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Mixed Companies and Local Governance: No Man Can Serve Two Masters

Abstract:

This article looks at the use of institutionalized public-private partnership (PPP) arrangements by local governments for the delivery of different types of infrastructure. It starts by analysing the mixed company model from a theoretical point of view, in particular the potential for internal regulation and the achievement of a relational agreement. Then, after discussing the practicalities of crafting this type of governance structure, four Portuguese case-studies are examined. The empirical evidence on mixed companies operating in the water, waste, transportation and education sectors shows that the extreme complexity involved in the whole life-cycle management of these companies usually leads to a poor protection of the public interest.

INTRODUCTION

Beyond their multiple advantages (either real or merely budgetary), it is acknowledged that the use of public-private partnership (PPP) arrangements entails special concerns. These concerns have been lately addressed in the literature (e.g. see McQuaid and Scherrer 2010; Hodge and Greve 2010; and Marques and Berg 2010). However, among all the types of PPPs, the mixed company model is surely the least studied and, at the same time, perhaps the one that presents the biggest challenges for public authorities who decide to embrace this type of agreement.

This article explores the use of mixed companies (entities co-owned by governments and private investors) for the delivery of local infrastructure services. We discuss the theoretical features and the institutional capacity of this specific governance structure, explaining when mixed companies are expected to have an advantage in the production of these services. We illustrate our points with the examination of four Portuguese case-studies that have relevance in the European context. The analysis of the tender and contractual documents allows us to contrast the theoretical expectations

with the actual practice. From this comparison we extract several normative conclusions with relevance to local decision-makers. Furthermore, we point out that further theoretical work should be developed regarding the use of this 'new' governance model by local governments for the delivery of social infrastructure. This is indeed a relevant issue both academically and for practitioners; despite the fact that there are very few studies of mixed companies in the public administration literature, one can currently observe several of these structures operating in Europe (European Commission 2004).

Relying on his theoretical model, Moszoro (2010, p.7) claims that 'a mixed capital structure allows to internalize both the cost of capital advantage of the public sector and the knowledge advantage of the private sector'. In fact, this author states that '[a]n optimum investment in public infrastructure requires mixed public and private ownership and governance of the project and knowledge transfer' (p. 26). Referring to Italian utilities, Marra (2007) argues that mixed companies, as an alternative to the traditional public production and to the delegation of services to concessionary companies, can undertake higher investments while attaining lower running costs. The first purpose of our analysis is to determine whether the theoretical features of the mixed company model are always translated into practice. Secondly, we want to learn what the 'real-world' problems involved in the crafting of a mixed company are and how they can be ameliorated. Finally, we intend to determine when this governance structure is expected to arise and when it may be actually be good for the public interest (taking into account the institutional and organisational theory as well as the empirical evidence gathered).

In our analysis, we find that there is a disconnection between theory and practice. Instead of using the mixed company model to devise a relational agreement that allows coping with unforeseen or unexpected circumstances without the need for costly renegotiation (Spiller 2008), local practitioners may use mixed companies to circumvent budgetary constraints (a practice that might have direct negative consequences for the users of public services). Steijn *et al.* (2011) claim that 'management' is more important than 'organizational form' in PPPs. We do not disagree with this

claim. Nevertheless, as we will see in the next sections, these specific governance models entail several 'traps' that constrain the potentially positive outcomes to the public interest.

The remainder of this article is organized as follows. In the second section we carefully describe the mixed company model and its relationship with other governance structures available to local governments for the delivery of social infrastructure. Also in this section, we discuss the particular features of different infrastructure sectors and the relevant aspects of the Portuguese framework. The third section provides the analysis of the four case-studies. A comparison of the cases is presented in the fourth section upon which several normative points are drawn regarding the process of structuring a mixed company. The final section comprises the main conclusions and the policy implications that arise from the empirical evidence.

