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TYPES AND MODELS OF PUBLIC-PRIVATE PARTNERSHIP IN THE ROAD SECTOR

Relevance of the topic. In Ukraine the urgent problem of the country's public road system development is the implementation of the projects on reconstruction and repair of roads and transport infrastructure facilities located on them, which in its turn requires significant resources both financial and logistical at all stages of these projects from their implementation to operation.

But the implementation of the projects on country's transport network development requires the fundraising of significant amounts of various resources, including production facilities, qualified personnel. The existing in the country production capacity and possibilities of Public sector of public road system management do not meet these requirements, requiring implementation of various forms and methods of fundraising. One of these methods of fundraising is the use of various forms of public-private partnership.

In the process of justification of cooperation models and determination of the best forms of resources use in the process of joint activity a considerable attention shall be paid to the study of situations of risks occurrence for the partners such as industrial, commercial and financial, as well as the creation of situational models to minimize their impact on the project execution.

The objectives hereof are to study the main types and models of public-private partnerships in road construction, the results of their implementation, obstacles and conditions for development in Ukraine.

Analysis of recent researches and publications. Such domestic scholars as V.M. Vakulenko, Ie.O. Fyshko, O.V. Berdanova, I.O. Fediv paid a considerable attention to the problems and prospects of public-private partnership establishment. Such foreign scientists as V.H. Varnavskiy, V.N. Mochalnykov, L.I. Iefimova, V.A.

Mykhieiev, V.Ie. Manzhykova, L. Otul, V. Rebok, V.I. Iakunin investigated the public-private partnership. Also the problem has been covered in numerous legislative acts, policy papers and analytical reports of the OECD, European Commission and others.

The main material of the research. As a result of implementation of the public-private partnership (PPP) the public road system meets the consumers' needs for quality and safe roads, thus it receives its own economic benefit, through the contract performance.

Contract within PPP has the following advantages:

- savings of financial resources (creation of impetus for the private sector to implement innovative approaches and improve labour productivity, reduce of administrative costs and overheads in connection with the development of the improved package of contracts and fewer personnel for their monitoring and maintenance);

- high probability of costs immutability (risk of funds overspending for the performed work is transferred to the contractor and the road administration rarely faces the unpredictable costs);

- possibility to maintain the road infrastructure with relatively fewer personnel;

- users' great satisfaction with the high quality of roads and road conditions (users' needs are reflected in terms of qualitative indicators of performed work that are specified in the contract, and contractor's honorarium depends on how it fulfilled or exceeded these indicators);

- long-term stable funding, aimed at roads maintenance.

The public road system can expect from the projects implementation under the PPP terms:

- integration of roads Ukraine to the European transport network;

- improvement of indicators of transport and operation condition of roads;

- attraction of alternative sources of funding;

- additional government revenue due to the implementation of transit potential of Ukraine.

Slowdown of the public-private partnership development in the road sector of Ukraine takes place because of the following reasons:

- low level of institutional capacity of public authorities and private sector in the implementation of public-private partnerships;

- low level of awareness of private sector about the benefits of investment projects implementation based on public-private partnership;
- noncompliance and imperfection of the regulatory and legal framework for public-private partnerships;
- lack of government support for the PPP and imperfect system of such partnership development management;
- existence of industry characteristics and complexity of the conditions of long-term and mutually beneficial cooperation between the state and private partners.

There is a purely private sector in the left extreme point of the continuum and there is a purely Public sector in the right extreme point. The main PPP models of the public road system are between these two extreme points.

Types of assets, the management of which is entrusted to a private company under the PPP contracts, usually include:

- Roads (surface, roadside);
- Structures (bridges, sustaining walls, tunnels);
- Road electrical system (lighting, digital displays, traffic lights, television surveillance system);
- General arrangements (fences, noise reduction walls);
- Safety elements (fencing, markings, signs, shock absorbers);
- Drainage (trenches, culverts).

Under the legal basis the PPP forms can be classified as:

- Service contracts;
- Rent and temporary transfer of rights;
- Concession agreement;
- Equity participation of private capital in public enterprises (joint ventures).

The analysis of the PPP effectiveness in the road sector is reasonable to perform under the Procedure approved by the Cabinet of Ministers of Ukraine dated April 11, 2011 No. 384, Order of the Ministry of Economic Development and Trade of Ukraine dated February 27, 2012 No. 255 and following these guidelines.

