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INVESTMENT AND INFRASTRUCTURE DEVELOPMENT PROJECTS IN PUBLIC–PRIVATE PARTNERSHIPS IN UKRAINE

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Introduction. Acquiring sustainable development of the public-private partnership process is an urgent task, given the need for post-war reconstruction in Ukraine. Nowadays, development is suspended, which is experiencing an investment gap due to the risks and uncertainty of war conditions and insufficient guarantees for investors, an imperfect legal framework, and unresolved institutional problems. Therefore, the task of identifying obstacles to the development of public-private partnerships and improving their mechanisms arises.

Aim and tasks. The study aims to analyse investment and infrastructure development projects within the framework of public-private partnership in Ukraine, identify barriers to sustainable development, assess the prospects for external financing and the need for private investment, develop proposals to increase the level of guarantees for investors and improve the mechanism of public-private partnership.

Results. The need to change the principles of evaluating public-private partnership projects is indicated to facilitate the formation of a new paradigm of cooperation between society, business, and institutional structures during the post-war reconstruction of Ukraine. Obstacles to developing public-private partnerships, exceptionally high risks for investors, significant uncertainty caused by the war, insufficient investment guarantees, and the way to acquire a dynamic public-private partnership financial model are indicated. It is proposed that projects aimed at redistributing risks between project participants be diversified and fragmented, which will facilitate the involvement of SMEs in the public-private partnership mechanism. New approaches are proposed to increase the level of guarantees to investors and measures to improve the public-private partnership mechanism, which will provide the prerequisites for sustainable development.

Conclusions. The conducted analysis showed that the improved mechanism of public-private partnership would reduce the risks of external investment by 28% and increase the chance of returning insured loans in case of failure by 11.9%, which increases guarantees for external creditors. This indicates that the total share of private investment in public-private partnership projects should reach 67%, and external investment should provide 75% of the total volume of investments.

Keywords: public-private partnership, stable foundations, infrastructure investment, project financing, economic recovery.

1. Introduction.

During the full-scale war in Ukraine, significant destruction of industrial and infrastructure facilities necessitates their restoration using the mobilization of all possible resources and mechanisms for raising funds for these purposes, one of which is public-private partnership (PPP). However, the development of PPP in Ukraine has stopped nowadays primarily because, in the conditions of war, the public-private partnership process is experiencing an investment gap, not only because of high risks but also because of insufficient guarantees for the economic actors of PPP.

An obstacle to developing PPP is the imperfections in the legal framework and unsettled institutional problems. The practice and experience of the European Union can serve as a benchmark for the formation of stable foundations for PPP development. In particular, Serbia and Croatia's experience in involving the PPP mechanism in reconstruction after military conflicts testifies to the effectiveness of this mechanism. Thus, in 2023, Serbia entered the top ten EU countries in this field regarding the number of PPP infrastructure projects (European Investment Bank, 2024a). Simultaneously, to successfully implement the PPP mechanism, it is necessary to ensure its support not only by institutional structures and businesses but also by Ukrainian society.

An argument for forming a favourable internal environment can be the positive impact of PPP on various spheres of the economy. According to the European Investment Bank (2024a), PPP gas pipeline projects in EU countries relate not only to transport (26% of the total number of projects in this direction) but also to the environment (26%), housing and communal services (7%), and public services (5%). This provides grounds for asserting the importance of PPP for a comprehensive solution to social and economic problems. Simultaneously, the experience of using the PPP mechanism in Ukraine and the expected complications of the interaction of partners in the post-war period indicate the need for its improvement, the search for new forms and methods of investment attraction, and an increase of guarantees for economic actors of public-private partnerships.

2. Literature review.

A significant corpus of scientific research has been devoted to the study of public-private partnership issues. In Ukraine, the theoretical and methodological aspects of PPP were thoroughly studied (Tan and Zhao, 2019; Narbaev et al., 2019; Strasser et al., 2021; Batjargal & Zhang, 2022) in particular, in Ukraine (Stakhova, 2020; Bairak, 2020).

