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Monteiro, Riu Sousa

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## ABSTRACT

The Portuguese PPP experience demonstrates the effectiveness of PPPs in rapidly developing infrastructure and in improving the quality of public services. But the ultimate goal is economic efficiency, not just effectiveness. On this count, Portugal's PPPs may not have scored as high as they could have. To some extent, this has been inevitable, given that no well-tested blueprint to follow was available when Portugal embarked on the PPP route a decade ago. That said, recent changes to Portugal's institutional framework for PPPs – especially a more rigorous appraisal of PPPs, their long-term budgetary implications, and of the contractual arrangements supporting them – aim at ensuring efficiency in the provision of infrastructure services and, thus, value for money.

**Rui Sousa Monteiro** (rui.monteiro@parpublica.pt) is Senior Economist in the PPP Unit of *Parpública SA*, the state firm acting as PPP knowledge centre and PPP advisor to the Finance Minister of Portugal. The views and opinions presented are solely those of the author and do not represent those of the Portuguese government.

# Public-private partnerships: some lessons from Portugal

#### 1. Introduction

Portugal has gained considerable experience with public-private partnerships (PPPs). These partnerships, which began to emerge about a decade ago, typically rest on long-term contracts – often for a period of 30 years – between a public body and a private consortium. They require the private partner to provide a public service – using an existing public infrastructure asset – or to design, construct, maintain, and operate a new infrastructure asset. Finance for PPPs has come from private or public funds. In the beginning, PPPs concentrated in the transport sector – highways in particular – but the model has began to spread to other sectors too, notably the health sector.



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Portugal is obviously not the only EU country that has travelled some way along the PPP route. However, the importance of PPPs relative to overall investment, sectoral investment, and – in particular – to GDP has been considerably higher in Portugal than in other EU countries. Related to this is that compared to countries with a higher per capita income – such as the United Kingdom – PPPs in Portugal often imply a major extension of infrastructure assets rather than small additions to the existing infrastructure. This feature, which applies in particular to the road network, should be kept in mind when reviewing Portugal's PPPs experience.

The remainder of the paper proceeds as follows. The next section looks at achievements and challenges of PPPs in Portugal. Section 3 draws lessons from the Portuguese experience – the challenges in particular – and Section 4 discusses changes to the institutional framework for PPPs that have been introduced recently in light of Portugal's experience. Section 5 offers some concluding remarks.

#### 2. Public-private partnerships in Portugal: achievement and challenges

Initially, PPPs were implemented mainly in the transport sector (highways, railways, and tramways). Reflecting their effectiveness in rapidly developing infrastructure assets and in improving the quality of services, they were welcomed by users and the public in general. A noteworthy example is the Vasco da Gama bridge, which was realised under tight schedule in time for the 1998 World Exhibition. More generally, the PPP road programme, although suffering from delays in receiving environmental approvals, marked a departure from the previously slow development of road projects. But success was not limited to road sector PPPs: the Fertagus rail service, for instance, can be considered exemplary in terms of service reliability and quality. Table 1 lists major PPP projects initiated or implemented in recent years.

Probably due to their success in providing public infrastructure services in an effective way, there is a consensus across political parties about the merits of PPPs. In fact, PPPs have been carried out under a series of governments formed by different political parties, albeit with different aims and emphasis, depending on the political positioning of each party. There is also broad agreement that PPPs should be further developed, both in the transport sector, where they have clustered so far, but also in other sectors.

As far as the transport sector is concerned, two new large highway concessions are currently being tendered, others are being prepared; several tram and train concessions are being negotiated or prepared; some large public sector projects, such as the EUR 3 billion-Porto tramway system, may be transformed into PPP schemes; the high-speed rail system will probably have a PPP component; and the possibility of converting public sector rail services into PPP concessions is being considered.

