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FEATURES OF RISK MANAGEMENT AFTER REALIZING PPP PROJECTS

Abstract. The article is devoted to the clarification of the peculiarities of risk management during the implementation of PPP projects. The author identifies a set of risks for a private partner, business risks of PPP projects and the main risks associated with the protests of the public, as well as public and international organizations. The typical risks of PPP projects are presented, including force majeure, political risks, profitability risks, operational, construction, financial risks, and the risk of default. The world experience of sharing risks between the partners is presented. Also named are the main methods for assessing the risks of PPP projects.

It has been determined that the conditions on which the parties should reach agreement in order for the contract to be concluded are essential. Risk management can be implemented within the framework of the essential conditions for the allocation of risks. However, the provisions of the law provide for the allocation of only those risks identified by the results of an analysis of the effectiveness of the PPP project. Legislation does not directly determine how risks can be al-

located to the risks identified during the pre-contract negotiations (or even at a later stage), but not taken into account in the analysis of efficiency. For example, suggestions on the terms of the partnership agreement as part of the bidding proposal may include suggestions on risk management mechanisms. There are no definite and can not be fully defined possible ways of managing risks in view of their specificity for a particular project. For this purpose, it is advisable to provide for a period of familiarization with the draft tender documentation and the possibility of making changes to it based on the findings received from potential contestants. It is also advisable to foresee cases in which it is possible to review certain terms of the contract without a competition.

It is substantiated that the law does not restrict the possibility of foreseeing specific terms of an agreement on the implementation of the PPP project or to conclude additional (auxiliary) contractual instruments (for example, an investment agreement). At the same time, when laying down conditions not provided for by law, it is necessary to take into account the scope of competence of the state partner. Also, in order to ensure the principle of equality of conditions, the state partner should provide such additional conditions in the tender documentation.

Keywords: public-private partnership, state partner, risk assessment, private partner, PPP risks.

ОСОБЛИВОСТІ УПРАВЛІННЯ РИЗИКАМИ ПІД ЧАС РЕАЛІЗАЦІЇ ДПП-ПРОЕКТІВ

Анотація. Стаття присвячена з'ясуванню особливостей управління ризиками під час реалізації ДПП-проектів. Автором виокремлено сукупність ризиків для приватного партнера, бізнес-ризиків ДПП-проектів та основних ризиків, пов'язаних з протестами населення, а також громадських та міжнародних організацій. Наведено типові ризики проектів ДПП, серед яких: форс-мажорні обставини, політичні ризики, ризики прибутковості, операційні, будівельні, фінансові ризики, а також ризик дефолту. Наведено світовий досвід розподілу ризиків між партнерами. Також названо основні методи оцінювання ризиків ДПП-проектів.

Визначено, що істотними є умови, щодо яких сторони мають дійти згоди для того, щоб договір був укладений. Управління ризиками можливо реалізувати в межах істотних умов розподілу ризиків. Однак положення законодавства передбачають розподіл лише тих ризиків, які виявлені за результатами проведення аналізу ефективності проекту ДПП. Законодавство прямо не визначає, яким чином можуть розподілятися ризики, виявлені в процесі переддоговірних переговорів (або навіть на пізнішому етапі), але не враховані при аналізі ефективності. Наприклад, пропозиції щодо умов договору про партнерство як частина конкурсної пропозиції претендента можуть містити пропозиції щодо механізмів управління ризиками. Не визначено й не може бути повною мірою визначено можливі способи управління ризиками з огляду на їх специфіку для конкретного проекту. Для цього доцільно передбачити період ознайомлення з проектом конкурсної документації та можливість внесення змін до неї за результатами зауважень, отриманих від

потенційних учасників конкурсу. Також доцільно передбачити випадки, в яких можливий перегляд окремих умов договору без проведення конкурсу.

Обґрунтовано, що законодавство не обмежує можливості передбачити особливі умови договору про реалізацію проекту ДПП або укласти додаткові (допоміжні) договірні інструменти (наприклад, інвестиційний договір). Водночас при викладенні умов, не передбачених законодавством, необхідно враховувати обсяг компетенції державного партнера. Також для забезпечення принципу рівності умов державний партнер має передбачити такі додаткові умови в конкурсній документації.

Ключові слова: державно-приватне партнерство, державний партнер, оцінювання ризиків, приватний партнер, ризику ДПП.

