



Public Private Partnership

Summary

In recent decades governments in most industrial and developing countries promote co-operation between the public and private sectors in providing public goods. This cooperation takes the form of Public Private Partnership (PPP) arrangements, in which the functioning principles of private firms are implemented in public administration. International experience suggests that co-operation between the public and private sectors can be a powerful incentive for improving the quality and efficiency of public services, and a mean of public infrastructure financing. This paper aims at providing readers with some background information with regard to types and determinants of PPP, as well as lessons that can be drawn from United Kingdom, Central and Eastern Europe and the Russian experience. From there we identify challenges and opportunities for PPP development in Belarus.

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1. Introduction

The interdependence between economic growth and infrastructure development is widely recognized. However, in the face of a decline in public expenditures that is incident for most industrial and developing countries in recent decades, governments require the funds to finance new and maintain existing infrastructure in order to support long-term economic growth. The need to find alternative ways of infrastructure financing supports schemes promoting co-operation between the public and private sectors in providing public goods. This cooperation takes the form of Public Private Partnerships (PPP) arrangements, in which the functioning principles of private firms are implemented in public administration.

There are plenty of definitions of PPP ranging from the general opening of state activities to private sector competition through collaboration between the public and private sectors to joint ventures between a private and public body. In collaborations a public body engages a private company for a specific purpose, whereas the risk is shared in joint ventures. In summary, the key features of PPP can be characterized as a long-term partnership between the public and private sectors that usually involve the private sector undertaking investment projects which traditionally have been executed and owned by the public sector.¹

At the same time, the emergence and proliferation of PPP schemes raises the questions regarding a country's success or failure in the attraction of investments in the form of public-private partnerships, applicability of the certain types of these arrangements in different industries, the determinants and extent of private sector participation, and the short- and long-term costs. Therefore, this paper aims at providing readers with some background information with regard to types and determinants of PPP, as well as lessons that can be drawn from United Kingdom, Central and Eastern Europe and the Russian experience. From there we identify challenges and opportunities for PPP development in Belarus.

The paper is organized as follows. Section 2 describes main types of PPP arrangements and their potential benefits. Section 3 presents determinants that set conditions for PPP success or failure. Section 4 provides an overview of the CEE and Russia experience with PPP, and indicates some key obstacles to development of such arrangements in Belarus. Conclusions are presented in section 5.

2. Types of PPPs arrangements

The PPP initiatives should be considered not only as a means of financing public infrastructure but also as a powerful tool for generating cost saving schemes, improving the quality and efficiency of public services.

The European Commission (EC) identifies four channels through which the private sector in PPP schemes affects infrastructure development²:

- provision of additional capital;
- provision of alternative management and implementation skills;
- provision of value added to the consumer and the public at large;
- better identification of needs and optimal use of resources.

In addition, the private sector may serve as a safeguard from economically unviable projects, as the underestimation of costs and overestimation of benefits is widely

¹ EIB (2005): Innovative Financing of Infrastructure: The Role of Public Private Partnerships: Lessons From the Early Movers. EIB papers, Volume 10, No 2.

² Davies, Steve and Fairbrother, Peter (2003). Private Finance Initiative (PFI) and Public Private Partnerships (PPPs): Definitions and Sources. School of Social Science, Cardiff University, Working Paper Series, Paper 39.

spread in public infrastructure projects. Estimation errors in the range of 50 percent or even more are the rule rather than the exception.³ For example, in its first year of operation (1994-1995) of the channel tunnel connecting the United Kingdom and France the actual number of passengers was less than 25 percent of what has been predicted by *Service National des Chemins de Fer* (SNCF), the French owned railway company. In 2003, actual revenues from the tolls were only about a third of predicted levels.⁴

PPP may take a wide range of contractual forms depending on the mode of entry, ultimate ownership, risk sharing, and duration of the partnership (see Table 1). Nevertheless, they can be categorized into four main types:

