

Katarzyna Biadała (kbiadala@izwbit.pk.edu.pl)

Institute of Construction and Transportation Engineering and Management, Faculty of  
Civil Engineering, Cracow University of Technology

## SELECTION OF A COOPERATION MODEL IN INVESTMENTS IMPLEMENTED IN THE SYSTEM OF PUBLIC-PRIVATE PARTNERSHIP IN POLAND

### WYBÓR MODELU WSPÓŁPRACY W INWESTYCJACH BUDOWLANYCH REALIZOWANYCH W SYSTEMIE PARTNERSTWA PUBLICZNO-PRYWATNEGO W POLSCE

#### Abstract

Public-private partnership is a form of investment implementation based on the distribution of tasks, responsibilities and the form of risk among the public and private parties. This division enables the most economically efficient means of investment implementation to be achieved. The paper presents an analysis of the selection of a cooperation model concerning the parties in public-private partnership, depending on the sector and specificity of the task.

**Keywords:** public-private partnership, concession, cooperation model

#### Streszczenie

Partnerstwo publiczno-prywatne jest formą realizacji przedsięwzięcia opartą na podziale zadań, odpowiedzialności i postaci ryzyka pomiędzy stroną publiczną i prywatną. Przez tak wykonany podział osiąga się najbardziej efektywny ekonomicznie sposób realizacji inwestycji. W artykule przedstawiono analizę wyboru modelu współpracy między stronami partnerstwa publiczno-prywatnego w zależności od sektora oraz specyfiki zadania.

**Słowa kluczowe:** partnerstwo publiczno-prywatne, koncesja, model współpracy

## 1. Introduction

The European Commission in the published guidelines defines public-private partnership (PPP) as a partnership between the public and private sectors in order to implement an investment or to provide services traditionally provided by the public sector. It is assumed that both parties achieve benefits appropriate to the degree of the implementation of their tasks. By giving each sector an opportunity to do what they excel at, public services and the infrastructure are executed and provided in the most economically effective way. The main aim of PPP is, therefore, the development of such relations between the parties that the risk is borne by the party which can control it best [14]. Depending on the specificity of the investment project, the distribution of tasks or the advancement of an integrated approach to the investment, the partners can choose various models of cooperation. The models are described in section 2 of the paper.

The paper presents an analysis of the selection of the cooperation model between the parties in the public-private partnership, depending on the sector and task specificity.

## 2. Cooperation models within PPP

the general understanding of PPP relates to various models of organizational and legal performance of public duties. The present paper focuses on two categories of investment projects implemented within PPP. One category includes the legal basis on which the signing of the contract by the parties rests, namely:

- ▶ Law on Public-Private Partnership [11],
- ▶ the Act on Concession for Work or Services [12] / Act on Concessions for Construction Work or Services [13].

Between the PPP law and the act on concessions for construction work or services certain differences concerning the following issues can be found:

- ▶ remuneration for the private party for the execution of the subject of the order,
- ▶ the types of risk involved in the project implementation,
- ▶ the scope of tasks and obligations assumed by the individual contractor,
- ▶ ownership of assets involved in the project,
- ▶ the creation of a special purpose company with mixed capital,
- ▶ the need to obtain the consent of the third parties to conclude the contract.

The differences concerning private party remuneration relate to the fact that in the concession the remuneration is derived from the fees paid by the holders of the contract, while within PPP it can be derived solely from the public budget.

Concerning the types of risks involved in the investment, the difference between the acts lies in the issue of risk allocation. The act on concession imposes that the whole economic risk is carried by the concessionaire. On the other hand, the PPP law allows any distribution of the risk category between the contractual parties.

The scope of tasks and obligations in PPP is subject to great freedom, including co-financing the investment by the private partner, while concession defines the concessionaire's obligation involving the design, construction, financing and maintenance of the subject of the contract.

The difference concerning the ownership of assets involved in the project means that within concession the assets intended by the contracting authority for the implementation of the investment remain in his/her possession during the term of the contract and after its completion. In contrast, in PPP the asset used in the project (regardless of who was its original owner) is transferred to the public entity after the contract expires.

Only the PPP law includes records about the possibility of creating a special purpose company with mixed capital and the need to obtain the consent of the Ministry of Finance for the projects co-financed from the state budget in the amount of at least 100,000,000 PLN.

The second category includes the principles of cooperation between parties. In the case of execution of construction projects, the most frequently chosen models of cooperation are the so-called integrated models which include the following:

- ▶ BOT (Build-Operate-Transfer),
- ▶ DBFO (Design-Build-Finance-Operate),
- ▶ BOO (Build-Own-Operate),
- ▶ BTL (Build-Transfer-Lease).