Casady et al. (2019), Cui et al. (2019) and Maurya and Srivastava (2019) have claimed that PPP requires new public administration approaches. In particular, Sanni (2021) indicated that one of the main reasons for the failure to implement PPP infrastructure projects is the improper organisation of institutional support for this process. Morar (2021) pointed out sectoral differences in the development of public-private partnerships, while Kang et al. (2019) and Bolomope et al. (2021) noted that development is not sustainable and that the implementation of infrastructure projects needs to be more active.

According to Mostovyi (2020), political instability, lack of access to financial resources, excessive tax burden and uncertainty of economic strategy are the main reasons for the underdevelopment of public-private partnerships in Ukraine. In Ukraine, there are cases where the activities of informal structures are associated with the inefficiency of PPP.

Therefore, in the article of Bohuslavska (2023), the formation of a "favourable legal environment", purposeful state policy in the field of PPP, and anti-corruption reforms are indicated as prerequisites for the sustainable development of PPPs. At the same time, investments in PPP projects will grow due to an increase in the level of guarantees to investors and the use of new forms of financing infrastructure projects.

This, in particular, is indicated in the article by Yu et al. (2018), where a way to form industrial funds with the participation of citizens and securitization, in particular, using securities secured by PPP property, is proposed. This approach is developed in the presented study. Makavsek and Moszoro (2017) indicate that the practice of risk transfer under PPP projects leads to the need to increase investment in projects.

Given the uncertainty of Ukraine's post-war recovery, these risks will increase, which will require an increase in the level of guarantees to investors. Wibowo (2024) notes that the uncertainty of post-war conditions required an increase in the rate of return to compensate for the risks of investing in PPP infrastructure projects.

Batjargal and Zhang (2022) pointed out the significant variability of PPP mechanisms in different countries, determining the need for flexibility in implementing infrastructure projects. At the same time, the main reason for the failure of many PPP projects in different countries is the lack of effectiveness of risk management, which is indicated as the reason.

According to Clark and Hakim (2019), the PPP mechanism has developed unevenly among countries, while Malik and Kaur (2022) found it even within certain regions of a single country. In order to prevent internal negative trends and activate the development of PPP, scientists have proposed various measures, particularly transnational PPP projects (Chen et al., 2019). Although the set of critical success factors proposed by researchers varies significantly from country to country, in all studies, the following are prerequisites for PPP development: the presence of a favourable environment and effective control of PPP projects, reliable investment guarantees, and an appropriate level of infrastructure development (Osei-Kyei et al., 2017; Malik & Kaur, 2022; Shi et al., 2018).

Studies also confirm that there is no single model for attracting investments using the PPP mechanism and a single approach that guarantees stable foundations for the development of public-private partnerships. National priorities and the level and peculiarities of economic development specific to each country determine the national specificity of PPP implementation.

As a condition for the sustainable development of PPP, some scientists indicate the need to direct them to the development of industries whose condition is the most unsatisfactory and therefore requires state and international financial support, in particular, health care (Zulu et al., 2023), in the energy industry (Kuzior et al., 2023), social and infrastructure projects (Vu et al., 2023).

Public-private partnership is a guarantee of sustainable development (Dorosh et al., 2023; Makavsek & Moszoro, 2018; Fay et al., 2021), an opportunity to solve perennial problems in the national economy, problems of technological and social development (Toe, 2021; Sehgal & Dubey, 2019), the task of reducing the state budget deficit (Wibowo, 2024; Arezki, 2020), see the need to rebuild countries, in particular Ukraine in the post-war period.

A review of literary sources indicated that there is no single formula for the formation of stable PPP foundations for all countries, and the proposals of Ukrainian scientists in this direction have certain differences. Therefore, there is a need to: assess the current state of PPP in Ukraine, identify obstacles to the activation of the PPP process, and propose measures and directions that will provide the prerequisites for the sustainable development of public-private partnership.

3. Methodology.

This study used general scientific knowledge methods. An analytical method was introduced to study statistical sources. This method of analysis and synthesis made it possible to reveal the influence of military actions on the stability of the public-private partnership process. The dialectical method proposes a change in the principles of assessing PPP projects and points to the formation of a new paradigm of cooperation among society, business, and institutional structures in PPP during the country's post-war reconstruction.