ОСОБЕННОСТИ УПРАВЛЕНИЯ РИСКАМИ ПРИ РЕАЛИЗАЦИИ ГЧП-ПРОЕКТОВ

Аннотация. Статья посвящена выяснению особенностей управления рисками при реализации ГЧП-проектов. Автором выделены совокупность рисков для частного партнера, бизнес-рисков ГЧП-проектов и основных рисков, связанных с протестами населения, а также общественных и международных организаций. Приведены типичные риски проектов ГЧП, среди которых: форс-мажорные обстоятельства, политические риски, риски доходности, операционные, строительные, финансовые риски, а также риск дефолта. Приведен мировой опыт распределения рисков между партнерами. Также названы основные методы оценки рисков ГЧП-проектов.

Определено, что существенными являются условия, по которым стороны должны прийти к согласию для того, чтобы договор был заключенным. Управление рисками возможно реализовать в рамках существенных условий распределения рисков. Однако положения законодательства предусматривают распределение только тех рисков, которые выявлены по результатам проведения анализа эффективности проекта ГЧП. Законодательство прямо не определяет, каким образом могут распределяться риски, выявленные в процессе преддоговорных переговоров (или даже на более позднем этапе), но не учтены при анализе эффективности. Например, предложения об условиях договора о партнерстве как часть конкурсного предложения претендента могут содержать предложения по механизмам управления рисками. Не определены и не могут быть в полной мере определены возможные способы управления рисками, учитывая их специфику для конкретного проекта. Для этого целесообразно предусмотреть период ознакомления с проектом конкурсной документации и возможность внесения изменений в нее по результатам замечаний, полученных от потенциальных участников конкурса. Также целесообразно предусмотреть случаи, в которых возможен пересмотр отдельных условий договора без проведения конкурса.

Обосновано, что законодательство не ограничивает возможности предусмотреть особые условия договора о реализации проекта ГЧП или заключить дополнительные (вспомогательные) договорные инструменты (напри-

мер, инвестиционный договор). В то же время при изложении условий, не предусмотренных законодательством, необходимо учитывать объем компетенции государственного партнера. Также для обеспечения принципа равенства условий государственный партнер должен предусмотреть такие дополнительные условия в конкурсной документации.

Ключевые слова: государственно-частное партнерство, государственный партнер, оценки рисков, частный партнер, риски ГЧП.

Problem statement. The system of relations between the state and the private business sector in the form of public-private partnership (PPP) is one of the manifestations of a mixed economy, which under certain conditions can have a positive effect for society as a whole, providing the economy with better quality goods. It is risk management that will reduce the probability of failure of the PPP projects and will promote the development of this type of cooperation with private business.

Analysis of recent publications. The works of the following leading scientists, namely N. M. Bondar [2; 3], I. A. Brailovskyi [4; 5], A. V. Mostepaniuk [7] and Ye. L. Cherevykov, etc. were devoted the issues of risk management during the implementation of the PPP projects. [8] and others. However, due to the urgency of the introduction of public-private partnership (PPP) in the economic activity of the state, this issue requires constant study, which predetermined the choice of the theme of this scientific article.

The purpose of the article is to find out the features of risk management during the implementation of the PPP projects.

Presentation of the main material. The effectiveness of public-private partnership, hereinafter referred to as the PPP, is considered from the point

of view of each partner. If it is enough for the private sector to apply standard performance measurement methods that are suitable for any company, then the task for the state is more difficult. The tasks that the state tries to solve through public-private partnership (PPP) cannot be estimated in quantitative ways only. Ultimately, all such projects are aimed at solving strategic state tasks, reducing the severity of social contradictions. There are no effective mechanisms for assessing the effectiveness of decision making of this kind. However, it is safe to assume that the precise planning of such projects and the maximum risk assessment for them significantly increases the chance of achieving the goals by both parties [1].

The potential benefits of using public-private partnerships (PPP) may consist in the fact that this format of business-government relations can provide:

- Greater efficiency, as well as time savings in project implementation and implementation through the use of partnerships of their most powerful parties;

- Diversity in the approaches to development and the further implementation of projects due to the use of different methods and the expansion of the number of possible options;

– Higher quality of economic and managerial decisions in the implementation of joint projects, provided by the qualification of business representatives, and the most comprehensive consideration of social needs and social significance, which is provided by representatives of government;

– The integration of business entities into public life due to its direct involvement in the implementation of meaningful, socially significant projects;

– Improvement of the quality of the goods and services provided due to the establishment of more rigorous state control;

– Reducing social tension and negative attitude to business by the public by recognizing its contribution to solving social problems.