To make a decision on the PPP implementation advisability they shall be checked for compliance with the following conditions:

- the possibility of achieving the goal of the project in the PPP implementation process;
- the lack of legal restrictions that prohibit or complicate essentially the PPP implementation;

- the PPP implementation will be acceptable regardless of whether the financial result (NPV, IRR indicators) will be positive for the public partner, if in its result the socio-economic impact is positive or, on the other hand, the financial result (indicators of NPV, IRR) is acceptable for a private partner;

- the optimal allocation of risks between public and private partners is established in the PPP implementation;

Advanced models of the PPP contracts for the road sector can be:

1. Management contract.
2. Lease contract.
3. Concession.
4. Build, Operate, Transfer (BOT).
5. Joint Ventures.

Table 1 - Key elements of various schemes of the public-private partnerships

| | | Outsourci ng | DFI | Concessi on | Lease | Build, Operate, Transfer |
|----------------|--|-----------------|-----|----------------|-------|--------------------------------|
| Operatio ns | Maintenance | X | X | X | X | X |
| Funding | Capital investments on account of the private sector | | X | X | | X |
| | It's paid for by the user charges | | | X | X | |
| | It's paid for under the contact with state authorities | X | X | | | X |
| Creation | Assets creation by the private company | | X | X | | X |
| Property | State prior and upon the contact conclusion | X | X | X | X | |
| | Private at the contract conclusion, state upon the contact completion | | | X | | X |

Tasks that can be achieved by each type of partnership are formed in the scheme (Figure 1).

| Objective | Service | Management | Leasing | BOT/ROT | Concession | Privatization |
|-------------------------------------|---------|------------|---------|---------|------------|---------------|
| Effectiveness improvement | Y | Y | Y | YYY | YYY | YYY |
| Commercial risk transference | X | X | X | YYY | YYY | YYY |
| Services quality improvement | Y | Y | YYY | YYY | YYY | YYY |
| Control over the services provision | YYY | YYY | Y | X | Y | X |

Figure 1 - Tasks that can be achieved by every kind of partnership *

* Note: YYY strong; Y low; X - not presented.

The Management contract provides that authorities for the network, road and its elements management can be delegated to a private investor. Although the ultimate obligation regarding the services provision in the Public sector, daily control over management and power are transferred to a private partner or contractor. In most cases, the private partner provides a floating capital but it doesn't have funding for investment [7].

Figure 2 The typical structure of a management contract is shown below.

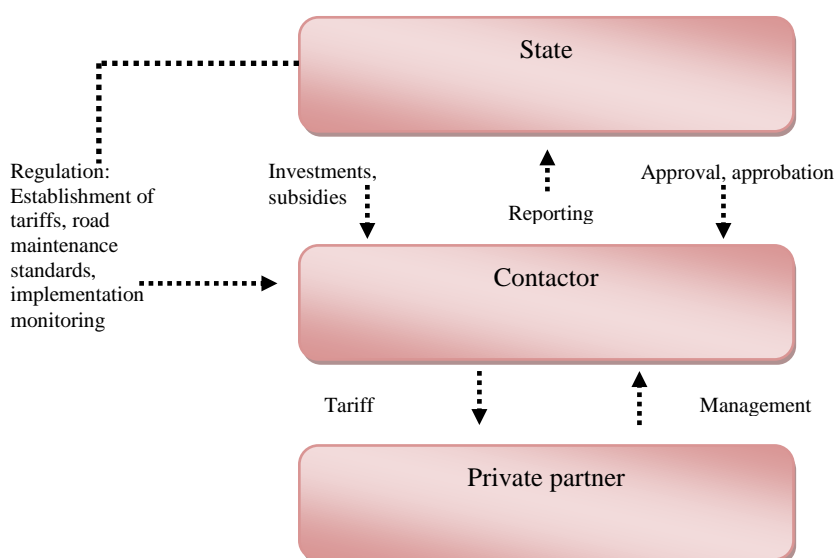


Figure 2 - A typical structure of a management contract

The contract may include specific measures which will be funded by the private sector.

Under the **lease agreement**, the private partner is responsible for services in full and undertakes obligations related to standards of quality and service. The duration of the lease contact is usually 10 years and may be renewed for up to 20 years. The responsibility for the service provision is transferred from the public sector to the private sector and the financial risks of the operation and technical maintenance are covered at the expense of the private sector. A typical structure of the lease contract is showed on Figure 3.