The method of critical analysis proposes a method of dynamic formation of the PPP financial model, approaches to increasing the level of guarantees to investors of public-private partnership projects, and measures and directions for improving the public-private partnership mechanism, which will provide prerequisites for the sustainable development of public-private partnerships.

4. Aim and tasks.

The study aims to analyse investment and infrastructure development projects within the framework of public-private partnership in Ukraine and identify directions for improving post-war development.

This determined the formulation and solution of the following tasks: identification of obstacles to the activation of the PPP process, assessment of external international financing prospects and needs for private investments, development of proposals to increase the level of guarantees to investors and improvement of the PPP mechanism.

5. Results.

Currently, in Ukraine, only 11% of the public-private partnerships projects are at the implementation stage (Ministry of Finance of Ukraine, 2024). Implementing 58% of PPP contracts has been suspended, another 25.8% has expired, and, therefore, the legal relations under them have been terminated, and 5% have had their implementation suspended due to force majeure caused by armed aggression. External factors also strongly influenced the presence of internal Ukrainian reasons. According to the World Bank (2023), the European region has seen the largest decline in average annual investment over the past five years, down to 48%. At the same time, the need to attract investments is high. The Ministry of Finance of Ukraine (2024) has developed a unified project portfolio for 2024-2027 with a total volume of public investment projects of 1.49 trillion UAH (36.1 billion US dollars).

However, only four out of 101 projects in the transport sector which need financing are PPP projects, accounting for 1.96% of the total financing of the sector’s investment portfolio. Due to the significant need for external financing, in 2025, international financial institutions and organisations are expected to receive 59.2 billion UAH (1.43 billion US dollars), and in 2026 - only 17.0 billion UAH, which is equivalent to 441.8 million US dollars (Ministry of Finance of Ukraine, 2024).

The most essential and urgent direction of post-war reconstruction is the restoration of critical infrastructure (energy sector, transport etc.) by more than 411 billion dollars, according to preliminary estimates (World Bank, 2023c).

Therefore, even with significant international financial assistance, recovery will require mobilising all possible resources and involving all possible tools.

In view of the above, it is worth assessing the volume of external investment obligations in PPP infrastructure projects, first of all, for countries whose economies do not occupy leading positions in the world. The volume of investment commitments in PPP infrastructure projects in low- and middle-income countries fluctuates significantly yearly and shows a downward trend (Figure 1).

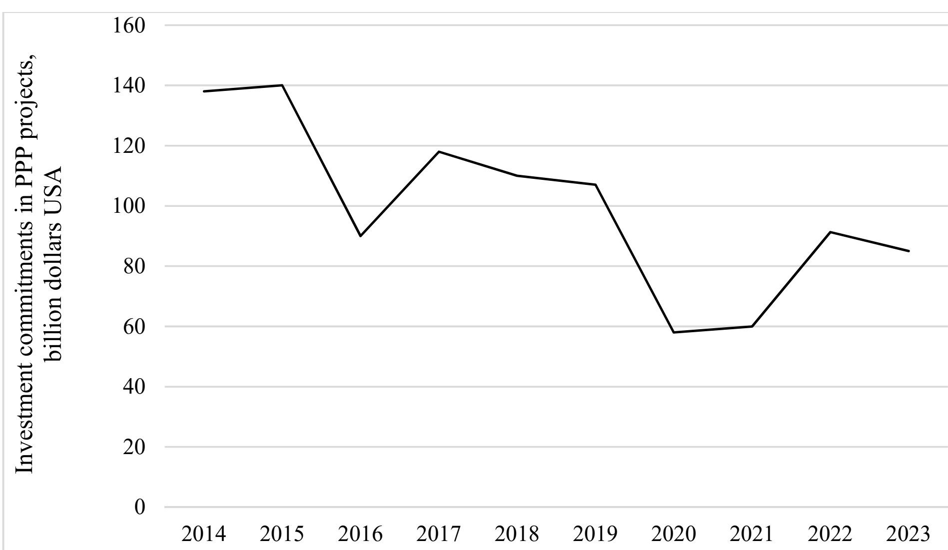

Fig. 1. Dynamics of external investment commitments in PPP infrastructure projects in low- and middle-income countries.