	Project phase	Initial investment	Cost to public sector
		(in EUR million)	(in EUR million)
Lusoponte (Vasco da Gama bridge)	completed	1 027	503
AENOR (real toll highways)	under construction	846	372
AEA (real toll highways)	completed	1 554	86
Shadow toll programme (7 concess.)	under construction (2 compl.)	3 428	7 616
Litoral Centro (real toll highways)	under construction	156	-45
Grande Lisboa (real toll highways)	tender phase, bids presented		
Douro Litoral (real toll highways)	tender phase, bids presented		
Fertagus suburban rail service	completed, renegotiation	39	
Metro Sul do Tejo tram system	under construction	269	269
Metro Ligeiro do Mondego	tender being prepared		
High speed railways	preliminary studies		
Hospital programme (10 hospitals)	two in tender phase		

#### Table 1. Selected PPP projects in Portugal

Note: Situation as of April 2005

Initially, PPPs were implemented mainly in the transport sector, but they are now making inroads in other economic activities, notably in the health sector. Outside the transport sector, the PPP model is making inroads in the health sector, and studies are being developed in water and waste management, student accommodation, and prisons. Specifically, a large PPP hospital programme has been launched, comprising ten hospitals, of which three are being tendered already. A salient feature of these PPPs is that they envisage the private partner not only to manage hospital facilities (as has traditionally been the case in hospital PPPs in the United Kingdom, for instance) but also to provide clinical services. In addition to this hospital programme, there are plans for smaller projects such as rehabilitation clinics and call centres, the latter providing information on health and health services.

While Portugal's PPPs have been effective in accelerating infrastructure development and in improving service quality, it is far from clear whether they can be considered efficient from a broader economic viewpoint. Of particular concern is that they have created new challenges for the public sector.

For a start, while providing short-term budgetary relief, some PPP programmes and projects have had a significant medium to long-term fiscal impact. The trouble here is that the traditional year-on-year government budgeting has been inadequate to deal with the long-run budgetary commitments the government has entered into under PPPs.

Adverse fiscal implications have also cropped up as a result of sub-optimal risk sharing. By and large, this was not because formal risk-sharing rules were inadequate, but because, in practice, such rules could be changed under specific circumstances to the benefit of the concessionaire.

When the probability of such circumstances materialising was not carefully evaluated, the effective risk sharing was different from the contractually agreed one. For instance, although all contracts allocated design and construction risks to the concessionaire, the public partner was responsible for delays in land expropriations and for substantial changes in projects imposed by environmental regulators or unilateral public sector decision. Indeed, land expropriation schedules were too tight, and environmental regulations, decisions by local authorities, and the successful lobbying by pressure groups forced significant project changes after contracts had been signed. As a result, the risks effectively borne by public partners were much wider than those envisaged under the contract. Clearly, successive expropriation delays and project changes at they saw a good chance of transferring cost overruns to the government and receiving compensation for delays as long as they were able to present them as the outcome of public sector decisions or expropriation delays.

Another challenge for the public sector has been to rapidly build up the capacity and knowledge to devise and implement PPPs and, still more important, to manage the PPP contractual relationships over the long-run. In the event, the public sector's progress on this front has not kept pace with that of private sector partners. In fact, the very development of PPPs enticed public sector employees to join the private sector. While this has probably raised overall productivity, it made the objective of creating value for money through PPPs even more challenging.

A lack of effective competition for PPPs is another reason why PPPs have not been as efficient as they could have been, with shortcomings in competition and efficiency evidenced by high construction and financing costs implicit in the bids for PPPs. Bidding for PPPs is inherently more costly than bidding for traditionally procured projects. This tends to limit the number of PPP bidders and thus competition. But in some cases, rigid tender rules have hindered effective competition; what is more, they did not allow bidders to introduce innovative and efficient proposals.

In principle, PPPs stand a better chance than traditionally procured projects to deliver infrastructure services on time and within budget. The Portuguese experience lends support to this view. That said, most PPP projects suffered delays and cost overruns, but this has been mainly due to difficulties in meeting environmental standards. This, in turn, happened for two reasons. One is that most projects were tendered without previous licensing (by environmental or local authorities); the other is that during the last decade the environmental licensing rules have been steadily reinforced in ways not compatible with the previously agreed contracts.

#### 3. Some lessons from the Portuguese PPP experience

#### 3.1 Fiscal policy implications

The Portuguese PPP experience strongly suggests the need to carefully consider the long-term fiscal implications of PPPs. Long-term budgeting – covering a period of 30 years – would be ideal in this respect, but no country has ever implemented it. A practical, though very useful second-best solution is a specific appropriation process for PPPs — like the one Portugal has recently adopted (see Section 4). Such a process will rationalise decisions for (or against) PPPs for at least two reasons.

