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MANAGEMENT OF ENVIRONMENT DESIGN OF THE DEVELOPMENT OF INNOVATIVE ENTREPRENEURSHIP AT INTEGRATED STRUCTURES UNDER THE CONDITIONS OF POST-WAR RECONSTRUCTION

ABSTRACT

In recent decades, there has been a global transition to the era of the fourth industrial revolution, which is characterized by total digitization and implementation of various innovative technologies. The ability to develop and implement them determines not only the competitiveness of an entity but also the level of well-being of the country.

The military aggression of the Russian Federation against Ukraine has led to significant losses in the national economy. The critical level of losses and high level of uncertainty prompts all the participants of the economic system to search for effective tools to recover the country. One of such instruments could be the innovative activity of enterprises which could be the key to the rapid recovery of the state in the post-war period. Therefore, the purpose of the study is to determine the direction of development of innovative entrepreneurship in the context of post-war reconstruction and to analyze the factors influencing the efficiency of innovative entrepreneurship in integrated structures.

To achieve the goal of the research, scientific methods were used, namely: statistical analysis, comparative analysis, correlation-regression analysis, and the SWOT analysis method.

As a result of the study, the peculiarities of the innovative entrepreneurship of national economic entities under the conditions of post-war reconstruction were determined. The SWOT analysis has helped to figure out the advantages and disadvantages of integrated structures in the context of innovative entrepreneurship, as well as the opportunities and risks they may face in the post-war period. Correlation-regression analysis of indicators of the level of influence of individual factors on the innovative activity of enterprises will help to form directions of influence on the external environment with the aim of stimulating innovative activity in the conditions of post-war reconstruction.

Keywords: innovative activity, integrated structures, SWOT analysis, post-war construction

JEL Classification: M21, O3

INTRODUCTION

The last decade has been characterised by considerable turbulence in the functional environment and the economic and social processes taking place in society. During this period, Ukraine faced the consequences of a dramatic transformation of the world order paradigm, economic crises caused by structural imbalances and the COVID-19 pandemic, military and political crises arising from the low level of state effectiveness as an institution of sovereign political power that governs social processes and provides security for the individual citizen and the nation as a whole and military aggression by the Russian Federation. Since 2014, Ukraine has been in a de facto state of hybrid warfare and, since February 2022, in a full-scale war with the Russian Federation, resulting in unprecedentedly severe consequences, in particular widespread destruction and losses

of at least 30% of productive capacity according to various estimates. Under such conditions, post-war reconstruction will require considerable effort and resources. The development of innovative entrepreneurship is one of the factors that make the country's renewal effective. Innovative entrepreneurship plays a significant role in the sustainable development of the economy as it involves the implementation of the achievements of scientific and technological progress, the creation of new business opportunities and the commercialisation of innovations.

The implementation of innovative entrepreneurship is based on the development and implementation of new products and technologies, assumes a significant share of innovative products in the structure of production and a high level of expenditure on innovative activities.

Under the conditions of limited resources, considerable uncertainty and increasing competition, the development of innovative entrepreneurship is relevant to any country, so the problems and characteristics of the implementation of innovative entrepreneurship are the subjects of research by many scholars around the world.

LITERATURE REVIEW

In their study (Lucaci & Sarafescu, 2022), carried out a bibliometric analysis of publications on various aspects of innovative entrepreneurship. The authors highlight the growing attention to the concept of innovative entrepreneurship since 2010. Institutions in Asia and Europe have made significant contributions to the study of innovative entrepreneurship. Most of the studies include the connection between innovative entrepreneurship and such concepts as entrepreneurial education, innovation, and educational informatics.

Scientists also pay considerable attention to the study of the implementation of innovative activities at various levels, in particular (Baumol, 2010), examining the microeconomic aspects of innovative entrepreneurship. The author distinguishes between the innovator entrepreneur and the replicator entrepreneur, focusing on the important role of the innovator entrepreneur in economic life, because this type of entrepreneur generates new ideas and implements them in economic activity. The impact of innovative entrepreneurship on a country's economic growth has also been analysed by many scholars, in particular (Galindo & Méndez-Picazo, 2013; Low & Isserman, 2015; Szabo & Herman, 2012). For example (Szabo & Herman, 2012), analyse the impact of innovation and entrepreneurship on EU economic growth and development. The scholars' analysis shows that gaps in economic development are a consequence of imbalances in innovative entrepreneurship. Therefore, the focus of government influence should be on innovative entrepreneurship and its development to ensure sustainable economic development. Thus, to stimulate innovative entrepreneurship in Romania, the authors recommend improving the quality of education, in particular, increasing the share of people with higher education, and increasing funding for higher education and scientific research.

Methodological modelling tools used by individual authors are quite non-standard and innovative (Shcherbak et al., 2019; Ovcharenko et al., 2022; Shcherbak et al., 2022; Puzyryova 2010; Zhyvko et al., 2022). In particular, the models and tools for the analysis of various economic phenomena proposed by the authors are interesting for our research.

