UNBUNDLING TOLLS FROM CONTRACTS: A NEW ROAD PPP MODEL

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ABSTRACT

Public private-partnerships (PPP) for infrastructure development have grown worldwide in the last few decades. Different approaches of private sector participation in infrastructure funding have been implemented. However, experience has shown that there are many aspects that have not been working so well on PPP models over the last few years. The objective of this paper is to develop a new road PPP model to foster efficiency and overcome the shortcomings of current models found in the literature and in practise.

The new model is founded on unbundling the toll policy in the road network from the fees paid to PPP contractors. User tolls will be based not only on infrastructure cost recovery but also on internalization of externalities. Contracts will be based mostly on availability. To that end, we also propose a new institutional framework with three new entities: a road PPP agency, a road fund, and a entity representing the users. This model promotes a more consistent application of infrastructure-use charges throughout the territory, defines a more efficient incentive approach by separating toll policy and PPP contracts, and enables a greater participation of users in the decision-making process.

Keywords: Public Private Partnership, Road infrastructure, Road pricing, concession contract.

INTRODUCTION AND OBJETIVES

Increasing efficiency in managing infrastructure along with the need to raise private funding to circumvent budgetary constraints have been changing the long-standing paradigm of government financing and managing infrastructure and public services over the last few years. Some countries have already a considerable body of experience with private sector involvement in the provision of public infrastructure—especially in the road sector. Other countries have recently started to develop infrastructure under PPP approaches, or are now implementing an institutional, legal and regulatory framework to allow private capital participation on transport infrastructure.

Different PPP approaches have been implemented over the world to build/upgrade, maintain, operate, and finance new or existing roads. All these models were based on different governance approaches which in some cases have not worked properly. These PPP approaches can be classified in many ways. One of them is according to where the revenue comes from: either from users through tolls, or from budgetary resources. In PPP contracts where revenue comes from the government budget, the PPP contractor is paid either in terms of traffic (shadow-toll), performance-based indicators (lane availability, state of the pavement, and so on), or a combination of them. In these types of models, taxpayers instead of users are the ultimate infrastructure payers. Nowadays, there is enough experience on the institutional and regulatory context to identify unexplored areas in this field and produce new models.

PPP contracts—based on either user or government budget payments— have been increasing in Europe in the last two decades. Countries such as Spain, Italy and France have mostly relied on toll concession contracts. The United Kingdom has relied mostly on shadow tolls and availability payment approaches. Germany and Portugal are implementing PPP models where payments to the contractors are made by the government—or a public agency—from tolls collected directly by the government. Latin American countries have mostly relied on concession contracts linked to user-toll payment models with private developers to fund new and existing infrastructure. In the United States budgetary constraints are encouraging some states to implement PPP models, most of them based on user-toll payment approaches.

In this paper we aim to contribute to the body of knowledge with the definition of a new road PPP approach that proposes to unbundle toll policy from PPP contracts. In this new PPP approach the toll policy will be based not only on infrastructure cost recovery but also on internalization of externalities. Moreover, PPP contracts will focus the payment to PPP contractors on the basis of performance so that they can add value through their management. The ultimate goal of this model is to foster efficiency and overcome the shortcomings of current models.

The new model is based on three features: first, pricing infrastructure is a key driver for managing mobility in an efficient way so tolls should be defined in a flexible way to optimise allocative efficiency rather than just raising resources to fund road construction and maintenance. Second, the revenue approach to pay PPP contractors should encourage value

for money by aligning incentives and social welfare. In this respect, payment approaches based on performance or availability seems to transfer a risk that is much more manageable by the contractor than traffic risk. And third, the two other features defined above (tolls and performance-based contracts) may become compatible through a model such as the one that we define in this paper.

ROAD PPP MODELS

Value for money produced by private sector management throughout the infrastructure life-cycle is often mentioned by the literature as one of the key benefits of PPPs (Morallos et al, 2009). According to the literature value for money is achieved insofar as risks are allocated to the party best able to manage and price them, which means that this party needs to have a certain ability to influence, mitigate and quantify these risks. However, in practise the main reason why many countries have relied on PPPs has been to circumvent budgetary constraints. As a consequence, tolls in PPP contracts have been set as a means for private contractors to raise resources to recoup construction, repair, maintenance, and operation costs during the life of the contract. In these types of models tolls are mostly set to guarantee the financial viability of the concession.