## Description of integrated models

### **BOT (Build-Operate-Transfer)**

This model of investment execution involves a private investor constructing the project, operating it and then handing it over to the public partner who performs regulatory and supervisory functions. The investment is financed by the public party, who also owns the infrastructure constructed in the process. The essence of this variant is the transfer of the risks associated with the operation, construction and design work. BOT is appropriate for projects in which accurate and effective operation and maintenance of the infrastructure used to perform public tasks plays a significant role [1, 9].

### **DBFO (Design-Build-Finance-Operate)**

In this model the private partner designs a relevant infrastructure, independently financing construction and design works. For the duration of the contract the investment is owned by a private investor, after which the infrastructure is transferred to the public entity. This model is the closest to concession. The essence of this type of cooperation is the commitment of the investment capital which is in the resources of the private sector to the needs of the public, as well as the transfer of the risk related to infrastructure design, construction, financing and operating to the private sector. All the variants of this form of PPP assume a maximum concentration of the responsibility for the implementation of the project on the private partner. DBFO means a suitable cooperation in projects in which proper and effective operation and maintenance of infrastructure used for public tasks plays a significant role [1, 9].

### **BOO (Build-Own-Operate)**

A characteristic feature of this model of project implementation is the fact that after a predetermined time no takeover of the investment by the public partner takes place, but the private investor may charge users. Within the contract of this type, the private sector is responsible for the design of the investment. Additionally, the private partner is accountable for the technical implementation of the task and ensures financing.

BOO involves an initial private ownership in which, after cooperation expires, the breakdown of assets are transferred to the public sector. Directly, the private sector is the operator, who is the one to provide services. The burden of ongoing expenditures, maintenance and conservation belong to the private partner duties, who is also responsible for the ongoing marketing of services [1, 9].

### **BTL (Build-Transfer-Lease)**

In this model of project implementation the private entity finances and executes the investment, taking the risk of cost overruns and delays in the project implementation. After the required technical parameters of the subject of the contract, obtained as a result of tests, the ownership is transferred to the public party, while the private entity operates the building on behalf of the public entity under lease. The private partner is responsible for designing the investment, its technical execution and ensures financing.

Contrary to the BOO model, the breakdown of assets are controlled by the public sector from the beginning to the end of the investment.

The operator, i.e. the provider of services is, depending on circumstances, a public or private partner.

In the case of maintenance and conservation the main role is played by circumstances, while bearing expenses belongs directly, or to a larger extent, on the private partner.

Marketing is believed to require considerable activity on the part of both private and public sector [1, 9].

## **3. Selection of the cooperation model**

in accordance with the project database on <http://www.ppp.gov.pl> [15], out of 113 investments for which contracts had been signed, 38 involved a procedure of private partner selection based on the PPP law [11], and 75 were based on the law on concessions [13]. 26 investments took account of public works concession, while 49 – service concession. The distribution of this division with regard to the sectors is shown in Fig. 1.

As the database mentioned above and Fig. 1. reveal, public entities may use a PPP model in a variety of sectors, implementing investments of various specifications. Among the projects executed on the basis of PPP law [11], as in the case of the Act on Concessions, one may distinguish those that involve only construction works and those that encompass services.

Of all the projects that involved signing a contract, special attention was paid to those concerning the construction or alteration of a building and road infrastructure, parking sites

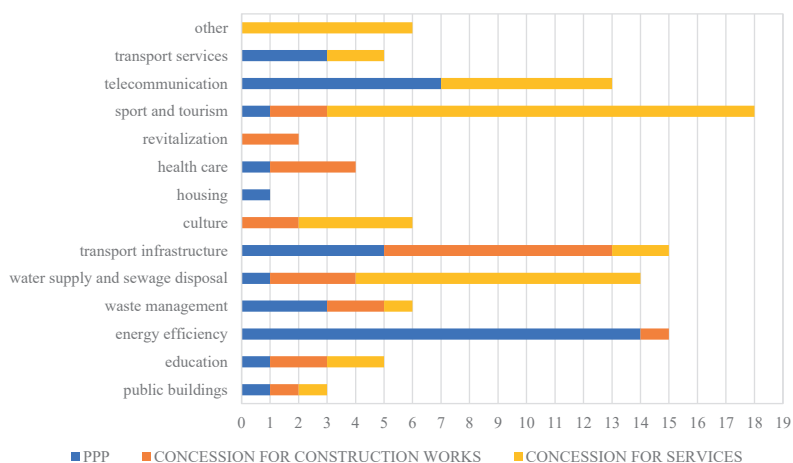


Fig. 1. The procedure of selecting the private partner including a division into sectors.  
Source: own study on the basis of a project database retrieved from [http://www.ppp.gov.pl/baza/Strony/baza\\_projektow\\_ppp.aspx](http://www.ppp.gov.pl/baza/Strony/baza_projektow_ppp.aspx)

included. Out of the projects for which contracts were concluded on the basis of the Act on Concessions [12] 7 concerning buildings and 5 concerning parking sites and road infrastructure were selected. On the other hand, of 38 projects for which contracts were concluded on the basis of the PPP law [11], 5 related to buildings and 4 to road infrastructure. Details are presented in Fig. 2. The projects were assigned to such sectors as health care, transport infrastructure, sport and tourism, public buildings, waste management, education and housing.