Greenfield projects imply a private company or a public-private joint venture building and operating a new facility for the project period indicated in the contract. It then either transfers it to the government or remains with the company under predetermined conditions. The most common contractual forms of a *greenfield* project are⁵:

- In a Build Own Operate Transfer (BOOT) project the private entity carries out the capital investment in building of the facility. It then owns and operates it for a period specified in the contract. Following expiration of that period all assets are returned to the public sector.
- In a Build Own Operate (BOO), and Build Lease Own (BLO) contract, a private entity is responsible for the financing and operation of the project. Unlike to the BOOT it becomes the owner of the facility and is not required to hand it back to the government. However, economic activities of a private entity as an owner may be subject to regulatory constraints on operations, pricing and etc.

These contractual forms are characterized by the long term period of operation (30 years and more), therefore a private entity has an incentive to build a facility of good quality, to keep it in good condition and optimize maintenance costs. This type of project presupposes that all market risk associated with production construction and operation costs is shifted to the private sector.

A *divestiture* presupposes that assets, operations and investment obligations are transferred to the private operator. According to this type of contract the asset can be transferred in part or full. The private entity may acquire equity of a state-owned enterprise through an asset sale, public offering, or privatization. Most commonly it requires the provision of government guarantees for future tariff increases to achieve full costs recovery or return on capital invested.

With a *concession* a private operator takes over the operation and maintenance of a facility based on lease for the contract period, during which the investment obligations in new equipment or the replacement of the existing infrastructure are required. Thus, commercial risks are imposed completely on the private sector with ownership remaining with the government. Therefore, the tariff level becomes less crucial, as it can be compensated by lower lease payments for the assets, but revenues should be sufficient to cover long-term costs of services and to attain a reasonable return. The most common contractual forms are Rehabilitate, Operate and Transfer (ROT), Rehabilitate, Lease/Rent and Transfer (RLRT), Build, Rehabilitate, Operate and Transfer (BROT). All of these are the long-term contracts which include a detailed list of investment and service obligations.

³ Prud'homme, Remy (2004). Infrastructure and Development. Paper prepared for the Annual World Bank Conference on Development Economics, Washington.

⁴ Sadka, Efraim (2006): Public-Private Partnerships: A Public Economics Perspective. IMF Working Paper, WP/06/77.

⁵ For a more detailed description of other PPP models see: Nijiru, Cyrus, Merna, Tony (2002). Financing Infrastructure Projects, Thomas Telford, Technology & Industrial Arts 304 p. and Walker, Charles T., Smith, Adrian J. (1995). Privatized Infrastructure: The Build Operate Transfer Approach, Thomas Telford, 304 p.

Table 1: Characteristics of Main Types of PPPs

Types of PPPs	Acronym	Mode of Entry	Operation and Maintenance	Investment	Ultimate Ownership	Market Risk	Duration (years)
Build, Own and Transfer	BOT	Greenfield	Private	Private	Semi-private	Private	20-30
Build, Own, Operate and Transfer	BOOT	Greenfield	Private	Private	Semi-private	Private	30+
Build, Own and Operate	BOO	Greenfield	Private	Private	Private	Private	30+
Build, Lease and Own	BLO	Greenfield	Private	Private	Private	Private	30+
Partial Privatization		Divesture	Private	Private	Private	Private	30+
Full Privatization		Divesture	Private	Private	Private	Private	Indefinite
Rehabilitate, Operate and Transfer	ROT	Concession	Private	Private	Public	Semi-private	20-30
Rehabilitate, Lease/Rent and Transfer	RLRT	Concession	Private	Private	Public	More-private	20-30
Build, Rehabilitate, Operate and Transfer	BROT	Concession	Private	Private	Public	Private	20-30
Management contract		Contract	Private	Public	Public	Public	3-5
Leasing		Contract	Private	Public	Public	Semi-private	8-15

Source: Thomsen (2005), OECD Secretariat, World Bank's PPI database, and authors' assessments.