In the search for an optimal balance between the aforementioned factors various models have been already developed. In the first type of models, toll road PPP models, revenue is collected by the contractor through explicit tolls paid by users. In these models traffic risk is often transferred to the PPP contractor or concessionaire. In the second type, budget-payment PPP models, revenues come from the government depending on either traffic (shadow tolls), or performance (availability, safety, etc.). There are also hybrid models where revenues depend partially on both traffic and performance. Below we give a brief description of the three models.

Toll-road PPP models

In toll-road PPP models, usually called concessions, most revenues come from explicit tolls directly collected by private developers from users. Consequently the pricing approach is bundled to the contract. This often means that tolls are set up in the contracts, which limits them through price caps that are updated yearly depending on variables such as inflation or productivity. User payments should be enough to generate cash flow for paying back the expenditures and the financial cost of the project.

Traffic risk, total or mitigated, is transferred to the concessionaire in this model. According to Evenhuis and Vickerman (2010) transferring traffic risk provides an incentive for the private party to encourage service and manage demand. However, these authors also argue that allocation of traffic risk on the private party side is only reasonable if it is able to have a positive influence on traffic with the service provided, tolls charged, and publicity.

According to Yescombe (2007) PPP programs in different countries have usually begun with toll-road concessions models. The "self-financing" nature of such models makes them immediately attractive for governments in comparison to other models.

Budget-payment PPP models

Unlike toll-road concession models, in budget-payment PPP models revenue comes from the general budget of the government, hence the infrastructure is not ultimately financed by users but rather by taxpayers. The private contractor is entrusted with the design, construction, maintenance, and operation of a certain road section for a period of time. The government commits itself to pay a regular charge to the PPP contractor according to what the contract stipulates.

Budget-payment PPP models allow governments to defer payments forward into the future. This strategy has been used by some governments to increase their investment capacity at the expense of committing budgetary resources in the future. This fact became problematic in some countries such as Spain and Portugal when the financial recession came in because governments were hardly able to afford such commitments.

Under purely budget-payment PPP models, taxpayers are less aware of renegotiations since they are not directly paying for the use of infrastructure. A direct payment makes users more conscious of some conditions of the contract such as the concession period and the toll levels. Another weakness of this type of models is that pricing can no longer be used as a mechanism to manage mobility and consequently reduce congestion and other externalities. Similarly overcapacity cannot be managed via tolls which usually lead to an un-optimal welfare distribution.

There are two major approaches of budget-payment PPP models: shadow tolls and performance-based models (popularly known as availability-payment models).

Shadow toll

Under this approach payments are made by the government to the PPP contractor on a regular basis in terms of traffic. Resources come from the government budget that subsidizes the service to the user. Traffic risk may be totally transferred to the PPP contractor, but normally it is mitigated through a set of toll bands defined in the contract in such a way that lower bands are associated to greater tolls and vice versa. These bands contribute to mitigate traffic risk compared to the real toll approaches.

In the UK, according to CDIT (2012), early generation design, build, finance, and operate (DBFO) projects were traffic-dependent. Consequently, the first generation payment mechanism incorporated the shadow toll component. In subsequent generations the payment mechanisms evolved from shadow tolls to asset availability/performance. Other countries that have implemented shadow tolls are Spain, Portugal, Belgium, Finland and the Netherlands

(Benito et al. 2008). In Spain (Vassallo et al. 2010) and Portugal (Pereira and Andraz 2012), shadow tolls approaches have been implemented where toll levels may also vary in terms of availability.

Performance-based payment models

In the performance-based approach (usually known as availability-payment) traffic risk is not transferred to the PPP contractor. Rather, the PPP contractor is paid on the basis of a set of performance-based indicators established in the contract and aimed at reflecting the availability of the infrastructure and the service quality provided by the private developer. With this type of contract the PPP contractor is encouraged to provide an uninterrupted service with high quality standards and maintain complete availability of the infrastructure.

Under availability approaches, deductions are made on periodic payments if the road or one of its lanes has not been available during a period of time. Moreover, in the case that the service is not provided according to the stated quality standards penalties are applied. Road safety may also be a feature taken into account to incentivize or penalize the PPP contractor operating the infrastructure (Rangel et al. 2012). Bonus payments may apply if quality standards and service surpasses the stated standards whilst penalties depend on the consequences of the event and the period of time when it took place and for how long.

