

Public-and-private partnership projects in housing-and-communal sector for ecological wellbeing in Russian cities

Asiiat Mottaeva^{1,*}

¹Moscow State University of Civil Engineering, Yaroslavskoye Shosse, 26, 129337, Moscow, Russia

Abstract. Housing-and-communal services have significant effect on the ecological situation in the cities. Therefore, considerable attention has to be paid on the development of this sector, that in turn demands great financial influences. According to the authors, the projects with the use of the mechanism of public-and-private partnership can be the good solution of this problem. The process of preparation of the project for its implementation through the public-and-private partnership mechanism as well as some aspects, which could cause the partnership failures. The authors also point out, that it is very important to create a legal base, which would stimulate the use of the public-and-private partnership mechanism, providing appropriate protection for investors and creditors.

1 Introduction

International experience proved the success of the use of the public-and-private partnership (PPP) for the creation of new facilities and for the maintenance of the existing infrastructure in the social sector and in the field of housing-and-communal services.

- Despite the importance of the PPP projects, some problems in the field remain unresolved:
- - there is a serious terminological and conceptual uncertainty (the terminology, used for the description of PPP is not standardized, there are serious disagreements in determination of the PPP features);
- - the PPP role in the modern economy is not defined (including the questions when and how it is necessary to allow the state intervention economy, in what spheres it is necessary to develop PPP, how long and large-scale the projects have to be);
- - it is not defined who can be the parties of the PPP and what will be the character of the relations among them;
- - it is not defined what institutional, organizational mechanisms of PPP have to exist (how formalized the relations between the state and business have to be, whether there has to be a special legislation, whether it is necessary to create the special centres);

* Corresponding author: asya@front.ru

- it is not defined in what directions and forms it is necessary to develop public-and-private partnership in the housing-and-communal sector;
- it is not defined, how to estimate the PPP projects, what criteria can measure their efficiency.

The problem of PPP formation as well as the problem of project management for PPP were studied by domestic and foreign scientists: Kovalyov V.V., Uhljanov V. A., Krylov T. A., Osobenkov O.M., Shchegortsov M.V., Sharp U., Alexander G., Bailey J., I. A., Zapatrin I., Ignatyuk N.A., Igonin L.L. Form., Yanchuk M.B., Matrayeva L. V., Yerokhin S. G., A. V. Belyak, Konov A. A., Borshevsky G.A., Veselova N. Yu., Ishchenko O. V., Shishkina N.A., Lukin V.K., Zakharova E. N., Zedina Yu. A., Yeskomb E. R., Merzlov I. Yu., Bagautdinova N. G., Bagratuni K. Yu., Prokhorov V. V., Ragulina Yu. V., Sabirova Z. E., Filippov A. P., Akimova O. E., Gafurova G.T., Lepeshkina S. V., Makhovikova G.A., Morozova I. A., Okolnishnikova I. Yu., Rybasova M. V., Khodyrev A. A., Gorokhov A. A., Zaynasheva Z. Ignatyuk N.A., Kabashkin V. A., Kolosov A. S., Moshkova L. E., Kanamgotov A. E., Kalinin I. A., Frolov A. V., Kadyrov I. Sh., Pitanov V. A., Kozlova E. V., Abdrakhmanov A. I., Mamontova Yu. P., Merkulova M. E., Potekhina E. V., Sazonov V. E., Zdanevich U. A., Ryazanova E.Yu., etc.

Nevertheless, the matters of implementation of public-and-private partnership projects in housing-and-communal sector in Russia needs closer consideration.

2 Mechanism and regulation

According to the practice of implementation in the Russian Federation and the specifics of Russian legal system, public-and-private partnership (PPP), is the set of forms of average and long-term interaction of the state and business for the complex and effective solution of socially significant tasks for the sake of mutual benefit.

The main features of PPP are the following:

- a) long term of the contract;
 - b) transfer of risks on the private sector;
 - c) payments for the use of a facility throughout all the PPP contract period, made by the public sector or by final users;
 - d) from the very beginning the facility is owned by the state, otherwise it is transferred to the possession to the state on the expiration of the PPP contract.
- Usually the PPP centres perform the following functions:
 - improvement of the legal (regulatory) base for PPP (introduction of new legislation on PPP or introduction of amendments to the existing laws, preparation of orders for management of development of PPP);
 - integration of the PPP program into the general system of planning for the implementation of only those projects, which are included into the list of priority state projects;
 - implementation of ecological, social and other essential requirements by projects;
 - advance of PPP opportunities at the federal and regional levels, for example, management of political expectations, selection of projects, state support, financing of development and structuring the project;
 - introduction of opportunities of the PPP mechanism among potential investors and financiers [1].

