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- [11] Irtysheva, I., Nosar, A., Boiko, Y., Stehnei, M., Kramarenko, I., Zavorodnij, K. (2023). The multiplier effect of investment and innovation support for the development of transport and logistics systems: foreign experience and practice for Ukraine. *Journal of Hygienic Engineering and Design*, 41, pp.211-219
- [12] Umar, Zaghum, Bossman, Ahmed, Choi, Sun-Yong, Vinh Vo, Xuan (2022). Are short stocks susceptible to geopolitical shocks? Time-Frequency evidence from the Russian-Ukrainian conflict. *Finance Research Letters*, <https://doi.org/10.1016/j.frl.2022.103388>.
- [13] Christopher J. Neely (2022). Financial Market Reactions to the Russian Invasion of Ukraine. *Federal Reserve Bank of St. Louis Review*, Fourth Quarter 2022, vol.104(4), pp. 266-96. <https://doi.org/10.20955/r.104.266-96>
- [14] Kramarenko, I., Stehnei, M., Boiko, Y., Nadtochii, I., Pavlenko, O., Vladislav, R., Hryshyna, N., Sirenko, I., Ishchenko, O., Tubaltseva, N. (2022). Socio-economic development in conditions of digital transformations: regional features, strategic analysis, and prospects. *7th International Conference on Mathematics and Computers in Sciences and Industry (MCSI 2022)*, pp.175-182, <https://doi.org/10.1109/MCSI55933.2022.00035>.

### **Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)**

-Halyna Mykhalchynets, Nataliia Mykhalchynets carried out the simulation and the optimization, formal analysis .

-Inna Irtysheva, Marianna Stehnei, Iryna Kramarenko, Viktor Neimet was responsible for the Statistics, conceptualization.

-Oleksandra Liashenko has organized writing - original draft.

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The authors have no conflicts of interest to declare.

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