

Alla Potapova, Taras Pohrebskyi, Gennadii Golub, Valentyna Golub,
Yaroslava Sosnytska

Lesya Ukrainka Volyn National University, The Department of Economic and Social Geography, Potapova str. 9,
43021 Lutsk, Ukraine; e-mail: potapova.alla@vnu.edu.ua; pogrebskyi.taras@vnu.edu.ua;
golub.gennadiy@vnu.edu.ua; golub.valentina@vnu.edu.ua; Sosnytska.Yaroslava@vnu.edu.ua

Economic potential of Volyn Region

Potapowa A., Pogrebskij T., Golub G., Golub W., Sosnicka J. **Potencjał ekonomiczny obwodu wołyńskiego.** Omówiono metodologiczne podstawy badań czynników kształtowania, wykorzystania i reprodukcji potencjału ekonomicznego obwodu i jego elementów w celu opracowania metodyki i przeprowadzenia analizy odnośnie do określenia możliwości wzrostu efektywności jego wykorzystania. Przeanalizowano główne składniki potencjału ekonomicznego obwodu wołyńskiego.

Потапова А., Погребский Т., Голуб Г., Голуб В., Сосницка Я. **Экономический потенциал Волинской области.** Рассмотрены методологические основы исследования факторов формирования, использования и воспроизводства экономического потенциала региона и его составляющих с целью разработки методики и проведения анализа по выявлению резервов повышения эффективности его использования. Проведен анализ основных составляющих экономического потенциала Волинской области.

Потапова А., Погребський Т., Голуб Г., Голуб В., Сосницька Я. **Економічний потенціал Волинської області.** Розглянуто методологічні засади дослідження чинників формування, використання та відтворення економічного потенціалу регіону та його складових з метою розробки методики та проведення аналізу по виявленню резервів підвищення ефективності його використання. Проведено аналіз основних складових економічного потенціалу Волинської області.

Key words: economic potential, productive potential, labour potential, financial potential, investment and innovative potential, human potential, region

Słowa kluczowe: potencjał ekonomiczny, potencjał produkcyjny, potencjał pracy, potencjał finansowy, potencjał inwestycyjno-innowacyjny, potencjał ludzki, region

Ключевые слова: экономический потенциал, производственный потенциал, трудовой потенциал, финансовый потенциал, инвестиционно-инновационный потенциал, человеческий потенциал, регион

Ключові слова: економічний потенціал, виробничий потенціал, трудовий потенціал, фінансовий потенціал, інвестиційно-інноваційний потенціал, людський потенціал, регіон

Abstract

The essence of methodological principles of examined investigational factors of forming, use and recreation of economic potential of region and his components in particular with the pur-

pose of development of methods and realization of analysis on the exposure of backlogs of increase of efficiency of his use. Analysed basic constituents of economic potential of the Volyn region.

Introduction

Formulation of the problem. Crisis phenomena in the economy of Ukraine, regional management stereotypes, inflexibility of management methods have led to a number of negative processes in the regions and in the country as a whole: decline in production, deterioration of the dynamics of demographic processes, increase in unemployment, decrease in the quality of life of the population, etc. In these conditions, the problem of assessing the effectiveness and rationality of using the economic potential of the region and managing it arises in a new way. Socio-economic development of regions largely depends on the size and efficiency of using the economic potential available in the given territory. The complexity and multifacetedness of the problems of the regions is one of the most important modern directions of analysis for the development of scientific and methodical approaches to the rationality and efficiency of its use. That is why, with all the complexity and multifacetedness of regional issues, one of the most important modern directions of analysis is the development of scientific and methodological approaches to the assessment of the economic potential of the region and the efficiency of its use.

The existing scientific and methodological base is insufficient due to the lack of a generally recognized method of comprehensive assessment of the economic potential of the region, as well as a method of integral assessment of the effectiveness of its use. In addition, a systematic analysis of the relationships between the constituent elements of the economic potential was not carried out, the impact on the integral level of its use was not taken into account. Therefore, some aspects of the problem of comprehensive assessment of the economic potential of the region and integral assessment of the effectiveness of its use require further theoretical and methodological justification. In this regard, the topic devoted to the study

of the economic potential of the region and the effectiveness of its use is relevant.