First, it will enable a better evaluation of whether PPPs are affordable. When payments by users are not sufficient to ensure the financial viability of a PPP, an appropriation process would show the amount of public funds required over the whole life of the PPP to achieve financial viability. One can look at this also from a different angle: an appropriation process will indicate the budget support PPPs accelerated infrastructure development, but for a variety of reasons they were not as efficient as they could have been. available for a PPP; if this is too little to ensure the financial viability of the PPP, its characteristics – such as user charges – could be reconsidered with a view to achieving financial viability. Overall, an appropriation process for PPPs promises to make them better and their long-term fiscal implications more transparent.

To show their long-term fiscal implications, Portugal has recently adopted a specific budgetary appropriation process for PPPs. Second, an appropriation process addresses concerns that PPPs simply transfer costs from current to future generations. Indeed, from the perspective of the government budget, PPPs substitute future payments for current investment costs, which the government would have incurred had it procured the infrastructure asset in the traditional way. If not properly dealt with, this substitution may make the government budget look healthier than it actually is, thereby undervaluing the cost of PPP-financed infrastructure and biasing decisions in favour of PPPs. Again, an appropriation process for PPPs allows a better assessment of their costs, in particular those falling on future generations.

That PPPs have considerable long-term fiscal implications is abundantly clear from Portugal's experience. In Portugal, the central government public investment budget (PIDDAC) amounts to more than EUR 6 billion. Forty percent of this is for transport projects, mainly railways, roads, and ports. In the last years, the annual PIDDAC for roads was less than EUR 700 million (around 0.5 percent of GDP). Expenditures financed from this budget included the maintenance of existing roads and bridges, the construction of new ones, and shadow toll payments to PPP concessionaires. From 2007 on, projected annual shadow toll payments, to be made over a period of 20 years, will reach EUR 700 million. It is clear that this will put the transport budget under considerable pressure. Against this background, the government of Portugal decided in 2004 to replace shadow tolls by real tolls in highway PPP concessions, subject to exemptions for some regions. In the health sector, the ten PPP hospitals (with 30-year contracts for the buildings and 10-year contracts for the provision of services, including clinical services) will create another annual payment of around 0.5 percent of GDP. But as these hospitals are expected to replace spending on old hospitals and to make the hospital sector more efficient, they could help curb expenditures on public hospitals.

Another fiscal policy dimension is worth highlighting. With a switch from investment expenditures (under traditional procurement) to long-term service payments (under PPPs), governments have less scope for changing expenditure in response to the business cycle. One could argue that less expenditure flexibility is of particular concern for small monetary union members like Portugal. Monetary union members have lost the possibility of using monetary and exchange rate policies to stabilise the economy, leaving fiscal policies as the only macroeconomic instrument to possibly deal with cyclical fluctuations in aggregate demand. Substituting long-term service payments for investment expenditure may further reduce the scope for counter-cyclical fiscal policies. But whether one considers this a genuine drawback very much depends on whether one believes in the effectiveness of discretionary fiscal policy in the first place - a question that remains controversially debated. In fact, there is also the view that counter-cyclical fiscal policies are counterproductive rather than merely ineffective. In this case, steady, long-term service payments in lieu of lumpy, politically influenced investment expenditures could help smooth the business cycle. To conclude, even if there are costs in terms of foregone fiscal flexibility, they would have to be compared to the potential benefits of PPPs, especially better long-term budgetary planning and a more efficient use of scarce public resources.

Overall, PPPs have long-term fiscal implications and they may create some rigidity in managing public expenditures. But it is also true that they have potential to make the provision of public services and infrastructure more efficient, thereby lowering the total call on public funds. To enhance the chances of this to happen, a specific appropriation process for PPPs is of crucial importance.