DELIVERING LOCAL INFRASTRUCTURE

The particular case of mixed companies

Mixed (public-private) companies are framed in the so-called institutionalized PPPs (or iPPPs); they consist in joint-ventures between public sector entities and private investors. Unlike what happens with purely contractual PPPs (or cPPPs – e.g. concession, *afférmage* and management contracts), where the private partner is solely responsible for producing the services and its rights and duties are (in)completely established in a written contract (transactional relationship), with mixed companies, the public and private partners gather to jointly manage and deliver the services (Weber and Alfen 2010). Nowadays, mixed capital companies are used by local governments all over the world, although with special incidence in Europe (mainly in Italy, Spain, France, Germany and Portugal – Verdier *et al.* 2004) and South America (especially in Colombia, but also in Cuba and Mexico – Marin 2009).

Purely contractual PPPs are said to be 'transactional' because they 'are rigid by origin' (Spiller 2008, p. 21). Indeed they usually fail to cope with adaptations to shocks without triggering formal contractual revisions (e.g. see Guasch 2004). This serious problem even led to the reconsideration

of high-powered incentives to the detriment of less theoretically efficient contracts that are more likely to promote continuity (Levy and Spiller 1994). Unlike what happens in the public sector, private contracting is relational in nature (Spiller 2008). Concerning public procurement, relational contracting should be 'closely associated with partnerships and strategic alliances and involves long-term social exchange between parties, mutual trust, interpersonal attachment, and commitment to specific partners, altruism and problem solving' (Reeves 2008, p. 972).

According to Schaeffer and Loveridge (2002), the differences in characteristics of PPP arrangements that are important to their success or failure are often overlooked. These authors provide a vocabulary for the study of cooperation between public and private (for-profit) sectors (an adaptation to our case is provided in figure 1). In the 'follower-leader' quadrant, the leading partner usually assumes the up-front infrastructure investments while the other carries out the complementary tasks (e.g. short-term outsourcing or even management contracts might fit this type, see Marques and Berg 2010). Long-term concession contracts embody a 'buyer-seller' type of cooperation (significant transaction costs might be involved because the time-frame renders the problems open-ended). In a theoretical perspective, mixed companies can be regarded as 'ideal-typical joint-venture' (if they have a very specific purpose, usually with aligned potential benefits and objectives for both partners) or 'ideal-typical partnerships' (if the participants set the general purpose of the partnership but are open to new developments and opportunities). Like Schaeffer and Loveridge (2002, p. 175), we think that '[w]hat works best depends on the nature, scope, and risks of the projects' and the actual model of cooperation should be chosen to better fit the needs of the partners. However, due to the special features of local public infrastructure services, the mixed companies that we address in this article should preferably be framed in the 'partnership' quadrant.

[Insert figure 1]

As Rangan *et al.* (2006) skilfully explain in their study, when public benefits significantly exceed the private benefits (e.g. a general-interest service with no or low economic interest) but the public

sector's resource costs are far higher than the private sector's costs (i.e. private actors hold higher expertise and, at least purportedly, are more efficient) then there is scope for public-private collaboration. Besides, if the specific infrastructure service is shrouded by singular uncertainty and the private actors are not able to control several aspects related to the global governance of the public service (e.g. contracting, coordinating and enforcing costs), then we can expect the establishment of 'constructive partnerships' (alliances or hybrids, see figure 2). Mixed companies seem to be a type of constructive partnership. These governance structures are often referred to as hybrids because they appear in circumstances where markets or firms alone are unsatisfactory (Koppenjan 2010, Rangan *et al.* 2006 and Røiseland 2011). Edelembos and Teisman (2010) note that while in a concession model a project management approach is usually adopted, 'alliance PPPs' implement a process management approach.

