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INDICATORS OF THE EFFECTIVENESS OF INNOVATIVE MANAGEMENT OF PUBLIC-PRIVATE PARTNERSHIP DEVELOPMENT

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INTRODUCTION. In conditions of martial law, public-private partnership is increasingly seen as a critically important, effective and efficient tool for solving urgent socio-economic problems of the economy. The growing national importance of joint projects between the public and private sectors in all types of economic activity, which contribute to the inflow of external investment resources to reduce risks and the financial burden on the state, the growth of the innovative component of the military economy, the unification of the nation to achieve national goals of sustainable development, etc., further actualizes the requests for conducting comprehensive scientific research. systematizing existing approaches and methods, and generating new ideas and concepts for building a modern paradigm of long-term publicprivate partnership relations.

RESEARCH HYPOTHESIS. It consists in substantiating indicators of indicators of management of the development of public-private partnership as an innovative component of the military economy.

PURPOSE. To determine the main indicators of effective management of the

development of public-private partnership.

METHODS. General scientific and special analytical methods: analysis, synthesis, generalization, comparison, integral evaluation.

CONCLUSIONS. In the context of the post-war reconstruction of countries that have suffered large-scale destruction of infrastructure and socio-economic system, of innovative management the development of public-private partnership (hereinafter PPP) is gaining particular relevance. It is this model of cooperation that allows for the effective mobilization of resources from both sectors - public and private - for the implementation of strategically important projects. The successful functioning of such а partnership requires a deep understanding of the dynamics of the socio-economic environment, the ability to flexibly respond to challenges and orientation to innovation key as a factor of development.

KEYWORDS: interaction; public-private partnership; innovation; innovation models; integration; management of innovative development; potential; partners-participants of PPP.

NUMBER	NUMBER	NUMBER
OF REFERENCES	OF FIGURES	OF TABLES
17	0	5

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O38, F15	ІНДИКАТОРИ ІННОВАЦІЙНОГ	ЕФЕКТИВНОСТІ О УПРАВЛІННЯ
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ВСТУП. В умовах воєнного стану державно-приватне партнерство дедалі частіше розглядається як критично важливий, дієвий та ефективний інструмент вирішення нагальних соціально-економічних проблем національної економіки. Зростання вагомості спільних проєктів між державним та приватним секторами в усіх видах економічної діяльності, які сприяють притоку зовнішніх інвестиційних ресурсів для зниження ризиків і фінансового навантаження на державу, зростанню інноваційної складової мілітарної економіки, об'єднанню нації задля досягнення загальнодержавних цілей сталого розвитку тощо ще більше актуалізує запити на проведення комплексного наукового дослідження, систематизації наявних підходів методів i та генерування нових ідей і концептів побудови сучасної парадигми довгострокових відносин публічноприватного партнерства.

ГІПОТЕЗА ДОСЛІДЖЕННЯ. Полягає в обґрунтуванні індикаторів індикаторів управління розвитком державно-приватного партнерства як інноваційної складової міліарної економіки.

МЕТА. Визначити основні індикатори ефективного управління розвитком державно-приватного партнерства.

МЕТОДИ. Загальнонаукові та спеціальні аналітичні методи: аналізу, синтезу, узагальнення, порівняння, інтегрального оцінювання.

ВИСНОВКИ. У контексті повоєнного відновлення країн, ЩО зазнали масштабних руйнувань інфраструктури та соціально-економічної системи, інноваційне управління розвитком державно-приватного партнерства (далі ДПП) набуває особливої актуальності. Саме ця модель співпраці мобілізувати дозволяє ефективно ресурси обох секторів – державного та приватного – для реалізації стратегічно проектів. Успішне важливих функціонування такого партнерства вимагає глибокого розуміння динаміки соціально-економічного середовища, здатності до гнучкого реагування на виклики та орієнтації на інновації як ключовий фактор розвитку.