#### 3.2 Public sector comparators

A key issue - in Portugal as in other countries - is whether PPP projects provide value for money (VFM). The paper by Grout in this volume specifically deals with so-called value-for-money tests. Suffice to note here that the most comprehensive version of such a test tries to ascertain whether the present value of the net economic benefits of a PPP is at least as high as the net present value of the same project carried out through traditional procurement. The latter project is typically called the public sector comparator. As Grout also argues, there are good reasons not to perform VFM tests that rely on comprehensive cost-benefit analyses, but to conduct simpler tests, which still could incorporate a public sector comparator. In the United Kingdom, for instance, a value-for-money test looks at things from a government budget perspective. Specifically, it compares the budgetary cost of the PPP with that of the public sector comparator. In essence, this is also the approach recently introduced in Portugal. More specifically, to evaluate the effectiveness and efficiency of PPP programmes, the budget law requires the construction of an alternative programme aimed at reaching the same result as the PPP programme, but excluding private financing and private management. This approach was implemented in the last few projects. So far, the experience with modelling the comparator has been very positive. The experience shows that the merit of defining a public sector comparator is indeed that it quantifies how PPPs score compared to traditional procurement. Perhaps more important, the use of a public sector comparator provides a great deal of information and fosters a more consistent approach to designing and evaluating PPP proposals.

To illustrate some of the practical advantages associated with the use of public sector comparators: they have helped to better define the outcome and goals of the underlying infrastructure investment; compile time-series and cross-sectional data from similar projects, thereby improving financial modelling; check and fine tune the consistency of the PPP project with government policy objectives; foster a constructive dialogue between all public sector parties involved – the Ministry of Finance, line ministries, PPP sponsors, and future public managers of the PPP contracts.

#### 3.3 Distribution of risks between private and public partners

The success of a PPP crucially depends on the sharing of risk between private and public partners. In this context, it is worth bearing in mind that PPPs are principal-agent relationships. An efficient PPP requires a set of incentive mechanisms to induce the agent (the private partner) to exert the adequate level of effort in order to maximise the objective function of the principal (the public partner). So, it is crucial how project goals are presented and measured and how the performance of private partners is rewarded (or punished).

Let us take a closer look at project goals. The PPP experience in Portugal indicates that projects with clear output specifications (e.g., the specific requirements of the service to be provided) tended to yield better results from the public sector viewpoint: shorter tender processes, better price conditions (e.g., prices lower than expected), and on-time completion of construction. The emphasis on output rather than input specification, which is key for giving private partners the right incentives, requires quite some rethinking on the part of government departments. Under traditional public procurement, departments incorporate in the tender documents many input specifications and prescribe several processes, designs, or technologies. In the case of PPPs, this is counterproductive, but as old habits die hard – not only in government departments –there is a constant need to purge tender documents of unnecessary input specifications with a view to allowing private bidders (and managers) space for innovative, efficiency-enhancing solutions. But it is also clear that with more emphasis on outputs there is a greater need to monitor and reward (or sanction) the actual performance of private PPP partners.

Portugal's PPP decision process now calls for the construction of a public sector comparator. Risk-sharing issues are especially challenging when risks are split between two or more concessionaires. In some of Portugal's PPP schemes, responsibilities, risks, and payments are shared between two concessionaires: one provides an infrastructure for a long period (typically 30 years) and the other delivers a service (for a much shorter period) using this infrastructure. This model is envisaged for hospital PPPs because the contractual arrangements for the clinical services can only be agreed on for a period shorter than the one suitable for the management of hospital buildings. It is also the model devised for some rail and tram PPPs, where the service of the infrastructure and the rolling stock is subject to availability risk, whereas transport services are subject to traffic risk. The contract period for transport services is usually shorter than that for providing the network and trains available; this is because the public sector cannot commit itself for a long period on some factors that affect traffic risk, such as maximum ticket rates, new transport systems, or urban parking rules.

The Portuguese experience shows how regulatory risk affects PPPs. There is also something to be learned from the Portuguese experience about how regulatory risk affects PPPs. It was noted above that most PPPs experienced cost overruns and delays (i) because of changing environmental regulations and (ii) because projects were tendered without prior environmental licensing. Changes in environmental regulation could be minimised, but they are probably difficult to avoid altogether. But it is clear that the public sector, i.e., the regulator, has to bear the consequences of changing environmental regulations. As to the environmental licensing of projects it is crucial that environmental impact studies have been carried out and initial licenses obtained before PPPs are being tendered so that bidders know all the environmental constraints and the mitigating measures they should include in their proposals. That this was often not the case in the past may have undermined competition for PPPs – an issue addressed next.