[Insert figure 2]

As described by the Advocate General Ruiz-Jarabo Colomer (European Court of Justice) in a recent legal case in Italy, in iPPPs the respective tasks of the public and private participants are managed by an entity with separate legal personality under which the partners ensure the production of the service or infrastructure for the benefit of the public. In 2009, the Advocate General stated the following in his opinion in *Acoset SpA v. Conferenza Sindaci e Presidenza Prov. Reg. ATO Idrico Ragusa and Others* (C-196/08):

In addition to acting as a safety valve in the face of budgetary restrictions, PPPs encourage private finance and the use of the knowledge of undertakings outside the public sector as a response to the setbacks inflicted on the State by liberalisation; the State's position as a direct operator has evolved into that of a regulator and it is the ultimate guarantor of conduct which affects the general interest.

Even so, designing, monitoring and enforcing (i.e. regulating) incomplete contracts is not an easy task, particularly for small to medium-sized municipalities that may lack the resources and expertise needed to deal with specialists from the private sector. Hence, the idea of regulating the partnership from within seems to be a valuable strategy. By opting for an iPPP, local decision-makers try to adopt a relational approach to governance (Reeves 2008). The use of a semi-public company should place a relatively high degree of control over the performance of the services on the public sector side. Indeed, in most cases the competent public authorities hold the majority of the shares, therefore retaining the dominant influence (European Commission 2004). Owning at least 51 per cent of the shares (the standard capital participation of local governments) should be enough to keep the companies at arm's length and benefit from the private sector's know-how and, at the same time, allow for the pursuit of unprofitable social goals.

The process of creating a local mixed company usually occurs as follows: the local government creates a 100 per cent public municipal company and then issues a public tender to select the private partner who will purchase the company shares (typically a non-controlling stake in a process sometimes labelled as 'partial privatisation', Schmitz 2000) and therefore assume the responsibility for the provision of the service and execution of the works, as the industrial participant. The selected partner is not allowed to sell its shares unless there is an explicit authorisation of the local government and both free competition and transparency principles are respected.

The property rights should reduce information and monitoring costs due to the increased access of the public partner to information regarding day-to-day operations. Asymmetric information is a serious problem in cPPP arrangements; however, in mixed companies this shortcoming should be mitigated, enabling the 'internal regulation' and decreasing the risk of *ex-post* opportunistic behaviour. Even in the worst case scenario, where the renegotiation of the initial contractual clauses must take place (usually with great loss for the public interest – Guasch 2004), the public partner is better able to cope with principal-agent problems.

In relational agreements, the 'spirit of the contract' should prevail over the 'letter of the contract' (Macneil 1974). Nevertheless, the EU legislation [COM(2007)6661] imposes that the scope for action of each partner is defined in a complex series of contractual documents, namely: the shareholders' agreement (setting the rights and duties of each partner and establishing crucial aspects like the remuneration scheme of the private investors), the management contracts (a document firmed between the competent authority and the mixed company setting the operational objectives to be attained by the latter) and the statutes or articles of association (defining the internal rules of the company like the remuneration of managers). Thus, the internal regulation is actually limited by the contractual framework that must be in place.

In their theoretical investigations, Eckel and Vining (1985) found that mixed companies can result in the 'worst of both worlds', where neither profitable nor social goals can be effectively achieved. Currently, we have some indications of the causes for this unintended effect. For the internal regulation to be effective (and for the information to flow upward) it is necessary that the public representatives in the board of the companies hold a high degree of expertise and ethical standards (Marra 2007). Mixed companies can sometimes suffer from lack of clear and stable objectives (Boardman and Vining 1989) which, in addition to the natural contradictory pressures within the companies, can lead to a high degree of managerial 'cognitive dissonance' (this problem is accentuated in case of ownership dispersion, which is unlikely for municipal mixed companies carrying out general-interest services). Finally, social goals are hard to determine and social output is hard to measure; this aspect complicates the benchmarking of these governance structures.

For all these reasons, mixed companies seem to be preferred when the external environment yields contradictory pressures on local decision-makers. In Spain, Bel and Fageda (2010) found that mixed companies are more likely to appear in municipalities with great financial constraints and where contracting costs are higher. Furthermore, this governance model can be perceived by local governments as a 'stand by' solution or a form of 'gradual privatisation' (Bognetti and Robotti 2007).