Projects that were awarded or under procurement in 2012 under an availability payment contract include for example: the redevelopment of the I-595 and the Tunnel in the Port of Miami in the USA, the Olivar motorway in Spain; the Eastern Bypass Road in Russia; the N33 in Netherlands, the Rod El Farag Access Road in Egypt, the B4 Maissau Bypass in Austria, and The Peninsula Link project in Victoria-Australia (CDIT, 2012).

Hybrid models

Different PPP approaches of pure real tolls, shadow tolls and availability payment have not always been held in good esteem because of the significant risk and costs of each. In order to overcome this problem, in recent years hybrid models have been proposed—see for instance Aziz (2007). In hybrid models payment to the PPP contractor depends on the service provided, the availability of the infrastructure, and traffic demand on the motorway. Under this structure of payments, the income obtained by the PPP contractor depends on traffic up to a certain level—to compensate for greater maintenance and operation costs when traffic increases—while the contractor is incentivized to provide an uninterrupted service with high quality standards and maintain complete availability of the infrastructure.

Successes in implementing hybrid models were reported by Simpson (2007). He mentions the Istrian motorway project in Croatia, and the Trakia motorway project in Bulgaria. At the time of writing this paper other projects were under procurement using hybrid approaches where the reimbursement to the PPP contractor partially depends on usage, availability and service.

Some examples are the West Coast Expressway in Malaysia (CDIT, 2012) and the 4th generation of concessions in Colombia.

PROBLEMS REPORTED ON ROAD PPP MODELS

A set of common shortcomings is found in the literature on PPPs such as opportunistic behaviour leading to high levels of renegotiations; unprotected public interest; asymmetries of information that might lead the PPP contractor to capture the regulator; biased traffic forecasts; rigidity of the contractual framework—in particular in setting of toll prices—which hinders the possibility of managing mobility; and commitment of budgetary resources for future generations. A classification of the shortcomings based on the diagnosis of this research, is shown in Table 1.

The long-term nature of PPPs, the impossibility in many cases to predict future situations, and the importance of preserving the public interest while providing public services, make of renegotiation a common practice in PPP deals. According to Guasch et al. (2007) and Guasch et al. (2008) the high rates of contract renegotiation have raised serious questions about the viability of the PPP model to attract private participation for financing infrastructure in developing countries.

There is evidence in the literature that suggests that parties are looking for individual and short-run benefits when they renegotiate PPP contracts, and in most of them, some social surplus is destroyed (de Brux, 2010). However, based on two case studies, de Brux (2010) also provided evidence that social surplus can be achieved by renegotiations when parties cooperate. A long term relationship between public and private parties should carry implicit cooperation and avoidance of opportunistic behaviour. However, the ideal win-win situation does not seem to be the rule for renegotiations.

Table 1 – Problems in different road PPP models

	Toll-road PPP models	Budget-payment PPP models		Hybrid models
		Shadow toll	Availability-payment	
Opportunistic renegotiation	High	High	Moderated	Moderated
Unprotected public interest	High	High	Moderated	Moderated
Asymmetries of information and capture of the regulator	High	High	Low	Moderated
Biased traffic forecasts	High	High	Low	Moderated
Limitation to use tolls to manage mobility	Moderated	High	High	Moderated
Future budget commitments	Low	High	High	Moderated

Another controversial issue that is being debated in many countries and deserves to be analysed is that of protecting public interest in PPP contracts. In the United States, Chicago Skyway and Indiana Toll Road are examples of PPP deals were the long concession terms ignited heated debates about the desirability of PPPs (Iseki and Houtman, 2012). In Spain, according to Vassallo et al. (2011), the government has incentives to avoid bankruptcy of concessionaries mainly to elude the public pecuniary liability payment (named RPA in Spain) to be paid to the concessionaire in case of early termination of the contract. The government prefers to renegotiate with the contractor rather than seeing the public deficit increase and its reputation degraded.

The existence of a Transport Infrastructure Agency is not a guarantee that decisions will be made in line with the public interest. Capture by some lobbies, or biased actions, may still occur (Meunier and Quinet, 2007). Unfortunately, decisions are often taken at the expense of users or taxpayers who usually end up bearing the burden of these kinds of inefficiencies.