КЛЮЧОВІ СЛОВА: взаємодія; державно-приватне партнерство; інновації; інноваційні моделі; інтеграція; управління інноваційним розвитком; потенціал; партнериучасники ДПП. Statement of the problem and its relation to important scientific and practical tasks. PPP performance indicators in recovery conditions should cover both quantitative and qualitative aspects. This is not only about financial indicators – the volume of investments, profitability or the level of private capital attraction, but also about a broader understanding of the success of projects: the level of social impact, the degree of community satisfaction, the speed of restoration of critical infrastructure, the adaptation of technological solutions to local conditions. Another important characteristic is the transparency and accountability of the partnership, which contributes to trust between participants, reducing corruption risks and ensuring sustainable development. Innovative management in this context involves not just the use of the latest technologies, but the transformation of the management approach in general. It includes the transition to digital platforms that allow real-time coordination between partners, tracking project progress and promptly responding to changes.

The purpose of the study Substantiation of the main indicators of the effectiveness of innovative management of the development of public-private partnerships in the conditions of war and post-war recovery.

Analysis of recent publications on the problem. In the field of scientific research in the field of forming innovative models of public-private partnership and determining the components of effective management of the development of public-private partnership, such Ukrainian scientists as L. Hanushchak-Efimenko, V. Geyets, I. Hnatenko, V. Hotra, Yu. Danko, Zh. Zhygalkevych, A. Kasych, S. Solntsev, M. Shkoda, as well as foreign scientists such as A. Atkisson, J. Lescure, W.K. Mitchell, B. Santo, B. Twiss, M. Porter. J. Schumpeter and others are well-known. However, it is worth noting that the concept of defining a comprehensive approach to integration interaction requires further development, since modern scientific research currently lacks integrity and complexity in the approach to studying relevant theoretical, methodological and practical issues of the components of the model of effective management of the development of public-private partnership in the conditions of post-war recovery.

Materials and methods. Integrating sustainable development principles into PPP planning is another important aspect of an innovative approach that ensures long-term effectiveness of reconstruction. In post-conflict situations, the institutional capacity of the state plays a crucial role. It is the state that must create a favorable regulatory environment that will stimulate investors to participate in reconstruction projects. In this context, it is important to develop clear procedures for the selection, evaluation and monitoring of projects, as well as to provide guarantees for investors. At the same time, for the private sector, understanding social responsibility and readiness to act not only in commercial interests, but also in the interests of the common good is key.

Statement of the main results and rationale. A culture of cooperation, openness to partnership and learning based on best international practices are critically important conditions for the successful implementation of an innovative approach. Technology transfer, involvement of foreign experience, adaptation to the local context create the basis for building a modern, sustainable and competitive development model. Innovative management of PPP development should be perceived not as a short-term response to the crisis, but as a foundation for the formation of a new type of economic interaction in the post-war period.

In the process of practical research, it is possible to develop a comprehensive system of indicators and indicators for assessing the state of implementation of the innovative potential of enterprises at the micro level and provide a full description of the selected indicators according to the components of the available set of resources and opportunities for the implementation of innovations (Havrylenko, 2022).

Domestic specialists developed a level strategy for the innovative potential of the enterprise (Table 1).

Table 1

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Sources of cost	Brief description of the level of innovation	A defined innovation		
coverage	potential of the enterprise	development strategy		
High innovation capabilities				
Own funds	High availability of own resources. The company can implement innovative development strategies without external borrowing.	Leader – mastering new technologies		
	Average innovation capabilities			
Own funds +	Normal financial provision of production with the necessary resources. To effectively involve new	Follower or leader – mastering new or		
Long-term loans	technologies in economic turnover, it is necessary to use a certain amount of borrowed funds.	improving technologies		
Sources of cost	Brief description of the level of innovation	A defined innovation		
coverage	potential of the enterprise	development strategy		
	Low innovation capabilities			
Own funds	Satisfactory financial support for current production inventories and costs. Implementation			
long-term and	of innovative development strategies requires	Follower – mastering improving technologies		
short-term	significant financial resources from external	improving technologies		
credits and loans	sources.			
Zero innovation opportunities				
_	Deficit or absence of sources of cost formation.	-		

Levels of innovation potential of an enterprise

Source: (Hrynova & Butenko, 2013).

Based on the presented level strategy of the enterprise's innovation potential, we adapt it for selected agrarian formations of the Kyiv region over the recent period (Table 2).