A significant number of studies have been devoted to the problems and factors of innovative entrepreneurship development. For example (Spulber, 2012), considers hidden knowledge as a factor of innovative entrepreneurship. Spulber notes the role of hidden knowledge in shaping the competitive advantages of an entrepreneur. However, stresses that usually, an inventor with advantages generated by hidden knowledge gets a competitive advantage compared to an entrepreneur who got the innovation through technology transfer. In addition (Amini Sedeh et al., 2021), explore in their work various factors that contribute to the development of innovative entrepreneurship, in particular in the economic realities of developing countries. The authors emphasise the important role of entrepreneurial capabilities in the context of high supply and demand barriers.

The authors (Chen & Zhou, 2023), study the impact of foreign direct investment in innovation activity on the development of innovative entrepreneurship. After analysing the databases of 31 Chinese provinces for a decade, the researchers conclude that foreign direct investment stimulates the start of innovative enterprises. The authors emphasize that this relationship is also positively influenced by the development of intellectual property protection.

Poblete studies the relationship between innovative entrepreneurship, duration of entrepreneurial experience and business growth expectations (Poblete, 2018). The scholar concludes that innovative entrepreneurship is characterized by an over-estimation of business growth rates and that the correlation between entrepreneurial experience and expected growth rates is reversed. Modrego and Foster, have devoted their study to the problems of innovative entrepreneurship in rural areas, using Chile as an example (Modrego & Foster, 2021). The authors conclude that, despite the unfavourable economic geography, there is an increase in the number of innovative enterprises, including through the growth of the level of

convenience. The researchers also analyse potential directions of public policy to stimulate innovative entrepreneurship development. Modrego & Foster emphasise the feasibility of a systematic approach to innovative entrepreneurship development, which provides the implementation of state policy aimed at providing territorial public goods and amenities.

Skala explores the start-up as a manifestation of innovative entrepreneurship and the possible ways of start-up development in the context of information, economic and social transformation (Skala, 2019). The author proposed the concept of the spiral definition of a start-up.

Many scientific papers investigate public policy in the area of innovative entrepreneurship development. For example (Dahlstrand & Stevenson, 2010), point out that the concept of innovative entrepreneurial policy is insufficiently articulated and explore the factors that influence the effectiveness of integrating innovative entrepreneurial policy into a holistic entrepreneurial policy framework.

The authors (López-Claros et al., 2010), analyse the practice of using business incubators to stimulate innovative entrepreneurship in developing countries.

Despite the large number of scientific works devoted to the study of the development and functioning of innovative enterprises, many issues remain underreported. In particular, the development of innovative enterprise in the conditions of post-war reconstruction of the country, so the purpose of the current study is to analyse the features of innovative entrepreneurship development in the conditions of post-war reconstruction, to determine the factors influencing the effectiveness of innovative entrepreneurship implementation by integrated structures, and to identify potential areas of managed influence on their functional environment.

AIMS AND OBJECTIVES

The purpose of the study is to determine the features of the development of innovative entrepreneurship under the conditions of post-war reconstruction, as well as to analyze the factors affecting the effectiveness of innovative entrepreneurship performed by integrated structures.

Objectives of the study:

- determine the place of innovative entrepreneurship in integrated structures in the post-war reconstruction of Ukraine;
- find out the specifics of the functioning of enterprises in integrated structures;
- determine the global position of innovative activity in Ukraine;
- carry out a forecast of innovative activity in Ukraine;
- specify the advantages, disadvantages, strengths and weaknesses of the development of innovative activities of integrated structures;
- to find out the factors that inhibit the development of innovative activities of integrated structures;
- specify the design of strategic guidelines for the development of innovative activities of integrated structures in the post-war reconstruction of Ukraine.

METHODS

In the context of managing the development of innovative entrepreneurship, integrated business structures attract special attention, because due to the positive synergy effect such structures are able to achieve significant success in particular in innovative entrepreneurship. It should be noted that both institutional and voluntary integrated structures operate in the national economic environment. The most common integrated business structures are business associations, associations, corporations and trusts, consortia and financial-industrial groups. Depending on the level of integration of business structures, enterprises receive certain benefits when carrying out an innovative activity. In particular, at a low level of integration, members of business structures can coordinate common research and development areas, and exchange information on legal protection of intellectual property, crediting, etc. At a higher level of integration, enterprises that are part of integrated structures are able to distribute risks of innovative activities, accumulate significant capital, reallocate financial resources to the most profitable innovative projects, attract highly qualified personnel, etc.

Managing the development of innovative entrepreneurship requires an analysis of the country's innovative potential and the effectiveness of the usage of existing potential.

The overall level of development of a country's innovative potential and its effectiveness is reflected in the Global Innovation Index (GII). The methodology for calculating the Global Innovation Index proposed by INSEAD Business School involves assessing the innovative development of an individual country based on 82 indicators. The index includes two sub-indices: Innovation Input, which shows the existing innovative potential of a country, and Innovation Output, which measures the efficiency of realising a country's innovative potential.

