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# ASSESSMENT OF INNOVATIVE-INVESTMENT POTENTIAL IN THE CONTEXT OF CREATING A SAFE ENVIRONMENT FOR THE IMPLEMENTATION OF PUBLIC-PRIVATE PARTNERSHIPS IN THE REGION

## ABSTRACT

The main purpose of the article is to propose a theoretical and methodological approach to the assessment of the innovative-investment potential of a region for the implementation of public-private partnerships. The object of study is the innovative-investment potential of a particular region. To achieve the set goal, the scientific task is posed in the form of developing and implementing an approach to assess the level of innovative-investment potential in the region in order to identify prospects for the implementation of public-private partnerships. The research methodology involves the application of various methods, the key among which is the method of taxonomic analysis. The key components of innovative-investment potential and the indicators for which the assessment was conducted have been identified. Special attention is given to economic-financial indicators. The work of the taxonomic approach in the context of our research is described. The key indicators of assessment of innovative-investment potential for each city in the selected region have been calculated. Standardized values for each calculation result have been determined. A ranking of all cities according to their potential level was carried out, and it was determined which of them has the greatest security potential for the implementation of public-private partnerships. As a result, the obtained data showed the practical value of the proposed assessment method. The research has limitations in the form of taking into account the specifics and information of only one region of the country. Prospects for further research include expanding the regional aspect in conducting assessments.

**Keywords:** investments, innovations, potential, innovative-investment potential, public-private partnership, region, assessment method, security

**JEL Classification:** E22, O31, P35, Z18

## INTRODUCTION

Martial law in most regions of Ukraine creates significant obstacles to creating a secure environment. This directly affects the decrease in the country's innovative-investment potential. Firstly, martial law leads to considerable instability and unpredictability, negatively impacting the investment climate. Investors and businesses typically avoid regions with high-risk levels, limiting the influx of new investments and innovation development. The risk of infrastructure damage, logistics disruptions, and increased security costs make investments less attractive. Secondly, martial law leads to the redistribution of state resources in favour of defence needs, instead of investments in areas that promote innovative development. This can lead to the postponement or reduction of projects aimed at developing infrastructure, education, health, and other critically important sectors. However, even under such conditions, the implementation of public-private partnership (PPP) is crucial. It allows the private sector and its resources to be involved in addressing urgent problems arising during martial law, such as infrastructure restoration, provision of necessary goods and services, and support for the social sphere. Such partnerships can contribute to the rapid restoration of economic activity and create a foundation for further innovative development after the end of martial law.

Assessing the innovative-investment potential before implementing PPP is a key step, especially in conditions requiring the formation of a secure environment, as in regions under martial law. Such assessment allows governments and potential private investors to understand the real state and possibilities of the region, as well as to identify key sectors where investments would be most effective. This creates a basis for selecting the most appropriate projects that can contribute to the recovery and development of the region while ensuring its security.

The conditions of martial law impose additional restrictions and require a particularly careful approach to assessing risks and potential. Restoration and development of infrastructure, ensuring the basic needs of the population, creating new jobs, and supporting key sectors of the economy under such conditions can have a significant impact on improving stability and security. Therefore, an adequate assessment of the innovative-investment potential before implementing PPP not only helps to determine the optimal directions for investment but also creates a foundation for long-term stability and security in the region.

## LITERATURE REVIEW

The literature on assessing the innovative-investment potential in the context of creating a secure environment for the implementation of public-private partnerships (PPP) in the region reflects a wide range of studies covering different aspects of this issue. For instance, in the work of Panchenko et al. (2022), the formation of a methodological approach to the management system of innovative activity in enterprises under economic development is considered. The authors emphasize the importance of integrating innovations into management processes to ensure the economic security of the enterprise. Drobyazko et al. (2020) focus on risk management in the financial stability system of a service enterprise. Their research points to the need for a comprehensive approach to risk management, which is important for ensuring the stable development of PPPs. Blakytá and Ganushchak (2018) highlight the financial security of the enterprise as a component of the country's economic security. The authors analyze the relationship between the financial stability of the enterprise and the overall economic stability.

In the context of PPP, Pessoa (2008) investigates public-private partnerships in developing countries and their alignment with the new official development assistance strategy. This research makes an important contribution to understanding the interaction between the public and private sectors in the context of infrastructure development. Subsequently, Shtangret et al. (2021) explore the practical aspects of applying anticipatory management in the process of ensuring the economic security of the enterprise. Their conclusions underline the importance of anticipating potential risks and threats for effective management.