Analysis of recent research and publications

Ukrainian socio-geographical and economic science has accumulated considerable experience in the development of theoretical and methodological foundations for the study of issues of the economic potential of the region. Many scientists were engaged in the analysis of problems related to the assessment of individual components of the economic potential, the effectiveness of their use, and the development of theoretical and methodological bases for the study of this issue. Among the works of Ukrainian scientists on the study of economic potential are the works of such economists as A. Zadoya, S. Mochernyi and others. B. M. Danylyshyn, D. V. Klynovyi, O. Klymakhina, T. V. Pepa, V. P. Rudenko, O. M. Tyshchenko and others made a significant contribution to the development of the theoretical foundations of geographical study.

B. M. Mochalov dealt with the problem of the essence and structure of economic potential. When assessing the value of economic potential, he proposed to consider it as the sum of the cost of past labor costs in the form of basic production funds and material costs that are part of the gross social product, as well as labor costs for creating national income plus the value of natural resources. This approach to the calculation of economic potential is inherent in the views of socialism: with an increase in the size and rate of growth of the country's potential, the national income, its consumption and accumulation funds, which determine the level of national consumption and the rate of expanded reproduction, grow faster.

Modern market relations have changed approaches to the assessment of economic potential. Among the classical approaches, the re-

source approach to determining economic potential is popular, as an economic assessment of certain types of resources: land, water, forest, minerals. Various methodological approaches to the assessment of natural resources are studied in economics: the cost approach; effective approach; cost-resource approach; rent approach; reproductive approach; monopoly-departmental approach.

When O. F. Balatskyi considering the structure of the economic potential, he singles out active and passive parts in its composition, depending on the degree of involvement in economic turnover. The active part of the economic potential represents resources that are involved in economic activity at the time of accounting. The passive part is represented by economic resources that are available, taken into account, but not involved in the state turnover.

O. M. Tyshchenko was engaged in the study of methods for assessing the economic potential of the region (EPR). He developed a method of integral assessment of the effectiveness of the use of the EPR, taking into account the influence of its constituent elements, which is based on the use of taxonomic analysis methods and the elasticity model. O. M. Klymakhina suggests considering the measurement of economic potential as the difference between production volumes during the boom and bust, using a chain of constituent elements: product-group of products-enterprise-region.

The purpose of the article

The purpose of the research is analyzing the components of the economic potential of the Volyn region and their valuation.

Research methodology

The methodological basis of the research is the position of constructive geography, the concept of sustainable development of the region, the doctrine of economic potential. The research

substantiates the main directions of optimizing the use of the economic potential of the Volyn region. Scientific works of A. Tyshchenko, V. Rudenko, V. Shkola, O. Balatskyi, V. Kyslyi, R. Matkovskyi, V. Semenov, A. Mints, K. Voblyi, M. Ilyin, D. Kokurin, L. Cherchyk, O. K. Pokataeva, A. Zhulavskyi, B. Mochalov, O. Klymakhina, etc. Philosophical, general scientific (systemic approach, analysis, synthesis, induction, deduction, generalization, comparison) and specific scientific methods (cartographic, historical-geographic, statistical-economic, economic-mathematical modeling) were used in the process of researching the economic potential.

Results of the research

The analysis and generalization of the results of theoretical research and approaches of Ukrainian and foreign scientists in the field of defining the concept of "regional economic potential" (EPR) made it possible to reveal significant differences in its interpretation, understanding of its essence, and selection of constituent elements. The traditional classical meaning of the term "potential" (from the Latin word "*potentia*") means power, hidden possibilities. The current stage of development of the world economy is marked by the emergence of the so-called new economy, which has a corresponding potential that requires research and appropriate assessments. The components of the economic potential should be optimally used in order to increase the potential of the new economy of the region, that is, that set of new possibilities of the region regarding the production and use of knowledge, technologies, and information, taking into account endo- and exogenous factors for the purpose of economic growth of the region (POTAPOVA, GOLUB, POGREBSKYI, 2022).

After analyzing the approaches of various authors to determine the essence of the economic potential of the region, it is possible to interpret EPR as a set of natural resources, pro-

duction, labor, investment and innovation resources, with the rational use of which the region can achieve the highest possible economic development.