An analysis of GII dynamics over the period 2015-2022, which characterizes innovation activity in Ukraine, allows us to identify certain features of the country's innovative development (Figure 1). Thus, Ukraine got its best result in 2018, ranking 43rd in the overall ranking, but the result deteriorated over the next four years. That in 2020-2021 was to some extent a consequence of the COVID-19 pandemic. And in 2022, the full-scale military aggression launched by the Russian Federation against Ukraine led to a significant deterioration in Ukraine's ranking to 57th place, losing 8 positions in the ranking at once.

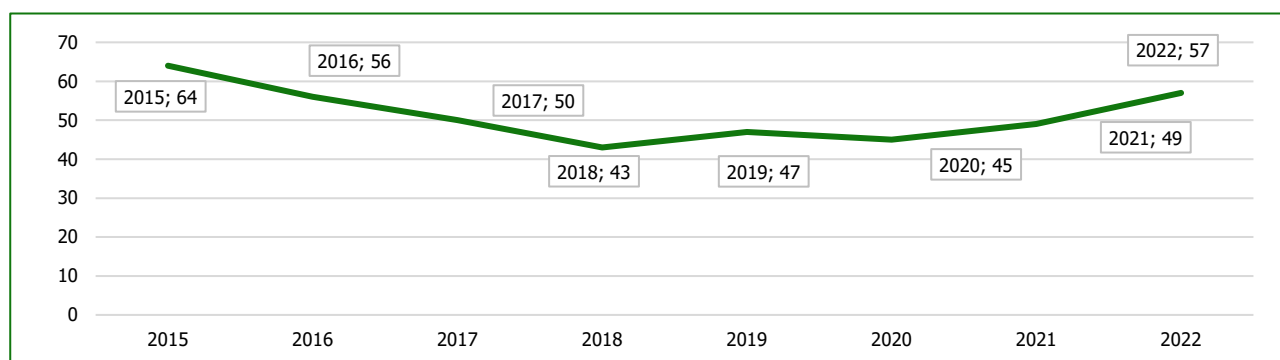


Figure 1. Dynamics of Ukraine's position in the Global Innovation Index 2015-2020. (Source: built by the authors using an Internet resource <https://www.globalinnovationindex.org/home>).

Ukraine's top scores were for human capital development and research activity, technological development and creative output, scoring 49th, 36th and 36th places respectively. These results were due to the high level of general and high education, successful penetration of national brands into the global market, modernisation of the technical base and development of the IT sector. All of these factors have a positive impact on the development of innovative entrepreneurship in Ukraine.

However, an examination of the individual components of the index indicates systemic problems (Figure 2), primarily related to the level of development of institutions, in particular the political environment, the legal environment and the business environment. While the business environment has changed positively in recent years, the political environment has continued to show a negative trend. In general, this indicator showed an improving trend in the pre-war period.

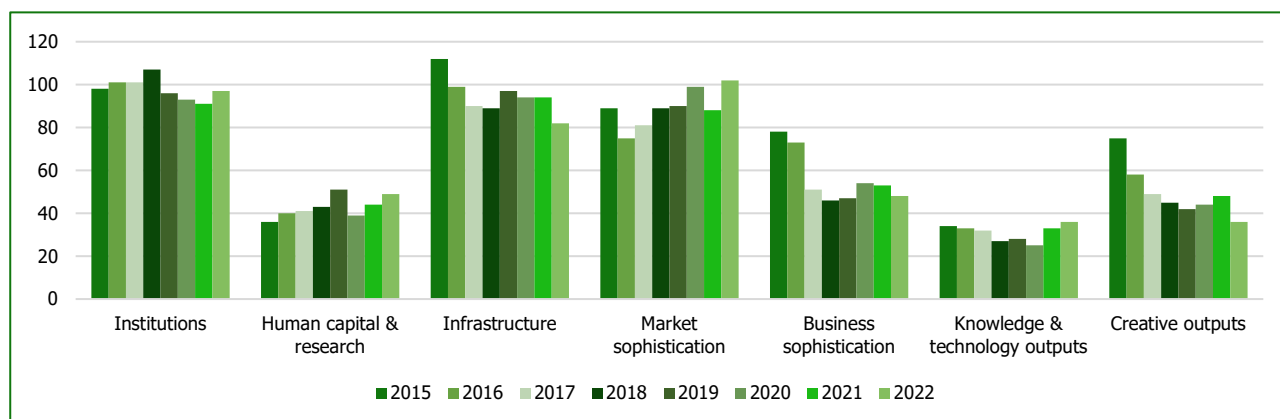


Figure 2. Dynamics of individual Global Innovation Index components from 2015 to 2020. (Source: built by the authors using an Internet resource <https://www.globalinnovationindex.org/home>).