The main functions of the PPP centres can be divided into four groups (Fig. 1).

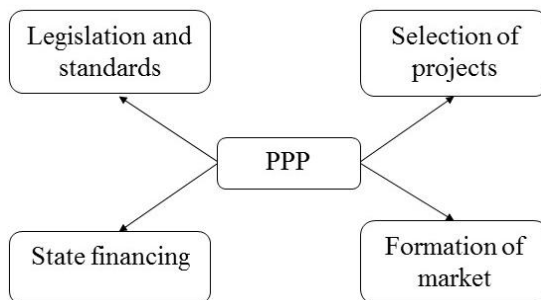


Fig. 1. Primary state activity within the PPP mechanism.

State can require special incentives for the use of the PPP mechanism for the projects, suitable for this purpose, in order to counterbalance these natural tendencies. Such incentives can include additional budgetary support, technical assistance, financing of preproject work or establishment of strict quotas, providing mandates on the implementation of definite projects through the PPP mechanism.

Successful activity in the field of PPP demands formation of a pool of the investors, who have appropriate qualification and who are interested in projects with the use of the PPP mechanism in the country of the project implementation. Such investors also have necessary resources for participation in tender process [2].

Investors should have their access to the loans and sufficient equity for project financing in the conditions, accepted for the use of the PPP mechanism. Financing by the means of own capital has to be long-term. At the same time investors have to undertake obligations for participation in the project with some minimal term (for example, 5 years or more), when they will not have any opportunity to leave the project.

The borrower has to prove stable credit position or have any support of solvent credit institutions.

Considering the legislative base of public-and-private partnership, we can note two great blocks:

- Federal legislation;
- Regional legislation.

Significant innovation was adoption of federal and regional laws on PPP.

3 Results

The PPP mechanism in housing sector has been used for a long time, but it faces serious difficulties during implementation. The greatest benefits can be obtained from PPP projects in the field of water distribution and sewerage. However, the projects in this sector are also the most difficult for satisfactory commercial and financial structuring. Unlike water purification, it is often difficult to combine distribution of water with PPP model, considering the need for definition and distribution of more complex and wide structure of risks. Similar matters have to be considered also for retail distribution of the electric energy.

Three main models of PPP proved to be most relevant for the housing-and-public sector.

a) "The Dutch model". The model supposes incorporating the public enterprise, which results in the creation of private business, belonging to the public sector. The joint stock company with limited liability, focused on profit, is the compromise between purely private company, working at the commercial principles (it is possible under the contract), and the state organizations, owning the equity stake, which are more inclined to work at the political principles.

b) "The French model". The model supposes the delegated private management, at which the state is generally responsible for assets, while the private sector provides more or less complex services of management, which can include concession agreements, service contracts and contracts for management.

c) "The British model". The model supposes the large-scale full realization of assets, which is often compared to "privatization". The model involves the private sector, owning the operating enterprises, including all the assets and land, the enterprises of public service become the private companies, and at the same time, the emphasis is placed on regulation for public supervision and support. Meanwhile in Scotland the model of a private financial initiative (PFI), at which the systems of municipal water supply belong to the state, is used, but separate services, such as water purification and sewage treatment are transferred to the private sector to outsourcing within the PPP contract [3].

It should be noted, that these approaches could be mixed and selected according to the needs of the sector and irrespective of the fact, which approach to PPP will be chosen. Rendering service has to be regulated for the purpose of ensuring its appropriate quality and fair pricing.

The analysis of the world practice proves, that appropriate selection and preparation of projects is necessary for the reduction probability of failure and for the increase in efficiency of implementation of the PPP project. The selection process usually includes several stages: drawing up the list of strategic projects, which meet the requirements of the state, carrying out the preliminary review of these projects, preparation of the feasibility study and assessment of expediency of the use of the PPP mechanism for implementation of these projects. Then the preparation is conducted for the projects, selected by the state: risks are estimated and spread, market requirements are defined and competitive process for the choice of a private partner is made out.

It is necessary to choose reliable, profitable projects for implementation through the PPP mechanism; in this case, there is more probability that the competition will be developed for the participation in financing of the project, and, therefore, there is more probability of achievement of the most favourable ratio of the price and quality.

Projects with insufficient study, doubtful demand or weak basic data have great probability of a failure and can discredit the very idea of PPP.

Appropriate transparent process of selection can stimulate participation of investors in similar projects, thereby strengthening the competition. The projects, selected for political motives or priorities, are perceived by investors as projects with higher political risk [4, 5].