The research by Dewulf and Garvin (2020) highlights the importance of responsive management in PPP projects for managing uncertainty. This indicates the need for flexibility and adaptability in managing such projects. Yao et al. (2015) investigate public-private partnerships in the context of reducing earthquake risk, including building modernization and insurance. This study demonstrates how innovations can be integrated into risk management within the framework of PPP. Furthermore, Dansoh et al. (2020) examine the role of traditional authority in managing the community as stakeholders in PPP projects. Their work contributes to understanding the importance of community engagement for the successful development of such projects. Meanwhile, Zheng et al. (2021) and Kuznyetsova et al. (2022) propose a model for predicting the outcomes of legal cases in disputes over PPP projects. These studies highlight the importance of legal stability and predictability for PPP success.

## AIMS AND OBJECTIVES

The main aim of the article is to propose a theoretical and methodological approach to the assessment of the innovative-investment potential of a region for the implementation of PPP. The object of study is the innovative-investment potential of a particular region. To achieve the set aim, the scientific task is posed in the form of developing and implementing an approach to assess the level of innovative-investment potential in the region in order to identify prospects for the implementation of PPP.

## METHODS

The taxonomic method plays a significant role in the context of assessing the innovative-investment potential of a region, as it provides a comprehensive and systematic approach to analysis. This method is based on the use of mathematical and statistical tools to evaluate various aspects that affect the potential of the region in the field of PPP. This includes the

analysis of economic indicators, infrastructure capabilities, education level, skills, and other social, technological, and financial factors. The taxonomic method allows for an objective assessment and comparison of different territories, identifying the most promising for investment and development of PPP. It helps governments and investors make informed decisions based on concrete data and analytics. Taxonomic analysis also facilitates the identification of key strengths and weaknesses of regions, allowing for the development of targeted development strategies and improvement of infrastructure and other critical aspects. Thus, the use of the taxonomic method becomes the foundation for creating a sustainable and effective partnership between the state and the private sector, enhancing the potential of the region to achieve long-term socio-economic goals and the desired financial-economic effect.

The method of least squares is an important statistical tool for data analysis, especially when it comes to determining the best territorial formation for PPP. Using this method, one can accurately model and analyze dependencies between various economic, social, and infrastructural factors that influence the potential of a region. The essence of the method lies in minimizing the sum of the squares of the differences between actual and predicted values, which allows for the determination of the most accurate parameters for the model. This ensures high precision and objectivity in assessing the potential of different territories. The use of the method of least squares provides a more accurate understanding of which territories have the greatest prospects for the development of PPP, thereby ensuring more efficient and targeted use of resources and investment planning.

In assessing the innovative-investment potential of cities in the Lviv region, the application of the Delphi method significantly enhances the quality and reliability of expert inputs. This method involves a structured process of gathering, refining, and consolidating expert opinions, particularly useful for evaluating complex and multifaceted issues like public-private partnerships (PPP), regional development, and investment attractiveness. The process begins with the careful selection of experts, chosen for their expertise and experience in relevant fields such as regional economics, PPPs, and local governance. The key to the Delphi method is maintaining the anonymity of the participants, which encourages open and honest feedback without the influence of peer pressure or dominant opinions. Experts are initially provided with a set of questions or statements pertaining to the innovative-investment potential of specific cities within the Lviv region. These questions are designed to elicit detailed insights into various factors influencing PPP and investment prospects, such as infrastructure, economic climate, and governance quality.

## RESULTS

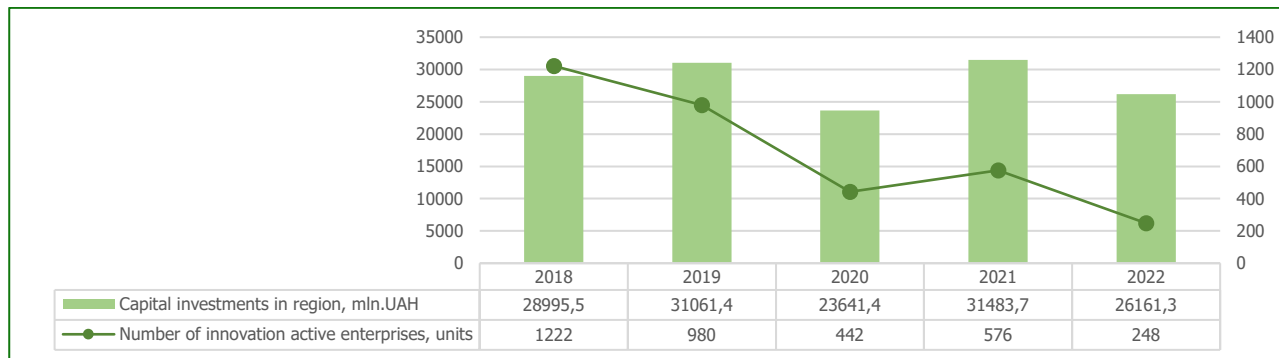
The innovative-investment potential of a region reflects its ability to attract and efficiently use investments to stimulate innovation in various spheres. This potential results from the complex interaction between scientific, educational, technological, economic-financial, and institutional components of the region. In the context of a secure environment and PPP, this potential also depends on the stability, efficiency, and openness of government policies, legislation, and collaboration between public and private sectors. This creates conditions for investment attractiveness and innovative development of the region.