The "Infrastructure" component reflects development challenges in the areas of general infrastructure, energy efficiency, and gross capital formation. Ukraine's "Market Structure" also has a low rating, in particular, due to its low investment attractiveness. The "Lending" and "Investing" components have extremely low values - 124 and 107 places respectively.

The biggest negative impact on these components is the lack of guarantees of investment protection from risks associated with military operations on the territory of Ukraine. It is also important to analyse the "Business Opportunity" component in the context of innovative entrepreneurship development. Ukraine ranked 48th in this indicator in 2022. The dynamics of the individual components of this indicator are shown in Figure 3, "Innovation Connections", and Figure 4, "Knowledge uptake".

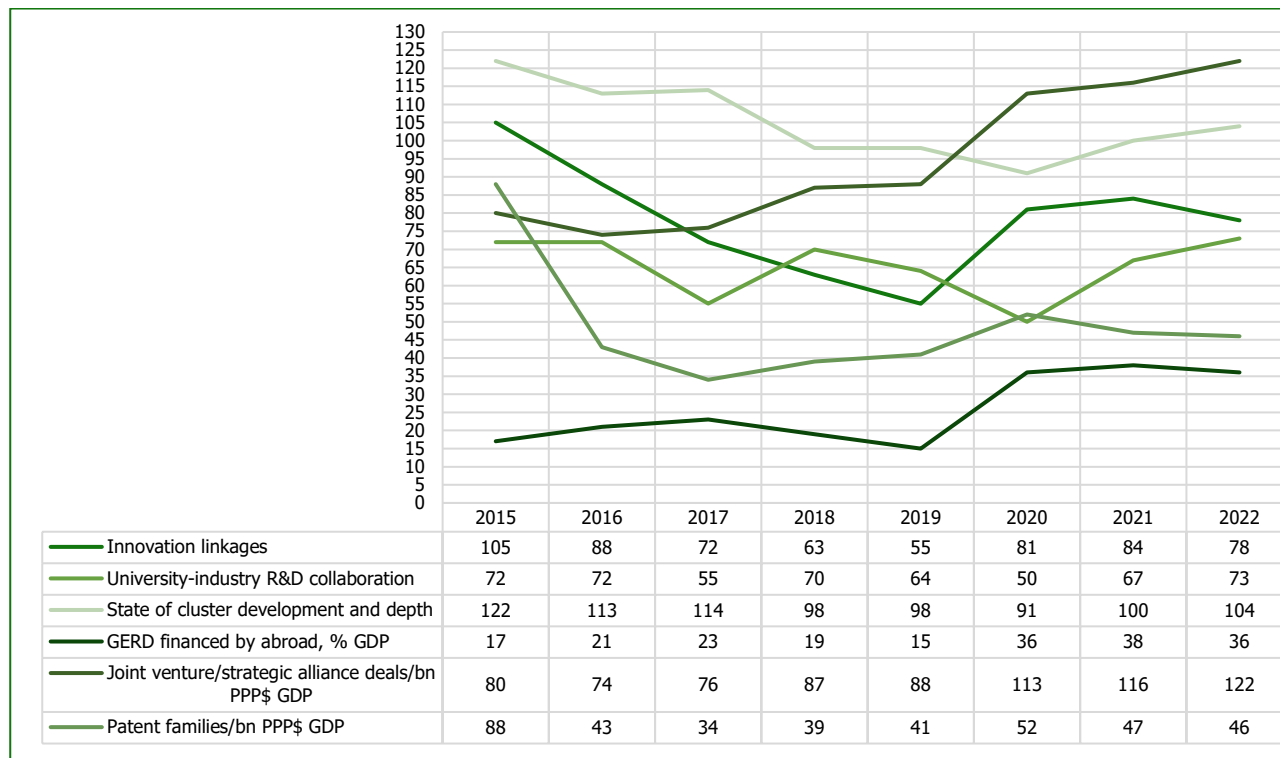


Figure 3. Dynamics of individual components of the Global Innovation Index's "Innovation Connections" indicator for 2015-2020.
(Source: built by the authors using an Internet resource <https://www.globalinnovationindex.org/home>)