The chart of stages of selection and preparation of the project for its implementation with the use of the PPP mechanism is presented in the figure 2.

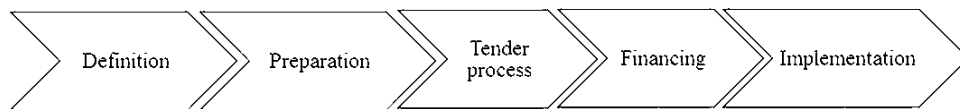


Fig. 2. Process of preparation of the project for its implementation through the PPP mechanism.

Non-performance of these stages has already led to the failure of many projects and programmes. In other words, the process of selection should not be cut down.

Conducting the corresponding examination of the project by creditors, prior to the beginning of the tender, is an expensive action, as each participant of the tender will work with different creditors and consultants. Thus at the third stage it is reasonable to reduce number of participants (2 or 3 participants).

The following criteria are usually used for assessment of tender offers [6, 7]:

1) technical criteria, for example, comparison of the proposed design solutions, the used technologies, innovative solutions, term of construction, realness of the offered construction plans and cost of the whole project;

2) commercial criteria, for example, shareholders' agreements, local or foreign employment, the proposed amendments to the concession agreement or other contracts on the project, involvement of subcontractors;

3) financial criteria, for example, the cost of the tender offer, volume of required state support, reliability of the offered financing sources, amounts in which creditors have already carried out the project expertize, and their readiness to provide financing for the project as well as the stability of the offered financial model.

According to the author, that is expedient to appropriate weight to each of above-stated criteria, in order to make the participants of the tender understood the priorities, which are put by the state during the tender.

4 Discussion

Partnerships need a certain balance between both parties as well as continuous maintenance. If entered into lightly, one can find its organization falling in various areas proving to be one of many partnership failures. The specialists name several aspects of PPP, presented in Figure 3 [8].

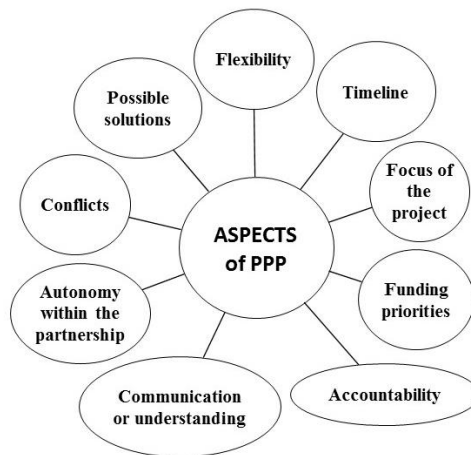


Fig. 3. Aspects of public-and-private partnership.

Flexibility between the two partners as the contract and staff involved throughout the process. If one party feels they are losing some of the control, they may work on adopting more rules and regulations throughout the process instead of working together to be flexible and mediate an issue.[9]

Timeline. Non-profits are working on a long-term timeline. Many of their goals can only be achieved with long-term commitment; this is where their focus will lie. For-profit organizations are more short-term oriented because of short-term goals focusing primarily on profitability. Finally, government agencies' timeline depends a lot on election timelines and therefore can change regularly [10].

Focus of the project. Partners may not have the same focus when entering into a partnership even though they think they might.

Funding priorities. When parties cannot agree on where funding should go this could sometimes lead to losses in time, resources, and the overall funding for the project [11].

Funding priorities for government bodies looks typically at where the public's funds were spent in relation to the contract made. This then typically is looked at as in how many hours of participations, forms filled out, meals served, etc. [70]. Neighbourhood organizations or small and local non-profits saw a broad source of funding during the early years but there has been a shift in funding more recently reducing the overall funding and seeing more of it go to larger agencies focusing on large grants.

Accountability. With the rise in PPP, there is also a rise in the responsibility that the non-profits tend to hold. With the government relying on many more of these organizations to provide the public services they cannot it is also proving difficult for the government to hold these non-profits responsible [12]. When responsibilities are not set to the letter this can cause some in managerial positions to take the back seat, seeing their counterparts taking the initiative to get tasks done. This leaves an unbalance of work and sometimes those with the most skills are not doing the job. This can also be brought on by undermanagement, causing more problems such as a lack of focus for the projects, mismanaged funding, and miscommunication [13]. Too many projects and partnerships can also lead to a lack of accountability. When there are too many tasks, they seem to all fall short of the hoped perfection [14]. Some partners may be taking over roles of others, because accountability has not been well defined. This can also lead to some taking advantage of others when they note the any weakness. This can cause a distrustful partnership [15].