When assessing the innovative-investment potential of a region, studying the volume of capital investments and the number of innovation-active enterprises is significant. The volume of capital investments is important as it reflects the level of economic activity and financial engagement in the region. It shows how attractive the region is to investors and to what extent it can support the development of innovations and new projects. On the other hand, the number of innovation-active enterprises indicates the innovative dynamics of the region, and its ability to generate new ideas and implement them in practice. Together, these indicators provide valuable insights into the region's potential for further financial-economic development and innovation.

To solve all the problems posed in the article, it is important to conduct an in-depth analysis of the economic situation and investment climate, including an assessment of current trends in investment activity, the level of innovativeness of enterprises and general economic conditions. Such an analysis allows us to identify key challenges and opportunities that may arise in the process of developing and implementing innovative strategies. It is proposed to carry out such an assessment using the example of the Lviv region, which, despite the difficult conditions of martial law, continues to demonstrate significant innovation and investment potential.

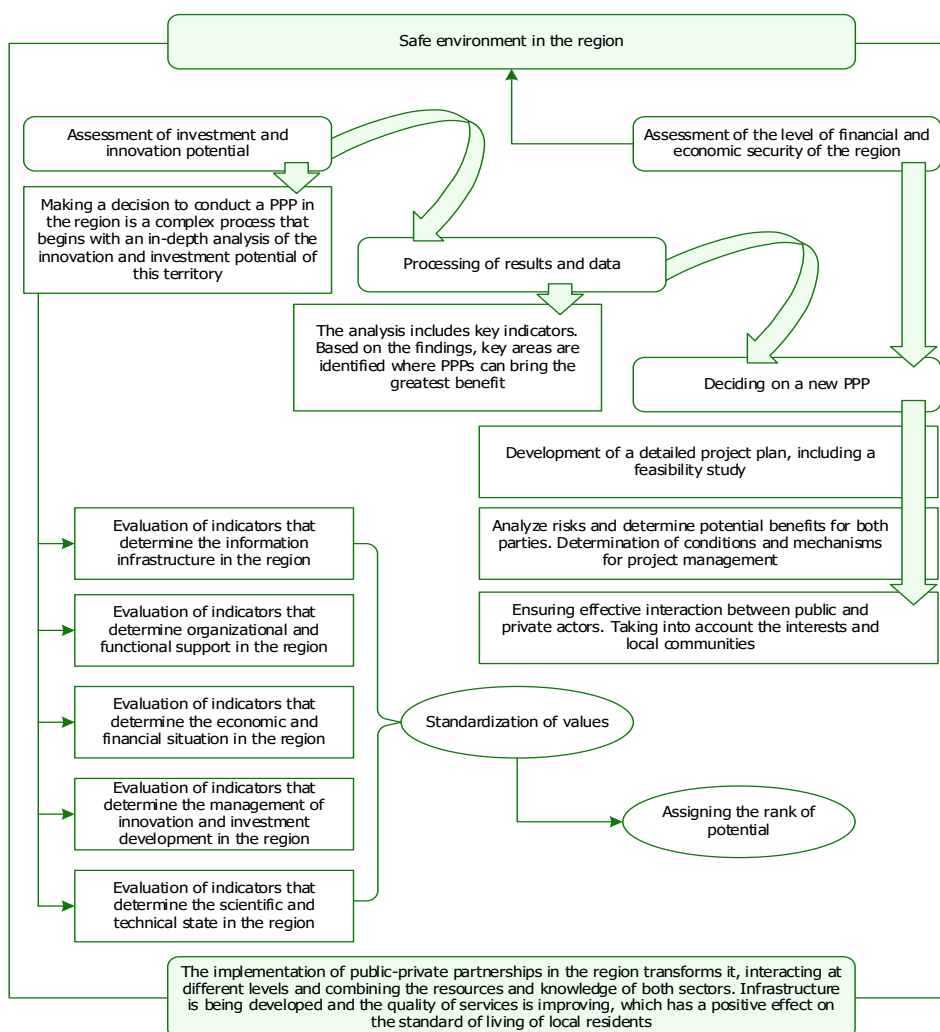
The decrease in the volume of capital investments and the number of innovation-active enterprises in the Lviv region over the past year due to martial law in Ukraine is an expected phenomenon. Martial law leads to economic uncertainty, which can impact investment activity and business development. However, despite these temporary difficulties, the Lviv region continues to demonstrate innovative-investment potential, particularly for implementing PPP. The Lviv region has several advantages that support and develop this potential. Firstly, it is a region with a relatively stable security environment,