Efficiently using and developing public-private partnership (PPP), the state may additionally attract private investor funds for the purpose of developing public infrastructure objects in priority innovative projects for reconstruction, modernization, construction of transport facilities, power lines, hydrotechnical systems, communication lines, information systems; objects of social value in the sphere of education, science, culture, health care, tourism, etc.; municipal objects of the economy: utilities, public transport, residential facilities, and landscaping, etc.

The set of risks for a private partner can be divided into four large groups as follows [2]:

1) Risks arising from the activities of state authorities;

2) Risks associated with the participation of the state as a partner in public-private partnership (PPP) projects;

3) Business risks of public-private partnership (PPP) projects;

4) Risks associated with the protests of the population, public and international organizations.

The risk category plays a significant role in public-private partnership (PPP) relations. Like any kind of economic activity, the PPP during its implementation may be subject to certain influences that may adversely affect the final results of the project. The key factors in risk assessment are: the probability of their occurrence and the degree of effects (impact) of the risks, if any. In our opinion, it is necessary to create a special approach to risk assessment of public-private partnership (PPP) projects, especially from the point of view of the state [4].

Among the risks arising from the activities of public authorities should be noted [2]:

- A high level of corruption at all levels of government. Unfortunately, this risk is inherent even for market-developed and economically successful countries;

- A large bureaucracy of state authorities, which leads to delaying the decision of issues related to the approval and implementation of the project;

- Change of regulatory framework in the field of project implementation. Such changes may introduce new taxes and fees, requirements for additional investments related to environmental protection, restrictions on pricing, and business rules, etc. Ultimately, this can lead to the loss of a private investor's expected profits.

- Changing priorities in social and economic policy at the state or municipal level. Such changes can lead to the

termination of state support for the project, reduction of budget subsidies, and reduction of the expected profitability of the project, etc.;

- Confiscation (nationalization) of capital invested by a private investor;
- Change of political system in the country.

The business risks of public-private partnership (PPP) projects include the usual business risks, as follows [3]:

- Incorrect assessment of solvent demand. This leads to the false approval of the project as a profitable and inappropriate investment;

- Unforeseen increase in the prices of equipment and materials necessary for the implementation of the project. It is impossible to take into account all possible options for increasing the prices for resources, energy sources, etc. that will occur during the project implementation period at the development stage of the project. This may result in a lack of approved investment volume for project implementation;

- Incorrect assessment of the project value (increase in value during its implementation). In this case, it is probable that a private investor will receive insignificant profits or even losses from the project implementation;

- Errors of technical design and implementation of the project;

- Incorrect estimation of profitability and payback period of the project. Such risks are related to changing requirements for pricing, increasing current costs and decreasing demand, etc.;

- Ineffective project management. It takes place due to insufficient experience of the management personnel of a company as a private investor;

- Exchange rate risk (for contracts in foreign currency);

- Force majeure circumstances (natural disasters, and civil disturbances, etc.).

The main risks associated with the protests of the public, public and international organizations are as follows [3]:

- Negative impact of the project on the environment;

- Insufficient level of technical safety of the project;

- Rejection of the project by society through religious, moral, historical and architectural motives and others;

- Violation of human rights or national minorities.

Among the typical risks of project implementation, the PPP mechanisms are both force majeure circumstances and political risks and profitability risks, operational, construction, financial risks and the risk of default (See Table).

The world practice of public-private partnership (PPP) has already gained the experience of sharing risks between partners. The basic principles of risk sharing are the following [2]:

- 1) The risk should be passed on to those from the partners who have better opportunities to control the events that may lead to a risk;

- 2) Risks must be defined, understood and evaluated in a certain way by all parties involved in the project;

- 3) The accepting partner must have the technical or managerial capacity to manage the risk;

- 4) The partner must have the financial capacity to be able to survive the risk or prevent a risk;

- 5) The partner must be willing to take risks.