Source: based on World Bank (2023b).

Thus, in 2020-2021, this indicator almost halved compared to 2018-2019, which will be due to the impact of the COVID-19 pandemic. In 2023, the volume of external investment obligations in public-private partnership projects decreased relative to the value 2022 due to the full-scale war in Ukraine. In 2023, the global volume of investments in PPP projects decreased, and the specific volume of investments (in one project) was reduced by 31.5%.

According to the World Bank (2023b), the amount of domestic investment is three times smaller than the amount of foreign investment, and the largest share of foreign investment is direct commercial investment. The specified comparison provides an opportunity to assess the direction of investment in PPP projects under a successful institutional policy of investment attraction.

War makes significant adjustments in areas related to project management and investment planning. A significant level of uncertainty regarding the duration of the war, the amount of material, financial and human losses requires a change in approaches in the strategic planning of the national project portfolio and measures to increase the share of PPP projects in it.

Evidence of the specified uncertainty, in particular, is the unevenness of the stages of damage assessment by the World Bank (World Bank, 2023a) from military actions by the economic sector (Fig. 2). In particular, there are discrepancies in the amounts of losses by assessment stages RDNA1 (loss assessment in the period from 02.24.2022 to 06.1.2022), RDNA2 (covering the period from 02.24.2022 to 02.24.2022), RDNA3 (covering the period from 02.24.2022 to 1.12.2022). 2023). As it can be seen from Fig. 2, clarification of losses at stages RDNA2 to RDNA3 led to no increase over time in the number of losses in the energy sector, which is a consequence of errors in previous estimates, and even to a decrease in the estimate of the number of losses in the transport sector.

Uncertainty in the amount of losses, and even in long-term investment risks, leads to a reduction in external private investments to recover Ukraine's economy, including PPP projects.

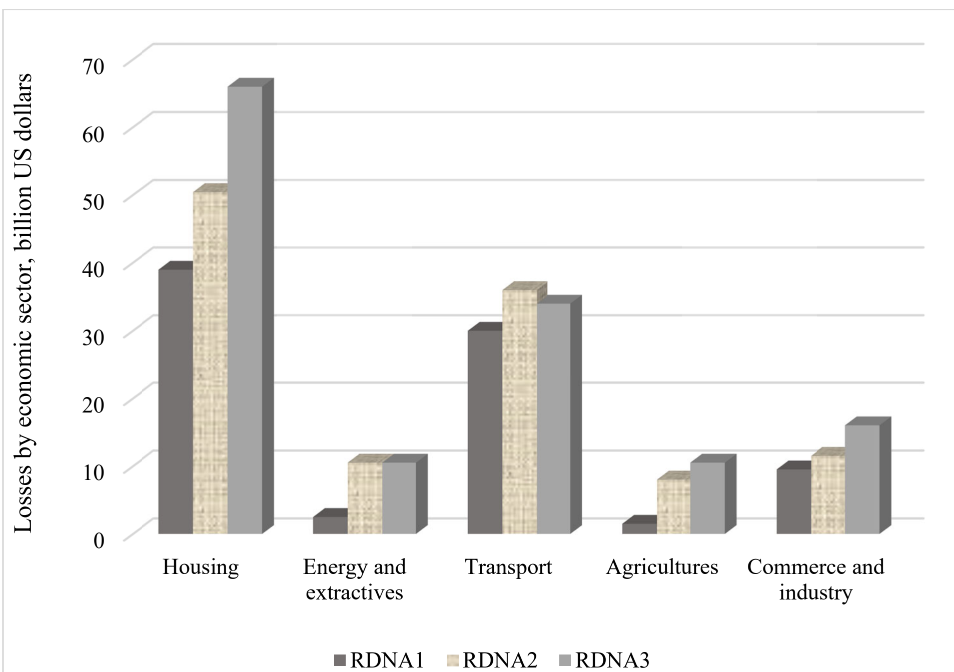

Fig. 2. Losses by economic sector according to stages of loss assessment, billion US dollars.

Source: based on World Bank (2023a).