which is critically important in the context of the current military conflict. Such an environment attracts investors and helps maintain business activity. Additionally, the Lviv region has developed infrastructure and access to skilled labour, especially in high-tech sectors, which is important for innovative development. These factors, along with opportunities for PPP, create favourable conditions for further economic recovery and innovation development in the region. Thus, despite current challenges, the Lviv region retains significant innovative-investment potential, which can be activated under favourable conditions, especially through PPP and investment initiatives (Figure 1).



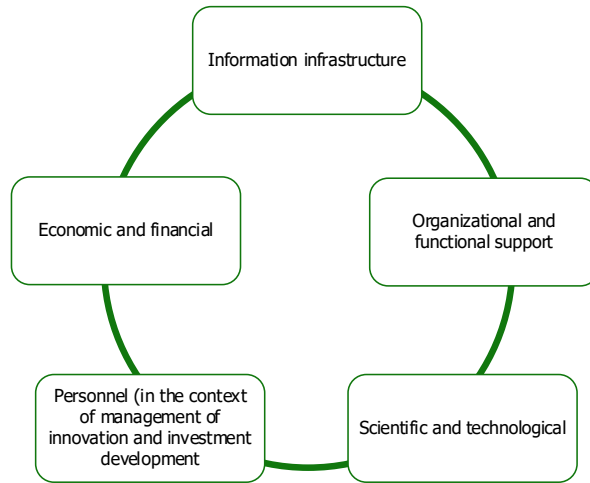
**Figure 1. Dynamics of key indicators of innovative-investment activity in the Lviv region for 2018-2022.**

To begin with, let's define the key components of the innovative-investment potential of a region (for the purpose of applying the approach, the Lviv region of Ukraine has been chosen). Let's build a model of a system for introducing PPPs in a region with high innovative-investment potential (Figure 2).



**Figure 2. The model of a system for introducing PPPs in a region with high innovative-investment potential.**

The proposed approach to structuring potential involves considering the components of the internal environment of the territorial formation, as they primarily influence the formation and development of such potential (Figure 3).



**Figure 3. Components of the innovative-investment potential of the region.**

Each component will be assigned a mathematical notation ( $P$ ). The economic-financial component is given significant attention within the potential. This component reflects the assessment of the financial and economic development of the region, which, together with scientific-technological aspects and security, are crucial indicators for private partners when considering the possibility of engaging in negotiations with the public partner of the region for PPP projects.

The analysis of the innovative-investment potential of the region in the context of attracting PPP requires the further development of a set of criteria for achieving this goal. According to theory and practice, the number of these criteria should be limited, following the principle of optimality. Identifying criteria for the analysis of the innovative-investment potential is a key task in such an assessment. It's also important to select a method for calculating the overall indicator of potential, which will serve as an informational foundation for determining the most optimal secure environment and for selecting an effective PPP implementation strategy. It must be taken into account that the indicators for assessing the innovative-investment potential can be either stimulating or restraining, which will affect subsequent calculations. Considering the substantive content of the components of the innovative-investment potential of the region, based on the research conducted, it is sensible to present a complex of indicators for evaluating such potential (Table 1).