Typical risks of the PPP projects and their hypothetical placement

Risk category	Example	Best partner for risk management
Force-majeure circumstances	Losses from natural disaster	Public partner
Political risks	Transfer deadlines for approval of projects, land acquisition, change in law affecting income	Public partner
Risk of profitability/demand	Insufficient income due to low traffic or lower price for elasticity of demand	Mostly state, but sometimes a private partner
Design/Technical risks	Engineer or designer mistakes	Private Partner
Construction risks	Increasing the costs of detaining with faulty equipment	Private Partner
Operating risks	Expenditure operations and lifecycle support	Private Partner
Risks in the field of the environment	Compensation for damages, compensation costs/repayment of obligations for environmental damage	Private Partner
Financial risks	Expenses arising from the inconsistency of hedging income and debt management	Basically, a private partner is sometimes state-owned
The risk of default	Project bankruptcy due to any or all of the above facts	Divided Public/Private Partner

* Compiled by the author on the basis [9]

Risk management of the PPP project is carried out at the stage of concluding an agreement on the implementation of the PPP project between the public and private partner. This reduces risk management to a very short time before the project starts. In addition, the possibilities of risk management mechanisms to a large extent depend on the provisions of the tender documentation approved for the conduct of a tender for the identification of a private partner.

Legislation does not provide for a simple way of changing the conditions of the PPP. In particular, it is unclear

what changes may require a re-run of a tender for identifying a private partner.

In this regard, effective government risk management mechanisms need to be foreseen at the stage of conducting a tender for identifying a private partner and ultimately enshrining in the PPP project contract.

It should be noted that the essential terms of the contract on PPP are defined in the Procedure for holding a tender for the identification of a private partner for the implementation of public-private partnership on the objects of state, communal property, approved

by the Resolution of the Cabinet of Ministers of Ukraine dated April 11, 2011, № 384. Significant conditions of the contract are as follows [6]:

- The name of the state partner and the object of public-private partnership (PPP);

- Obligations of the parties, including the scope and form of financial participation of public and private partners in the implementation of the partnership;

- The list, scope and terms of performance of work stipulated by the contract;

- Requirements to the quality of goods, services, performed in accordance with the contract;

- The distribution of risks identified by the results of an analysis of the effectiveness of the implementation of public-private partnerships (PPP) between partners and the form of management of such risks;

- The procedure and conditions for obtaining a tender for the right to use the land plot for the implementation of public-private partnership (PPP), if necessary;

- Conditions, size and procedure for making payments, if such are stipulated by the terms of implementation of the said partnership;

- The procedure and conditions for the distribution between the parties to the partnership agreement on income and/or products, if such distribution is provided for by the terms of the partnership implementation;

- Requirements for the return after the termination of the partnership agreement of the public-private partnership (PPP) object and the land plots provided for the needs related to

the implementation of such a partnership;

- An obligation to reimburse the cost of analysing the effectiveness of public-private partnership (PPP) and/or environmental expertise;

- Conditions for amending the partnership agreement;

- Responsibility of the parties for its non-fulfilment;

- Procedure of dispute settlement;

- The term of the partnership agreement, the date, place of signing and the procedure for its entry into force.

Significant are the conditions on which the parties must reach agreement in order for the contract to be concluded. Risk management can be implemented within the framework of the essential conditions for the allocation of risks. However, the provisions of the law provide for the allocation of only those risks identified by the results of an analysis of the effectiveness of the PPP project. Legislation does not directly determine how risks can be allocated to the risks identified during the pre-contract negotiations (or even at a later stage), but not taken into account in the analysis of efficiency. For example, suggestions on the terms of the partnership agreement as part of the bidding proposal (Clause 25 of the Order) may include proposals for risk management mechanisms. There are no defined and cannot be fully defined possible ways of managing risks in view of their specificity for a particular project. For this purpose it is advisable to provide a period of familiarization with the draft tender documentation and the possibility of making changes to it on the basis of observations re-

ceived from potential contestants. It is also advisable to foresee cases in which it is possible to review certain terms of the contract without a tender.

Legislation does not restrict the possibility of providing specific terms for the PPP project implementation agreement or for the conclusion of additional (auxiliary) contractual instruments (for example, an investment agreement). It is necessary to take into account the scope of competence of the state partner at the same time, when laying down conditions not provided for by law. The state partner should also provide such additional conditions in the tender documentation in order to ensure the principle of equality of conditions.