Table 2

of Kyiv region, 2024					
Agricultural enterprise	Own funds, thousand UAH	Own funds + Long- term loans, thousand UAH	Own funds + long-term and short-term credits and loans, thousand UAH	A defined innovation development strategy	Characteristic
FG "Gavryshchuk"	124,60	500,00		Follower or leader – mastering new or improving technologies	Average innovation capabilities
FG "Arhat"	44035,40			Leader – mastering new technologies	High innovation capabilities
SG "Coop Agribusiness"	383989,00			Leader – mastering new technologies	High innovation capabilities
STOV "Lyubaretske"	411571,00			Leader – mastering new technologies	High innovation capabilities
TOV "AF Kyivska"	395486,00			Leader – mastering new technologies	High innovation capabilities
FG "TVK"	128477,30	500	300	Follower – development of improving technologies	Low innovation capabilities

Levels of innovation potential of agricultural formations of Kyiv region, 2024

Source: based on (Hrynova & Butenko, 2013).

Analyzing the presented information, we see that most of the selected agricultural enterprises have the characteristics of a leader in the development of new technologies and high innovation capabilities, using their own funds. However, the "Gavryshchuk" FG is a follower (leader) in the development of new or improving technologies and has average innovation capabilities, involving not only their own funds in innovation activities, but also long-term loans for the production of the latest production facilities. The "TVK" FG has the characteristics of a follower in the development of improving technologies, but with low innovation capabilities, as it involves not only its own funds in innovation, but also long-term and short-term loans and loans.

When considering innovative approaches in production activities and development strategies, it is necessary to note the introduced technologies and products that form the basis of efficiency and effectiveness (Table 3).

Table 3

Introduced technologies and products of agricultural formations of Kyiv region as of 01.01.2025

Agricultural enterprise	Number of technologies/ products introduced	Names of implemented technologies/products		
FG "Gavryshchuk"	3 Corn, wheat, sunflower			
FG "Arhat"	5	Corn, wheat, sunflower, rapeseed, barley		
SG "Coop Agribusiness"	8	Wheat, soybeans, buckwheat Laboratory for quality control of agricultural products, Commodity shop, vegetable storage, dryer, seed cleaning line.		
STOV "Lyubaretske"	3	Wheat, soybeans, buckwheat		
TOV "AF Kyivska"	6	Wheat, oats, corn, millet, buckwheat, rapeseed		
FG "TVK"	5	Soybeans, corn, winter wheat, rapeseed, sunflower		

Source: based on (KURKUL, 2023).

The next step in the study of the main indicators and methods of innovative management of the development of public-private partnership in the conditions of post-war recovery is the analysis of the operating costs of the agricultural formation in general, including for innovative activities, as they are key components that affect export potential, allow us to assess it and determine the ability of products to compete with other goods in the domestic and foreign markets. Table 4 presents the dynamics of operating costs in general, for innovative activities and per employee of the agricultural formation of the Kyiv region.

Table 4

Dynamics of operating expenses of agricultural formations of Kyiv region, 2020–2024

	Operating	Operating expenses for	Operating expenses
Agricultural enterprise	expenses, thousand	innovation activities,	per employee,
	UAH	thousand UAH	UAH
FG "Gavryshchuk"	26155,75	21186	21450,38
FG "Arhat"	34874,33	28248	17175,40
SG "Coop Agribusiness"	104623,00	84745	26697,18
STOV "Lyubaretske"	260604,80	211090	13687,62
TOV "AF Kyivska"	415687,20	336707	25574,16
FG "TVK"	22260,21	18031	6510,53

Source: based on (Opendatabot, n.d.; Proekt Clarity, 2025a-f; Hosting Ukraine, 2022].

The largest amount of operating expenses over the last five years in LLC "AF Kyivska", the smallest in FG "TVK".

Further, in the study of the main indicators and methods of innovative management of the development of public-private partnership in the conditions of post-war recovery, it is necessary to highlight the greening coefficient in agriculture, as it characterizes the safety and competitiveness of innovative products. Also, the greening coefficient in agriculture measures the degree to which agricultural activity reduces its negative impact on the environment. This can be achieved through the use of environmentally friendly technologies, reducing the use of chemical fertilizers and pesticides, as well as improving waste management

The author calculated the greening coefficient of innovative agricultural products by determining the volume of mineral, organic fertilizers and pesticides applied, their total volume and the share of organic fertilizers in the total volume of fertilizers applied.