With the end of the war, the level of uncertainty and risks will be reduced, which, with the appropriate policy of attracting investors and increasing guarantees, can contribute to the stable development of PPP in Ukraine. Sustainable investment in PPP infrastructure projects in the post-war period will allow for the rapid restoration of critically important facilities and in the short term will ensure the minimum needs of the population and in the strategic perspective will form the prerequisites for the development of a competitive economy.

This requires a significant improvement of the mechanism for the implementation of public-private partnership projects, a change in approaches to the institutional support of this sphere, the introduction of new methods and forms of interaction between state institutions, business and international organizations, taking into account the needs of the post-war recovery of Ukraine.

Although a certain regulatory and legal toolkit for attracting investments on the basis of PPP was formed in the country, it was, rather, not the result of a purposeful state policy but a consequence of adaptive practice and the need to fulfil assumed international obligations. Nowadays, the attraction of foreign investments, primarily private investments, is limited not only due to a significant level of uncertainty and risks but also due to the inconsistency of the PPP mechanism.

Therefore, the relevance of the concept of “sustainable PPP for post-war reconstruction” (Agency on Support Public-Private Partnership, 2023) has increased, which requires new tools and should promote the interaction of institutional structures, subjects of economic activity, financial institutions, and international organizations.

This, first of all, determines the need for a broader view on the evaluation of the effectiveness of PPP projects, which should be based not only on economic and financial indicators, but also on such social parameters as the quality of life, the welfare of the population, etc. Indicators of the level of restoration of the affected areas due to the implementation of PPP projects should also be included in the assessment.

In view of the above, it is advisable to move from the evaluation of projects according to the principle of “Value for Money” to the evaluation according to the principles of “Value for People” and “Value for Sustainable Reconstruction and Further Dynamic Development”. This should be supported by a normative provision regarding the inclusion of a condition for the acquisition of at least one of the Sustainable Development Goals to PPP contracts.

The success of the implementation of the concept of sustainable PPP for post-war reconstruction requires not only regulatory measures but also the formation of appropriate economic and financial incentives, in particular, to ensure a favourable competitive position on the international market for attracting investments and implementing the "build back better" principle in the PPP process (restoration with higher quality and use of modern innovative technologies). At the same time, in the face of significant economic troubles and the need for post-war reconstruction, the importance of PPP mechanisms in the comprehensive solution of social and economic problems is increasing, which will require forming a favourable internal and external environment.

A specific factor in the formation of a favourable internal environment for PPP during post-war reconstruction can be the creation of additional jobs, which increases not only the quality of life of the population. This also creates a new paradigm of cooperation between society, business, and institutional structures in public-private partnerships during the post-war reconstruction of the country.

This will require not only the improvement of PPP mechanisms but also the revision of established views in this area. In particular, modern international practice points to the expansion of economic relations in PPP, such as the tendency to increase the share of multilateral foreign investments in PPP projects (Fig. 3). The largest share of the total investment in PPP projects (67% according to international practice) is made up of private investments. At the same time, a significant obstacle to attracting foreign private investments is the inconsistency of the Ukrainian legal field and investment attraction policy with international PPP practice.

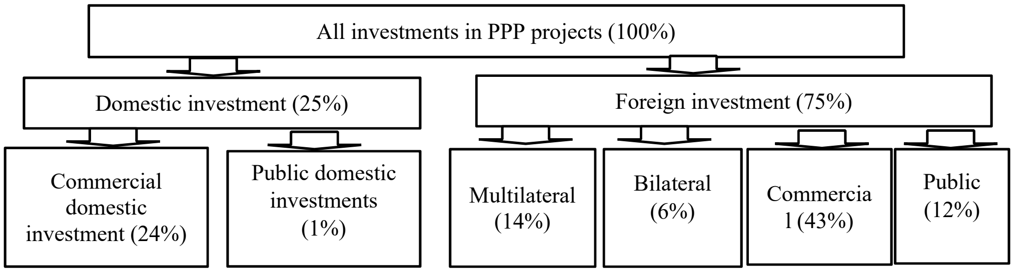

Fig. 3. Distribution of sources of investment in PPP projects in 2023 according to international practice.

Source: based on World Bank (2023b).