Effective PPP arrangements require that public decision-makers agree on giving up more control and discretion than they usually do and, at the same time, need that the private investors agree on assuming greater financial risks than they are usually willing to bear. The mixed company model represents a compromise solution and an attempt of both sides to manage these opposing objectives. If well managed, the 'self-interest seeking' (Williamson 1985) behaviour of private partners in PPP arrangements can provide incentives for cost-efficiency; however, to prevent this behaviour from distorting decisions away from the social optimum, governments must retain some discretionary capacity. If this complex balance of power is not well structured, the benefits of entering into PPP agreements will fade out and may not compensate the political costs intrinsic to these processes. As we stated at the outset, in this article we investigate whether mixed companies can be a good answer to this proposition.

Range of governance structures

Between the two extremes of governance schemes (ranging from in-house production to full divestiture), there are a number of other possible strategies for regulating local public monopolies (see figure 3). One should note that, strictly speaking, the array of different strategies is not a continuum in the sense that there are 'leaps' between consecutive governance structures. We also point out that even in contracts and concessions there is some form of political input, especially regarding the performance in terms of quality (although this input is mainly during the 'competition for the market' phase, Demsetz 1968).

Naturally, each governance structure (bureaus, firms, hybrids and markets) has its pros and cons; markets provide more incentives for efficiency but hierarchies perform better if uncertainty and asset specificity deepens (resulting in the need to carry out coordinated adaptations, Williamson 2002). In these conditions, typical of infrastructure investments, local governments may be inclined to opt for direct (in-house) public production. Direct public management can be carried out by municipal departments or by semi-autonomous entities that have administrative independence and separate accounts. In both cases, local governments remain liable for all the activities carried out

and retain the power of signing new contracts, select new investments, set tariffs and define the quality levels to be attained. In contrast, municipalities can delegate responsibilities in separate entities. If local decision-makers opt for a more entrepreneurial and flexible approach to deliver infrastructure while avoiding the hurdles of privatisation, the 100 per cent public municipal company model can be a reasonable choice. The rationale for corporatisation (Bilodeau *et al.* 2007) consists of crafting a public governance structure incorporating certain appealing features of private enterprises, e.g. clear and stable objectives, incentives for efficiency, flexibility in human resource management and the use of accelerated procedures in the procurement by the special purpose entity (the latter feature is not necessarily desirable since it may be a gateway for corruption or favouritism, nonetheless, it is usually perceived by decision-makers as a very useful tool). However, municipal companies are often bounded by too many goals and, in practice, it is very difficult to replicate the discipline and performance of private companies (Cruz and Marques 2011).

[Insert figure 3]

Since public authorities retain the dominant influence over mixed companies, iPPPs can be regarded as 'public companies'. These governance structures represent a new step in the range of strategies for regulating public monopolies. In fact, mixed companies appear as an alternative both to pure public production and to the delegation of services to private firms through concession contracts (Marra 2007). However, in spite of the relational relationship established within the companies (e.g. in the board of directors), these entities detach from the 'in-house' regulatory strategy on account of the web of regulatory contracts that formalize the partnership. Ultimately, these documents govern the relationship between public and private sectors and the latter will always claim its stated rights, regardless of what might happen that was not predicted in the contracts. Furthermore, there is also an influence of future relationships as indicated in some PPP literature which may mean that a private firm might accept a short-term disadvantage (even if they could enforce a better short term outcome) in order to maintain good relations and future relationships or 'lateral contracts' (see Brux 2010). This is why mixed companies can be described

as 'hybrids'. Usually, major investments are imposed by local governments in the market access phase but the trend in tariffs is established in the regulatory contracts (according to specific assumptions mentioned in the tender documents or the viability studies approved by the public authority). Hypothetically, the mixed company model can be one of the modern versions for governing local public services that may prove successful in combining the flexibility of in-house delivery with some specific commitments found in contracts (Gómez-Ibáñez 2006). Nevertheless, some provisions must be made so that an optimal regulatory framework for the mixed companies can be devised, namely, the inclusion of performance indicators to monitor the contracts.