The basic component of the economic potential of the region is the natural resource potential. It is a determining factor in the formation of specialization of the region's economy within the economic complex of the country, a prerequisite for the formation of territorial and production complexes. Constituent parts of natural resource potential are resource, recreational and ecological potential.

The land area of the Volyn region is 2,014.45 thousand hectares. According to V. P. Rudenko's estimate, the share of the region's land resources is 55.2% of the total natural resource potential (РУДЕНКО, 2010). However, these reserves make up only 2.1% of Ukraine's land resources. The forest-steppe regions (Volodymyr-Volynskiy and Lutsk districts) have the most powerful land potential, because their territory is dominated by fertile black soils (podzolized and typical). According to the quality assessment, the soils of the Volyn region have a score of 32 (the average score for Ukraine is 100). The highest rate is in Lutsk (51 points) and Volodymyr-Volynskiy (44) districts. This indicates that these areas have the most favorable soil conditions for the development of crop production (*Державна служба статистики України, 2022*).

The Volyn region has significant water resources, the potential of which, according to V. P. Rudenko, is 9.3% of the national water resources. In the component structure of the integrated natural resource potential of the Volyn region, water resources occupy the second place in terms of value and make up 18.0%. The highest specific weight of this resource is in Kamin-Kashytskyi (26.5% of the total natural resource potential of the district) district (ДОБРИК, 2019).

In the region, there is a territorial differentiation of the potential of water resources, which is determined by the orographic and hydrogra-

phic features of the territory. According to the total potential of water resources, the Kamin-Kashytskyi and Kovel districts are distinguished, in which 11.0 and 8.7% of the estimated water resources of the region are concentrated. Volodymyr-Volynskiy district has the lowest potential of water resources.

In the component structure of the natural resource potential, forest resources occupy the third place and, according to V. P. Rudenko's assessment, make up 16.2% of the total natural resource potential (ПОТАПОВА, 2012). The Volyn region belongs to the regions of Ukraine, which are well provided with forest resources. The area of forest lands in the region is 697.3 thousand hectares, the forest cover of the region is 34.3%. Kamin-Kashytskyi district (160.4 thousand hectares) is best equipped with forest resources. The share of forest resources in the integral potential of the territory ranges from 33.0% to 21.6% in Polissya areas, the lowest this indicator is in the forest-steppe areas of the region (3.1–8.0%) (ПОТАПОВА, КРАСНОПОЛЬСЬКА, 2016).

The region is not fully provided with mineral and raw material resources. Fuel and energy resources play an important role in the structure of natural resource potential. On the territory of the region there is a part of the Lviv-Volyn coal basin, within which the Volyn and Bubniv deposits are distinguished. The territories of Volodymyr-Volynskiy, Lutsk, and Kovel districts are promising for the exploitation of explored coal-bearing areas. There are also deposits of gas (Lokachynske field) and peat (Kamin-Kashytskyi and Kovel districts) on the territory of the region. The Volyn region has significant reserves of sapropel. Most of this raw material is found in the lake sediments of the Polissya part of the region, namely in the Kovel (33.7 million tons) district. Deposits of native copper and phosphorite have been explored in the Kovel district (KRASNOPOLSKAJA et al., 2017). Construction minerals – sand, loam, clay, basalt, carbonate rocks – occupy a significant place in the structure of mineral and raw ma-

terial reserves. Within the region, there are 66 deposits and 40 little-explored outcrops of carbonate rocks, including 7 chalk deposits.

In general, in the component structure of the natural resource potential, according to V. P. Rudenko's assessment, mineral raw resources make up only 1.0% of the total natural resource potential. The highest specific weight of mineral resources in the integrated natural resource potential is in Kamin-Kashyrskyi (2.6%) and Kovel (4.32%) districts. In the component structure of the natural resource potential, the faunal potential, according to V. Rudenko's assessment, is only 0.4% of the total natural resource potential. According to the total potential of the faunal natural resource potential, the following districts stand out: Kamin-Kashyrskyi (31.4% of the assessment of faunal resources of the region), Volodymyr-Volynskyi (29.0%) (POTAPOVA, POHREBSKYI, GOLUB, 2022).