Asymmetry of information between the PPP contractor, the government, and the regulator is a very important weakness of current PPP models. Meunier and Quinet (2010) pointed out that this is one of the major causes of regulatory inefficiency. PPP contractors often have more powerful means to pressure the regulator than road users and they may well succeed to 'capture' the Regulator (Ragazzi, 2005). According to Meunier and Quinet (2010) the operator can influence public authorities and induce them to make wrong judgements or estimates and lead them to decisions that are bad for the welfare of society but good for the operator. Reducing this asymmetry is crucial to advance and improve current PPP models.

Traffic risk allocation is another issue that has to be reconsidered according to past experiences with current PPP models. The effort by governments to entice the private sector has led to consistent erroneous traffic forecasts across projects (Chung, 2009). Bain (2009) cited studies in different countries that lead to traffic deviations over 30% of the traffic expected. Vassallo et al. (2011) point out that allocating the bulk of traffic risk to the concessionaire without implementing any traffic risk mitigation mechanisms has been one of the problems related to the definition of the concession contracts in the radial toll highway concession program in Madrid. Requiring the private party to bear the demand risk, in most cases, won't lead to additional value-for-money, but instead will lead to higher financing costs due to the need for compensation of increased risks (Evenhuis and Vickerman, 2010).

Another problem that deserves mention is the limitation that the rigidity of contracts makes on the necessity to be flexible to adapt infrastructure management to the evolving needs of society. Concerns have been raised about the fact that the rigidity of PFI/PPP contracts may hinder long-term service changes without risking the commercial integrity established during the bidding process (Clifton and Duffield 2006).

The long-term nature of PPPs, and the need to regulate the monopolistic power of the PPP contractor after the contract has been awarded, requires setting up rigid contracts with fixing price caps and indexing toll prices to inflation. Consequently the contract itself sets up tolls

that will not necessarily be optimal in the future because user perceptions and externality values may vary over the years. Kaplow and Shavell (1999) argued that it is impossible to define precisely contract agreements to regulate tolls for such a long period of time. Later Athias and Saussier (2007) pointed out the dependence of toll rigidity on institutional factors and trust between the public authority and the private party. According to these authors contracts designed in strong institutional environments tend to be more flexible regarding tolls adjustment provisions. Albalate and Bel (2009) suggest that toll prices are often set to fund infrastructure costs, but they are rarely designed to regulate traffic in order to tackle congestion problems, internalize externalities, or promoting a more rational mobility.

Finally, an emerging problem of PPPs is the one stemming from the future commitments derived from long term PPP contracts whose payments rely on the government budget. Unfortunately, PPPs have often been used by governments to make new or improve existing infrastructure by transferring the burden of the infrastructure to future generations of taxpayers. This situation incentivises overinvestment in the present at the expense of constraining the government ability to spend in the future (Vassallo and Pérez de Villar, 2010).

Below we discuss the possibility of making an efficient pricing policy for the road network compatible with the management of the network stretches on the basis of performance-based and availability PPP contracts so as to reduce the above mentioned problems.

A NEW ROAD PPP MODEL BASED ON UNBUNDLING TOLLS FROM CONTRACTS:

Based on the problems identified above, a new road PPP proposal consisting in the implementation of several measures is presented in this section. These measures are the basis for a new road PPP model where user payments are unbundled from PPP contracts.

Key principles and characteristics of the model

The model that we propose is founded on a number of key principles aimed at solving the shortcomings identified above:

- The private sector must bear only those risks that can reasonably be managed because by being allocated those risks it can create value for money.

- The PPP contractor will, hence, be paid through performance-based or hybrid PPP approaches. The payments will not be necessarily related to the amount of revenues collected in the road stretch the contractor operates.

- The private sector should never bear risks where there is a conflict of interest between private incentives and social incentives. For example, from a social standpoint it will be more appropriated charging a lower toll to less polluting vehicles. However, if the

private sector bears this risk, it will have the incentive to favour more polluting cars to drive in the road to increase its profit.

- As a consequence of the previous principle, unlike present toll road PPPs, in the new model tolls will not be regulated by contracts, but they will be periodically updated by the government. This way, the tolls could be changed over time to improve allocative efficiency and promote sustainability.

