

# Public-Private Partnerships

## Promise and Hype

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## Abstract

This paper provides perspectives on patterns of public-private partnerships in infrastructure across time and space. Public-private partnerships are a new term for old concepts. Much infrastructure started under private auspices. Then many governments nationalized the ventures. Governments often push infrastructure providers to keep prices low. In emerging markets, the price of water covers maybe 30 percent of costs on average, that of electricity some 80 percent of costs. This renders public infrastructure ventures dependent on subsidies. When governments run into fiscal troubles, they often look again for public-private partnerships, and price increases. As a result, public-private partnerships keep making a comeback in most countries, but are not always loved. Waves of interest in public-private partnerships sweep different countries at different times. Overall, in emerging markets today, public-private partnerships

account for some 20 percent of infrastructure investments, with wide variations across countries and from year to year. There is no “killer” rationale for public-private partnerships. They can help raise financing when governments face borrowing constraints. They can be more efficient when sound incentives are applied. Existing evaluations suggest public-private partnerships tend to perform often a bit better than public provision. Yet, well-run governments can do as well. Public-private partnerships provide mechanisms to improve the governance of infrastructure ventures where governments are flawed. Once the fiscal troubles are over, the politics of pricing assert themselves again. Tight pricing erodes the profitability of public-private partnerships and the wheel of privatization and nationalization keeps turning, as it has since modern infrastructure services were invented.

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# **Public-Private Partnerships**

- Promise and Hype -

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# Patterns of PPPs across Time and Space

## Public-private partnerships – what’s in a word?

Public-private partnerships (PPP) are the rage these days - all over the world. The popularity of the term is recent. During the 1990s it was not much used.<sup>2</sup> Unsurprisingly, therefore, there are views that the PPP phenomenon is somehow new.<sup>3</sup> In reality the packaging may be new, but the content is old. For example, concessions under which the state delegates construction and management of public works to private providers were deployed in France in the 17<sup>th</sup> century. In many parts of the world early infrastructure projects were built and operated by the private sector under contracts that could today be called PPP. Examples are Thai and Japanese railways and French water systems.<sup>4</sup>

The term PPP itself remains fuzzy. Often it refers to infrastructure ventures such as roads, water systems or power plants. It may extend to social infrastructure including schools and hospitals. It can cover all sorts of facilities from landfills for waste management to prisons. And then there is the universe of collaborative efforts between governments and private parties such as programs for vaccine development or the support of small and medium enterprises. Jay Knott, consultant and former USAID official has it right when he notes, “It seems that the very definition of a PPP can shift with the winds.”<sup>5</sup>

In this paper the term PPP refers to private participation in infrastructure (telecom, transport – roads, ports, airports, and railways –, water and sanitation, waste management and electricity).<sup>6</sup> Activities that fall under this umbrella may sometimes be characterized, for example, as “concession” or “franchise” or “build-operate-transfer” deals. At one extreme there are “fully” public sector enterprises – at the other “fully” private firms. In between exists a continuum of arrangements that combine public and private roles in different ways. The public sector may delegate construction and operation to a private party. It may just delegate operation or just management or only some services, like metering electricity.

Whatever term we use, it is important to understand the details. For example, proponents of private participation in the water sector have made much of the difference between the French approach – concession – and the English and Welsh –

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<sup>2</sup> An early example is the Institute for Public-Private Partnerships (IP3) that was set up in Washington in 1994

<sup>3</sup> see for example the view on the origins of PPPs in Wikipedia:

[http://en.wikipedia.org/wiki/Public%E2%80%93private\\_partnership](http://en.wikipedia.org/wiki/Public%E2%80%93private_partnership)

<sup>4</sup> Klein, M. and N. Roger (1994) “Back to the Future” in *Finance and the International Economy* 8

<sup>5</sup> <https://www.devex.com/news/for-public-private-partnerships-to-succeed-get-beyond-the-definitions-85190>

<sup>6</sup> Occasionally, an example from social infrastructure illustrates a special point.

privatization. Looking closer there is no significant difference. Can an English water company turn off the tap, because it owns the water? No, it has to provide service. Can it close the business, dig out the pipes and leave? No. But the ownership is private, whereas in France it remains public and the assets return to the public sector when the concession period ends, say after 25 years. Well, under its license an English water company may lose the license, if the responsible ministry so decides at any time and without reason, as long as notice of 10 years has been given.<sup>7</sup> The assets are then taken over by the government. Hence, there is no substantive difference between the two approaches. At the other end of the spectrum, even when the enterprise is deemed fully public, construction is typically outsourced to the private sector as are a number of services such as office cleaning or catering. If we want, we can call that PPP.

PPPs in infrastructure and in much of social infrastructure typically operate in sectors where competition is not or not easily workable. They – and fully public enterprises – are thus usually subject to some form of price and quality regulation, except in “lawless” areas such as parts of Somalia. The regulatory rules may be written down in a contract or some other document, say a statute, a license or a law. The organization making and administering the rules may be a special agency or an office in a ministry or some other public authority. All sorts of combinations exist.