**Table 1. Indicators for assessing the innovative-investment potential of a region in the context of determining its suitability for introducing PPPs.**

Marking	The name of the indicator	Calculation formula	The value of the components of the formula
<i>Information infrastructure</i>			
P <sub>11</sub>	The level of efficiency of information provision, part. units.	$B_{ie} / B_{ib}$	$B_{ie}$ – score of an expert on the level of information provision in the region; $B_{ib}$ – the maximum possible number of points that was assigned;
<i>Organizational and functional support</i>			
P <sub>21</sub>	The level of formation of organizational and functional support for potential partnership, partial unit.	$Z_{nt} / Z_{ft}$	$Z_{nt}$ – the number of tasks performed within the framework of previous partnerships; $Z_{ft}$ – the total number of tasks that can be performed within the framework of one partnership;
P <sub>22</sub>	The level of clarity in the planning of events on the territory, part unit.	$C_{np} / C_{fp}$	$C_{np}$ – the number of adjusted planned tasks in the field of partnership; $C_{fp}$ – the maximum possible number of scheduled tasks;
P <sub>23</sub>	The level of the quality of communications, part units.	$P_{qk} / P_{fk}$	$P_{qk}$ – the number of institutions and persons that can be involved in communication activities during the partnership; $P_{fk}$ – the maximum possible number of institutions and persons in the field of communication activities in the territory;
<i>Scientific and technological</i>			
P <sub>31</sub>	Amount of capital persons per 1,000 persons, UAH thousand.	$Q_{ci} / Q_m$	$Q_{ci}$ – the volume of capital investments in the territory for the reporting period; $Q_m$ – 1,000 Mashkan residents on the territory;
P <sub>32</sub>	The share of innovative and active enterprises in the territory, %	$T_{ie} / T_{fe}$	$T_{ie}$ – the number of innovatively active enterprises; $T_{fe}$ – the total number of enterprises;
P <sub>33</sub>	Share of implemented innovative products, %	$M_{rp} / M_{fp}$	$M_{rp}$ – the volume of implemented innovative products of the territorial entity; $M_{fp}$ – the total number of sold products;

(continued on next page)

Table 1. Continued

Marking	The name of the indicator	Calculation formula	The value of the components of the formula
<i>Personnel</i>			
P <sub>41</sub>	The share of employees of management bodies who came to study the topic of management of processes of innovation and investment development, units.	$N_{pi} / N_{ti}$	$N_{pi}$ – the number of employees of the governing bodies of the territorial entity who have undergone training on the subject of management of investment-innovative development processes during the reporting period; $N_{ti}$ – the total number of employees of the governing bodies of the territorial entity;
<i>Economic and Financial</i>			
P <sub>51</sub>	The volume of products sold by enterprises, UAH million.	$O_{rp}$	$O_{rp}$ – Determined according to official statistics;
P <sub>52</sub>	The level of profitability of the operating activities of enterprises, %	$H_{fr} / H_{po}$	$H_{fr}$ – financial result from operating activities; $H_{po}$ – the amount of operating expenses;

Thus, using the conceptual-categorical apparatus of taxonomy, at the first stage of evaluating the innovative-investment potential to determine the safety principles of the implementation of PPP, a matrix  $X$  for  $n$  territorial formations and  $m$  indicators should be constructed (1):

$$X = \begin{cases} x_{11} \dots x_{1j} \dots x_{1n} \\ x_{i1} \dots x_{ij} \dots x_{in} \\ x_{m1} \dots x_{mj} \dots x_{mn} \end{cases} \quad (1)$$

where  $x_{ij}$  is the value of the  $i$ -th indicator of the assessment of the potential of the  $j$ -th territorial entity;  $i = 1, \dots, m$  is the serial number of the indicator for assessing the potential of territorial formation;  $j = 1, \dots, n$  is the serial number of the territorial formation.

The application of the developed method for assessing the innovative-investment potential in territorial entities was illustrated by the example of cities of regional significance in the Lviv region (the following were selected: Morshyn; Truskavets; New Rozdil; Sambir; Stryi; Drohobych; Chervonograd. They form the set  $C = \{C_1; C_2; C_3; C_4; C_5; C_6; C_7\}$ ). Particular attention was paid to the analysis of attracting investments and innovations based on PPPs. The study included the collection and analysis of official statistical information from the Main Department of Statistics in the Lviv region, as well as expert data to assess indicators that are not tracked by official statistics. This information was used to generate input data for assessing innovative-investment potential and creating a security environment in these territories (State Statistics Service, 2022). The results of calculating indicators ( $P_{ij}$ ) for key cities of the Lviv region ( $C_i$ ) are presented in Table 2.

Table 2. The results of the calculation of indicators for evaluating the innovative-investment potential of the region in the context of determining its suitability for the implementation of PPP.