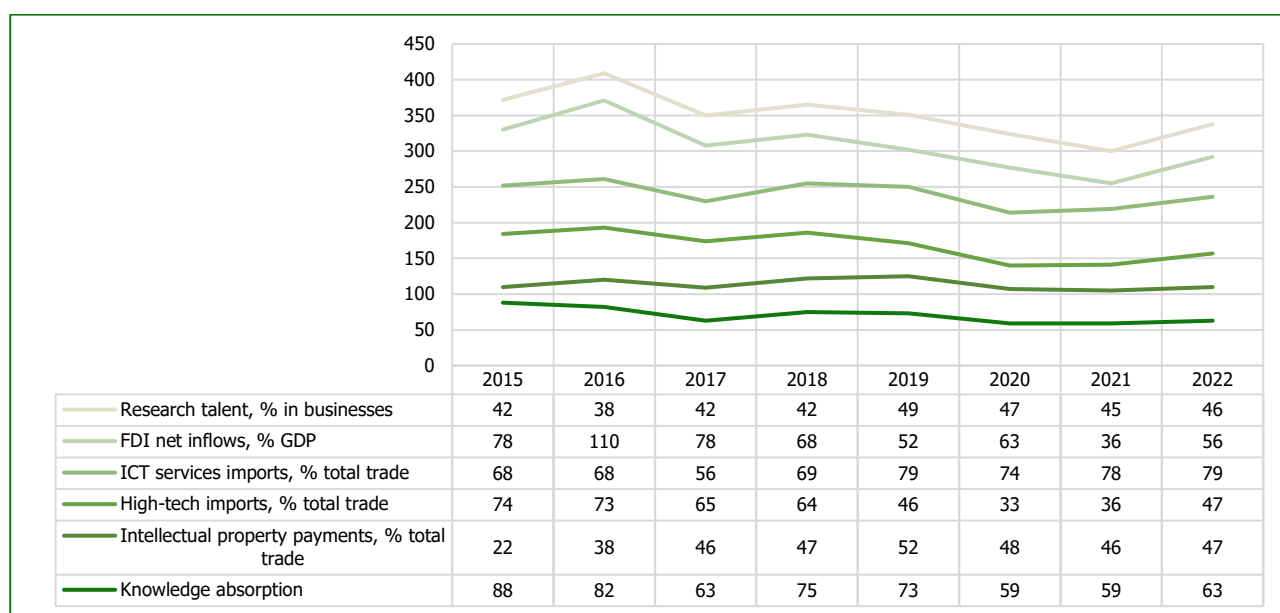


Figure 4. Dynamics of individual components of the Global Innovation Index "Knowledge uptake" indicator 2015-2020. (Source: built by the authors using an Internet resource <https://www.globalinnovationindex.org/home>)

Between 2015 and 2022, Ukraine managed to improve the "Innovative Connections" indicator and moved from 105th to 78th place. In particular, gross expenditure on research and development funded by foreign entities has increased and

the number of patents has risen. However, for all other components, Ukraine's position has deteriorated, namely, the level of university-business cooperation, the level of cluster development, joint ventures and strategic alliances forming.

There has been a deterioration in the "Knowledge uptake" indicator, with Ukraine moving from 59th to 63rd place. Within the current indicator, the worst value belongs to "Imports of ICT services", with Ukraine ranked 79th.

However, despite the difficult conditions for realising its innovation potential, Ukraine ranks fourth among countries that perform better than expected in the lower-middle-income group.

The analysis of the index indicates that there are factors that may facilitate the development of innovative entrepreneurship in the future, in particular the availability of a highly skilled workforce, a developed system of access to general and higher education, experienced personnel and a certain infrastructure for research and development activity and the rapid development of the IT sector. However, there are some factors that significantly complicate innovative entrepreneurship, namely: a complex and unbalanced legal environment, problems of intellectual property rights protection, a difficult political situation, unbalanced implementation of innovative technologies, and low investment attractiveness.

The development and stimulation of innovative entrepreneurship in the context of post-war reconstruction, in particular within integrated business structures, requires a managed influence on the economic system to eliminate the negative impact of innovative development factors and to create conditions for the development and effective realisation of innovative potential.

Open data provided by the State Statistics Committee of Ukraine and describing the innovative research and development activity of Ukrainian economic entities for the period from 2015 to 2020 were used for the analysis.

The method of correlation and regression analysis was applied to analyse and forecast innovative economic activity. This method of stochastic modelling allows, while studying a single process, to reveal the nature of the links between random variables. The advantage of this method is that it allows the analysis of the relationships of all indicators and takes into account the influence of individual random factors.

Correlation and regression analysis involve 2 stages of analysis, namely: correlation analysis and regression analysis.

The correlation analysis stage identifies the factors that have the greatest impact on the resulting indicator. This is done by estimating the relationship density between the indicator variables. The following formula (1) is used to estimate the relationship density:

$$r = \left(\sum_{j=1}^k (\chi_j - \bar{\chi}) \cdot (\gamma_j - \bar{\gamma}) \right) \cdot \left(\sqrt{\sum_{j=1}^k (\chi_j - \bar{\chi})^2} \cdot \sqrt{\sum_{j=1}^k (\gamma_j - \bar{\gamma})^2} \right)^{-1} \quad (1)$$

where r – correlation coefficient, χ_j – j value of the independent variable χ , $\bar{\chi}$ – average value of the independent variable χ , γ_j – j the value of the resulting variable γ , $\bar{\gamma}$ – average value of the resulting variable γ , k – number of observations

The coefficient r quantifies the level of relationship between two qualitative characteristics of a process or object. The value of the coefficient lies within the range $[-1;1]$. The r values, which are in the range $[-0,5;0,5]$, indicate a weak direct or inverse relationship between characteristics. Under the condition $r = 0$, there is no relationship between characteristics. If there is a high level of multicollinearity, i.e. if there are indicators with high levels of collinearity, it is useful to exclude from the model those indicators whose pairwise correlation coefficients are below the relationship density between the indicators.