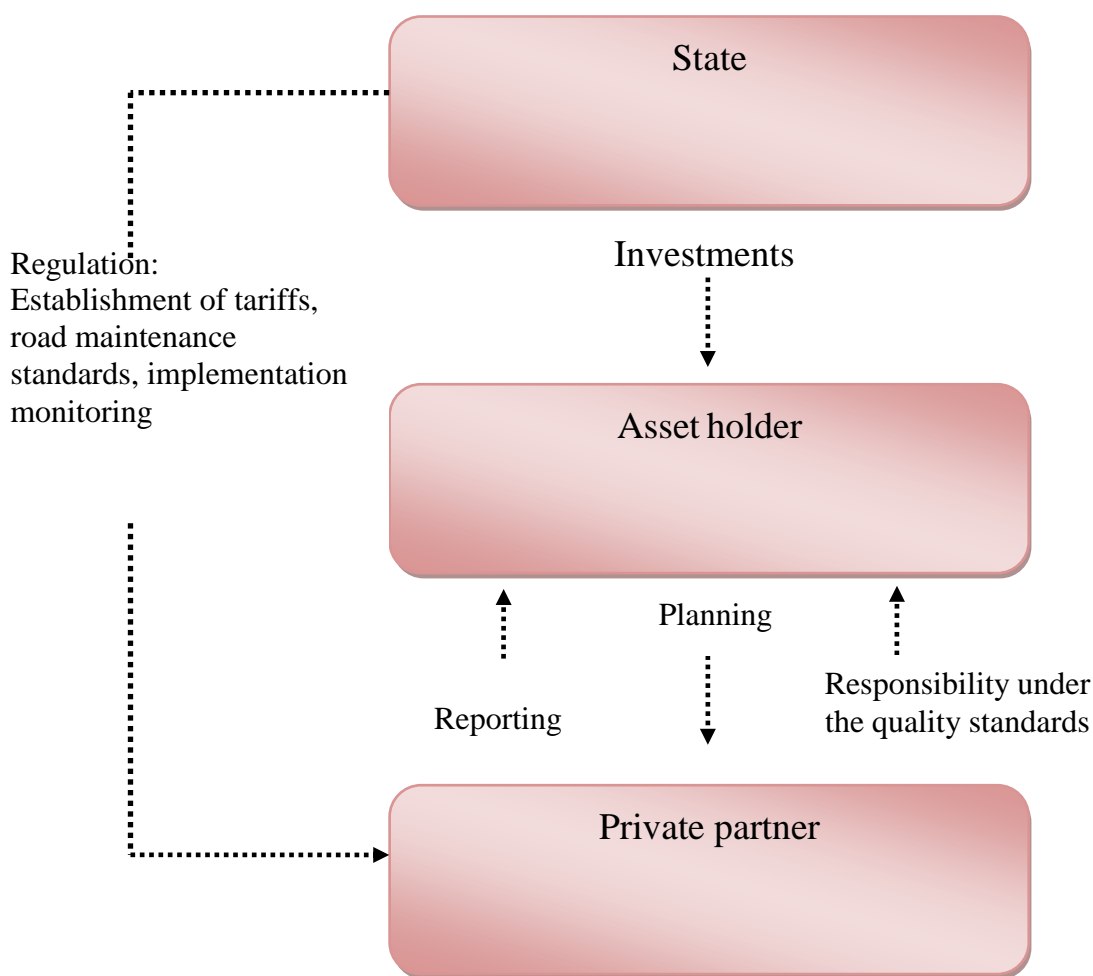


Figure 3 - A typical structure of the lease contact

Necessary conditions for the successful PPP implementation in the road sector are shown in Table 2.

Table 2 – Necessary conditions for the successful PPP

| | Support of the interested parties and political will | Tariffs at the level of the profitability | Information on the system | The degree of development of the regular basis | The high financial rating of the country |
|--------------------|--|---|--|---|--|
| Service contact | Unimportant | Unnecessary in the short term | Possible in case of limited information | Minimum monitoring | Unimportant |
| Management contact | Level from low to medium | Desirable but not essential in the short term | Possible in case of limited information | Minimum monitoring | Unimportant |
| Leasing | Level from medium to high | Necessary | Necessary reliable information on the system | Necessary high capacity for management and coordination | Unimportant |
| BOT | Level from medium to high | Desirable | Necessary reliable information on the system | Necessary high capacity for management and coordination | Higher rating will reduce expenses |
| Concession | High level | Necessary | Necessary reliable information on the system | Necessary high capacity for management and coordination | Higher rating will reduce expenses |
| Privatization | High level | Necessary | Necessary reliable information on the system | Necessary strong ability for regulation | Higher rating will reduce expenses |

The concession makes the private sector representative (concessionaire) responsible for the complete works performance, services implementation, including project maintenance and management. It's important to note that that concessionaire is responsible for all investments.