Management and outsourcing contracts is the simplest form of PPP that does not include any investment obligations. The ownership and investment decisions remain with a public entity while the private company is responsible for management only. Thus, only the operational risk is transferred to the private company by a lease contract. This type of contract for a service is important when it is difficult to attract private investment given the tradition of pricing below costs, and government being reluctant to set a cost-covering tariff (district heating). Management and outsourcing contracts can improve labor productivity, increase operating performance and standards of services, but also have some drawbacks compared to deeper forms of private participation. As a rule they are short term, and might not lock in improvements in efficiency and productivity.⁶

Another type of PPP arrangements is the French model which has many similarities with the above mentioned forms of the PPP (See Box 1).

Box 1: French model of PPP arrangements

Delegated management (*"gestion déléguée"*) is a system where the delivery of a public service is assigned to a third party. The term "delegated management" applies to a contract concluded for the delivery of a public service, where the remuneration of the delegatee is largely dependent on operating results, and where management of the service is entrusted to a legal entity. This can be a private company, individual, local semi-public company, association, another local authority or a public corporation not controlled by the delegating local authority.

Concession in the strict sense (*"concession"*) is when the private company has complete responsibility for operating the system, making the necessary investments in the infrastructure, and takes responsibility for financing them at its own risk (*"à ses risques et périls"*).

In a **operating concession** (*"affermage"*) the private company has to operate the business and carry out maintenance at its own risk, depending on revenue from charges - but the commune remains the owner of the infrastructure, and is responsible for investment in the system.

A **management contracts** (*"gérance"*) pays a flat fee to the company for managing the system, without taking on any responsibility or risk for investments.

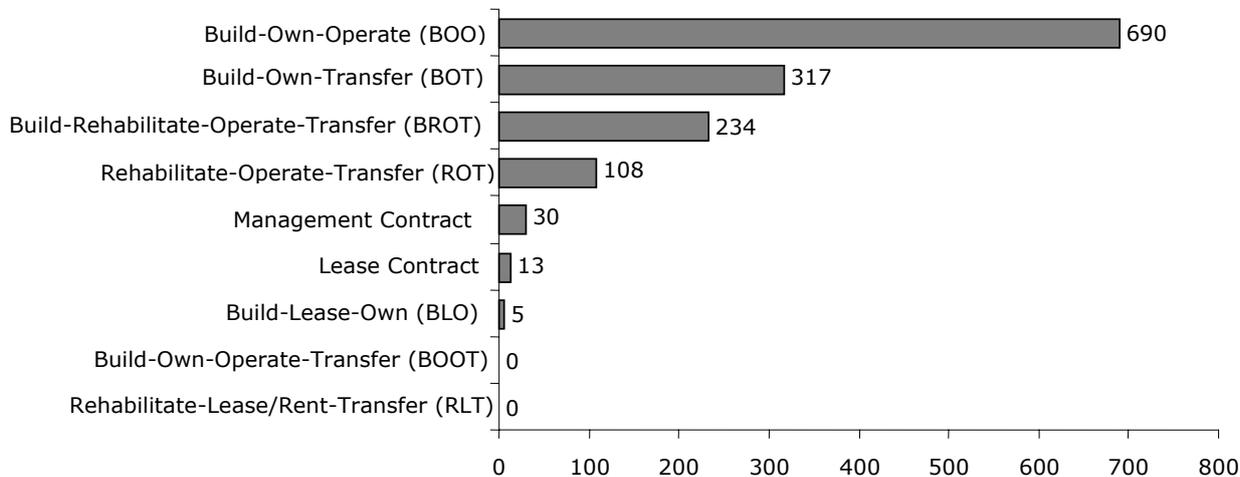
In practice, the technical distinction between *"concessions"* and *"afferriages"* is of great significance with respect to rules on public finances and tendering. According to the French state audit office (*"Cour des Comptes"*) rules on public works contracts (*"Code des marchés publics"*) do not apply to contracts as a concession in the strict sense. Works contracts do not have to be tendered.