One or more of the following methods may be used in risk assessment as follows [7]:

1. *The Expediency Method*, aimed at identifying the potential risk areas of the project. According to this method, the generalized risk factor is considered to be a surplus of funds in comparison with the planned volume. The investor can make a decision regarding termination of project appropriations at the same time, taking into account various factors of project realization provides the possibility of separating the process into separate stages, assessing the risk area that the project enters at each stage and accordingly guarantees the protection of the public and private partner from critical and catastrophic risks, since at each stage [7].

2. *The Expert Estimation Method* is used when it is impossible to assess risks in other ways or there are many formal risks that it is difficult to evaluate mathematically. The application of this method is to use the intelligence of

people and their ability to find solutions to formal tasks. The methodology of conducting expert evaluation involves the formation of the purpose of evaluation, the setting of tasks, the creation of a rating group, and a description of the form of obtaining the necessary results, selection of experts and determination of their competence. In this case, the selection of experts should be carried out in such a way that the experts who entered the group, firstly, were aware of the peculiarities of the implementation of the PPP; secondly, they were aware of the specifics of the work of a particular industry (the sphere of activity of the enterprise); and thirdly, they were not interested in the results of the evaluation. The competence of experts is objectively determined by the degree of their qualifications in a particular field of knowledge through the analysis of professional, scientific and other activities [7].

Risk management continues throughout the life of the project and takes place in the following five stages [5]:

- 1) *Risk Identification*. The process of identifying all risks related to the project;

- 2) *Risk Assessment*. Determination of the probability of the identified risks and the magnitude of the consequences in case of their occurrence;

- 3) *Distribution of Risks*. Distribution of responsibilities between the PPP parties for a project with the identification and assessment of the consequences of each risk for each of the parties under the contract or the parties agreeing to deal with risks using the specified mechanism, which may include a risk exchange;

4) *Risk Reduction*. An attempt to reduce the likelihood of a risk and degree of its consequences for the parties;

5) *Monitoring and Analysis*. Monitoring and analysis of identified risks and new risks with project development and changes in its environment. This process takes place throughout the duration of the contract.

An analysis of the practice of implementing public-private partnership (PPP) projects indicates that the risk management system should include the following main procedures [7]:

- Detection of risks;
- Assessment of risks and the possibility of risk occurrence;
- Characteristics of risks;
- Monitoring (control) of risks, in particular, the possibility of renewal of risk;
- Analysis of the consequences on the occurrence of risk;
- Development of risk management methods.

The key to effective allocation of risks is the principle that certain types of risks should be assigned to those participants that are most suited to risk assessment, control and risk management. If the state seeks to transfer to a private company certain additional risks that it cannot manage, it will increase the duration of negotiations and remuneration of the company. If the private party tries to take responsibility for the technical, commercial and financial risks, then it should question the value of the contract or the competence of the private company [8].

The procedure for determining the distribution of risk has the following steps [5]:

Step 1: All project risks should be identified. These include the overall risks of public-private partnerships, as well as the risks of specific projects (for example, public health risks in the water supply project).

Step 2: Identifying the main services that will be provided by the state and for which the risks cannot be attributed to a private partner.

Step 3: It is necessary to check each of the remaining risks and identify those in which:

- The government is in the best position to manage them;
- A private partner is in the best position to manage them;
- None of the parties has control;
- In accordance with this, determine the optimal allocation of risks.

Step 4: Determine whether there are any risks from the remaining ones and how they should be allocated according to the conditions of a particular market or specific factors associated with the project.

Step 5: Final distribution of public-private partnership (PPP) risks, taking into account both Step 3 and Step 4, and using the contract to resolve any imbalance between the parties.

Conclusions. Today, it is crucially important for the successful implementation of the PPP-projects to be the distribution of risks between a public and private partner. This question is fairly widely presented in the studies, and one can conclude that there is no universal risk-sharing scheme at present. Nevertheless, most unsuccessful examples of the PPP implementation are due to the parties failing to agree on the distribution of possible risks (or individual risks are not distributed among participants at

all), when each PPP participant attempts to transfer responsibility to a partner. Particularly high individual risks in the PPP projects in the area of transport infrastructure, which are characterized by high capital intensity and difficulties in forecasting transport flows.

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