So why call things “PPP”? Just google images under “water privatization” and then “water public-private partnership”. Water privatization shows rapacious firms exploiting poor people. Under PPP the images look benign. Charts, slogans about partnership and some occasional handholding between partners are depicted. “Privatization” has become incendiary. “PPP” is a politically benign term, at least for now.<sup>8</sup>

### **History of PPPs in infrastructure**

The history of PPPs globally has yet to be written. The most comprehensive treatise covers the case of Britain.<sup>9</sup> Nevertheless, from existing historical accounts we can piece together a broad picture that helps organize thinking about the phenomenon.

With the rise of the modern world, many infrastructure services started in private hands. That applies to much of telecommunications, railroads, electricity, town gas and natural gas or urban water supply. Even canals and overland roads were originally private in places, for example, England or the United States.<sup>10</sup> At the same

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<sup>7</sup> Kerf et al. (1998) “Concessions for Infrastructure” World Bank Technical Paper No. 399

<sup>8</sup> Groups like the globalization critics, ATTAC, have started campaigning against PPPs as such; see for example <http://www.ppp-irrweg.de/>

<sup>9</sup> Foreman-Peck J. and R. Millward (1994) “Public and Private Ownership of British Industry 1820 – 1990” Clarendon Press, Oxford

<sup>10</sup> [http://www.historylearningsite.co.uk/canals\\_1750\\_to\\_1900.htm](http://www.historylearningsite.co.uk/canals_1750_to_1900.htm);

[http://en.wikipedia.org/wiki/History\\_of\\_turnpikes\\_and\\_canals\\_in\\_the\\_United\\_States](http://en.wikipedia.org/wiki/History_of_turnpikes_and_canals_in_the_United_States)

time there were services that started in public hands and remained there, for example, the United States postal service, since Benjamin Franklin was appointed as the first postmaster general in 1775.

During the second half of the 19<sup>th</sup> and the beginning of the 20<sup>th</sup> century some form of nationalization occurred in many countries. Motives for nationalization varied. At a general level they had to do with concern over private greed leading to excessive prices or inadequate quality. Health concerns drove some water nationalizations. British electricity companies were nationalized to facilitate system integration when long-distance transmission became economic. Prussia nationalized rail service to subsidize the cost of Upper Silesian coalmines competing with English coal. When early arrangements were put in place that we might call PPP today, inflation was virtually unheard of. With the rise of inflation during the 20<sup>th</sup> century agreed prices lagged behind costs. Some governments then nationalized failing private firms, as in Brazil's electricity sector.

In a number of cases, governments resorted to some form of price and quality regulation rather than outright nationalization. Examples are the telephone company ATT in the United States; the German electricity company RWE; the power company of Hong Kong SAR, China; China Light and Power; Electricidad de Caracas in the República Bolivariana de Venezuela (till 2007); and many French water companies.

Government firms were meant to provide better quality at lower prices. Disenchantment followed. Low prices starved public firms. The incentives of public firms to perform were not systematically better than those of private ones. Some performed well. Yet, many Government officials and managers of public enterprises revealed themselves as self-interested just as the greediest capitalist or used state enterprises to pursue non-economic goals, such as keeping prices below cost.

As long as generous state subsidies can paper over the cracks, state-owned firms persevere. But when fiscal resources are tight, the call for private finance and management becomes politically salient. The syndrome leads to the "wheel of privatization and nationalization" (figure 1).<sup>11</sup> A number of countries and infrastructure sectors have undergone the cycle, notably Argentina.

The move from private to national infrastructure firms lasted well into the 1970s in much of the world. The productivity slowdown in advanced economies since the early 1970s and the concomitant oil crisis put government finances under stress, whether in some European countries like Britain, which had to resort to IMF support in the 1970s or in Latin America, where debt crises erupted in the 1980s.

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<sup>11</sup> Gomez-Ibanez J. and Meyers J.R. (1993) "Going Private: The International Experience with Transport Privatization" The Brookings Institution, Washington D.C. and Klein M. and Roger N. (1994)

As a result a number of governments turned to some form of “privatization” of infrastructure services. Chile and the UK paved the way in the 1980s. Technology advances in telecommunications made that sub-sector particularly attractive for the introduction of competition and concomitant privatization.

