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ESTIMATION OF THE EFFICIENCY OF THE USE OF INNOVATION POTENCIAL OF UKRAINE USING MIDDLE-DIMENSIONAL METHOD

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Abstract. Estimation of the efficiency of the use of national innovation potential of Ukraine in 2014-2018 has been conducted. Middle-dimensional method has been used and allowed the author to establish that among nine countries aiming to join to the EU and NATO Alliance Ukraine is the leader in terms of national innovation potential. At the same time problem of the efficiency of the use of national innovation potential of Ukraine remains difficult and unsolved. It acts in low market value of national intellectual assets and explains insufficient state support of industries with high added value. Taking it into account, it is proposed the following statements: increase in state expenditure on newest information technologies, providing of favorable institutional conditions to run knowledge-intensive businesses, improving of organizational and economic mechanism for the protection of intellectual property rights.

Keywords: innovation potential, educational potential, scientific potential, information potential, human potential, national innovation system, middle-dimensional method, European integration, the European Union (EU), Euro-Atlantic cooperation, North Atlantic Alliance (NATO alliance).

Estimation of the efficiency of the use of national innovation potential of Ukraine in 2014-2018 has been conducted by three stages.

At the first stage the list of partial indexes that characterize the components of national innovation potential (index of expenditure on education, index of providing of education by teachers, index of R&D expenditure, index of publication activity, index of quoted of scientific articles, index of the use of mobile communications, index of internet users, index of expenditure on information and communication technologies, index of skilled labor force, index of expected term of education) has been formed and after that they have been divided into two groups: stimulants and non stimulants.

At the second stage of the research needed statistics has been collected. The research covered nine countries aiming to join to the EU and NASA (Albania, Bosnia and Herzegovina, Georgia, Macedonia, Moldova, Serbia, Turkey, Ukraine, Montenegro), and, for that reason, are in the conditions of difficult structural and market transformations now. Summarized coefficients for each component of national innovation potential as well as the integral coefficient of it have been calculated. It has been established that

among nine countries Ukraine is the leader in terms of national innovation potential, and, therefore, it has the greatest potential to join to the EU's integrated economic system and attract global investment resources. At the same time problem of the efficiency of the use of national innovation potential of Ukraine remains difficult and unsolved. It acts in low market value of national intellectual assets and explains insufficient state support of industries with high added value, underdeveloped partnership between public private sectors, controversial lack of proper institutional conditions for organizing and conducting knowledgeintensive businesses, imperfect legal regulations in the field of protection of intellectual property rights as well as low level of remuneration of scientists and researchers.

Taking into account obtained results, at the third stage of the study it have been recommended the following. Firstly, it is important to change the priorities in the distribution of budget expenditure towards the financing of new, more advanced technologies. Secondly, it is necessary to provide more favorable institutional conditions to run knowledgeintensive business in Ukraine. In particular, there is a need to provide tax preferences for Ukrainian innovation entrepreneurs or even exempt them from paying taxes and fees for a period from 1 to 3 years. On the other hand, it is essential to simply an access to financial resources for Ukrainian innovators. Finally, the organizational and economic mechanism for the protection of intellectual property rights must be improved. It is proposed to take into account the successful European experience in organizing in the universities and scientific institutions the departments of technology transfers, coworkings, offices of commercialization of scientific development that allow European scientists and researchers to obtain objective data about level of the profitability of their projects, patenting procedures and licensing.

References

1. Androshuk, H. O., Davymuka, S. A., Fedulova, L. I. (2015). Natsionalni innovatsiini systemy: evoliutsiia, determinanty rezultatyvnosti. Kyiv: Parlamentske vydavnytstvo [in Ukrainian].

2. Huseinova, A., Shukurova, A., Huseinly, A. A. (2017). Osnovi i analiz innovatsionnoho potentsiala. Nauka, tekhnologii, innovatsii, is. 2 [in Ukrainian].

3. Zhylinska, O. (2017). Ukraina 2030: Doktryna zbalansovanoho rozvytku. Lviv: Kalvariia [in Ukrainian].

4. Liashenko, V. I., Vyshnevskyi, O. S. (2018). Tsyfrova modernizatsiia ekonomiky Ukrainy yak mozhlyvist proryvnoho rozvytku. Kyiv. Retrieved from: http://iep.com.ua/7/Lyashenko_Vishnevsky_2018.pdf [in Ukrainian] 5. Pyrozhkov, S. I., Maiboroda, O. M., Shaihorodskyi, Yu. Zh. (2016). Tsyvilizatsiinyi vybir Ukrainy: paradyhma osmyslennia i stratehiia dii: natsionalna dopovid. Kyiv: NAN Ukrainy [in Ukrainian].

6. Pysarenko, T. V., Kvasha, T. K. (2018). Stan innovatsiinoi diialnosti ta diialnosti u sferi transferu tekhnolohii v Ukraini u 2017 rotsi: analitychna dovidka. K.: UkrINTEI [in Ukrainian].

7. Sidenko, S. (2018). Pereformatuvannia yevropeiskoi intehratsii: mozhlyvosti i ryzyky dlia asotsiatsii Ukraina – EU. K.: Zapovit [in Ukrainian].

8. Sirenko, K. (2018). Yevrointehratsiina polityka Ukrainy: pozytyvni ta nehatyvni aspekty. Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu. Seriia: Mizhnarodni ekonomichni vidnosyny ta svitove hospodarstvo, vol. 22, 65-68 [in Ukrainian].

9. Ustinova, K. A., Hubanova, E. S., Leonidova, H. V. (2015). Chelovecheskii kapital v ynnovatsyonnoi ekonomyke. Vologda: Instytut sotsyalno-ekonomycheskogo razvytyia terrytoryi RAN [in Ukrainian].

10. Shvab, K. (2016). Chetvertaia promishlennaia revoliutsyia. M.: Eksmo [in Russian].

11. Bozkurt, B. (2018). Investigating Turkey's national innovation and learning system. Oxford Review of Economic Policy, is. 41(2).

12. Edler, J. & Fagerberg, J. (2017). Innovation policy: what, why, and how. Oxford Review of Economic Policy, vol. 33, is. 1, 2-23.

13. Fagerberg, J. Innovation policy: Rationales, lessons and challenges (2017). Journal of Economic Surveys, vol. 31, is. 2, 497-512.

14. Kuzkin, Y., Cherkashyna, T., Nebaba, N., Kuchmacz, B. (2019). Economic growth of the country and national intellectual capital (evidence from the post-socialist countries of the central and eastern Europe). Problems and Perspectives in Management, vol. 17, is. 1, 348-359.

15. Mazzucato, M., Penna, C. R. (2015). Mission-oriented finance for innovation: New ideas for investment-led growth. London: Rowman & Littlefield.

16. Schot, J., Edward, W. (2017). Three frames for innovation policy: R&D, systems of innovation and transformative change [Working paper]. London: University of Sussex.

17. Vasylchenko, M., Khrystenko, O. National innovation system development: Evidence from the countries of the Central and Eastern Europe region. Retrieved from: http://dx.doi.org/10.30525/978-9934-571-28-2_6

18. Weber, K. M., Truffer B. (2017). Moving innovation systems research to the next level: Towards an integrative agenda. Oxford Review of Economic Policy, is. 33(1), 101-121.

19. Official site of World Intellectual Property Organization. Retrieved from: www.globalinnovationindex.org.

20. Official site of State Statistics Committee of Ukraine. Retrieved from: www.ukrstat.gov.ua.

21. Official site of United Nations Organization. Retrieved from: www.un.org.