In faunal potential, the region is rich in hunting, fishing and honey resources. According to natural complexes, the hunting grounds of the Volyn region are divided into forest (19%), field (45%), meadow (25%) and meadow-swamp (11%), the highest share of which is located in the Kovel and Kamin-Kashyrskyi districts. The fish resources of the region are very diverse, which is caused by favorable natural conditions for fishing. Such types of fish as carp, crucian carp, pike, bream, catfish, river eel, crucian carp are of industrial importance. The Volyn region is almost completely self-sufficient in freshwater fish. The largest fish farms are located in the Kovel, Lutsk and Kamin-Kashyrskyi districts. In the Volodymyr-Volynskyi and Lutsk districts, there is a significant stocking of water bodies.

Recreational resources of the region according to the classification of M. S. Nudelman can be divided into specialized or targeted (healing mud, mineral waters) and multi-purpose (vegetable, water, climatic resources, which act as resources of combined use). In the component structure of the natural resource potential, according to V. P. Rudenko, natural and recrea-

tional resources make up 9.2% of the total natural resource potential. Kovel, Kamin-Kashyrskyi and Lutsk districts have the greatest natural and recreational potential. So, the main natural resources of the Volyn region are land (55.2% of the total natural resource potential), forest (18.0%), water (16.2%) and natural recreation (9.2%). The potential of fauna (0.4%) and mineral resources (1.0%) is insufficient. The most important component of the economic potential is the production potential. The state and development prospects of the region depend primarily on the level of its economic development, in particular on the level of development of the sphere of production of tangible and intangible goods.

The Volyn region is one of the regions of Ukraine characterized by a low level of economic development. The index of industrial production in January–November 2021 compared to January – November 2020 was 109.0%, including in mining and quarrying – 97.5%, processing – 109.1%, supply of electricity, gas, steam and air conditioning – 109.0%. In the processing industry, an increase in production by 23.8–4.0% was achieved at enterprises for the manufacture of wood products, paper production and printing activities, textile production, production of clothing, leather products and other materials, mechanical engineering. Enterprises of the Volyn region sold industrial products (goods, services) in the amount of UAH 38.1 billion.

The Volyn region has sufficient production potential for proportional economic development. From material production, the main industries that determine the indicators of production potential and the scale of production of industrial products are food, light, coal, forest and woodworking industry, machine building and metalworking, chemical industry and building materials industry. From intangible production – services of transport, warehousing, telecommunications and real estate transactions.

There is a significant regional distribution of industrial production within the region, the

greatest industrial potential is concentrated in the Lutsk and Volodymyr-Volynskyi districts. The main industry that processes agricultural products is the food industry. The presence of a powerful raw material base and a wide consumer market of the Volyn region creates a powerful base that provides almost 40% of the total sales of industrial products in the region. At the current stage, labor potential is gaining more and more importance and priority as part of the economic potential of the region. This is a very complex concept, which is characterized by the size of the population, its mode of reproduction, sex-age structure, features of the settlement system, the level of urbanization, the level of education and professional qualifications, income and expenses, the standard of living of the population, provision of social services, etc.

As of February 1, 2022, the population of the Volyn region was 1,018,000 people. The largest population is observed in Lutsk (452,000 people), Kovel (266,000 people), and Volodymyr-Volynskyi (169,000 people) districts. This distribution of the population has been typical for the past five years and this trend is explained by the fact that more populated areas have a stronger labor potential, which in turn attracts the population.

The age structure is dominated by the population from 15 to 69 years old, which in the total population structure is approximately 63%, the population from 0 to 15 years old – 19%, over 65 years old – 18%. The basis of the labor potential of the Volyn region is the economically active population, the number of which in 2021 was 461.4 thousand people, the level of economic activity of the population was 61.7%. The number of economically active population among males (68.9%) is slightly higher than among females (61.0%). According to the results of the labor force survey, the number of the region's workforce aged 15 years and older in January – December 2021 was 413.7 thousand people, of which 412.6 thousand people were aged 15–70, which is 0.5 % less than in the corresponding

period of 2020.