### **Geographical patterns today**

From the 1990s onwards we have more systematic data on PPP developments in developing economies from the World Bank’s PPI database.<sup>12</sup> By February 2015 it covered 6146 projects in low and middle-income countries with a total investment volume of about \$ 2.2 trillion (not adjusted for inflation). Data on public sector infrastructure projects are, however, still not systematically available. In the following estimates by McKinsey on overall infrastructure investment levels by region are used to put PPP developments in perspective.<sup>13</sup>

The general picture is one of waves of enthusiasm for PPPs followed by some disenchantment and consolidation. Different countries were caught up in the waves at different times. The World Bank’s World Development Report of 1994 estimated that PPPs accounted for some 7% of infrastructure investment in developing economies in the early 1990s, probably an underestimate by up to half in retrospect. It surmised that the total might double in the following years.<sup>14</sup> Indeed, it exploded. In 1997 \$ 150 billion of PPP investments may have accounted for close to half of all infrastructure investment.<sup>15</sup> A collapse followed. By 2002 PPP investments fell back to barely \$ 60 billion. Since then total investment has recovered reaching \$ 200 billion in 2010 before subsiding somewhat.<sup>16</sup> At the same time GDP had grown rapidly. Today, PPPs account for something like 20% of total infrastructure investment in low and middle-income economies, roughly double the level in the late 1980s.

PPPs rarely account for more than half of the infrastructure investments of a country. It is fairly normal for a country to use PPPs for 15 – 25% of total infrastructure investments. Most countries use PPPs at least occasionally; even for example,

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<sup>12</sup> In 1993 I created the PPI (private participation in infrastructure) database at the World Bank, which remains the main source on developments in infrastructure PPPs. [www.ppi.worldbank.org](http://www.ppi.worldbank.org) The data cover both new investment as well as purchases of existing companies.

<sup>13</sup> McKinsey Global Institute (2013) “Infrastructure Productivity: How to save \$1 trillion a year”, Washington D.C.

<sup>14</sup> World Bank (1994) “Infrastructure for Development”, Washington D.C. p.93

<sup>15</sup> GDP of low and middle-income economies amounted to \$6.4 trillion in 1997 (World Bank (1998/99) “Global Economic Prospects”, Washington D.C.). Assuming a total investment in infrastructure of 5% of GDP, \$ 150 billion invested in PPPs amounted to almost half of that. Some of this was investment in existing companies. Net new investment still probably exceeded \$120 billion and investment levels in emerging market were probably lower than 5% of GDP due to financial crises.

<sup>16</sup> This assumes an average total investment level of about 4% of GDP, which is high for most countries except China (8.5%) and to a lesser extent India (4.7%).

Turkmenistan or Belarus. Some have seen years when PPPs accounted for the bulk of infrastructure investments, most recently Brazil. China has pursued more PPPs than any other country. Yet, on average PPP projects are relatively small and account for less than 1% of China's exceptionally large investment in infrastructure.

Among regions of the world, Latin America started early and has invested most under PPP contracts – some 38% of the global total. Within the region, however, the interest of different countries shifted. Initially, in the 1990s Argentina was the forerunner in PPPs till the country changed its economic model after the crisis of 2002. Today, Brazil is the big enthusiast. Several East Asian countries such as Thailand and Indonesia were caught up in the early wave of the mid-1990s. Then China took the lead albeit with smaller projects. In Eastern Europe, early privatization touched mostly telecommunications. Other PPPs took off slowly. The Russian Federation and, most recently, Turkey are most active today. India staid out of the game during the 1990s but then became the global haven for PPPs and project finance around 2010. Sub-Saharan Africa saw little interest in the 1990s, but has experienced a mini-boom recently driven by telecommunications and now also electricity PPPs. Only modest activity has been seen in the Middle East and North Africa.

In advanced economies,<sup>17</sup> PPPs have been most popular in Europe led by Britain's private finance initiative (PFI) that started under John Major. More recently, prior to the financial crisis, they became an approach of choice in Spain and Portugal. In France PPPs always had a home at the municipal level. Some countries are experimenting with PPPs including Germany.<sup>18</sup> Interest may grow in the United States, where PPPs in the transport sector have become a subject of debate.

In sum, there are no simple geographic patterns. Most countries have tried PPPs. Some have seen enthusiasm wax and wane. Others have stuck steadily to some form of PPPs. A new set of countries has so far taken up the banner, when activity flagged elsewhere.

### **Sector patterns**

More pronounced patterns appear when looking at PPPs by sub-sector of infrastructure. Telecommunication investments typically led, notably in Eastern Europe and Central Asia, the Middle East and in Sub-Saharan Africa. Electricity was next in line. Within the power sector, the emphasis has been on independent power production (IPPs) with limited activity in transmission and distribution. Very little overall has happened in water and sanitation. There, the major game was Chinese PPPs for water treatment plants. Roads dominate transport sector investments.

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<sup>17</sup> For advanced economies data on PPPs are not systematically available over a longer period as for developing economies

<sup>18</sup> Wagenvoort R. et al. (2010) "Infrastructure Finance in Europe: Composition, Evolution and Crisis Impact" in *EIB papers Vol. 15 No. 1*

Several countries have tried PPPs in the form of toll roads. Chile has arguably the most successful PPP toll road program of any country in the world. Mexico on the other hand was plagued by imprudent approaches to private toll-roads in the mid-1990s – a significant contributor to the currency crisis of 1994/5. Some rail road PPPs exist, next in size after toll-roads. Finally, there are smaller investments in many airports and ports. To some degree these patterns simply reflect the size of “normal” investments in the various sub-sectors. Power plants and road are often simply big-ticket items.