- Road charges should be made easy for the user to understand. This implies that charges would need to have a certain degree of homogeneity throughout the network. Similar conditions (characteristic of the road, congestion, and so on) should be priced in a similar way. Consequently road charges should not be different between roads with similar quality standards and specifications.

The institutional framework and relationships among different stakeholders in this new model is described in Figure 1. This approach involves some novelties compared to the conventional approaches already outlined in this paper:

- We propose a separation between the toll policy in the network—which will be periodically defined by the government—and the management of infrastructure PPP contracts. Consequently, the resources collected in a particular stretch of the network will not be necessarily allocated to fund this stretch. As a consequence of this, the busiest roads will cross-subsidize low traffic roads within the system. The toll structure should be fairly homogenous across regions in order to be easily understood by users.

- Tolls will be charged through an electronic toll collection system. They will be collected by the government either directly, thorough a public authority, or through a franchise with a private company. Tolls will be set up annually by the government after considering proposals from the Secretary of Transportation and the Secretary of the Treasure. The following are the principles we propose for the establishment of tolls:

    a. Higher tolls for more polluting vehicles.

    b. Higher tolls for vehicles that produce greater wear and tear costs to the road.

    c. Higher tolls during congestion periods.

    d. Higher tolls for vehicles with low occupancy.

    e. Flat rates may be established to encourage the use of infrastructure during periods with overcapacity, e.g. flat rates for using certain roads at certain times. This is intended to encourage a more balanced use of the infrastructure network over time.

- The funds collected will be assigned to a Road Fund and the use of these resources will be assigned by Law. Tolls should ideally guarantee enough money to fund the road network expenditure. The Road Fund will be managed by an entity regulated by the Secretary of the Treasury.

- Road sections, both new and existing ones, will be managed by the private sector through PPP agreements and the contracting party on behalf of the government will be a specialized PPP Agency. The contract will set up the payment mechanisms (PPP fee), which will be mostly based on performance. Consequently, the revenue received by the PPP contractor will not necessarily have to be related to the revenue collected by the government in the section operated by the contractor ("user toll"). The PPP fee will depend mostly on:

    i. Performance-based indicators to reflect service quality.

    ii. The marginal cost of traffic. The corresponding rate will always be higher than the marginal cost generated by an additional vehicle to the PPP contractor, so that the PPP contractor may offset higher maintenance costs if traffic increases. The objective of this measure is so that the PPP contractor keeps a positive incentive to attract more traffic to the road stretch it manages.

    iii. Public opinion according to quality perception surveys regularly conducted amongst the users.