Among the labor force among persons aged 15 and older, 50.2% belonged to employed persons, and the rest were classified as unemployed according to the methodology of the International Labor Organization (ILO). In the workforce, 55.5% of people aged 15–70 were employed, and 52.4% were unemployed. The number of employed people aged 15 years and older was 361.3 thousand people, of which 15–70 years old – 360.2 thousand people, which is 2.4 thousand people less compared to 2020. The employment rate of the population aged 15 and older was 43.8% of the population of the corresponding age, and among persons aged 15–70 – 48.5% (in Ukraine – 49.6%). Based on the results of calculations, it can be stated that in 2021 the level of utilization of the labor potential was quite high, however, this direction of calculation is extensive, which means: the higher the percentage of citizens engaged in socially useful activities, the higher the level of utilization of the labor potential of the region.

The investment potential reflects the available resources involved in the economic activity of the territory and options for their use, acts as a means of mobilizing all possible sources that determine the ability of the region to form, optimally place and effectively use the investment resources of the territory (POTAPOVA et al., 2021). One of the constituent parts of the investment potential is the financial potential, because finance mediates the processes of transformation of one resource into another; perform the role of quantitative assessment of other resources; give the investor the prerogative to choose any business for investing; provide potential opportunities for diversification of investment areas in order to minimize risk and maximize profits. The natural-geographical and social-geographical prerequisites of the Volyn region form a powerful investment potential, with the rational use of which the region can significantly improve its economic situation.

The total volume of capital investments of the Volyn region in 2021 amounted to UAH

8,263.24 million. Currently, there is a tendency to reduce their volumes by UAH 1,930.6 million (2020 – UAH 10,193.8 million). The largest share of capital investments was invested in the city of Lutsk and Lutsk district. The least amount of capital investment was invested in Kamin-Kashyrskyi district.

By sources of financing, the share of capital investments is increasing at the expense of own funds of enterprises and organizations, bank loans and other loans. The share of capital investments at the expense of the state budget, funds of local budgets, funds of foreign investors, funds of the population for individual housing construction is decreasing.

The export of goods in January – October 2021 in the Volyn region amounted to 675.7 million dollars USA, import – 1422.1 million dollars. Compared to January – October 2020, the volume of exports increased by 27.4%, imports by 33.3%. The negative balance was equal to 746.4 million dollars. The main partners in export-import operations were the countries of the European Union (EU), which accounted for 69.3% of the total volume of exports and 61.6% of imports of goods. Machines, equipment and mechanisms prevailed in the total volume of exports of goods; electrical equipment, low-value metals and products from them, plastics, polymer materials, wood and wood products, furniture, paper and cardboard, textile materials and products, products of plant origin. The basis of the commodity structure of imports was made up of mineral fuels; oil and products of its distillation, means of land transport, except for railways, machines, equipment and mechanisms; electrotechnical equipment, low-value metals and their products, plastics, polymer materials, rubber, rubber, products of the chemical and related industries, various industrial goods, wood and wood products, textile materials and products, live animals; products of animal origin. Among the EU countries, the volumes of trade transactions with Germany, Poland, the Netherlands, Lithuania, Hungary and Italy were significant (NIEMETS et al., 2021).

Considering the available investment potential, the Volyn region is attractive for investors. However, investment opportunities today are underutilized and need a number of changes.

Innovative potential, as part of the economic potential, ensures the development of science and technology and their implementation in the economic development of the region, thereby ensuring its growth. A constituent part of the innovation potential is the scientific potential, which is a set of resources and opportunities in the field of science of any system (collective, industry, city, etc.), which makes it possible to effectively solve economic tasks under the existing forms of organization and management. The components of scientific potential are personnel, funds, material and technical base, information support, etc. The constituent parts of the innovation potential are educational, scientific and technical, and actual innovation potential. The educational potential includes all educational institutions within the Volyn region, from preschool to higher educational institutions.

Over the last few years, there has been a trend in the oblast to decrease pre-school primary institutions and institutions of general secondary education, their number has decreased. Taking into account the demographic situation, 34 institutions of general secondary education were liquidated in 2021 by decisions of local self-government bodies, with the consent of communities. The Volyn region provides its population with vocational and technical and higher educational institutions. In today's changing socio-economic conditions of society's development, when the demand for labor force has significantly decreased, labor professions remain in demand in the region. The main center of vocational and technical and higher educational institutions is the city of Lutsk, their number is somewhat smaller, but significant, in such cities as Kovel, Volodymyr, Kivertsi, Novovolynsk. Higher educational institutions of the III–IV level of accreditation of the region ensure the implementation of promising scientific and innovative developments that correspond

to the priority directions of the development of science and technology of Ukraine, carry out patent and licensing activities.