Telecommunication developments stick out. Initially, mixed ownership forms were widely used not least in Eastern Europe, the Middle East and Africa. By now PPPs play less and less of a role in the sector as competition drives out remnants of the old telecom monopolies. Telecommunications prices have been cost covering in many countries for some decades by now. The new businesses are thus sustainable without regular fiscal transfers.

## Rationales for PPPs

### “The government has no money”

**Pricing and fiscal dependence.** Dependence on fiscal transfers plagues the other sectors that remain shot-through with unavoidable monopoly elements and are subject to some form of price regulation. Trivially, for a business to work, whether in state or private hands, there need to be sufficient revenues to cover costs. Often this de facto requires government transfers. In developing economies, electricity prices covered only about 60% of costs in the early 1990s. By 2005 they covered around 80% of costs. Water prices have stubbornly remained at about 30% of cost.<sup>19</sup> Some infrastructure projects, notably many roads, may simply not be able to charge adequate user fees.

Raising prices to consumers of water and electricity can be politically fraught. In the case of water, popular outrage easily erupts.<sup>20</sup> Opposition to electricity price increases is also widespread although it tends to be more prominently affected by business lobbies for lower prices on grounds of “competitiveness”, most recently, for example, in Brazil or Germany. Note that in electricity and water, the typical existing PPPs do not sell directly to consumers – they sell to utilities, power or water companies. Some form of transfer fiscal transfer payment tends to pay for the cost of

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<sup>19</sup> Costs include operating costs, maintenance and the cost of capital. Only broad estimates of price relative to cost levels are currently possible for comparisons across time and space. See Klein M. (2012) “Infrastructure Policy: Basic Design Options”, World Bank Policy Research Working Paper 6274, Washington D.C.

<sup>20</sup> Note that more people in Africa have cell-phone access than access to modern water supply. Access is thus available to what was not long ago considered a luxury good. Yet, poor people have to obtain water at great expense from traditional sources, because low and erratic revenues for water companies hold back development.

PPPs, where it exceeds levels that can be covered by current tariffs charged to the final customer.

Pricing policies are not only a function of pressures from citizens and firms. Intriguingly, corrupt officials do not use monopoly-pricing power to extract rents, even though that would yield the biggest possible profit. Instead they keep prices low, ostensibly for developmental purposes, while getting kickbacks, for example, from construction projects or spare part sales. Efficient monopoly pricing would mean efficient management and transparency based on solid accounting. Corrupt practices, however, require obfuscation and shoddy accounting.<sup>21</sup>

As long as governments can provide adequate fiscal transfers, service may be provided despite low user fees. The less user fees cover costs, the more clearly a business is dependent on political vagaries. Government transfers obviously suffer when fiscal deficits get out of control independent of the performance of a particular infrastructure business. Hence the syndrome plaguing many state-owned infrastructure companies of low quality service provision combined with low profitability. Taxpayers (the shareholder of state-owned companies) and consumers bear the risks.

**Fiscal troubles: Borrowing restrictions.** When fiscal troubles rear their ugly head, government authorities cast around for new solutions. Initially, governments may have some trouble raising funds. They may also be subject to self-imposed prudential limits on borrowing. The Maastricht Treaty borrowing limits were, for example, one factor driving the popularity of PPPs in Spain. When the limits start biting governments become as inventive as any corporation to hide financial obligations from the public eye and that of credit analysts. In fact, governments have an easier time to use accounting tricks, because accounting standards for governments tend to be less demanding than for firms, particularly those listed on an exchange.

PPPs can be a mechanism to disguise the financial position of governments. Suppose a government authority wants to build a road on which tolls cannot be charged. Government may borrow in the capital markets, say \$100 million, and use the funds to pay a contractor to build the road. For simplicity's sake assume the loan is perpetual and interest is 10%, government would then have to repay \$ 10 million every year. In addition it will have to pay for operation and maintenance of the road, say another \$ 10 million annually. As government borrows, the debt appears on its balance sheet. Parliamentary approval may be necessary. Once the road is built, taxpayers need to come up with \$ 20 million per year to fund the road.

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<sup>21</sup> Klein M. (2011) "Enrichment with Growth", World Bank Policy Research Working Paper 5855, Washington D.C.

