As a result of the fractal analysis, it was established that the constituent indicators of the intellectual potential of the Khmelnytsky region are anti-persistent, and therefore it is advisable to use the method of moving average and exponential smoothing for their forecasting.

According to the selected model of exponential smoothing (2), the forecast value of the indicator x_1 of the coverage of children in preschool education institutions (percentage to the number of children of the appropriate age) for 2023 will be 69.1% compared to 2022, in which this indicator was 68%, so the situation is insignificant will improve indicator x_2 (number of graduate students, people) will decrease from 568 people in 2022 to 512 people in 2023. Indicator x_3 (number of students in general secondary education institutions - total, thousand people) will decrease from 140.3 thousand people in 2022 to 140.0 thousand people in 2023. Indicator x_4 (number of teachers in general secondary education institutions, thousand people) will increase slightly from 15.6 thousand people in 2022 to 15.7 thousand people in 2023. Indicator x_5 (number of students, students in professional (vocational and technical) education institutions at the end of the year, thousands of people) will remain the same in 2023 as in 2022 at the level of 9.5 thousand people. Indicator x_6 (the number of employees involved in scientific research and development - total, people) will increase from 233 people in 2020 to 266 people in 2021. The x_8 indicator (the number of introduced new technological processes, units) in 2020 will remain at the level of 2019 - 7 units.

It has been established that the forecast values demonstrate an insufficient level of development of innovative processes at industrial enterprises of Ukraine and the Khmelnytskyi region and a high probability of maintaining similar trends in the future, which will lead to a deterioration of the economic situation both in the region and in the country as a whole. It is possible to come to a conclusion regarding the disappointing trend of the constituent indicators of the intellectual potential of the Khmelnytskyi region, which requires appropriate decisive actions on the part of the authorities in order to activate and grow the educational, scientific and innovative potential, which will lead to the improvement of the indicator of the intellectual potential of the region and its positive impact on the indicators of economic efficiency.

Time to invest in human resources will reveal new priorities for the region. Any development requires investments - intellectual investments justify themselves with the quality of life and longevity of dividends in the form of inexhaustible qualities of intellectual potential.

The obtained research results can be used for: forecasting and improving indicators of the intellectual potential of the region. The models built in the work can be adapted to the operating conditions of any region.

REFERENCES

[1] Y.F. Dai, P.Y. Chu, S.T. Lu, W.T. Chen, and Y.C. Tien, "Evaluation of Regional Innovation Capability: an Empirical Study on Major Metropolitan Areas in Taiwan," Technological and Economic Development of Economy, vol. 28(5), pp. 313-1349, 2022.

[2] K. Boiarynova, O. Popelo, S. Tulchynska, S. Gritsenko, and I. Prikhno, "Conceptual Foundations of Evaluation and Forecasting of Innovative Development of Regions," Periodica Polytechnica Social and Management Sciences, vol. 30(2), pp. 167-174, 2022.

[3] O. Popelo, S. Tulchynska, N. Lagodiienko, M.A. Radin, and A. Moskalenko, "Methodical Approach to Forecasting the Intensification of Innovative Development of Regions Using the Mathcad Program International Journal of Circuits," Systems and Signal Processing, vol. 15, pp. 1591-1601, 2021.

[4] P. Hajek, R. Henriques, M. Castelli, and L. Vanneschi, "Forecasting Performance of Regional Innovation Systems using Semantic-based Genetic Programming with Local Search Optimizer," Computers & Operations Research, vol. 106, pp. 179-190, 2019.

[5] V. Shcherbak and P. Puzyrova, "The Forecasting the Level of Development of Innovative Potential of Textile Enterprises," Management, vol. 2 (32), pp. 65-83, 2020.

[6] P. Zakharchenko, Y. Glazova, S. Zhvanenko, S. Kucher, and V. Mukhin, "Models for forecasting innovative development of the economy of resort-recreational sphere," CEUR Workshop Proceedings, vol. 2927, 2021.

[7] I. Chaikovska, "Evaluation of enterprise knowledge management system," Actual problems of the economy, vol. 10 (172), pp. 221-229, 2015.

[8] L. Lisovska, O. Mrykhina, A. Terebukh, and N. Kozmuk, "Modeling of financial results of subjects of the innovation process in the region", Financial and credit activity: problems of theory and practice, vol. 3(44), pp. 122-131, 2022.

[9] H.E. Hurst, "The Long-Term Storage Capacity of Reservoirs," Transactions of the American Society of Civil Engineers, vol. 116, pp. 770-799, 1951.

[10] H.E. Hurst, "Methods of using long-term storage in reservoirs," Proceedings of the Institution of Civil Engineers, p. 1, pp. 519-577, 1955.