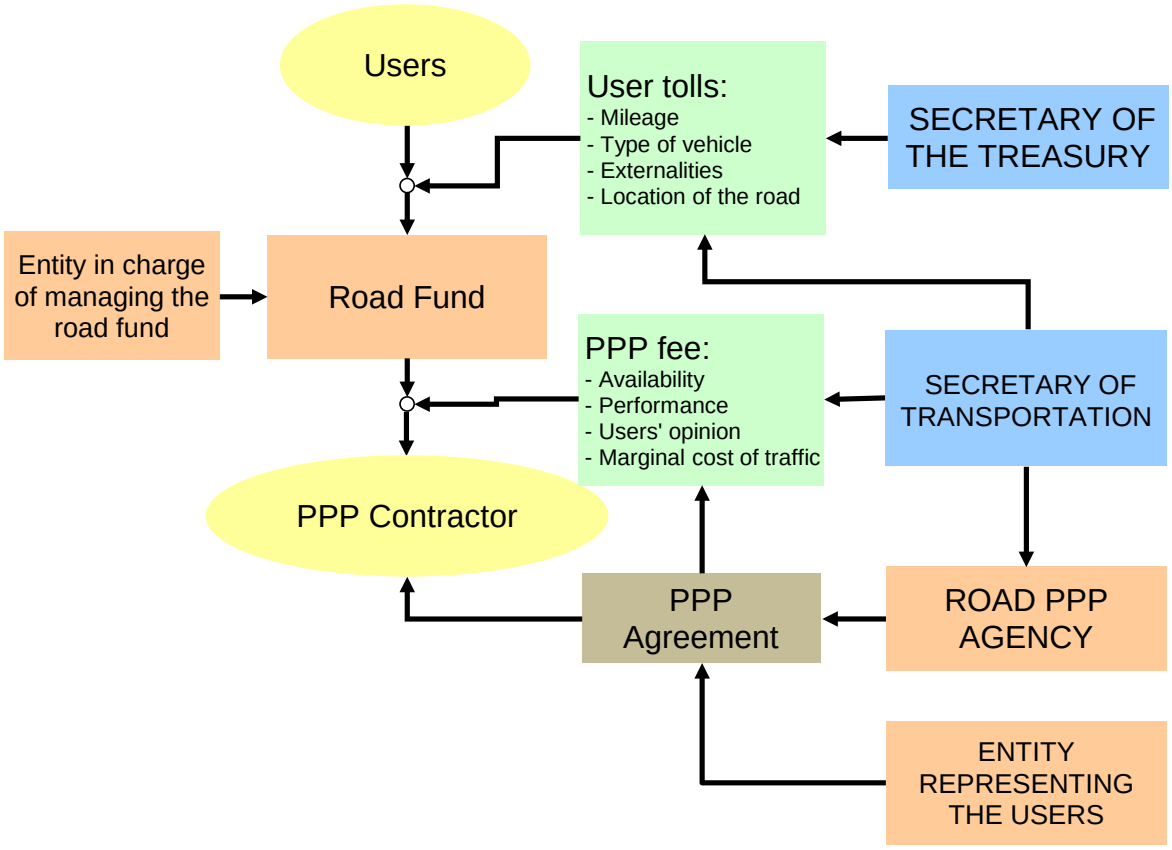

Figure 1 – New Road PPP Model

Institutional Framework

This model implies the need of a new institutional framework consisting of a set of institutions that we describe in this section. These institutions are a Road Fund and an entity to manage it, a Road PPP Agency similar to the one existing in some countries, and an Entity Representing the Users.

The Road Fund and its Management Entity

The Road Fund will be a special purpose vehicle with the goal of safeguarding the revenue coming from the tolls paid by users, and disbursing resources to make payments to PPP contractors. The use of the resources of the fund will be approved by Law. However, they will be primarily used for paying the road PPP contractors and promoting measures that contribute to minimize the environmental effects caused by roads.

The Road Fund will be administrated by a Road Fund Management Entity that will be supervised by the Secretary of the Treasury. This company will be entrusted with the management and administration of the Road Fund in accordance with the Law. The Road Fund Management Entity cannot decide on the resources allocation policy of the Road Fund.

Nevertheless, it may conduct financial operations such as revenue securitization, etc., although these operations would require always approval by the Secretary of the Treasury.

The Road PPP Agency

The Road PPP Agency will be a government-owned company monitored by the Secretary of Transportation. It will be in-charge of granting PPPs, participating in the whole process of selection and award of PPPs, and overseeing the contracts. The Road PPP Agency will be assigned the following roles: coordinate the high capacity network, prepare the tendering documents for PPP contracts, coordinate the technical and economic supervision of the PPP contracts, publicize new projects to be promoted under PPP, measure performance-based indicators established in PPP contracts, and collect statistics on PPP contracts to make them public. The agency should have a team specialized personnel in, for example, contracting, finance, procurement, and so on. The support on technical aspects and operation will be provided by the Secretary of Transportation.

The Entity Representing the Users

This entity will be created as a public body with its own legal independence and full capacity to act, endowed with its own assets and governed by the Secretary responsible for social policies and consumption. The Users Representative Entity should ensure transparency in the information about PPPs to the users and the society. Within the course of its duties it shall inform of changes to be done to PPP agreements that may affect users or taxpayers. The Road PPP Agency shall be required to inform the Entity Representing the Users of all possible contract modifications or renegotiations that may have influence on the interests of users or taxpayers.

HOW DOES THIS MODEL AVOID THE PROBLEMS OF PREVIOUS PPP MODELS?

In this section, we explain the reasons why the model that we propose reduces the problems previously described about traditional PPP road models: opportunistic renegotiation, unprotected public interest, asymmetries of information that may lead to “capture” of the regulator, biased traffic forecasts, limitation to use tolls to manage mobility, and future budget commitments.

