesis about the adequacy of the proposed methodological approaches, which provide for the definition of the multiplier and accelerator of investment in the development of the transport and logistics system.

To analyze the impact of investments on the economic development of Ukraine’s national and regional systems, the authors proposed the calculation of the coefficient of the investment multiplier (Keynes multiplier). Statistical data of the State Statistics Service of Ukraine are used as the basis of the measures. Furthermore, the authors adapted the appropriate calculation method to determine the multiplier of investments in developing regional transport and logistics systems. After all, in economic models, the multiplier is used to determine the amount of investment in year \(t\), which must be attracted to increase production (services) in period \(t+1\), which is \(k\) times less than the increase in this production.

The calculated indicators of the multiplier of investments in the transport and logistics system showed that in terms of regions, the highest multiplier effect of assets in the development of transportation, warehousing, and communications (more than twice) as of the end of 2020 is observed in Volyn, Zakarpattia, Lviv, Mykolaiv, Poltava, and Chernihiv regions. In 2020, the multiplier effect of more than five times the GRP increase in transport investment compared to 2016 was typical for some oblasts whose transport potential is used most intensively due to the geographical location of major transport routes and key transport hubs in the territory. In particular, these are Lviv (growth more than seven times), Chernihiv (6 times), Kyiv (almost five times), Mykolaiv (4 times), Poltava, and Odesa regions. In general, with various deviations in specific periods during 2016 - 2020, the multiplier effect of investing in the development of transport and logistics on GRP and the level of investment activity of economic entities was observed in all regions of Ukraine.
The results of the calculations allow us to assess the extent to which the marginal propensity to save limits the growth of the volume of logistics services. Accordingly, a change in the component of aggregate costs leads to an even more significant difference in the equilibrium volume of logistics services, which reproduces the multiplier effect. It was determined that achieving the effect of an accelerator and multiplier of investments in the transport and logistics sector requires a comprehensive analysis and rational planning of capital investments in the industry and their compliance with the needs and trends of the development of the regional, national and world economy. In this context, an urgent task at the level of territorial management systems is developing a strategy for the development of warehouse logistics as an integrative component of transport and logistics systems, taking into account the proposed methods of evaluating efficiency.

**Key words:** Foreign experience, Transport and logistics system, Methodological approaches, Multiplier effect, Accelerator, Multiplier, Investment support.