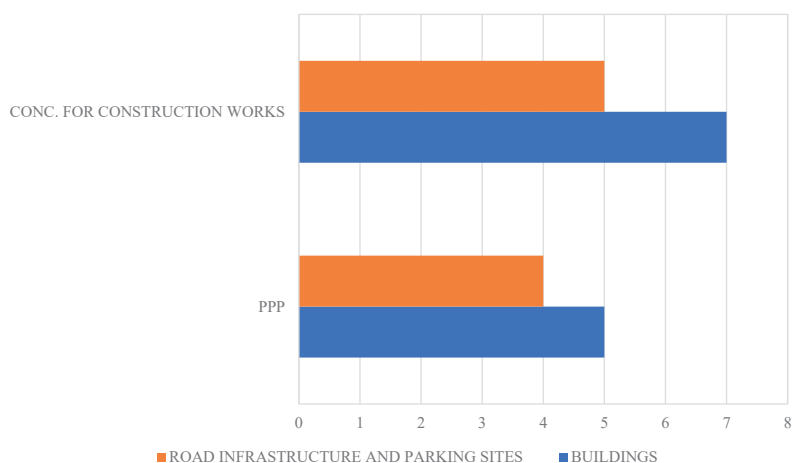


Fig. 2. The distribution of investment projects, including the construction/alteration of buildings and road infrastructure, parking sites including. Source: own study on the basis of a project database retrieved from [http://www.ppp.gov.pl/baza/Strony/baza\\_projektow\\_ppp.aspx](http://www.ppp.gov.pl/baza/Strony/baza_projektow_ppp.aspx)

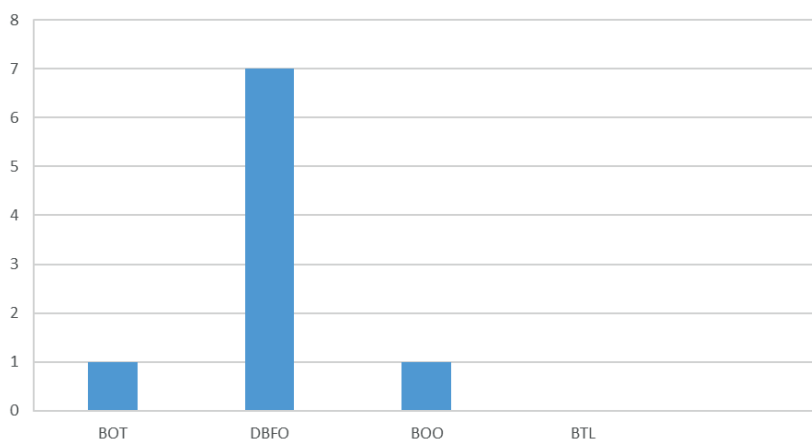


Fig. 3. A model of project implementation under the Law on Public-Private Partnership.  
Source: own study on the basis of data contained in, i. a., [2-8, 10]

To assess the selection of the integrated model for projects implemented on the basis of the Law on PPP, an analysis of documents for the 9 projects related to buildings and road infrastructure mentioned above was performed. The analysis concerned mainly the scope of the tasks entrusted to the private partner and the division of project financing between the parties.

As Fig. 3 reveals, of the 4 integrated models analysed here, the most frequently chosen one is DBFO (Design-Build-Finance-Operate) which was selected for 78% of investments. BOT (Build-Operate-Transfer) and BOO (Build-Own-Operate) models were chosen for 11% of cases, while BTL (Build-Transfer-Lease) model was not selected at all.

Of projects implemented within the DBFO model, two involved the DBOD (Design-Build-Operate-Deliver) form, which is a variation of DBFO.

The cases analysed reveal a tendency to select a concession for construction works and the DBFO model more frequently as the form of cooperation between the public party and the private partner. Both models allow the public entity to raise the capital of the private sector for investment purposes, which increases the chances to accelerate the construction program and development. They allow the greater part of risk to be transferred to the private sector. For the private partner the choice of one of these models allows the actual costs of the investment to be specified taking into account its entire life cycle.