Opportunistic renegotiation is directly linked to three aspects: first, allocation of risks to the private sector that are very difficult to manage; second, design of incomplete contracts that leave many unresolved situations to be dealt with in the future; and third, lack of oversight of eventual renegotiations between the government and the PPP contractor. The model presented here is expected to reduce opportunistic behaviour in several ways. The bulk of the revenue for the contractor will be mostly tied to a set of performance measures so traffic risk would only be allocated to the PPP contractor in a very limited way. As documented in the literature,

traffic risk has proved to be difficult to manage by the contractor, and it has often been the cause of renegotiation. Moreover, the constitution of a specialised agency dealing with PPPs will prompt more complete contracts which should also reduce opportunistic renegotiation. In addition, the entity representing the users will be in charge of ensuring that eventual renegotiations will not harm the interests of users and taxpayers.

Unprotected public interest is often caused by improvisation in structuring PPP deals and lack of expertise on the part of government officials. The proposed model includes a much more sophisticated governance approach intended to reduce this problem. On the one hand, a specialised Road PPP Agency is expected to design better and more complete contracts leaving less room for capture. In addition, the Entity Representing the Users is envisaged to increase transparency in the process, which undoubtedly will improve the protection of the public interest.

Asymmetries of information that may prompt the capture of the regulator are also a big problem in dealing with PPPs. These asymmetries will be reduced insofar as a more solid institutional framework will be set up where transparency is greatly encouraged. In addition, the definition of performance-based payments and the opinion of the users will enable the Road PPP Agency to obtain more complete information about the operation performance of the road.

Regarding optimism bias for traffic forecasts, in the model that we define here traffic will no longer be the main revenue driver for the PPP contractor. Consequently, the optimism bias problem previously described is expected to diminish substantially because traffic inflated forecast cannot be used anymore by bidders to justify aggressive offers.

Unbundling tolls from contracts will definitively favour toll flexibility since user tolls will be set independently of PPP contract fees. The government will be able to vary tolls over the life of the contract in order to foster allocative efficiency, and promote a more sustainable mobility. PPP contractors will not see their finances being disrupted by user toll changes because the revenue they obtain will be mostly based on performance, which is strongly related to their ability to manage the contract in the right way.

Future budget commitments for the government can be better controlled with this model because, unlike most of the availability payment approaches already in place, the revenues to fund the system ultimately rely on real user tolls rather than on the government budget. According to these models, average tolls should be defined to generate enough revenue to finance the whole commitment with private sector contractors while these tolls may vary across type of vehicle, time of the day, environmental sensitivity of the region and so on. The government might decide to set up lower average tolls for users and subsidise the Road Fund, but in any case the debt inherited by future governments would be lower than conventional availability payment models.

SUMARY AND CONCLUSIONS

Increasing budgetary constraints for delivering road infrastructure along with the need to reach greater efficiency have prompted the boom of different PPP models around the world. Some countries adopted toll concession models whereby revenues to finance infrastructure came mostly from the users. Other countries where users are more reluctant to pay for using road infrastructure decided to implement budget-payment PPP models. Toll PPPs release the government from the responsibility to raise money to fund road infrastructure. In their turn, budget-payment PPPs contracts, especially availability models, seem to have worked better in terms of incentives, but they still have the problem that they do not enable governments to release budgetary resources neither do they include pricing as a means of managing mobility.

Improving the present performance of those models in order to overcome most of the identified shortcomings seem to be feasible by implementing a new model, applicable to the whole trunk network. This new model would unbundle user toll policy from performance-based PPP contracts while keeping the revenue collected as the main source for financing PPP contracts through a Road Fund. The proposed model addresses the identified weaknesses by incorporating the following features: separation of user tolls (real tolls) and payments to contractors (PPP fees) that will depend mostly on availability; enabling the government to change tolls on a regular basis in order to manage the road network in an efficient and sustainable way; creating a Road Fund to safeguard the allocation of the revenue collected mostly for road purposes; and incorporating an entity representing the users to protect the public interest by ensuring transparency.

Unbundling tolls from contracts will allow more flexibility in the setting of toll prices while it will enable governments to define contracts where the private sector will be entrusted with the risks that it can manage better, thus fostering value for money. This will reduce opportunistic renegotiations and optimism bias in traffic forecasts. PPP contracts will be isolated from long-term service changes or toll adjustments so tolls could be fixed to better meet social policy goals. Regulator capture and asymmetry of information will be also reduced. Moreover, this proposed model, will be better to track information on the availability of infrastructure, performance of PPP contractor in providing services, and account for the opinion of users.

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