How can a PPP come to the rescue? The government delegates construction, operation and maintenance of the road to a private firm under a contract. Let's for now assume that the firm is just as efficient as the government and has the same cost of capital (return to shareholders plus interest on debt). The firm borrows \$ 100 million and repays \$ 10 million every year. It also spends \$ 10 million per year to operate and maintain the road. Yet a firm is not providing a donation. Its owners, who may include, for example, pension funds, want to be compensated. As there are no toll revenues, taxpayers have to pay \$ 20 million per year, once the road is operational.<sup>22</sup> However, governments often need not show this future obligation on their balance sheet. Parliamentary approval may not be required. Should the PPP firm have trouble borrowing a creditworthy tier of government (typically the sovereign) can give a guarantee to the PPP's creditors. Again the government may not need to show this contingent liability on its books and may be able to approve with limited scrutiny.<sup>23</sup>

The ability to "cook the books" and avoid demanding approvals can be attractive for politicians who wish to get an infrastructure project going, for example, before the next elections. The British Private Finance Initiative (PFI), established under John Major in 1992 and expanded under the subsequent labor government has been one of the largest PPP programs globally. PPPs for transport infrastructure, hospitals, schools, prisons and other public services were funded. Eventually, such off-balance sheet borrowing led some creditors to withdraw from PFI projects as they correctly saw that the borrowing authorities, for example, some National Health Service trusts were over extended.<sup>24</sup> Also, new accounting standards adopted by the government reduced the attraction of the PFI model relative to traditional government financing.

**Fiscal troubles: Tight credit constraints.** Some governments become completely non-creditworthy. The typical argument then becomes: "The government does not have any money, let's get the private sector to invest". In such a situation projects that rely on government transfers for repayment, like the road example above remain hard, if not impossible to fund. However, projects relying on user fees may be easier to fund as PPPs than in public hands. This is not because the private sector provides funding for free. Investors want their money back - with a return. If projects are financially viable, i.e. user fees are adequate to cover operating costs, maintenance and the cost of capital, then funding may flow. The crucial issue becomes: Why is it possible to fund such a solid project under a PPP structure, but not under "pure" public ownership? After all the government also borrows from the capital markets.

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<sup>22</sup> If there were user fees, government could also have used them to pay for obligations, just like the private sector.

<sup>23</sup> Irwin T. and T. Mokdad (2010) "Managing Contingent Liabilities in Public-Private Partnerships" The World Bank and PPIAF, Washington D.C.

<sup>24</sup> [http://en.wikipedia.org/wiki/Private\\_finance\\_initiative#cite\\_note-gtpu-19](http://en.wikipedia.org/wiki/Private_finance_initiative#cite_note-gtpu-19)

Investors (shareholders and creditors) may be willing to fund a PPP, because the cash flow from user fees is dedicated to the project. When a cash-strapped government is the owner, it may be tempted to divert cash flow to plug “urgent” holes, for example, in the general budget. Diverting cash flow from a PPP would visibly violate the private property rights of the investors. Governments tend to be reluctant to do so, because it would send a signal that contracts and property rights are not respected and this could affect investor perceptions well beyond the project.<sup>25</sup> The PPP thus acts as a commitment device that enables governments to attract investors who would otherwise shy away.<sup>26</sup>

## PPP - The best of both worlds

When governments face no tight fiscal constraint, one often hears the argument that PPPs are valuable because they can combine the efficiency of the private sector with the cheap financing of government. Both parts of the argument are questionable.

**The government’s cost of capital.** Indeed, in almost all cases, the borrowing costs of the sovereign government are lower than those of a private borrower of the same jurisdiction. Is this, because the public sector is systematically better at managing projects? - Hardly. However, when projects fail governments can call on taxpayers to ensure repayment to investors. The taxpayers thus provide, for example, unremunerated credit insurance. The issue is whether the cost of risk bearing imposed on taxpayers in this way is lower than the cost of risk bearing<sup>27</sup> imposed on private financiers for PPPs. To use an analogy with financial markets, would an appropriate fee for credit insurance by the taxpayers offset the ostensible financing cost advantage of governments?

The technical arguments have been largely clarified by now.<sup>28</sup> When projects are small relative to national income, when their risks (positive and negative outcomes) are not correlated with income and when the risk is spread evenly and very widely among all citizens, then one can argue that the cost of risk-bearing for taxpayers is immaterial.<sup>29</sup> However, all projects together constitute the economy; hence on average project outcomes are fully correlated with overall income. In this case, citizen-taxpayers bear a material risk. In addition, for example, in societies where

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<sup>25</sup> Gomez-Ibanez J. (2003) “Regulating Infrastructure”, Harvard University Press

<sup>26</sup> The most sophisticated cost-benefit evaluations of privatizations suggest that the ability to attract additional investment is the key source of benefits (Galal A. et al. (1994) “Welfare Consequences of Selling Public Enterprises” Oxford University Press

<sup>27</sup> The cost of risk bearing of an individual can be thought of as the amount of money s/he is willing to pay to insure against an uncertain outcome.