Among the menu of feasible strategies available for local governments, the concession model is, by far, the one that provides higher incentives for cost-efficiency. Concession contracts awarded by means of a public tender are subject to more direct market forces, but then again, negotiated contracts can work better if the projects are framed by singular uncertainty (see Bajari *et al.* 2009 for a discussion on this issue). However, due to problems of bounded rationality (Bajari *et al.* 2006) long-term contracts are unavoidably incomplete. Indeed (Crocker and Masten 1996, p. 35):

[A]s the empirical literature on organizational choice and design demonstrates, in contexts where exchange requires relationship-specific investments and the environment is complex or uncertain, the optimal governance mode is an incomplete relational contract or, in the extreme, the use of vertical integration or regulatory oversight.

Simply put, and according to the Eurostat rules (EPEC 2010), if there is an effective transference of 'most of the project risk' to the private partner, the two types of PPP arrangements (purely contractual or institutionalized) allow for the assets to be registered off the local government's balance sheet, which is a very interesting feature for overburdened municipalities. If credible contracting is feasible (e.g. in a simple market exchange), private management is likely to dominate the other alternatives and internal or external regulation would not be necessary (Williamson 2002). 'To be credible, a regulatory contract must be specific – i.e., it must lay out in detail how the parties

will deal with each eventuality' (Spiller 2008, p. 21). But increasing the completeness of the contracts can entail prohibitive transaction costs in cPPP agreements. On the other hand, mixed companies may fall short in terms of securing an optimal allocation of risks and a clear accountability framework.

Different sectors, different requirements?

Some fundamental aspects are similar to all public or social infrastructures. They are thought to provide general-interest services that have social and equity concerns. Once the initial investment is made, some costs are non-recoverable (or sunk). Usually, utility services involve networks with monopoly attributes and there are information asymmetries between the regulators (local governments) and the regulatees (the entities that are actually in charge of producing or managing the projects). Hence, in some aspects, infrastructure projects are riskier than other types of investment (e.g. utilities can have inelastic demand but several other sources of risk are relevant, such as construction risks, availability risks and regulatory risks, Guasch 2004). The ISO standard on risk management (31000:2009) defines risk as the 'effect of uncertainty on objectives'. Therefore, the concept of risk is related to the potential for events that have uncertain consequences and may constitute threats to success (or, if properly managed, welcome effects). Even though private sector entities are known for being particularly risk-averse, seeking private sector participation is often seen by public authorities as a way of lessening budgetary constraints and increase prices.

The 'wholesale' market segments of utility services like water intake, treatment and transportation, wastewater treatment, urban waste transportation and disposal/treatment and electricity generation are usually managed by regional entities. These entities can be conceived in multiple ways where inter-municipal cooperation is the most common strategy to achieve the evident economies of scale. Sporadically, regional utilities result of creative models like in the electric 'wholesale' market in the U.S. where, frequently, publicly-owned local utilities are equity owners of private companies that are in charge of producing electricity; local utilities then buy and sell energy to these companies (owned

by public and private utilities), enabling the exploitation of scale economies and an efficient risk-management (Cruz *et al.* 2011). Irrespectively of the sector, 'wholesale' utilities entail major investments in infrastructure with high degree of asset specificity. Thus, dealing with private investors involves all the traditional problems of bilateral monopolies and, in addition, it is also necessary to cope with the objectives of different local governments.

The 'retail' segment of utility services is also characterized by latent scale (and scope) economies; however, local governments are not enthusiastic about giving up control and discretion regarding the services that are directly provided to their constituencies (even to other local public bodies). In contrast to what happens with water and electric 'retail' services (that present similar challenges to the ones described for the 'wholesale' utilities), urban waste and bus services have fewer problems in terms of asset specificity. In fact, one can move waste trucks or buses to another municipality, but one cannot move a light rail or an electrical grid. Hence, contracting out bus services or 'retail' waste management should be an easier task.