For example, when implementing a PPP project under the terms of a concession, according to international practice, the evaluation of the concession object should be carried out by expert structures chosen by the potential concessionaire. In this case, the evaluation methodology based on the practice tested in developed countries may not consider the peculiarities of the Ukrainian regulatory and legal system. In addition, for a potential foreign concessionaire, the incentive to enter into a PPP project is a short investment payback period. At the same time, infrastructure objects proposed by the Ukrainian side for concession projects are usually unprofitable. Sometimes, the payback period reaches tens of years, which makes investments in this project unattractive.

This requires legal standardization of the assessment of the value of the concession object according to established international standards, revision of the practice of risk distribution between parties to PPP contracts, and changes in approaches to the implementation of PPP projects. Such approaches can be, for example, the so-called energy service projects (ESCO), which are based on the principle of making a profit due to the future saving of energy resources and the introduction of energy-efficient technologies; crowd projects for the inclusion of citizens' financial resources in the PPP mechanism. It is also appropriate to involve independent, for large and long-term projects, primarily international, rating agencies to evaluate not only the rating of tender participants but also to evaluate the credit ratings of financial instruments used in the project, for example, securities that are important for the effectiveness of crowd projects. The specified securities (shares, bonds, etc.) must be in free circulation. A rational step would be to ensure, in a normative and legal manner, the possibility of converting debt obligations of past periods for property objects that are part of the integral property complex of the project. This will increase confidence in the PPP mechanism and allow the owners of securities to benefit from the increase in their value during the implementation of the public-private partnership project.

The involvement of rating agencies guarantees the credit quality of the project and will reduce investment risks, which, in turn, will ensure more favourable terms of contracts between project participants and insurance companies. The insurance company's participation in the project will provide a higher level of investment security guarantees to the economic actors of the PPP.

The involvement of a wide range of investors, particularly citizens, in the PPP mechanism and the free circulation of securities will create prerequisites for forming a new dynamic financial model of PPP. The dynamism of the model will ensure the attraction of investments not only at the beginning of the project but also during its implementation, which will allow levelling of the risk inherent in PPP projects, an increase in the need for financing due to unforeseen costs, and to reduce the time of project implementation.

The participation of a wide range of investors in the PPP mechanism will also contribute to the democratization of society as citizens gain experience in participation in economic projects and public control of economic activity.

The new dynamic financial model of the PPP should also guarantee the security holders their payments. The participants of PPP projects, both insurance companies and institutional structures, must provide the specified guarantees. This will form the prerequisite for introducing a new mechanism for distributing and neutralising PPP risks. This will positively affect the estimates of the Global Emerging Markets Risk Database (GEMs) Consortium, using which the risks of lending to projects in developing markets are significantly reduced (Table 1). Since the risks for private companies whose projects are lent by consortium members are 27.8% higher than for projects involving the state (Table 1), and the share of the return of insured loans is 11.9% lower, this increases the level of guarantees for external creditors of PPP projects where one of the contractual parties is necessarily the state. This, accordingly, will increase the volume and pace of lending to economic actors of PPP in Ukraine by international organisations, first of all, the initiators of the creation of GEMs: the European Investment Bank and the International Finance Corporation, which, in turn, will form the prerequisites for the sustainable development of PPP in Ukraine.

Table 1. General indicators of bankruptcies and return of insurance sums in the period 1994-2023 in developing markets.*

Project type	Overall default rate, %	Number of defaults	Signed amount in € million	Average recovery rate, %
Project of a private company	3.56	1561	28967	72.2
Project with the participation of the state	2.59	251	3828	85.9

**according to the credits of the participants of the Global Risk Database Consortium.*
Source: based on World Bank (2023b).

The problem of guaranteeing the implementation of long-term budget programs that finance PPP projects and, accordingly, the continuation of state participation in long-term projects whose life cycle can reach dozens of years also needs to be regulated in a regulatory and legal manner. There is also a risk of unstable fiscal legislation for long-term PPP projects. A change in the rules and regulations in the field of taxes can reduce the payback period of the PPP project and even lead to the bankruptcy of private companies (project participants). Therefore, as a party to the PPP contract, the state must guarantee the stability of the legislation regulating the level of direct and indirect fiscal risks for public-private partnership projects. This especially applies to PPP infrastructure projects, where costs incurred at the initial stages are irreversible. Therefore, if the project fails, there is a problem of insurance for losses caused by the actions of one of the parties to the PPP contract.