<sup>28</sup> Gollier C. et al. (2011) “Le calcul du risque dans les investissements publics” Rapports et Documents, Centre d’Analyse Strategique, Republique Francaise, Premier Ministre, Juin

<sup>29</sup> Arrow K.J. and R. C. Lind (1970), “Uncertainty and the Evaluation of Public Investment Decisions,” Amer. Econ. Rev., June

tax evasion is widespread and concentrated among wealthier citizens the cost of risk-bearing is accentuated as it falls on fewer and less-well off citizens. Accounting for this cost of risk-bearing might render the ostensible financing advantage of the public sector illusory.

Ultimately, it comes down to beliefs whether private capital markets are more or less imperfect than governments when it comes to diversifying risk.<sup>30</sup> One has to believe that governments are fairly efficient and benevolent to assume that government finance is systematically cheaper.

**Efficiency of the Private Sector.** Private businesses are often said to be more efficient than public ones. What is it about “private” that makes a business so? In the mid-1990s the Government of Maharashtra opted for a public-private partnership to build a toll expressway from Mumbai to Pune, a first in India. Despite a favorable new highway act, despite tax and customs concessions, the project failed to attract interested private bidders. The state government finally established a semi-private entity, the Maharashtra State Road Development Corporation (MSRDC) that proceeded to win the contract and implement the project. The road opened in 2001.

The MSRDC was essentially a public venture incorporated as a private vehicle. Managers who were previously public became private. Why would a change in the legal status of the firm suddenly make managers and the firm more efficient? It is hard to believe that legal status changes the inherent ability of people. More plausibly, people may become more efficient, if their incentives change concurrent with the legal change or on account of it. Also a different incentive regime may attract different types of people.

Can the public sector institute an efficient incentive regime without going the PPP route? This question leads back to the nuances in the definition of a PPP. Most “pure” public road projects, for example, use private firms to build the road. Some even rely on private firms to operate and maintain it.

Could it be that PPPs enable new forms of contracts that cannot be instituted in traditional public sector projects? Typical claims about the advantages of PPPs encompass the following:

- Price certainty – government knows payment schedule, i.e. performance risk is allocated to the private party
- Responsibility for maintaining assets transferred to private party
- Scope, incentive for innovation
- Payment only after completion – incentive to be on time
- Life-cycle approach (incentives jointly to optimize costs of building, maintaining and operating over the life of a project)

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<sup>30</sup> Engel E. et al. (2014) “The Economics of Public-Private Partnerships” Cambridge University Press

Yet, public sector contracts are feasible that replicate all these advantages. The government can use fixed price contracts to obtain price certainty. Government can delegate responsibility for assets to the private sector under maintenance contracts. A fixed-price contract that relies on performance specifications and leaves the private sector to come up with innovative ideas to meet performance targets is an option. Payment on completion of works or services can also be embedded in public contracts.

The life-cycle approach is often cited as the key to the efficiency of PPPs.<sup>31</sup> Making a single firm, the PPP, responsible for the life of a project provides incentives to invest in such a way that the impact on future operations and maintenance is taken into account thus minimizing the lifetime cost of a project. Traditional public procurement also tries to assess the impact of construction approaches on future current expenditure but may fail to do so comprehensively.

By now, however, we also find life-cycle contracts in the public sector. A German hospital project applied this approach in a setting that is de facto a public sector lifecycle approach,<sup>32</sup> even though it was officially called a PPP. Thus all the contractual improvements that might be enabled by a PPP can also be put in place in a public sector setting.

The key distinction of a PPP would then not be the contract structures, but the incentives to monitor contract design and fulfillment, because private shareholders and lenders bear performance risk. They have their money on the line when things go wrong, not the taxpayers.<sup>33</sup> That is typically a key reason why competitive markets outperform state-run, planned approaches. Under workable competition, when companies overcharge or provide sub-standard quality consumers can switch to another one. Companies thus have an incentive to perform.

Yet, in much of infrastructure competitive markets are not feasible or advisable. Monopoly provision is often the way to go, for example, for modern water and sewerage systems, roads, electricity transmission and distribution and similar network infrastructure. Such monopolies tend to be regulated. Price and quality standards are set administratively by some regulatory authority.

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<sup>31</sup> Engel E. et al. (2014) argue that the life-cycle approach is key to the potential benefits of PPPs relative to traditional public procurement

<sup>32</sup> The project, Hochtaunus Kliniken, near Frankfurt is called a PPP. However, ownership (equity) is essentially public. Lenders are insured against performance risk in the project by the local authorities. All risks are thus with the public sector – the taxpayer. The PPP format helps keep the obligations off the local government books. Materially it just adds to transaction costs and may not be repeated in this form. (communication from project staff to the author)

<sup>33</sup> In some PPPs the lenders, for example, are state-owned, for example, in Spanish hospital projects. As always one needs to look at the details to determine how public or private a particular PPP really is.