Source: Davies, Steve and Fairbrother, Peter (2003): Private Finance Initiative (PFI) and Public Private Partnerships (PPPs): Definitions and Sources. Working Paper 39, Cardiff University.

⁶ EBRD (2004). Transition Report 2004, Infrastructure.

According to the World Bank’s Private Participation in Infrastructure (PPI) database on projects for developing countries the prevailing type of PPPs to date appears to be the Build Own Operate (38.9 percent of all projects), followed by Build Own Transfer (17.9 percent) and Build Rehabilitate Operate-Transfer (13.2 percent). Jointly, these three represent 70 percent of all projects signed in 1990-2003 (See Figure 1).

Figure 1: Number of Projects by Types of Contract



Source: Hammami, Mona, Ruhashyankiko, Jean-Francois, and Yehoue, Etienne B (2006): Determinants of Public-Private Partnerships in Infrastructure. IMF Working Paper, WP/06/99.

3. Determinants of PPP arrangements

It is widely recognized that public goods are characterized by externalities and market failures in consumption. Therefore, the state should in some way keep control on public service delivery. On the other hand, private firms operate profit oriented and will not be willing to enter in public infrastructure independently unless adequate safeguards are put into place in order to reduce the commercial risk and to recover the costs.

PPP arrangements were signed in the United Kingdom in the early 1980s within the framework of New Public Management initiative. At that time public investment had declined from 5 percent of GDP in the early 1970s to 2 percent of GDP by the early 1980s. The result of which was the so-called infrastructure gap between what government could afford and what people need. The main goal of the PPP initiative was to allocate the necessary resources to infrastructure, to increase the efficiency of the provision of services, to improve the management of public enterprises through introduction the functional principles of private firms and opening up this market for competition. Over the past five years the share of PPP in the UK has reached 15–25 percent of total public investment.⁷ Today, governments in industrial and developing countries regard PPP as alternative or complementary ways of financing and managing infrastructure projects. Therefore, it is important to identify factors favorable for PPP and the public services for which these arrangements are the most applicable.

Based on the analysis by IMF using the World Bank’s Private Participation in Infrastructure (PPI) database the determinants of PPP can be divided into four groups⁸:

⁷ According to the World Bank estimates about 20 percent of infrastructure investment in developing countries comes from private sector through PPP. (World Bank, 2002, “Building Institutions for Markets,” *World Development Report 2002*, Washington: World Bank, Chapter 8 on Regulation of Infrastructure, pp. 151–67).

⁸ Hammami, Mona, Ruhashyankiko, Jean-Francois, and Yehoue, Etienne B (2006): Determinants of Public-Private Partnerships in Infrastructure. IMF Working Paper, WP/06/99.

Public finance and state budget

In general, PPP is more likely to be initiated in a country where government has a heavy debt burden, large state budget deficits and therefore, has to cut public expenditures. On the contrary, countries with large sources of exogenous revenues available and soft budget constraints have less reason and need for opening state activities to the private sector.

Macroeconomic conditions

Governments with a credible, predictable macroeconomic policy engendering economic growth based on low inflation and stable exchange rates are more successful in the development of Public Private Partnership as a means of financing public infrastructure. Since infrastructure projects usually require substantial investments, the private sector will engage in PPP only when generating revenues over the time period are sufficient. Therefore, stable macroeconomic conditions are of crucial importance as an indication of adequate tariff regimes and project profitability.

Moreover, PPP projects in developing and emerging market economies are generally supported by multilateral development agencies: the International Finance Corporation (IFC), followed by the World Bank (through the Multilateral Investment Guarantee Agency (MIGA)), the International Bank for Reconstruction and Development (IBRD), the Inter-American Development Bank (IADB), the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB). All these international organizations put liberalization, favorable conditions for investments and macroeconomic stability as preconditions for financing and launching PPP projects under their umbrella.