Despite such widespread interest, both forms of cooperation have disadvantages that may be the source of risk for both parties. In the DBFO model and the concession on construction works there is a high probability of the private partner's underestimating the cost of the investment. Such underestimation had previously resulted in breaking the contract by the private party; therefore, the public entity should take into account the risk of early termination of the contract and the need for the emergence of a new private partner. Currently, the public entity, prior to such an event, secures themselves, for example, by determining the minimum

amount of insurance or creditworthiness which the contractor should possess at the time of the submitting the offer. An additional risk that the public entity needs to consider relates to failing to achieve the technical parameters contained in the provisions of the agreement at the moment of the hand-over of the object.

In contrast, the choice of the concession model, in which the remuneration for the private partner constitutes exclusively a right to the use of the object and enjoying the resulting profits, the possible risk involves the fall in an interest in the infrastructure made available and reducing the resulting profits. With the concession contracts concluded for a period of up to 30 years, consideration of such risks, estimating the cost of investment and the selection of a project implementation model can be evaluated not earlier than after the termination of the first signed contracts, that is in over 20 years.

#### 4. Conclusions

The Law on Public-Private Partnership does not force a public entity to choose any particular model of cooperation. They make the choice themselves on the basis of, for instance, specificity of the project, initially approved distribution of risk or way of financing the planned investment. This procedure must be always preceded by a deep analysis of the factors affecting the project and the public entity should not be tempted to transfer all the risk to the private partner.

In the future the data presented in the article will be extended and compiled with data of PPP investments on the European market. At the same time, the distribution of tasks, responsibilities and the form of risk among the public and private parties, which affects the choice of cooperation model, will be analysed.

#### References

- [1] Ćwik D., *Modele współpracy w ramach partnerstwa publiczno-prywatnego*, Gospodarka Materiałowa i Logistyka, No. 5/2014.
- [2] Herbst I., Jadach-Sepiolo A., *Raport ze studiów przypadku PPP*, Polska Agencja Rozwoju Przedsiębiorczości, Warszawa 2012.
- [3] Informacja o planowanym partnerstwie publiczno-prywatnym [http://bip.walcz.pl/content.php?cms\\_id=2857%7C%7Cm=13](http://bip.walcz.pl/content.php?cms_id=2857%7C%7Cm=13) (access: 15.02.2017).
- [4] Ogłoszenie o zamówieniu [http://www.dzp.cm-uj.krakow.pl/siwz/540/ogloszenie\\_PPP.pdf](http://www.dzp.cm-uj.krakow.pl/siwz/540/ogloszenie_PPP.pdf) (access: 15.02.2017).
- [5] Ogłoszenie o zamówieniu <http://bip.um.olawa.pl/Article/get/id,22282.html> (access: 15.02.2017).
- [6] Ogłoszenie o udzieleniu zamówienia <http://bip.ustka.ug.gov.pl/Article/get/id,18607.html> (access: 15.02.2017).

- [7] Ogłoszenie o zamówieniu [http://www.biuletyn.net/nt-bin/\\_private/krobia/2419.pdf](http://www.biuletyn.net/nt-bin/_private/krobia/2419.pdf) (access: 15.02.2017).
- [8] Ogłoszenie o zamówieniu [http://ugkarczmiska.bip.lubelskie.pl/upload/pliki/ogloszenie\\_o\\_zamowieniu\\_PPP\\_do\\_BIP.pdf](http://ugkarczmiska.bip.lubelskie.pl/upload/pliki/ogloszenie_o_zamowieniu_PPP_do_BIP.pdf) (access: 15.02.2017).
- [9] *Partnerstwo publiczno-prywatne. Poradnik*, Urząd Zamówień Publicznych, Warszawa 2010.
- [10] *Podpisanie umowy PPP i zamknięcie finansowe w projekcie pn. „Budowa budynku sądu rejonowego w Nowym Sączu przy ul. Grunwaldzkiej”* – pierwszy projekt administracji rządowej realizowany w formule PPP. Platforma Partnerstwa Publiczno-Prywatnego, 12.2015.
- [11] Ustawa z dn. 19 grudnia 2008 r. o partnerstwie publiczno-prywatnym (Dz. U. 2009 Nr 19 poz. 100 z późn. zm.).
- [12] Ustawa z dn. 21 października 2016 r. o umowie koncesji na roboty budowlane lub usługi (Dz. U. 2016 poz. 1920).
- [13] Ustawa z dn. 9 stycznia 2009 r. o koncesji na roboty budowlane lub usługi (Dz. U. 2009 Nr 19 poz. 101 z późn. zm.) – nieobowiązująca.
- [14] *Wytyczne dotyczące udanego partnerstwa publiczno-prywatnego*, Komisja Europejska, styczeń 2013.
- [15] [http://www.ppp.gov.pl/baza/Strony/baza\\_projektow\\_ppp.aspx](http://www.ppp.gov.pl/baza/Strony/baza_projektow_ppp.aspx) (30.11.2016).