After adapting the indicators set, a matrix of pairwise correlation coefficients is constructed.

In the regression analysis stage, the relations forms are determined and a model is built to produce the estimated values of the resulting indicator.

Also, at the stage of checking the model for autocorrelation, it is advisable to use the Durbin-Watson coefficient, calculated according to the formula (2):

$$dw = \sum_{j=2}^k (\varepsilon_j - \varepsilon_{j-1}) \cdot \left(\sum_{j=1}^k \varepsilon_j^2 \right)^{-1} \quad (2)$$

where k – is the number of observations, ε_j is the remainder of the j observation, calculated according to formula (3):

$$\varepsilon_j = \gamma - \gamma(\chi_j) \quad (3)$$

The Durbin-Watson coefficient indicates no autocorrelation if its value belongs to the interval (1.5; 2.5).

In order to determine how much the resulting indicator deviates from its average value if the independent indicator χ deviates by 1 per cent from its average value with fixed effects of other indicators included in the model, it is expedient to calculate average partial coefficients $\overline{\Lambda}_{\chi i}$. To do this, we will use formula (4):

$$\overline{\Lambda}_{\chi i} = \beta_i \cdot \overline{\chi_i} \cdot \overline{\gamma}^{-1} \quad (4)$$

where β_i is the regression coefficient for χ_i .

The coefficients $\overline{\Lambda}_{\chi i}$ identify possible areas of influence on the system that have been characterised by the constructed model.

RESULTS

The innovative activity of integrated structures takes place in the context of increasing global integration, intensified competition for a place on global markets, disruption of customary economic processes, high investment risks and many negative consequences of the war in Ukraine. Most of the negative factors will continue to affect to some extent the innovative activity of business structures in the post-war period. Moreover, new challenges will emerge after the end of the war, requiring a quick response and adaptation of the business entities. Under conditions of the highly turbulent functional environment and limited state resources, it is advisable for the management system to focus on addressing priority issues, taking into account the factors and objectives of the state's management influence on the innovative activity of integrated business structures.

In order to design strategic directions for the development of innovative activity, it is advisable to carry out a SWOT analysis of the innovative activity of integrated structures to identify strengths and weaknesses, as well as threats and opportunities. The formed SWOT matrix is shown in Table 1.

Table 1. SWOT analysis matrix.	
Strengths	Weaknesses
- Sufficient level of education of labour resources; - significant adaptability due to various organisational and legal forms of business activity; - leadership position in specific market segments; - a higher level of sustainability in competition; - high level of innovation and marketing skills; - availability of resources necessary to ensure innovative activity; - opportunities for rapid innovative development; - high quality of information on market conditions and peculiarities of market conditions; - more developed logistics infrastructure; - high level of digitalisation; - greater ability to cooperate in research and development.	- Imperfect legislative environment; - low level of implementation of innovative technologies; - low level of access to credit resources; - low share of innovative products in the structure of industrial production; - low efficiency of management systems at all levels of innovative activity management; - low efficiency of the state policy in the field of activation of innovative entrepreneurship; - low competitiveness on global markets; - low energy efficiency; - low level of qualification of scientific personnel; - high level of obsolescence and physical depreciation of fixed assets; - lack of financial resources; - planning of innovative activities for short horizons; - imbalance in the population structure by gender and age.
Opportunities	Threats
- Growth of domestic and foreign market volumes; - access to external financial resources; - increasing investment attractiveness; - increase in the share of innovative products in the structure of industrial production; - modernisation of the material and technical base of research and development; - increasing demand for innovations in the domestic and foreign markets; - creation of coworking spaces for research and development with unique equipment; - growing demand for innovative products from the military-industrial complex; - development of innovative infrastructure.	- Acceleration of inflation; - reduction in the volume of sales markets; - increased competitive pressure; - loss of highly skilled labour resources; - destruction of energy and/or logistics infrastructure; - deterioration of the environmental situation; - loss of assets due to military operations; - The slowdown in the pace of digitalisation; - deepening degradation of the country's innovative system; - loss of highly qualified specialists with experience in generating and implementing innovative ideas; - low level of cooperation in the research and development sector.

In the next stage of the study, it is advisable to use the method of correlation and regression analysis to build econometric models. Thus, to build the first model Y1 – the volume of sold innovative products was chosen as the resulting indicator, and the following factors that can influence the resulting indicator were considered: X1 - number of employees involved in research and development, X2 - financing of scientific and scientific-technical works from the state budget, X3 - financing of scientific and scientific-technical works from own funds, X4 – the amount of expenses on innovative activities, X5 - share of innovation-active enterprises in the total number of industrial enterprises. According to the results of the correlation analysis, one factor – X4, was selected for the model. The results of the correlation analysis of the first model are shown in Table 2.

