

**Anna B. Bardal** – Candidate of Economics, Associate Professor, Leading researcher, the Institute of Economic Researches, FEB RAS (153, Tikhookeanskaya Str., Khabarovsk, 680042, Russia). E-mail: Bardal@ecrin.ru

### **Needs of the regional socio-economic system in transport services**

*The subject of the article is the relationship between the parameters of the regional socio-economic system and the transport complex. Transport is a: 1) independent branch of the economy, 2) element of the regional infrastructure, providing conditions for functioning of the other branches of material production and the social sphere. The purpose of this article is to present methodological approaches to the study of needs of the regional socio-economic system in the transport services and to conduct experimental needs assessment on the example of the Khabarovsk territory. Methodology is presented as a set of sequential stages, including the analysis of features of the regional economy and transport, study of the relationship of their parameters. The structure of the economy and key indicators of the transport complex of the Khabarovsk territory are considered. Experimental assessment of the demand for freight transportation from the socio-economic system of the region using methods of econometric analysis was carried out. Models of simple linear regression vector and auto-regression vector are tested. The data on the volume of cargo transportation and cargo turnover for the period 1995–2019, as well as the index of industrial production and gross regional product were used. It is determined that linear regression does not allow obtaining meaningful and correct estimates. The vector auto-regression model shows a significant relationship between the indicators of the economy and the volume of rail transport, the general indicator of transportation, as well as cargo turnover by road (with a lag of one period), no significant connection with the road transport was found. The results obtained can become the basis for assessing the future needs for transport services, based on the future parameters of the economic development of the region. This will allow for timely and adequate development of transport infrastructure without turning it into a limitation of economic growth. In the future, it is necessary to detail the analysis by studying the relationship of need for transport services with the parameters of the functioning of individual sectors of the socio-economic system of the region.*

**Keywords:** regional economy, transport complex of the region, the Far-Eastern federal district, needs for transport services, demand for transportation.

#### **References:**

1. Vakhrameev I. I. Influence of transport infrastructure on the sectoral development of the region's economy *Vestnik Zabaykal'skogo gosudarstvennogo universiteta* [Bulletin of the Transbaikal State University], 2014, no. 8 (111), pp. 85–91. (In Russian).
2. Gritsko M. A. Human potential of the Far East: modern dynamics and growth restrictions *Vlast' i upravleniye na Vostoke Rossii* [Power and Administration in the East of Russia], 2014, no. 3 (68), pp. 47–52. (In Russian).
3. Galaburda V. G., Persianov V. A., Timoshin A. A. et al. Unified transport system. M.: Transport, 2001. (In Russian).
4. Krasnopol'skiy B. Kh. Influence of the main infrastructure on the efficiency of spatial and economic formations: approaches to assessment *Regionalistika* [Regionalistics], 2021, vol. 8, no. 3, pp. 56–71. DOI: 10.14530 / reg.2021.3.56 (In Russian).
5. Lapidus B. M. On the contribution of JSC "Russian Railways" to the formation of the country's GDP and the economic objectives of the company in conditions of tariff restrictions *Vestnik nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta* [Bulletin of the Research Institute of Railway Transport], 2014, no. 1, pp. 3–7. (In Russian).
6. Malov V. Yu., Kibalov E. B. Formation of a single transport space of Russia in the

context of economic development of its eastern regions *Region: ekonomika i sotsiologiya* [Region: economics and sociology], 2009, no. 2, pp. 183–191. (In Russian).

7. Macheret D. A., Ryshkov A. V., Beloglazov A. Yu. Macroeconomic assessment of the development of transport infrastructure *Vestnik nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta* [Bulletin of the Scientific Research Institute of Railway Transport], 2010, no. 5, pp. 3–10. (In Russian).

8. The volume of cargo transshipment in the seaports of Russia in 2019 *Morskiye porty* [Seaports], 2020, no. 2 (183), pp. 52–62. (In Russian).

9. Sevek V. K., Chuldum A. E. On the question of the concepts of “region” and “regional socio-economic system” *Regional'naya ekonomika: teoriya i praktika* [Regional economy: theory and practice], 2012, no. 26 (257), pp. 10–14. (In Russian).

10. Tarasova O. V. Foreign investments in the port infrastructure of the Russian Far East: national economic assessment *Intekspo GEO-Sibir'* [Intexpo GEO-Siberia], 2017, vol. 3, no. 1, pp. 143–147. (In Russian).

11. Tkachenko V. Ya. Problems of the formation of the backbone transport network in Siberia. Novosibirsk: Publishing house IEiOPP SB RAS, 1999. (In Russian).

12. Khachaturov T. S. Placement of transport in capitalist countries and the USSR. Moscow: State Socio-Economic Publishing House, 1939. (In Russian).

13. Shcherbanin Yu. A. Transport and economic growth: relationship and influence *Yevraziyskaya ekonomicheskaya integratsiya* [Eurasian economic integration], 2011, no. 3 (12), pp. 65–78. (In Russian).

14. Shcherbanin Yu. A., Ivin E. A., Kurbatsky A. N., Glazunova A. A. Econometric modeling and forecasting the demand for freight transportation in Russia in 1992–2015 *Nauchnyye trudy: Institut narodnokhozyaystvennogo prognozirovaniya RAN* [Scientific works: Institute for Economic Forecasting of the Russian Academy of Sciences], 2017, vol. 15, pp. 200–217. (In Russian).

15. Banister D., Berechman Y. The Economic Development Effects of Transport Investments. London: UCL Press, 2000.

16. Lakshmanan T. R. The broader economic consequences of transport infrastructure investments *Geografiya transporta* [Journal of Transport Geography], 2011, vol. 19, issue 1, pp. 1–12. DOI: 10.1016/j.jtrangeo.2010.01.001

17. Pereira R. M., Pereira A. M., Hausman W. J. Railroad investments and economic development in the antebellum United States *Zhurnal ekonomicheskogo razvitiya* [Journal of Economic Development], 2017, vol. 42, no. 3, pp. 1–16. DOI: 10.35866/caujed.2017.42.3.001

18. Summerhill W. R. Big social savings in a small laggard economy: railroad-led growth in Brazil *Zhurnal ekonomicheskoy istorii* [The Journal of Economic History], 2005, vol. 65, pp. 72–102. DOI: 10.1017/S0022050705050035

---

### Reference to the article

Bardal A. B. Needs of the regional socio-economic system in transport services // Power and Administration in the East of Russia. 2021. No. 3 (96). Pp. 60–69. DOI 10.22394/1818-4049-2021-96-3-60-69

---