**The profit motive and politics.** Public sector supervision of the PPP is needed to assess whether payments to the PPP are adequate (neither too low nor too high) and whether quality is sound. Initial bidding for a PPP helps select the best firm to implement a project and also to get the best possible initial price. However, as time goes by something always changes and contracts need to be adjusted in response. Such contract modification is unavoidable and is nothing else but standard price and quality regulation. Regulation or contract adjustment is needed whatever the ownership format is, including public ownership. Good policies and contracts foresee that and set out the principles for adjusting terms, the processes to go through for the adjustment and the players involved.

Price and quality regulation always weakens incentives to be efficient relative to competition. It is thus no longer so clear that PPPs are better run than public firms. The evidence suggests that well-run public firms tend match the performance of private firms in regulated sectors.<sup>34</sup> Yet, public firms are often heavily affected by political goals that render efficient management difficult. Prices may be suppressed. Managers may be political appointees with loyalty counting for more than competence. Entrenched, politically connected, labor unions may resist efficient management. The choice of suppliers may be affected by political pressure. The litany of issues is well known.

The core issue then is which arrangements for the delivery of infrastructure best combine i) incentives for efficiency with ii) credibility to investors and iii) benefits and legitimacy for consumers and taxpayers. No perfect solution exists but key issues and options are fairly clear.

One piece of the puzzle is a sensible balance between autonomy and accountability for the regulator or PPP contract supervisors. They should be mandated to pursue socially desirable outcomes and at the same time be insulated as best as possible from nefarious political interference. This is the issue of “independent” regulatory bodies.<sup>35</sup>

Another piece is the legal form of the private party involved in a PPP. When quality of service delivery can be monitored reasonably well, one can use contracts that motivate private firms strongly to be efficient.<sup>36</sup> That means payment is tied to achievement of measureable goals: good performance leads to higher profit. For-profit firms have good incentives to make the best of such contracts. Regulators need to watch out for quality of outcomes. Typically the quality of infrastructure

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<sup>34</sup> Kwoka, J.E. (2005) “The Comparative Advantage of Public Ownership: Evidence from U.S. Electric Utilities” in *Canadian Journal of Economics*, Vol 38, No. 2, May

<sup>35</sup> For a survey of the debate and the key mechanisms to balance autonomy and accountability see Smith W. (1997) “Utility Regulators – The Independence Debate” in *Public Policy for the Private Sector* 127

<sup>36</sup> High-powered incentive schemes in the language of economists; see Laffont J.J. and J. Tirole (1993) “A Theory of Incentives in Procurement and Regulation”, MIT Press

ventures can be monitored reasonably well and such performance contracts can be used.

When critical dimensions of quality are hard to monitor strong performance incentives may lead providers to skimp on quality. Hospitals are a case in point. Some dimensions of quality care can be measured, but others only imperfectly. In this case, the incentive schemes may need to be weak. This calls for a limitation on achievable profit. Traditional utility regulation, for example, limits rates of return for investors. Investors might even have an incentive to increase costs in this case. Skimping on quality would not help investors. Alternatively, one may employ a firm that limits profit distribution to shareholders. Some countries, have had limited dividend companies for a long time.

One can also consider non-profit organizations. Non-profit organizations need to make profit just like any other firm if they want to sustain operations. But, they cannot distribute profit to shareholders. They are used in medical establishments where quality is hard to monitor and where patients cannot easily change providers, for example, in nursing homes.<sup>37</sup> Yet, government organizations are also non-profits. So why even bother with PPPs in this case? This brings us back to the private form of incorporation as a commitment device against some form of political interference.<sup>38</sup>

Public sector companies may have a hard time instituting change when they underperform. They may be subject to public sector rules that render efficient operations difficult from procurement to labor regulations. Political connections of the top managers and entrenched public sector unions may also make it difficult to reform. States thus often use PPPs as a way of instituting change in such firms. The very fact, that states introduce PPPs sometimes motivates remaining state firms to reform as well.

PPPs can help protect ventures from dysfunctional government bureaucracy. They can also be used to circumvent sound public policy. For example, they may be an excuse to evade or soften sound policies for tendering contracts. Up to the late 20<sup>th</sup> century French municipal service concessions were awarded “gré-à-gré” i.e. by discretionary decision of the mayor. This left room for special deals and outright corruption. In principle, it is fairly clear what can be done about this. In particular transparent tender award processes matter and have been adopted in France as well.

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<sup>37</sup> Hansmann H. (2006) “The Role of Trust in Non-profit Enterprise” Chapter 6 in Helmut Anheier and Avner Ben-Ner, eds. “The Study of Nonprofit Enterprise: Theories and Approaches” (Kluwer Academic Publishers, 2003)

<sup>38</sup> Because shareholders cannot be remunerated, non-profit firms rely on some form of donation to obtain equity capital. To the extent they obtain donations they can also be cheaper than for-profit organizations. This can help address affordability concerns and, for example, help lower the price of service for poor people. However, subsidies can also be combined with provision by for-profit firms. Where for-profit firms can be adequately monitored they tend to be most efficient. Combining this with a good subsidy scheme for poor people can give even better results than provision by non-profits.