Market size

Market size is an influential determinant of private sector participation in PPP as demand and purchasing power is essential for cost recovery. In general it can be noticed that the bigger the market, the more likely private entity engagement in PPP.

Institutions

PPP tend to be more common in politically stable countries with strong and effective institutions and legal code protecting investors' rights.

In addition, successful previous PPP experiences positively affect the incentive of private participation in Public Private Partnership.

The nature of public infrastructures, capital intensity, required technology, and risk sharing between the public and private partners govern the extent of private participation in PPP projects. Table 2 provides an overview of infrastructure services depending on appropriateness and attractiveness for PPP. Since the private sector is guided by profit motives PPP may not be suitable for sectors where public safety is the major concern, operating is expensive, marketability of services is low. Accordingly, the most optimal area for private sector participation are water and waste, roads, bridges and tunnels, telecommunications.

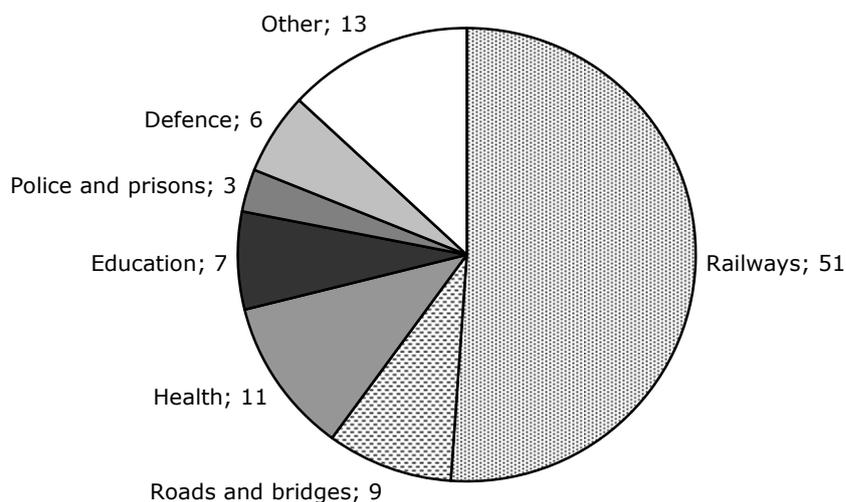
Table 2: Expectations about the sectoral distribution of PPP

Probably No	Yes	Maybe
Police and prisons	Roads	Railway networks
Defense	Bridges	Air traffic control
	Tunnels	Education
	Water & waste	Health
	Telecommunications	

Source: Own assessments based on Riess, Arnim (2005): Is the PPP model applicable across sectors? EIB papers, Volume 10, No 2.

However, the experience of the United Kingdom suggests that even for infrastructure sectors commonly considered as inapplicable for opening to private sector (i.e. police, prisons, and defense) it appeared possible to provide such public goods by private—for-profit and not-for-profit—firms. This implies that even for the sectors which may seem too weak to be contenders for private investments and in which safety is of particular importance government managed to create a powerful incentive mechanism for the emergence of PPP (See Figure 2). At the same time, the public body placed adequate safeguards against adverse service quality effects.

Figure 2: PPP by sectors in the UK, 1987-2004



Source: Riess, Armin (2005): Is the PPP model applicable across sectors? EIB papers, Volume 10, No 2.

The largest share of PPP investments in EU countries is rail roads (46 percent) and roads (35 percent), followed by energy (7 percent) and airports (6 percent). Financing of education and health are lagging behind (3 percent each). However, PPP projects in developing countries are mainly carried out in the energy (41.2%) and transport sectors (27%) followed by telecommunications (22%) and water (9.8%) (see Table 3). The most common type of PPP in energy and telecommunication sectors is Greenfield investments; while in transportation and water sectors mainly concessions are used.