#### 3.4 Competition for PPPs

PPP projects are usually subject to international public tender, with advertising obligations and tender procedures similar to those used in major public works. The tender typically has two stages: bidders present their bids and after evaluation the two most promising bidders are invited to negotiate with the contracting authority and to present their best-and-final offers (BAFO), which are the basis for selecting the winning bidder. All procedures are required to satisfy the principles of transparency, equality of treatment, and competition and they have to clearly present the rules governing the selection of the private partner. Bidders are given extended information at all stages of the process and have the right to challenge the outcome in court.

Competition is seen not only as a means of ensuring a level playing field for all bidders. More important, it is crucial for obtaining an efficient outcome in the interest of the public. This has a short-term and a long-term dimension: in the short term, competition induces the submission of low-cost and high-quality bids; in the long run, it promotes a selection process that eliminates inefficient bidders and rewards efficient ones.

The Portuguese experience shows the need to reinforce formal competition requirements with additional measures to ensure effective competition for PPPs. For a start, all licenses (from government, environmental authorities, local authorities, etc.) should be provided prior to the launch of tender. But this also obliges government entities to have the nature of the project – including its goals, the targeted quality of services, and mitigating measures in the case of environmental challenges – clearly defined before tendering. If this is not done and if the definition of the project is revised after the first tendering stage – or even after the winning bidder has been selected – the PPP

agreement might be reached with a bidder who is not necessarily the most efficient in delivering the revised project.

Another measure to make competition for PPPs more effective and to create value for money is to refrain from introducing in the tender documents requirements that can block the introduction of innovation in the project technology or management. Too rigid requirements not only raise the costs for users or the public partners, but also prevent the selection of the most efficient private partners. Moreover, it is important to define criteria for evaluating and selecting bids so that they are objective and verifiable. In addition, they should enable an evaluation of innovative proposals made by bidders. Overall, greater project efficiency and tender competition can be obtained by cutting input requirements and, at the same time, by better defining intended outputs. A corollary is that selection criteria need to focus on the targeted output of the PPP project rather than – as under traditional procurement – the means of producing this output.

Greater project efficiency and tender competition can be obtained by cutting input requirements and, at the same time, by better defining intended outputs.

These characteristics of efficiency- and competition-enhancing PPP tenders, which are very different from traditional public procurement, suggest that the currently proposed new European Community legislative initiative on PPPs, designed to regulate the procedure for the award of concessions, is not desirable. What is necessary at this stage of Portugal's experience with PPPs is more time to evaluate and test different schemes, including more innovative ones – such as PPP procurement procedures that give the private sector a larger role in finding solutions for public problems and tendering processes that allow for separate but interlinked contests for contractors and financing consortia. Of course, compliance with EU principles should always be required. But before putting in place any EU legislative framework for PPPs, there should be an extended and thorough debate between the European Commission and member states on such a framework.

#### 3.5 Long-term management of the contractual relationship

For PPPs to deliver value for money, the public sector obviously needs the expertise to manage such long-term contractual relationships. Furthermore, it must be committed to the goal of improving the supply of 'public' services. Besides these general requirements, the public sector has to manage PPPs in a consistent way. In this respect, Portugal encountered difficulties, notably in aligning contract provisions with general government policies. This applies in particular to PPPs that rest on user charges.

For instance, in suburban transport projects, it is quite difficult to contractually prescribe user fees (or fee-adjustment rules) for a long period because the opportunity cost of this transport service will be influenced by decisions made by the central government (e.g., petrol taxes, new links, and toll rates) and local authorities (e.g., availability and cost of parking). In principle, this problem can be solved in two ways, or a combination thereof. One solution is to clearly formulate which circumstances would trigger a review of user fees and by how much they could be adjusted. The other solution is to have relatively short contract periods, essentially aligning them with the time horizon over which the government can credibly commit to refrain from actions that would justify a change in user charges. In Portugal, the second solution has been used. In the case of tramway PPPs, for instance, there are typically two contracts: a long-term concession for the provision of the infrastructure and the rolling stock, and a short-term concession for the provision of tram services. In the case of hospitals, a similar approach applies, with a short contract period for the provision of clinical services that, nonetheless, allows for annual revisions of the mix of services offered by the hospitals.