For 2014–2021, the region has seen an increase in the number of candidates and doctors of science and doctors of philosophy, and the share of post-graduate students has increased. Costs for scientific research and development by type of work for 2020 amounted to UAH 10.0 million, including fundamental scientific research – UAH 5.6 million, applied scientific research – UAH 3.6 million, scientific and technical (experimental) developments – UAH 0.8 million. 127 people were involved in scientific research and development, 32 of them have a doctor of science degree, 95 have a doctor of philosophy (candidate of science) degree. At the beginning of 2020, UAH 93,083.9 thousand were allocated to the region for innovative activities, this is UAH 68,994.0 thousand less than in 2017, which is not enough to fully ensure innovative activity. The main source of investment in innovative activity is the own funds of enterprises and organizations. The specific weight of enterprises implementing innovations in 2020 was only 10.4% of their total number. This indicator is quite small and continues to decrease.

The Volyn region has significant innovation potential, but there is a lack of funding for the implementation and development of new innovative projects.

Conclusions and prospects of further research

The conducted analysis showed that taking into account the proposed components of the region's potential in managing the economic potential of the territory can contribute to the formation of a rational and balanced spatial structure of the economy; development of effective competitive types of economic activity; rational use of labor resources, equalization of socio-economic development of the region. Prospects for further research on this issue are a more detailed assessment of the components

of the region's economic potential, and the discovery of new methods for its assessment.

References

- Державна служба статистики України. Офіційний веб-сайт. URL: <http://www.ukrstat.gov.ua> (дата звернення: 18.02.2022).
- Добрик Л. О., 2019: Структурні складові соціально-економічного потенціалу регіону. Інтеллект XXI. № 1: 29–32.
- Потапова А. Г., 2012: Оцінка економічного потенціалу Волинського регіону. Науковий вісник Волинського національного університету імені Лесі Українки. Географічні науки, № 9 (234): 64–69.
- Потапова А. Г., Краснопольська Н. В., 2016: Економічний потенціал Волинської області: монографія. Волиньполіграф, Луцьк: 174 с.
- Руденко В. П., 2010: Географія природно-ресурсного потенціалу України. У 3-х част.: підручник. Чернівецький нац. ун-т., Чернівці: 552 с.
- Krasnopolskaja N., Potapowa A., Benediuk W., Pogrebskij T., 2017: Aspekty społeczno-ekonomiczne kształtowania się i wykorzystania potencjału edukacyjnego (na przykładzie Północno-Zachodniego Regionu Ekonomicznego Ukrainy). Acta Geographica Silesiana, № 11/2 (26). WNoZ UŚ, Sosnowiec: 31–36.
- Niemets L., Golub G., Niemets K., Pohrebskyi T., Sehida K., Potapova A., Kravchenko K., 2021: Structural and dynamic features of the regional labour market of Ukraine (case study of Volyn and Kharkiv regions). Proceedings of the 37th International Business Information Management Association (IBIMA), (Cordoba, Spain, 30–31 May 2021) : 2090–2098. ISBN: 978-0-9998551-6-4, ISSN: 2767-9640
- Potapova A., Pohrebskyi T., Golub G., Hlushko S., 2021: The scientific potential of Volyn Region. Acta Geographica Silesiana, № 15/2 (42). INoZ UŚ, Sosnowiec: 27–32.
- Potapova A., Pohrebskyi T., Golub G., 2022: Socio-demographic factors of population resettlement of Volyn Region. Acta Geographica Silesiana, № 16/1 (45). INoZ UŚ, Sosnowiec: 19–31.
- Potapova A. G., Golub G. S., Pogrebskyi T. G., 2022: Divorce as an aspect of demographic behavior of the population of Volyn region. Journ. Geol. Geograph. Geoecology, 31 (1). ПП “Ліра ЛТД”, Дніпро: 133–141.

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