According to the principle of risk sharing between the parties to the PPP agreement, the private partner assumes risks that may be predetermined in the contract, such as construction and operational risks.

At the same time, there are risks for which the other party must be responsible, for example, political and economic instability, the risk of populism, and indirect fiscal risks are often not subject to formalisation in contracts. This makes the parties to the contract unequal, particularly under unstable conditions.

This can be solved by contracting, diversifying, and fragmenting project tasks and creating a system of contracts in addition to the basic PPP contract.

The concession agreement may include contracts with the investment company, which should be the main coordinator of the project and property manager, and phased contracts with the project development company, construction organisations, and operator holders.

The diversification and fragmentation of super-large infrastructure projects will allow PPP participants to re-select part of the functions of socio-economic regulation in a certain location or by direction of development to solve the problem of complicating the connections of the state administration system, which will increase the flexibility and efficiency of economic management.

Fragmentation of project tasks will also solve the problem of ensuring the integrity of the object of public-private partnership. This problem arises when concluding a concession agreement or an agreement on joint activities since a complete property complex can be territorially distributed in different locations and be owned by different legal entities, which will significantly complicate the implementation of PPP projects.

An obstacle for foreign investment today is also a complex and outdated system of industry norms. For example, a condition for PPP projects in the road infrastructure is prohibiting the construction of toll highways without allowing the user to choose a toll-free highway. A problematic issue for PPP projects is often insufficient inter-sectoral coordination, which can not only slow the execution of works but even lead to a stoppage of the project. Therefore, the risk of an insufficient level of inter-sectoral coordination should be foreseen by the PPP contract, and the state, as a party to the contract, should be responsible for its neutralization.

In Ukraine, due attention is not paid to the involvement in PPP of industries that are characterized by the appropriate level of innovation capacity for PPP projects, that is, the specific volume of involved investments, which is calculated as the ratio of the total amount of investments to their sectoral share in the total number of PPP projects. The information and communication industry, with an innovation capacity index of ~2.15, had, in previous periods, only 0.8% of PPP contracts out of their total number (Ministry of Finance of Ukraine, 2024).

Moreover, this indicator is greater than the indicator of the following industries: water supply and drainage by 6.14 times (as a share of the total number of transactions, which in the period from 2018 varied from 33% to 40%), energy by 2.53 times, water transport by 1.5 times, road transport 1.41 times. This indicates not only the insufficient innovative level of PPP projects but also the neglect of one of the goals of public-private partnerships – the country's acquisition of an appropriate level of technological and economic competitiveness in the global market. This also, to some extent, contradicts the declared theses about the innovative direction of PPP projects before the active phase of the war (Bohuslavska, 2023).

An obstacle to external investment is the insufficient level of development of modern digital financial instruments. In particular, decentralized finance (DeFi) plays an increasingly important role in the global financial system in digital transformation. This requires overcoming the digital divide, forming interstate digital compatibility, and adapting Ukraine's national financial system and regulatory legal field to expand investment opportunities using DeFi.

Proof of the investment attractiveness of DeFi projects is the Ukrainian start-up "P2P Finance", which attracted external investments of 3.5 million US dollars. Investments using decentralized finance are facilitated by Ukraine's significant overall international rating in this area. At the same time, the relatively low overall rating and other indicators are deterring factors (Table 2).

Table 2. Comparative data for the 2023 national implementation of DeFi.

Country	General rating	Ranking by total value of DeFi	Rating of the total cost of centralized services	Rating of the total value of the retail service	Ranking by total retail DeFi value
India	1	1	1	1	1
USA	4	2	2	8	2
Ukraine	7	10	5	3	10
Brazil	9	9	11	15	11
China	11	10	5	13	23
Turkey	12	11	9	35	12

Source: based on Chainalysis blockchain data platform (2024).