City	P <sub>11</sub>	P <sub>21</sub>	P <sub>22</sub>	P <sub>23</sub>	P <sub>31</sub>	P <sub>32</sub>	P <sub>33</sub>	P <sub>41</sub>	P <sub>51</sub>	P <sub>52</sub>
C <sub>1</sub>	37840.4	0	0	1560.1	2.1	0.12	0.18	0.55	0.62	0.53
C <sub>2</sub>	9945	0	0	1850.6	7.2	0.27	0.36	0.56	0.48	0.38
C <sub>3</sub>	9577.3	0	0	1552.9	5.4	0.1	0.19	0.21	0.21	0.2
C <sub>4</sub>	5188.7	37.4	8.9	978.4	0.6	0.09	0.1	0.21	0.17	0.3
C <sub>5</sub>	5042.4	11.2	0	2248.9	4.8	0.33	0.3	0.48	0.52	0.67
C <sub>6</sub>	3133.2	21.5	0	3845.4	3.4	0.12	0.24	0.38	0.4	0.6
C <sub>7</sub>	2688.6	0	0	3415	4.5	0.08	0.11	0.27	0.32	0.27
Average	9864.8	9.1	0.3	3731.2	5.6	0.18	0.21	0.18	0.19	0.26
Mean square deviation	9155.5	12.6	1.7	3607.6	7.3	0.11	0.12	0.2	0.14	0.24

As can be seen from Table 2, the indicators for assessing the innovative-investment potential of the territorial formation are multi-dimensional. For a more comprehensive assessment of the potential, their values should be standardized according to the procedure of the applied method and represented in the form of a matrix of standardized indicators  $A$  (2):

$$A = \begin{cases} a_{11} \dots a_{1j} \dots a_{1n} \\ a_{i1} \dots a_{ij} \dots a_{in} \\ a_{m1} \dots a_{mj} \dots a_{mn} \end{cases} \quad (2)$$

where  $a_{ij} = (x_{ij} - x_i) / \sigma_i$ ,  $x_i = \sum x_i / m$  is the average value of the  $i$ -th indicator of potential assessment for the analyzed territorial formations;  $\sigma_i = \sqrt{1/m \sum (x_{ij} - x_i)^2}$  is the root mean square deviation of the values of the  $i$ -th indicator of potential assessment (Table 3).

**Table 3. The results of the standardization of the evaluation of the innovative-investment potential of the region in the context of determining its suitability for the implementation of PPP.**

City	P <sub>11</sub>	P <sub>21</sub>	P <sub>22</sub>	P <sub>23</sub>	P <sub>31</sub>	P <sub>32</sub>	P <sub>33</sub>	P <sub>41</sub>	P <sub>51</sub>	P <sub>52</sub>	P <sub>52</sub>
C <sub>1</sub>	3.04	-0.74	-0.2	-0.6	-0.91	-0.62	-0.27	0.89	1.4	0.45	2.46
C <sub>2</sub>	0.009	-0.74	-0.2	-0.53	-0.38	0.7	1.2	0.89	0.59	-0.16	1.42
C <sub>3</sub>	-0.03	-0.74	-0.2	-0.6	-0.55	-0.81	-0.27	-0.83	-1.22	-0.94	-6.2
C <sub>4</sub>	-0.51	2.23	5.09	-0.76	-1.07	-0.9	-1.02	-0.79	-1.49	-0.53	0.26
C <sub>5</sub>	-0.528	0.16	-0.2	-0.41	-0.62	1.2	0.64	0.54	0.72	1.03	2.6
C <sub>6</sub>	-0.736	0.98	-0.2	0.03	-0.77	-0.71	0.22	0.05	0.25	0.7	-0.18
C <sub>7</sub>	-0.784	-0.74	-0.2	-0.8	-0.65	-1.01	-0.85	-0.49	-0.61	-0.65	-6.1

Next, it is necessary to form what is termed a 'benchmark' territorial formation. To achieve this, within the row of potential assessment indicators, the highest or lowest value of such an indicator should be chosen depending on its optimal magnitude. Consequently, a matrix-column (3) is constructed:

$$\begin{pmatrix} A_1^e \\ A_2^e \\ A_3^e \end{pmatrix} \tag{3}$$

$A_i^e$  – is a normative criterion (benchmark) for indicators of evaluating the innovation and investment potential of a territorial entity.

Next, it is necessary to calculate quasi-distances from any territorial formation to the standard for all such formations according to formula (4):

$$\sum_{i=1}^n (z_{ij} - z_{ej})^2 \tag{4}$$

Consequently, the selection of the area in the Lviv region with the highest level of PPP potential is carried out using the method of least squares. If necessary, the application of significance coefficients for the values of indicators is possible. Based on the data in Table 2 and formulas (3) and (4), we can establish the ranking of cities in the Lviv region according to their level of innovative-investment potential for effective PPP implementation (Table 4).