Table 3: Number of Projects by Industry Sector and Mode of Entry

Industry sector	Total number of projects	Concession	Divestiture	Greenfield	Other mode
Energy	1116	45	428	626	17
Telecommunications	600	8	113	477	2
Transportation	735	406	58	226	45
Water	261	110	20	81	50
Total	2712				

Source: Calculation provided in IMF working Paper, WP/06/99 based on World Bank's PPI database.

4. Experience with PPP in CEE and Russia

CEE countries experience

The breakdown of the socialist system in early 1990s resulted in bankruptcy of infrastructure and high debts in CEE countries facing the necessity to find a way of financing of infrastructural projects in order to reduce of the infrastructure gaps with Western Europe.⁹ This situation forced governments of these countries to privatize or to

⁹ According the EC and EBRD estimations the investment needs for the sectors of infrastructure amounted to more than EUR 500 billion by the mid 1990s. (Brenck, Andreas, Beckers, Thorsten, Heinrich, Maria, von Hirschhausen, Christian (2005): Public-private partnerships in new EU member countries of Central and Eastern Europe. EIB papers, Volume 10, No 2.

engage in PPP. It should be mentioned that European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD), and the World Bank highly supported this idea and provided favorable lending conditions for such projects. According to rough estimations the above mentioned international organizations have jointly invested about EUR 35 billion in infrastructure development of eight CEE countries to this day.

The World Bank's PPI database contains information on 217 PPP projects carried out in CEE countries by 2003. Hungary is on the top of the list with 42 projects and investment commitments amounting to EUR 17.4 billion, followed by the Czech Republic (46 projects, EUR 16.4 billion), and Poland (35 projects, EUR 18 billion). These three countries account for 71% of total PPP investments in CEE countries. The sectoral distribution of financing confirms the fact that attractiveness of different infrastructure sectors for PPP varies considerably. The largest share of investment (69 percent) went to telecommunications, and reflects the high profit expectations from the side of private sector and minor needed engagement due to deregulation from the side of public sector. The total number of PPP projects was in telecommunications amounted to 71. The energy sector follows with 57 projects in electricity and 17 projects in natural gas. However, the financing of this sector was seriously lagging behind and constitutes 23.6 percent of the total investments only. The share of financing of other sectors, such as toll roads, water, and some other accounted for 7.4 percent.

The distribution of investments by PPP category shows the dominance of 'divestiture', with 63.9 percent of total amount of financing, and nearly half of all projects. Nearly all projects in the energy sector were released through this type of Public Private Partnership and in telecommunications divestiture accounted for more than 50 percent of the PPP investments. The share of 'greenfield' type partnership is 29.5 percent in total amount of projects and 31 percent in investments. The contribution of two other categories, i.e., concessions and management contracts is only 5 percent of investments. Toll roads with six projects cover 3.2% of investments, while the share of water and sewerage with 20 projects is 1.8% of investments.

However, the considerable hope that was placed on PPP in CEE countries did not materialized fully. Despite the fact that, due to the backwardness and the urgent need for financing, water and sewage have been prime targets for PPP in CEE countries and international organizations provided the support trying to transfer international best practice, the overall impact has been lower than expected, and the projects in this sector faced difficulties right from the start given the low commercial value. Some projects in water sector were even taken off, e.g. in Budapest, Sofia, and Tallinn.

In general, the first attempt to institutionalize PPP as a key instrument for infrastructure financing of CEE countries were less successful than in other countries and than initially hoped for, mainly due to the ***lack of effective institutions, shortcomings in macroeconomic policy, and unrealistic demand expectations***. Yet, in the context of EU accession CEE countries substantially improved institutions over the last years, and, hence, created a more fertile ground for PPP in the future. Countries now are entering into the second generation of PPP projects that most likely will be more efficient.