Table 2. Paired correlation coefficients for the first model.

	Y1	X1	X2	X3	X4	X5
Y1	1					
X1	-0.49936	1				
X2	0.430988	-0.80278	1			
X3	-0.08922	0.5437	0.045176	1		
X4	0.929937	-0.205	0.104495	-0.0556217	1	
X5	0.348094	0.443808	-0.65731	-0.0972161	0.6564	1

The result of the regression analysis is a regression model characterised by the following regression statistics: Multiple R = 0.93, R-square= 0.86, Standard Error= 4653202. The regression statistics indicators for the first model are shown in Table 3.

Table 3. Regression statistics for the first model.

Multiple R	0.929937
R Square	0.864782
Adjusted R Square	0.830978
Standard Error	4653202

The regression statistics indicate a sufficiently high level of determinism of the resulting indicator by the selected factor. The proportion of Y1 variation of 86.45% depends on the variation of indicator X4. The actual value of the F - Fisher coefficient is 25.58, which significantly exceeds the critical value (7.71). The Durbin-Watson coefficient for the model is 0.61, which provides no reason to reject the null hypothesis of the Durbin-Watson test, that is, there is no correlation between the residuals. That is, the calculated regression model has the following form (5):

$$Y_1 = 286,237 \cdot 10^4 + 1,775 \cdot X_4 \quad (5)$$

The average elasticity coefficient was calculated $\overline{\Lambda}_{\chi_i}$

$$\overline{\Lambda}_{Y_1 X_4} = 1,775 \cdot 0,512 = 0,91 \quad (6)$$

That is, a 1 per cent deviation of the independent indicator X4 from its average value with a fixed impact of the other indicators results in a 0.91 per cent change in the resulting indicator.

In the context of innovative entrepreneurship, revenues from product sales are important, so a second model has been built. This model includes as a dependent indicator Y2 - revenue from innovative activity, and as independent variables: X4 the amount of costs for innovative activity, X6 -the number of employees involved in research and development and X7 - the number of innovative products implemented by industrial enterprises. The results of the correlation analysis of the first model are shown in Table 4.

Table 4. Paired correlation coefficients for the second model.

	Y2	X4	X6	X7
Y2	1			
X4	0.741106	1		
X6	-0.71559	-0.205	1	
X7	0.304877	0.710312	0.007241	1

Based on the results of the correlation analysis, independent factors X4 and X6 were selected for the second model.

The result of the regression analysis is a regression model characterised by the following regression statistics: Multiple R = 0.94, R-square= 0.88, Standard Error = 2761956.59. The regression statistics for the second model are presented in Table 5.

Table 5. Regression statistics indicators for the second model.

Multiple R	0.938559
R Square	0.880893
Adjusted R Square	0.801488
Standard Error	2761957

The regression statistics indicators show a high level of determinism of the resulting indicator by the selected independent factors. The proportion of variation Y₂ on 88.09% depends on the variation of indicators X₄ and X₆. The actual value of the F -Fisher coefficient is 11.09, which exceeds the critical value (9.55). The Durbin-Watson coefficient for the model is 1.66, which gives no reason to reject the null hypothesis of the Durbin-Watson test, i.e. there is no correlation between the residuals. That is, the calculated regression model has the following form (5):

$$Y_2 = 2596,671 \cdot 10^4 + 0,6485 \cdot X_4 - 225,581 \cdot X_6 \quad (7)$$

Average elasticity coefficients were calculated $\overline{\Lambda}_{xi}$:

$$\overline{\Lambda}_{Y_2X_4} = 0,6485 \cdot 1,049 = 0,68 \quad (8)$$

$$\overline{\Lambda}_{Y_2X_6} = -225,581 \cdot 0,512 = -1,38 \quad (9)$$

That is, a 1 per cent deviation of the independent indicator X₄ from its average value with a fixed impact of the other indicators leads to a 0.68 per cent change in the resulting indicator. A 1 per cent deviation of the independent indicator X₆ from its average value with a fixed impact of the other indicators results in a change of the resulting indicator by -1.38 per cent.

That is, in the context of managing the development of innovative entrepreneurship, the costs of innovative activity should be increased while increasing the number of employees involved in scientific research would have negative consequences. Therefore, it is advisable to focus efforts on improving the qualifications of researchers and increasing the level of cooperation with research and development institutions.

DISCUSSION

The conducted correlation and regression analysis allow for the development of a strategic planning matrix of SWOT analysis. The design of strategic benchmarks is carried out taking into account the strengths and weaknesses of the integrated structures, as well as taking into account the results of correlation and regression analysis. The developed strategic planning matrix is presented in Table 6.

Table 6. Strategic planning matrix of SWOT analysis.