**Table 4. Ranking of cities in the Lviv region by their level of innovative-investment potential for effective PPP implementation. (Source: Formed by authors)**

City	Rank	Criteria
C <sub>5</sub>	1	High innovative-investment potential with an appropriate security environment
C <sub>1</sub>	2	
C <sub>2</sub>	3	Average innovative-investment potential with a low-security environment
C <sub>4</sub>	4	
C <sub>6</sub>	5	Low innovation and investment potential with a problematic security environment
C <sub>7</sub>	6	
C <sub>3</sub>	7	

Thus, the cities of Stryi and Morshyn demonstrate the highest innovative-investment potential, indicating their secure environment for the implementation of PPP.

For the cities of Stryi and Morshyn, which have high innovative-investment potential and a favourable security environment for the realization of PPP, the following forms of partnership are recommended:

1. Infrastructure projects. In Stryi and Morshyn, there is significant potential for the development of transportation infrastructure, updating municipal networks, and constructing and modernizing public facilities. Private investors can be involved in road construction projects, updating water supply and sewage systems, and in creating new cultural and recreational facilities.
2. Environmental and renewable energy sources. Involving private capital in projects related to renewable energy and ecology can be beneficial for both cities. This can include the installation of solar panels, wind turbines, and waste recycling projects.
3. Healthcare and education. Stryi and Morshyn could benefit from partnerships in healthcare and educational projects, particularly in expanding and modernizing hospitals, clinics, schools, and universities. Private partners can make a significant contribution to improving the quality and accessibility of these services.

For the cities of Truskavets and Sambir, which have average innovation and investment potential, the following forms of public-private partnership are recommended:

1. Development of tourism infrastructure. Truskavets and Sambir can attract investment in the development of tourist facilities, renovation of the hotel sector and the development of cultural events.
2. Agricultural projects. Taking into account the agricultural potential of the region, it is possible to implement projects to modernize agricultural equipment, introduce innovative technologies and develop organic farming.
3. Development of small and medium-sized businesses. Stimulating the development of local entrepreneurship through financial support and consulting.

For the cities of Novy Razdel, Drohobych and Chervonograd, which have low innovation and investment potential, the following forms of partnership are suitable:

1. Improving public services. Projects for modernizing utility networks, updating water supply and sewerage systems, and energy efficiency in the residential sector.
2. Supporting local industrial initiatives. Development of existing industrial enterprises, attracting investment in local industry and supporting start-ups.
3. Development of education and vocational training. Introduction of vocational training and retraining programs, modernization of educational institutions for training qualified personnel that meet the needs of the local economy.

The chosen forms of partnership should reflect local needs and opportunities, as well as promote sustainable development in both cities. When selecting specific projects for implementation, it's important to consider their socio-economic impact, potential investment returns, and the ability of projects to improve the quality of life for residents. Financing can come from various sources, including private capital, bank loans, government grants, or international organizations. It's important to ensure balanced financing that minimizes risks for both parties. To ensure effective use of funds and public trust, a high level of accountability and transparency in financial matters is necessary. This includes transparent accounting, regular reports on project expenses and income, and independent monitoring and evaluation of financial results.

## DISCUSSION

Discussing the obtained research results, it is necessary to compare and contrast them with similar studies on the topic. Our research focuses on identifying the key components of the innovative-investment potential of the region, such as informational infrastructure, organizational-functional support, scientific-technological, human resources, and economic-financial components. This approach provides a comprehensive overview of the region's internal resources and their impact on the development of PPP. Similarly, in the study by Chou and Lin (2013), the focus is on predicting conflicts in PPP projects, which helps to identify potential risks and improve project management. This approach is useful for assessing the informational component and understanding the internal dynamics of PPPs.

The research by Dokienko (2021) and Bilomistnyy et al. (2017) focuses on the financial security of enterprises, which is crucial for the economic-financial component. Their conclusions about the importance of alternative approaches to evaluating and managing financial security reflect the need for a deep understanding of the financial conditions and potential of the region.

In the context of the scientific-technological component, Feng et al. (2017) consider the optimization of capital structure in PPP projects, including the use of public funds. This provides valuable insights into the need for integrating innovations

into financial mechanisms. The results of Rushchyshyn, Nikonenko, and Kostak (2017), and Sylkin et al. (2019) also highlight the importance of strategic planning and crisis management to ensure financial security, which is critical for the human resource component of managing the processes of innovative-investment development.

Considering the organizational-functional component, the work of Chan et al. (2015) and Jakaitis, Paliulis, and Meidutė (2011) contribute significantly to understanding the risks and development prospects of urban areas through PPP. Overall, comparing these studies with our own results underscores the importance of a comprehensive approach to evaluating the innovative-investment potential of the region, including all key components and considering a variety of internal and external factors.