Given the above, the following will contribute to the sustainable development of PPPs in Ukraine in the post-war period:

1. There is a need for a PPP mechanism to mobilise additional sources of financing for the reconstruction infrastructure.
2. The possibility of avoiding the dispersion of institutional administration with complex and ultra-complex projects is characteristic of the country's post-war reconstruction.
3. The transition from a narrowly targeted direction of both individual PPP projects and state policy in this area to a multi-purpose one, an example of which should be complex infrastructure projects to expand their purpose from economic tasks to a driver of accelerated restructuring of the economy, social, environmental, and other spheres of activity.
4. Expansion of the PPP investment market with the involvement of international partners, primarily external private investors.
5. Effective mechanisms for the operational management of changes to PPP contracts and the introduction of new forms of interaction between institutional structures, business, and international organisations, which, in particular, necessitate the need to ensure permanent dynamic changes in the regulatory and legal field in the sphere of PPP.
6. A rational approach to assessing the private partner's contribution to the PPP project according to internationally established norms and rules.
7. Involvement of a wide range of investors, small and medium-sized businesses, and citizens in the PPP mechanism.
8. The free circulation of PPP projects' securities will contribute to the democratisation of society by acquiring the experience of public control of economic activity by a wide range of citizens.
9. Expansion of PPP forms.
10. A new dynamic financial model of PPP should reduce the risks of public-private partnerships by increasing the level of guarantees to investors.
11. The rational redistribution of risks between project participants and risk insurance. Participation in PPP risk assessment and insurance of international partners.
12. Determination in the normative and legal field of guarantees to the economic actors of PPP regarding the avoidance of the state transferring the risk of demand to private contractors in infrastructure projects.
13. Guaranteeing by the state for PPP projects the stability of direct and indirect fiscal risks, taking on the risks of political and economic instability, and the risk of an insufficient level of inter-sectoral coordination.
14. Diversification and fragmentation of project tasks.
15. Taking on the part of the functions of socio-economic regulation in a certain location or by direction of development to increase the level of diversification and complications of connections of the state administration system will increase the flexibility and efficiency of economic management.

6. Conclusions.

The study of the development of public-private partnership indicates its suspension. The reason for this is that in the conditions of war, the PPP process experiences an investment gap, not only because of significant risks and a high level of uncertainty but also because of the lack of guarantees for the economic actors of the PPP. This indicates that the total share of private investment in PPP projects should reach 67%, and external investment should provide 75% of the total investment volume.

Obstacles to activating the PPP process have been identified, including the problem of guaranteeing the implementation of long-term budget programs that finance PPP projects, the instability of fiscal legislation, and the insufficient development of modern digital financial instruments. At the end of the war, the level of uncertainty and risks will be reduced, which, with the appropriate policy of attracting investors and increasing the level of guarantees, can contribute to the stable development of PPP in Ukraine. It is indicated that during post-war reconstruction, the transition from evaluating projects based on the principle of “Value for Money” to evaluation based on the principles of “Value for People"” and “Value for Sustainable Reconstruction and Further Dynamic Development” will increase public support for PPP.

This should be supported by a normative provision that includes a condition for acquiring at least one of the sustainable development goals for PPP contracts. New approaches to implementing the PPP mechanism have been proposed, particularly the use of securities, which will allow citizens to attract financial resources. The involvement of a wide range of investors in the PPP mechanism and the free circulation of securities will create the prerequisites for the formation of the dynamic nature of the PPP financial model and will contribute to the democratisation of society, with a wide range of citizens gaining experience in public control of economic activity. Approaches to increasing the level of guarantees to investors in PPP projects have also been proposed. Specifically, it includes the involvement of rating agencies and international insurance companies.

This indicates that the PPP mechanism will reduce the risks of external investment compared to exclusive business projects and increase the return of insured loans in case of failure. A promising direction for improving the PPP mechanism is the diversification and fragmentation of projects, which will reduce redistribution risks and contribute to the involvement of small and medium-sized businesses in the public-private partnership mechanism, solving the problem of ensuring the integrity of the PPP object. Super-large infrastructure projects will solve the problem of complications of connections in the public administration system, increasing the flexibility and efficiency of economic management. Measures and directions for improving the PPP mechanism that will ensure the prerequisites for the sustainable development of public-private partnerships are proposed.

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