Russia

A significant range of the issues which local authorities in Russia face nowadays generates a need to look beyond traditional funding alternatives and attract private sector in delivery and financing of local infrastructure projects aimed at improvement of the urban infrastructure. Taking into consideration that creation of the supportive legal framework is crucial for PPP development the special legislation necessary for implementation of infrastructure projects was established: for concessions it is the Federal

Law "On Concession Agreements" (July 21, 2005), lease and investment agreements are governed by "Civil Code of the Russian Federation" already in place, management and procurement contracts are regulated by the "Civil Code" and the Federal Law on "Placement of Orders for Procurement of Goods, Performing Works, Rendering Services for State and Municipal Needs" (July 21, 2005).

PPP agreements have been used in Russian infrastructure as follows:

Private operations of municipal utilities:

- Water (Renova-Russia Utility System, Eurasian Water Partnership, Alfa-Rosvodokanal, Interros-Novogor)
- District heating (Renova-Russia Utility System, Interros-Novogor, Basel-Russian Utility Investments, UES subsidiaries)
- Electricity Distribution (local private operations, Renova-Russia Utility System, Interros-Novogor, UES subsidiaries)
- Private operators of airports (Basel Infrastructure – Krasnodar, Gelendzhick, Krasnoyarsk, East Line – Domodevo, Vnukovo TZK –Vnukovo, Alfa Eco, National Reserve Bank)

Today, Russia witnesses an increasing provision of public goods by PPP arrangements. This process is driven by the transformation of public entities into commercial enterprises, e.g. major municipal utilities (water, district heating, public transport, gas) are to be corporatized in Moscow; electricity reform, which increases the role of municipal councils and their willingness to enter in district heating concessions, co-generation BOT projects; devolution of responsibilities for hospitals, schools and colleges to local authorities.

However, there remain obstacles restraining the entering of private investments through PPP. First, public authorities do not have sufficient funds and expertise for preparation of long-term investment programs, thus leading to the lack of well-developed projects, which might be interesting for PPP. Second, since public property is not adequately registered quite often significant up-front investments are needed to settle the differences in order to make it work within a PPP. Third, there remain problems with risk sharing and coverage in PPP. Fourth, the shortcomings in regulation (insurance, tariffs, and etc.) create some additional barriers to proliferation of PPP.

5. Conclusions

International experience suggests that co-operation between the public and private sectors can be a powerful incentive for improving the quality and efficiency of public services, and a mean of public infrastructure financing. Depending on the mode of entry, ultimate ownership, risk sharing, and duration of the partnership PPP's may take a wide range of contractual forms that can be combined into four main types: Greenfield, divestiture, concessions, and management contracts.

The most common contractual forms of PPP is a *greenfield* and more specifically Build Own Operate Transfer (BOOT) and Build Own Operate (BOO) projects. That is a private entity makes the capital investment in building of the facility, and then owns and operates it for a period specified in the contract. These contractual forms are characterized by the long term period of operation (30 years and more), therefore a private entity has an incentive to build a facility of good quality, to keep it in good condition and optimize maintenance costs.

Governments in industrial and developing countries regard PPP as alternative or complementary ways of financing and managing infrastructure projects. Therefore, it is important to identify the factors that are favorable for PPP's. An analysis carried out by the IMF using the World Bank's Private Participation in Infrastructure (PPI) data-

base revealed that countries that following a market-oriented policy and with a credible, predictable macroeconomic policy that engender economic growth based on low inflation and stable exchange rates are more successful in the development of Public Private Partnership as a means of financing public infrastructure. The finding also suggests that PPP's are more likely to be initiated in a country where government has heavy debt burden or a large state budget deficit and therefore, has to cut public expenditures. Moreover, PPP's tend to be more common in politically stable countries where institutions are strong and effective and the legal code better protects investors' rights.

Market size is an influential determinant of the private sector participation in PPP as both demand and purchasing power are essential for cost recovery. The bigger the market the more likely a private entity is engaged in PPP.

Since the private sector is guided by profit motives, PPP's may not be suitable for sectors where public safety is a major concern, operating is expensive, marketability of services is low. Accordingly, the most optimal and commonly observed areas for private sector participation are water and waste, roads, bridges and tunnels, telecommunications.

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