Although it is responsible for the assets ensuring but the assets are owned by the state, even in the period of the concession. The public sector is responsible for the establishment of the work performance quality standards and the insurance of the concessionaire's compliance with them. A concession contract is usually entered into for a period of 25-30 years.

A state body can execute a funding part of the project whenever necessary. It can be investments in the form of "subsidies" to achieve commercial viability of the concession. The typical structure of the concession agreement is shown in Figure 4.

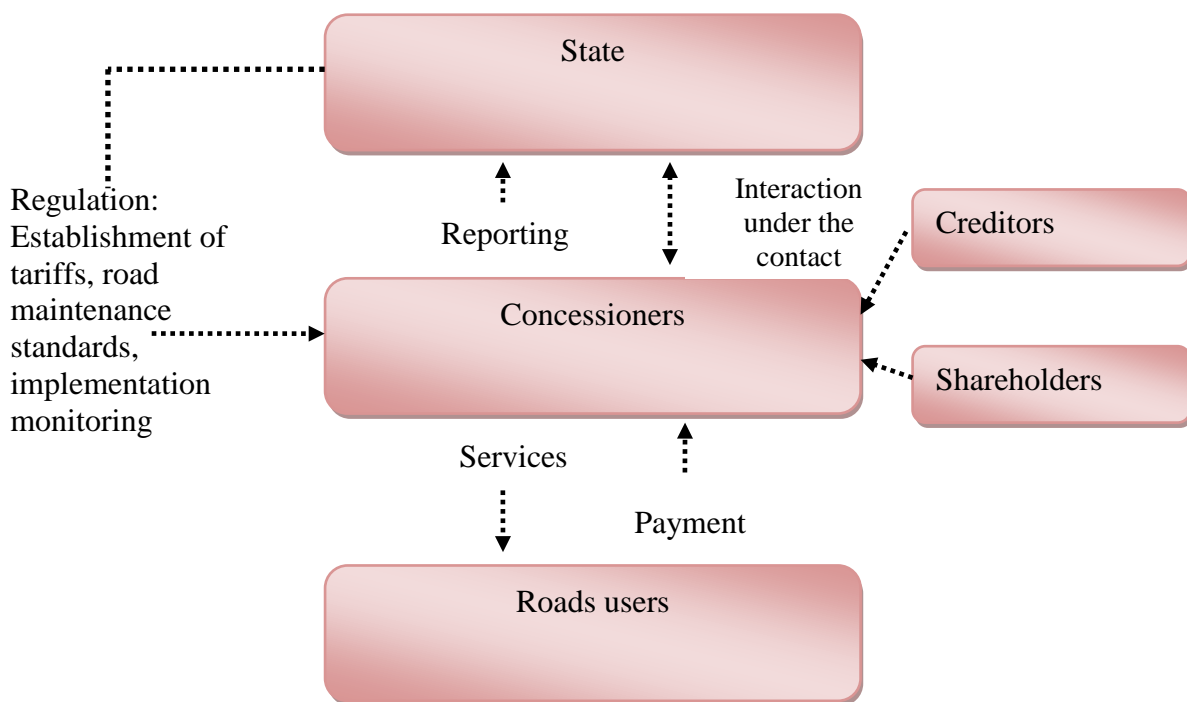


Figure 4 - Typical concession structure

Build, Operate, Transfer (BOT) is a kind of specialized concession in which the private firm or consortium finances and develops a new infrastructure project or a major component under the operational requirements set by the state. . Figure 6 illustrates the structure of the BOT contract.

Under the PPP contract terms the private partner provides costs necessary to create a new object. It should be noted that the duration of the BOT contact is determined as such within which the private partner could recover investment costs through user charges (Figure 5).