Communication or understanding. One of the largest issues that can be discussed, communication can be a huge downfall and can contribute too many of the other risks within partnerships. It can be said, that when entering into a cross-sector partnership it is difficult to understand and collaborate due to the diversity and differing languages spoken amongst the sectors. Items like performance measures, goal measurements, government regulations, and the nature of funding can all be interpreted differently thus causing blurred lines of communication [16].

Autonomy within the partnership: While working together is important, it is still a strength to be able to work on parts of the project alone, take initiative when needed, and keep some individualism throughout the process. This is beginning to happen more with the privatization of public-and-private partnerships where the private organization may own the partnership itself and the government then keeps full responsibility for it. This keeps parts of the partnership separate for focus [17].

Conflicts. These can arise from any of the above topics but even outside issues or forces may bring a partnership to a halt. Even though these partnerships are entered into with the best of intentions, even the most trivial issues can snowball into greater conflict halting a partnership dead in its tracks [18]. Having no understanding and communication between parties can cause conflicts with use of language, stereotyping, negative assumptions, and prejudice about the other organization. These conflicts can be related to territorialism or protectionism, and a lack of commitment to working within the partnership.

Possible solutions: Partnerships might not be natural for business and managers do not want to depend on others but it is possible with careful solutions [19].

5 Conclusion

Public-and-private partnership is not a "panacea" for the solution of all the problems of development of infrastructure in the country, however the PPP mechanisms in capable to increase the efficiency of the public expenditures considerably.

Proper preparation of projects (with the consideration of the matters of risk management and link with federal and regional priorities) is one of the means of decrease in project risks in case of the use of the mechanism of PPP for investors, and for the state. Time and resources, spent on selection and preparation of projects will allow to reduce the probability

of failure and to increase the efficiency of the project implementation. The successful project has to gain benefit from realistic, commercially viable and economically effective distribution of risks. Government also has to play its role and create such a legal base, which would stimulate the use of the PPP mechanism, providing appropriate protection for investors and creditors as well as the introduction of the best international practices.

References

1. Delmon, *Water Projects: A Commercial and Contractual Guide* (2014)
2. Eric Gutierrez, *Water Aid*, **7** (2014)
3. Irwin, *Government Guarantees: Allocation and Valuing Risk in Privately Financed Infrastructure Projects* (World Bank, 2007)
4. A. Mottaeva, *World of economics and law* **6**, 9-16 (2011)
5. As. Mottaeva, *MATEC Web of Conferences* **106**, 08072 (2017)
6. *Public Private Partnerships Units: Lessons for their design and use* (World Bank, 2007)
7. Tremolet, Shukla, Venton, *Contracting Out Utility Regulatory Functions* (World Bank, 2004)
8. E. Akimova, G. Potasheva, *MATEC Web of Conferences* **106**, 08080 (2017)
9. B. Eschenfelder, *Nonprofit Management and Leadership* **21(3)**, 273–288 (2011)
10. T. Tereshkina, A. Mottaeva, L. Andreeva, T. Larinina, *IOP Conference Series: Earth and Environmental Science* **19**, 012138 (2017)
11. D. Muralidhar, M. Koteswara, *DESIDOC Journal of Library & Information Technolog.* **33(1)**, 21–24 (2013)
12. M.A. Bahauovna, M.A. Bahauovna, *International Journal of Applied Engineering Research* **11 (9)**, 6808-6816 (2016)
13. B. Cairns, M. Harris, *Nonprofit Management and Leadership* **21(3)**, 311–324 (2011)
14. P. Bloomfield, *Public Administration Review* **66 (3)**, 400–411 (2006)
15. O.V. Kalinina, *Universal approach to building the progressive scale for income taxation, Actual Problems of Economics*, Vol **176**, IS **2**, pp 387-400 (2016)
16. A. Bril, O. Kalinina, O. Valebnikova, *Lecture Notes in Computer Science*, **9870**, pp 766-775 (2016) DOI -10.1007/978-3-319-46301-8_67
17. K. Olga, *An innovative approach to the formation of a progressive taxation probabilistic model on personal incomes*, *Intern. Journal of Economics and Financial Issues*, Vol **6**, IS **3**, pp 995- 1002 (2016)
18. I.V. Ilin, A. Lepekhin, A.I. Levina, O.Yu. Iliashenko, *Advances in Intelligent Systems and Computing*, **692**, pp 1306-1314 (2018) DOI -10.1007/978-3-319-70987-1_138
19. I.V. Ilin, A.I. Levina, O.Yu. Iliashenko, *MATEC Web of Conf.*, **106**, 08066 (2017) DOI-10.1051/matecconf/201710608066