Table 5 presents the calculated coefficient of greening of innovative agricultural products and its ranking based on the quality of implemented agrotechnical measures by agricultural formations of the Kyiv region over the last five years.

Table 5

Dynamics of the greening coefficient of innovative agricultural products and its ranking based on the quality of implemented agrotechnical measures of agricultural formations of the Kyiv region, 2020–2024

Agricultural enterprise	Greening coefficient of innovative agricultural products	Ranking of the greening coefficient of innovative agricultural products based on the quality of implemented agrotechnical measures
FG "Gavryshchuk"	88,31	3
FG "Arhat"	88,46	2
SG "Coop Agribusiness"	88,65	1
STOV "Lyubaretske"	85,27	5
TOV "AF Kyivska"	84,95	6
FG "TVK"	87,86	4

Source: based on (Opendatabot, n.d.; Proekt Clarity, 2025a-f; Hosting Ukraine, 2022].

Conclusions and prospects for further research. The distribution of enterprises by efficiency level can be used as a guideline for developing a regional strategy to support innovative development in the agricultural sector of the Kyiv region, as well as for targeted targeting of resources and consulting and educational initiatives.

According to the results of calculating the complex indicator of the efficiency of innovative management of agrarian formations of the Kyiv region

over the last five years, the top three are: LLC "AF Kyivska", STOV "Lyubaretske" and SG "Coop Agrobusiness", that is, medium-sized enterprises in the agricultural sector. The value of the complex taxonomic indicator of the efficiency of innovative management of agrarian formations is in the range from 0 to 1 and has an indirect meaning.

In addition to the general arrangement of enterprises by the level of innovative management efficiency, the analysis also allows identifying spatial and organizational differences in the agricultural sector of the region. The variability of the values of the complex indicator indicates the presence of a certain imbalance between agricultural formations, which may be due not only to internal management factors, but also to the external environment - access to markets, financing, personnel qualifications, and the level of digital integration.

The analysis of the obtained results opens up prospects for the formation of a typology of enterprises by the level of innovation efficiency and contributes to the construction of individual trajectories of managerial improvement. Also, these data can become the basis for further research to identify the most sustainable managerial solutions that ensure synergy between innovations and business performance.

REFERENCES

Havrylenko, N. H. (2022). Metodyka otsiniuvannia innovatsiinoho potentsialu promyslovykh pidpryiemstv v umovakh tsyfrovoi ekonomiky [Methodology for assessing the innovation potential of industrial enterprises in the digital economy]. *Problemy ekonomiky = Problems of economy*, Vol. 3 (53), P. 112–121 [in Ukrainian].

Hanushchak-Iefimenko, L. M., Riabchykov, O. M. (2025). Uzghodzhennia pokaznykiv produktyvnosti roboty Skram komandy z dovhostrokovymy tsiliamy vykorystovuiuchy matematychni modeli ta ShI [Aligning Scrum Team Performance Metrics with Long-Term Goals Using Mathematical Models and AI]. *Zhurnal stratehichnykh ekonomichnykh doslidzhen = Journal of Strategic Economic Research*, N_{2} 1 (24), P. 136–147 [in Ukrainian].

Hnatenko, I. A., Hnydiuk, V. S., Yarovenko, V. V. (2024). Innovatsiina model orhanizatsiino-ekonomichnoho upravlinnia stalym rozvytkom natsionalnoi ekonomiky ta biznesu na zasadakh derzhavno-pryvatnoho partnerstva [An innovative model of organizational and economic management of sustainable development of the national economy and business based on public-private partnership]. *Aktualni problemy ekonomiky* = *Actual Problems of Economics*, Nº 11, Vol. 2(281/2), P. 144–152. DOI: https://doi.org/10.32752/1993-6788-2024-2-281-144-152 [in Ukrainian].

Main Department of Statistics in Kyiv Region (n.d.). URL: <u>http://kyivobl.ukrstat.gov.ua/p.php3?c=922&lang=1</u> [in Ukrainian].