SO-strategy	ST-strategy
- Entering and developing new sales markets, both within the country and abroad; - participation in start-up projects; - promotion of innovative developments in the military-industrial complex; - deepening cooperation with structures and organisations engaged in basic research; - raising public awareness of innovative achievements and popularising science; - participation in the creation of an ecosystem of innovation; - Increasing funding for innovative projects aimed at solving social problems of local communities.	- Improving the efficiency of interaction with the state to help remove barriers to innovative development; - search for new markets; - promoting research and development among young professionals; - participation in local projects to restore the damage caused by russian aggression, including the restoration of infrastructure facilities; - participation in environmental projects involving innovative solutions; - Increasing the level of cooperation with research and development institutions; - participation in projects aimed at improving energy efficiency.
WO-strategy	WT-strategy
- Adaptation and implementation of foreign innovative solutions in the production and management of integrated structures participants; - expanding cooperation with research and development institutions to implement projects to modernise the innovative infrastructure; - Renewal and modernisation of fixed assets with the help of foreign grants; - participation in municipal projects to restore municipal facilities, including infrastructure.	- Search for diversified sources of financing for innovative activities; - development and implementation of programmes to improve the skills of personnel involved in research and development; - improving the quality of the management system at all levels of innovative activity management; - participation in digitalisation projects; - searching for new sales markets to increase the share of innovative products in the total production volume.

CONCLUSIONS

Although hostilities are still raging in Ukraine, finding ways to rebuild the country in the post-war period is a critical task, as the scale of destruction caused by war is unprecedented and in need of immediate intervention. In the context of the post-war reconstruction of the country, innovative entrepreneurship can play a leading role, as it will allow the most effective realisation of the existing potential in the development of an independent, competitive country, capable of providing a high social and economic standard of living for its citizens.

The national economy is characterized by high rates of digitalisation in certain sectors, the rapid development of the IT sector, the availability of a highly skilled labour force, well-developed general and higher education systems, and experience in research and innovative activity, which has a positive impact on the country's innovative potential. However, there are several factors that have a negative impact on innovative activity, namely intellectual property protection problems, low share of innovative products in total output, obsolete and physically worn-out equipment, low energy efficiency, etc. Activation of innovative entrepreneurship in integrated structures can help to overcome certain barriers to innovative development.

The advantages of integrated business structures in the implementation of innovative activity are their ability to accumulate significant financial resources, the availability of highly qualified personnel, considerable flexibility due to the various organizational and legal forms of the structure of participants, experience in conducting research and development, the ability to effectively cooperate in the field of research and development activity. To increase the innovative activity of integrated structures, the state should improve the legal environment, optimize taxation and stimulate venture investment programs, while the integrated structures should increase funding for innovative activity, improve the skills of researchers, increase the share of innovative products in the production structure, improve cooperation with research institutions, increase the level of interaction with the state to remove barriers to innovative activity.

The formation and implementation of factors influencing the efficiency of innovative activity of integrated structures may be a subject for further research.

ADDITIONAL INFORMATION

AUTHOR CONTRIBUTIONS

All authors have contributed equally

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УПРАВЛІННЯ ДИЗАЙН СЕРЕДОВИЩЕМ РОЗВИТКУ ІННОВАЦІЙНОГО ПІДПРИЄМНИЦТВА В ІНТЕГРОВАНІХ СТРУКТУРАХ В УМОВАХ ПІСЛЯВОЄННОГО ВІДНОВЛЕННЯ

Протягом останніх десятиліть спостерігається глобальний перехід до епохи четвертої промислової революції, яка характеризується всеохопною цифровізацією та впровадженням різноманітних інноваційних технологій. Здатність їх розробляти та впроваджувати визначає не лише конкурентоспроможність суб'єкта господарювання, а й рівень добробуту країни.

Воєнна агресія російської федерації проти України призвела до значних втрат у національній економіці. Критичний рівень збитків і висока невизначеність спонукають усіх учасників економічної системи до пошуку ефективних інструментів відновлення країни. Одним із таких інструментів може стати інноваційна діяльність підприємств, яка є запорукою швидкого відновлення країни в повоєнний період. Тому метою дослідження є визначення напрямів розвитку інноваційного підприємництва в умовах післявоєнної відбудови та аналіз чинників, що впливають на ефективність здійснення інноваційної підприємницької діяльності в інтегрованих структурах.

Для досягнення мети дослідження були використані наукові методи, а саме: статистичний, порівняльний, кореляційно-регресійний, SWOT-аналіз.

У результаті дослідження визначено напрями розвитку інноваційного підприємництва суб'єктів національної економіки в умовах післявоєнної відбудови. SWOT-аналіз допоміг з'ясувати переваги та недоліки інтегрованих структур у контексті інноваційного підприємництва, а також можливості та ризики, із якими вони можуть зіткнутися в післявоєнний період. Кореляційно-регресійний аналіз виявив рівень впливу окремих чинників на інноваційну активність підприємств і допоміг сформулювати напрями впливу на зовнішнє середовище з метою стимулювання інноваційної діяльності в умовах післявоєнної відбудови.

Ключові слова: інноваційна діяльність, інтегровані структури, SWOT-аналіз, післявоєнне відновлення

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