Finally, local governments also have the responsibility to provide other types of local infrastructure (e.g. school buildings, underground parking lots, municipal pools or other sport facilities, etc.). The requirements of this type of investments are somewhat different from utility services (for instance the risks involved, the complexity of the demand estimates, and the size of the projects, among others). Regarding these investments, the mixed company model might be questionable, especially if the projects are not so particularly complex that internal regulation and relational contracting would become desirable. This issue will be further addressed in the third section of this article (concerning a real application in the schools sector).

The Portuguese case

There are 308 municipalities and 4,259 civil parishes in Portugal (the administrative regions mentioned in the constitution are yet to be created), encompassing 10.6 million inhabitants. Regarding utility services, and despite the wave of decentralisation of competences from the central

state to local governments, presently municipalities are mainly responsible for water, waste and urban transportation. Electricity and natural gas services are (at least for now) usually provided by centralized entities and other services, such as broadband, are completely 'on the market'. Similarly, besides sports facilities, cultural spaces and other traditional responsibilities, Portuguese municipalities are just now beginning to gain competences regarding the education (basis schools facilities and non-teaching staff) and health sectors.

Since it generates direct or indirect public expenditure, after the negotiation with the winning bidder, the iPPP contract (or contracts) is subjected to an *a priori* control by the Portuguese Court of Auditors to make sure that everything is according to the law and budget. If there is some irregularity, the Court can make recommendations to the competent public authorities in order to overcome the identified problems. Due to the constitutional principle of local autonomy, the central state cannot interfere with the responsibilities and duties of local governments. Nevertheless, the central state participates indirectly in the management of the 'wholesale' water and waste services in several occasions. These utilities often consist of public-public partnerships (PuPs) where the municipalities and a company fully owned by the central state (AdP in the water sector and EGF, a sub-holding of AdP, in the waste sector) join to cooperate and deliver the services.

In 1997 the Portuguese government decided to create a sector-specific regulator for the water and waste sectors. The Water and Waste Services Regulation Authority (ERSAR in the Portuguese acronym) is somehow an atypical regulator. Indeed, in the EU15, similar agencies can only be found in Italy and the UK. Still, until very recently ERSAR has only had regulatory power over concessionary companies and mainly regarding quality issues (sunshine regulation). There is also an external regulator for the transportation sector (created in 2007). However, the Institute for Mobility and Land Transport (IMTT in the Portuguese acronym) competencies merely involve the approval, licensing and inspection of vehicles, as well as other activities like the issuing of driving licenses, licensing of driving schools and training of professional drivers.

Usually the private investors involved in PPP arrangements at the local level consist of construction companies or specialized sub-holdings owned by them. Knowing that local governments have been subjected to strict debt limits, these players have been keen to invest and adapt their organisations to this type of procurement; in fact, they often appear much more prepared to enter these complex negotiations than the decision-makers on the public sector side. In Portugal there is no specialized PPP office to retain the lessons learned. A dedicated organisation to assist in the structuring and monitoring of local PPPs like the 'Operational Task Force' of the HM Treasury or the 'Local Partnerships' in the UK, or the Dutch 'Knowledge Centre on PPPs', would be of great use in this country.

CASE-STUDIES

Introduction

The study of institutions places an emphasis on the case-study research (Posner 2010). In this article, we focus on four different mixed companies, each one currently operating in its specific infrastructure sector. Our aim was to gather empirical evidence on this singular governance structure and to appreciate when (or if) it can be an optimal solution (i.e. good for the public interest). The sectors covered are water, waste, transportation and schools, all at the local level. To learn how local decision-makers are handling the access to the market while founding iPPPs, we analysed all the tender documents (in the cases where a public tender took place). Furthermore, to understand how the activities and roles of each partner are regulated, we also examined all the contractual documents, namely the shareholders' agreements and the statutes (since, with the exception of AMBILITAL, the management contracts have not yet been devised for the other cases studied).