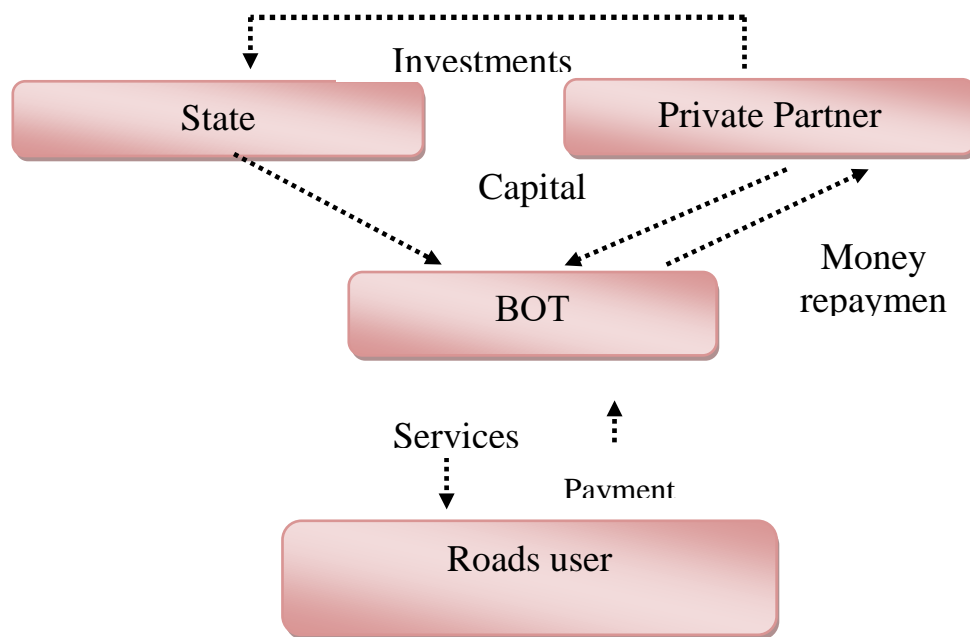


Figure 5 - Typical structure of the PPP contract

Joint ventures are an alternative to the full privatization, and at the same time the infrastructure is owned and operated by a public and private sector jointly. As part of the joint venture the partners of public and private sector can either form a new company or jointly hold shares of an existing company. A key requirement of this structure is a good corporate management, including the company's ability to maintain independence from the government. This is important because the state as a co-owner and controller, and officials may be tempted to interfere in the company's business to achieve political goals. The private partner takes an operational role (Figure 6).

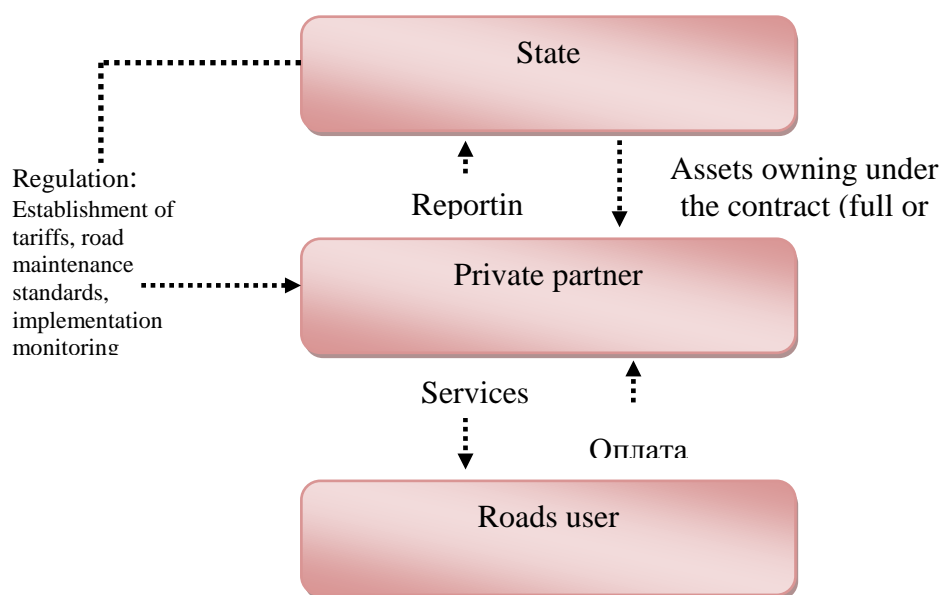


Figure 6 - Typical structure of joint ventures in the terms of the PPP

For the development of the public-private partnership in the road sector it's necessary:

- creation of a favorable institutional environment of the PPP;
- entrenchment of the principles of the PPP in the state and regional strategies for socio-economic development of state and regions;
- development and improvement of its legal and regulatory framework;
- provision of the state support and guarantees for the partners of the private sector;
- creation of a public authority regarding the PPP and civil society institutions necessary for its activities: unions, associations, alliances, expert advisory committees;
- establishment of the public control over the implementation of contact obligations by all parties and partners.

Conclusions

PPP-based projects implementation in the road sector of Ukraine is a promising new direction, which is under development. The PPP development provides involvement of fundamental perspective forms and models that can be successfully implemented in the road industry of Ukraine. The PPP introduction is related to the assessment of expected economic results from the projects implementation. Yes, it is attraction of alternative funding sources, improvement of indicators of transport and operation condition of roads, Ukrainian roads integration into the European transport network, additional government revenue due to the implementation of transit potential of Ukraine etc. In general, the partnership development means for the State the road network preservation with their complex infrastructure, an additional source of funding (including concession fees) and, consequently, reduce the burden on the budget.

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