Given all the different considerations, what do evaluations show? They suggest that PPPs can outperform public sector firms, they are not systematically worse than public firms, but good public sector firms do just as well.<sup>39</sup> From a public policy perspective PPPs in infrastructure are useful tools for reform of service delivery, but they are no “killer-apps”.

To balance good policy with efficient service delivery we can design decent contracts and insulate them from undue political interference via independent regulation and some form of private ownership. In addition, private forms of ownership also make it easier to tender contracts from time to time and replace failing firms. Firms that have an interest in winning tenders in the future have an incentive to maintain some reputation for efficient delivery of quality service.<sup>40</sup> To some degree the ability to participate in tenders in other jurisdictions could also motivate public sector firms to perform better. Electricité de France – a public sector company, for example, has won a number PPP contracts in electricity. Yet, public sector companies are often not allowed to go bid for contracts in other jurisdictions.

### **Across time and space: The Wheel of Privatization and Nationalization**

PPPs are often pursued when the public system has run into trouble. Well managed PPP processes reduce the scope for discretion. Yet, many politicians appreciate a little flexibility for good or bad reasons. Thus the political powers that be are tempted to find ways to exercise discretion by influencing regulatory or supervisory decisions. This tends to lead to lower prices. This in turn weakens the finances of the PPP leading to under-investment, lack of maintenance and quality problems. Eventually, governments may take the PPP back into public hands. The PPP company might actually prefer that to being starved of funds. Alternatively, PPPs may have been a way to conduct dubious deals. As the arrangements become suspect more widely and governments change, taking the venture into public hands becomes more and more likely. Finally, private firms can also misbehave. Some PPPs are just badly managed. Calls for nationalization are again a likely response. Thus the wheel of privatization and nationalization keeps turning.<sup>41</sup>

The lack of a clear geographical pattern of PPPs over time is consistent with the arguments about a cycle between public and private approaches to service delivery. PPPs are here to stay, but they come in waves driven often by fiscal problems. Yet, the waves also recede. If we could predict the broader pattern of economic

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<sup>39</sup> Kessides I. (2004) “Reforming Infrastructure: Privatization, Regulation and Competition” World Bank, Washington; Andres L. et al. (2008) “The Impact of Private Sector Participation in Infrastructure” The World Bank, Washington D.C.

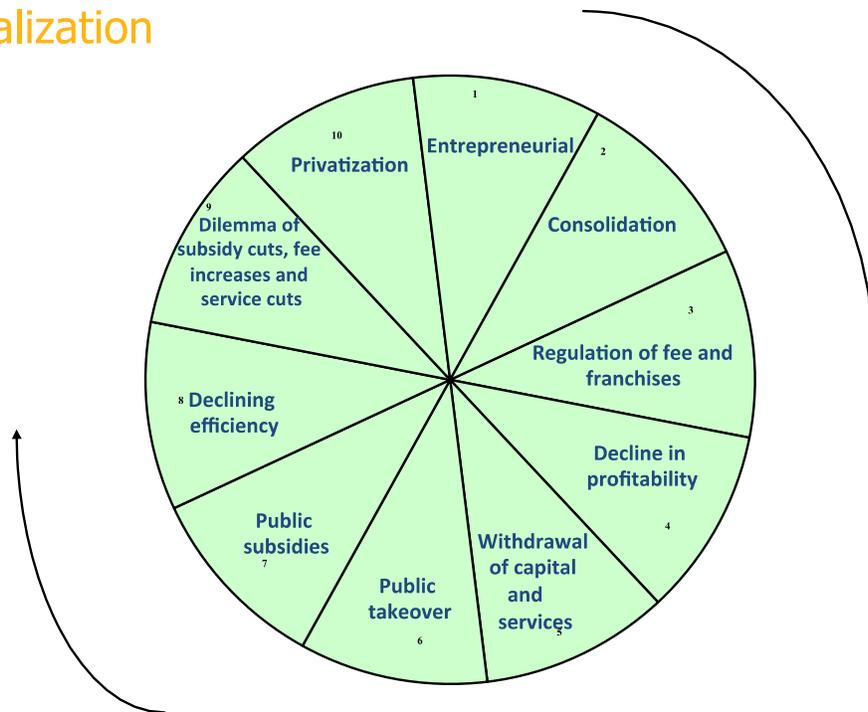
<sup>40</sup> Zupan M. (1989) “The Efficiency of Franchise Bidding Schemes in the Case of Cable Television” Journal of Law and Economics, Vol 32.

<sup>41</sup> Gomez-Ibanez J. (2003) “Regulating Infrastructure”, Harvard University Press

development and fiscal strength across the world, we might be able to predict the future of PPPs a bit better. Until then we are faced with waves that sweep the world in seemingly random patterns.

Figure 1:

## The wheel of privatization and nationalization



Source: Gomez-Ibanez J. and Meyer J.R. (1993)