Verkhovna Rada of Ukraine (2003). Hospodarskyi kodeks Ukrainy vid 16.01.2003 № 436-IV (redaktsiia vid 28.02.2025) [Commercial Code of Ukraine dated 16.01.2003 No. 436-IV (edition dated 28.02.2025)]. URL: https://zakon.rada.gov.ua/laws/show/436-15#Text [in Ukrainian]. Hotra, V. V. (2022). Osoblyvosti stratehichnoho upravlinnia rehionalnoiu ekonomikoiu v suchasnykh umovakh [Peculiarities of strategic management of regional economy in modern conditions]. *Naukovyi visnyk Uzhhorodskoho universytetu. Seriia "Ekonomika" = Scientific Bulletin of Uzhhorod University. Series "Economy"*, № 2 (60), P. 66–70 [in Ukrainian].

Hrynova, V. M., Butenko, D. S. (2013). Otsinka rezultatyvnosti innovatsiinoi diialnosti pidpryiemstva: monohrafiia [Assessment of the effectiveness of an enterprise's innovation activity: monograph]. Kharkiv: Vyd. KhNEU [in Ukrainian].

Kasych, A. O., Cherniavska, O. V., Bondarenko, S. M., Shkoda, M. S. et al. (2024). Government 5.0 yak osnova efektyvnosti derzhavno-pryvatnykh partnerstv u period povoiennoho vidnovlennia Ukrainy: monohr. [Government 5.0 as the basis for the effectiveness of public-private partnerships in the period of post-war reconstruction of Ukraine: monograph]. Edited by Doctor of Economics, Prof. A. O. Kasych, Doctor of Economics, Prof. I. O. Tarasenko. Kyiv: KNUTD. 252 p. [in Ukrainian].

Clarity Project (2025a). Silskohospodarskyi kooperatyv "Ahrobiznes". Osnovna informatsiia [Agricultural Cooperative "Agribusiness". Basic information]. URL: https://clarity-project.info/edr/30707558 [in Ukrainian].

Clarity Project (2025b). Silskohospodarskyi kooperatyv "Ahrobiznes". Finansova analityka [Agricultural Cooperative "Agribusiness". Financial Analytics]. URL: <u>https://clarity-project.info/edr/30707558/finances</u> [in Ukrainian].

Opendatabot (n.d.). Vidkryvaiemo Ukrainu. My nadaiemo dostup do derzhavnykh danykh pro hromadian ta biznes [We are opening up Ukraine. We provide access to government data about citizens and businesses]. URL: <u>https://opendatabot.ua</u> [in Ukrainian].

Clarity Project (2025c). Silskohospodarske tovarystvo z obmezhenoiu vidpovidalnistiu "Liubaretske". Osnovna informatsiia [Agricultural Limited Liability Company "Lyubaretske". Basic information]. URL: <u>https://clarity-project.info/edr/32630697</u> [in Ukrainian].

Clarity Project (2025d). Silskohospodarske tovarystvo z obmezhenoiu vidpovidalnistiu "Liubaretske". Finansova analityka [Agricultural Limited Liability Company "Lyubaretske". Financial Analytics]. URL: <u>https://clarity-project.info/edr/32630697/finances</u> [in Ukrainian].

Clarity Project (2025e). Tovarystvo z obmezhenoiu vidpovidalnistiu "Ahrofirma "Kyivska". Osnovna informatsiia [Limited Liability Company "Agrofirma "Kyivska". Basic information]. URL: https://clarity-project.info/tenderer/30641052 [in Ukrainian].

Clarity Project (2025f). Tovarystvo z obmezhenoiu vidpovidalnistiu "Ahrofirma "Kyivska". Finansova analityka [Limited Liability Company "Agrofirma "Kyivska". Financial analytics]. URL: <u>https://clarity-project.info/edr/30641052/finances</u> [in Ukrainian].

KURKUL (2023). TOP 20 fermerskykh hospodarstv Kyivshchyny [TOP 20 farms in Kyiv region]. URL: <u>https://kurkul.com/spetsproekty/540-top-20-fermerskih-gospodarstv-kiyivschini</u>.

Hosting Ukraine (2022). FH "HAVRYShchUK" [Farm "HAVRISHCHUK"]. URL: <u>https://www.ukraine.com.ua/egrpou/32892914/</u> [in Ukrainian].

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