## CONCLUSIONS

As a result of the conducted research, it is proposed to distinguish a number of components in the structure of the innovative-investment potential of the region: the component of informational infrastructure of PPP in the territory, the organizational-functional support component of PPP, the scientific-technological component, the human resource management component in investment-innovation development processes, and the economic-financial component. The proposed approach to structuring the innovative-investment potential involves considering the components of the region's internal environment, as they primarily influence the formation and successful development of PPP. Indicators corresponding to the components of the region's innovative-investment potential have been identified. The appropriateness of using the taxonomic method for a comprehensive assessment of the innovative-investment potential of the region has been justified. The practical application of the proposed method for assessing the innovative-investment potential of the region in the context of activating the implementation of new PPP has been carried out using a specific region as an example.

To form a modern approach to assessing the innovation and investment potential of a region for the implementation of PPP, a taxonomic method of analysis was applied. This method, through mathematical and statistical tools, facilitated the assessment through a series of key indicators. The evaluation process was part of a developed model of the system for implementing PPP in a region with high innovation and investment potential. As a result, key indicators for assessing the innovation and investment potential of the region were identified in the context of determining its suitability for implementing PPP. These include the level of profitability of operational activities of enterprises in the region; the share of innovation-active enterprises in the area; the level of formation of organizational and functional support for potential partnerships, etc. Lviv region was chosen for the practical application of the methodology and identified indicators. The assessment results showed how cities in the region can be ranked in terms of potential in a way that speaks to favourable conditions for the implementation of PPP.

In the future, the main focus can be on analyzing successful international practices in the field of PPP, which will allow identifying key success factors and the possibilities of their adaptation to local conditions. An important aspect is also the study of the impact of the regulatory environment on the innovative and investment climate, including the analysis of legislative and normative frameworks. In parallel, the role of technological innovations in enhancing the efficiency of PPPs can be considered, especially in the context of digitalization and modern technological trends. Additionally, the integration of socio-economic aspects, such as the impact on the development of local communities and job creation, can provide a deep understanding of the impact of PPPs on the overall development of the region. Separately, researching the risks and challenges associated with such partnerships can contribute to developing effective risk management strategies and optimizing interactions between public and private sectors.

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## ADDITIONAL INFORMATION

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The Authors declare that there is no conflict of interest.

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### ОЦІНЮВАННЯ ІННОВАЦІЙНО-ІНВЕСТИЦІЙНОГО ПОТЕНЦІАЛУ В КОНТЕКСТІ ФОРМУВАННЯ БЕЗПЕКОВОГО СЕРЕДОВИЩА ДЛЯ ВПРОВАДЖЕННЯ ДЕРЖАВНО-ПРИВАТНОГО ПАРТНЕРСТВА В РЕГІОНІ

Основною метою статті є запропонувати теоретико-методичний підхід до оцінювання інноваційно-інвестиційного потенціалу регіону для впровадження державно-приватного партнерства. Об'єктом дослідження є інноваційно-інвестиційний потенціал окремо взятого регіону. Для досягнення поставленої мети поставлене наукове завдання: розроблення й реалізація підходу до оцінки рівня інноваційно-інвестиційного потенціалу в регіоні з метою ідентифікувати перспективи для впровадження державно-приватного партнерства. Методологія дослідження передбачає застосування різноманітних методів, ключовим із яких є метод таксономічного аналізу. Визначено ключові складові інноваційно-інвестиційного потенціалу й показники, за якими було проведено оцінювання. Особливу увагу надано економіко-фінансовим показникам. Описано роботу таксономічного підходу в контексті нашого дослідження. Розраховано ключові індикатори оцінювання інноваційно-інвестиційного потенціалу для кожного міста в обраному регіоні. Визначено стандартизовані значення для кожного результату розрахунку. Здійснено ранжування всіх міст за рівнем їхнього потенціалу та визначено, яке з них має найбільший безпековий потенціал для впровадження державно-приватного партнерства. Отримані дані показали, практичну цінність запропонованого методу оцінювання. Дослідження має обмеження: урахування специфіки та відомостей лише одного регіону країни. Перспективи подальших досліджень передбачають розширення регіонального аспекту в проведенні оцінювання.

**Ключові слова:** інвестиції, інновації, потенціал, інноваційно-інвестиційний потенціал, державно-приватне партнерство, регіон, метод оцінювання, безпека

**JEL Класифікація:** E22, O31, P35, Z18