The long-term management of PPP contracts requires developing public sector entities that can be held responsible for managing such contracts and, specifically, for checking the quality of services provided and applying penalties for non-fulfilment or misbehaviour. Those entities should be distinguished from regulators since they manage the relation between the private operators/ concessionaires and the contracting authority (making sure, in particular, that all partners fulfil their contractual obligations) whereas regulators care about general matters such as competition, users satisfaction, and public safety. The separation between contract managers and regulators aims at avoiding inherent conflicts of interest.

#### 4. Recent institutional changes

The experience gained by Portugal with its PPPs has led to a number of institutional changes. The experience that Portugal has gained with its PPPs, and in particular the challenges it encountered, has induced a number of institutional changes aimed at improving the quality of PPP projects, optimising the PPP contractual relationships, and increasing political awareness about the long-term costs and risks of PPPs and their appropriate budgeting.

The budget laws now clearly define several PPP appraisal procedures, supplemented by a specific legal decree<sup>1</sup>. A key feature is that the case in favour of PPPs – and the specific PPP model chosen – has to be made on the basis of a public sector comparator and with the involvement of experts from the Ministry of Finance. This should help ensure that the PPP route is taken only if PPPs offer value for money. To further rationalise the decision process, the PPP proposals have to specify long-term budgetary implications and, more important, adequate long-term budgetary appropriation have to be made prior to launching a PPP programme.

Another institutional change is the creation of a PPP Unit, in *Parpública*, which is responsible for surveying public-private relationships, for collecting, analysing, and disseminating information on PPPs, and for advising sectoral ministries. In addition to this more general mandate, the PPP unit has a role in evaluating PPP projects, tender documents, and bids, and in negotiations with private partners<sup>2</sup>. At present, the PPP Unit is involved in the appraisal of several new large projects, mainly in the transport and health sectors, which are at different stages of the project cycle (evaluation of departmental proposals, preparation of tender documents, bid evaluation); the unit is also involved in the supervision of PPP contracts that are being renegotiated or refinanced.

Centres of PPP expertise are also being established in sectoral ministries with the creation of departmental PPP units in charge of developing specific PPP programmes. For instance, the PPP hospital programme is being developed and managed by *Parcerias Saúde*, the Health Ministry PPP unit, with assistance from *Parpública*.

### 5. Conclusions

Public-private partnerships certainly have potential to provide public services more efficiently, and if they are chosen for that reason, they present a way of facilitating the development of infrastructure and public services in an environment of severe budget constraints. In addition, they could have the positive side effect of fostering competition among government departments for setting best practice in delivering public services to users. What is more, PPPs themselves may set good practice

<sup>1</sup> Decreto-Lei 86/2003, April 26th.

<sup>2</sup> Decreto-Lei 86/2003, April 26th; and Finance Minister legal order, Despacho Normativo 35/2003, August 20th.

that is spreading to those services that the public sector will continue to supply. For instance, most publicly-managed hospitals, traditionally paid according to their input needs (personnel, equipment, etc.), are now being paid for their output, and new incentive schemes are being devised for their managers and staff. Obviously, there could be a positive feedback from more efficiently publicly-managed hospitals to PPP hospitals as the performance of the latter is benchmarked against the most efficient publicly-managed hospitals.

Overall, we arrive at the following conclusion: the Portuguese experience demonstrates the effectiveness of PPPs in rapidly developing infrastructure and in improving the quality of public services. But the ultimate goal is economic efficiency, not just effectiveness. The recent changes to the institutional framework – especially a more rigorous appraisal of PPPs, their long-term budgetary implications, and the contractual arrangements supporting them – aim at ensuring efficiency in the provision of infrastructure services and, thus, value for money.

Looking ahead, in Portugal and elsewhere, different PPP models and procedures should be carefully analysed and evaluated in order to continue to learn from experience. As a national PPP Unit and knowledge centre, *Parpública* clearly sees the need for a European and international exchange of views on PPPs to find out what works and what does not.