The sectors addressed in this article are representative of those in which the Commission has been providing grant financing (European Commission 2004). Besides the 'umbrella' provided by the EU legislation, the national legal frameworks and the actual practices in continental Europe are similar in terms of public procurement (e.g. France, Italy, Portugal, Spain and even Germany). The major

reforms that began in 1994 in the Italian water sector (Bognetti and Robotti 2007) triggered the emergence of several mixed companies (publicly-owned utilities are the most common model, however, there are now more mixed companies than concessions in this sector). In Spain, this model has been present in the last two decades (Bel and Fageda 2010), especially in the water and waste sectors. The *Resource Book on PPP Case Studies* (European Commission 2004) describes several uses of this model in Germany (e.g. Berliner Wasserbetriebe, or Berlin Water, is one of the biggest mixed companies in Europe) and also similar experiences in Western Europe and even in the UK (Moszoro 2010). Usually, in local iPPPs the private partners are (or have ties with) construction companies (e.g. FCC from Spain is present in several mixed companies in Europe, especially in the waste sector). In the specific case of utility services, these partners also tend to be large international corporations with a great market share (e.g. the case of Veolia and RWE in Berliner Wasserbetriebe and Suez in ACEA which is a mixed company in charge of water and energy services in Rome).

Table 1 presents the selected case-studies and a summary of their main features. In the next subsections we present the systematic analysis carried out for each mixed company. Drawing on these findings, section 4 comprises the critical success factors of mixed companies in charge of local public infrastructure.

[Insert table 1]

Water sector

As previously mentioned, water services are a responsibility of local governments. Currently, the Portuguese market is structured as shown in table 2 (we chose to exclude the detailed listing of 100 per cent public municipal companies, municipal services and municipal departments – they are included in the totals). In the ‘retail’ market, the most common governance model is still the municipal department (207 units, encompassing 43 per cent of the population). Currently, there are 33 PPP arrangements in the Portuguese water sector. All these contracts are split by only five

private companies: Aqualia (FCC – Spain), Aquapor (DST/ABB – Portugal), AGS (Somague – Spain), Indaqua (Mota-Engil – Portugal) and Veolia (France).

[Insert table 2]

Only seven calls for mixed companies were launched until this article was written. FAGAR was one of the first mixed companies to be created in the water sector (the company is also in charge of refuse collection and urban cleaning). The call for tenders was published in 2003 and the bidders had 60 days to submit their proposals, but the financial close was only reached in 2005 (the year when the company actually started to operate). The mixed company followed the transformation of the municipal services with autonomy that were in charge of water, wastewater, refuse collection and urban cleaning services. The new company retained the same corporate purpose and had to incorporate the former employees of those services (public servants). At the least, the remuneration, benefits and rights of all employees had to be kept the same.

Only one bidder participated in the public tender. This is clearly very bad for the public interest since without any competitive pressure, prices detach from production costs (Bajari *et al.* 2006). Initially, the winning bidder consisted in a consortium composed by three companies: AGS, Hidurbe and EcoAmbiente. Currently, the private shareholders are just AGS (32.83 per cent of the shares) and Hidurbe (16.17 per cent) which, in turn, are owned by the same construction company (Somague). The term of the PPP is 35 years (although this period can be extended if the parts agree) and, by the end of that period, the local government can buy back the shares from the private investors at their nominal value. In this point one should take into account that 'the risk of residual value of the PPP assets may be relevant for the classification in borderline cases' (EPEC 2010, p. 17), which means that, according to the Eurostat statistical treatment rules, this could result in an on-balance sheet treatment for this particular PPP if 'most of the risk' is not effectively transferred to the private partners.

The municipality had a set of critical investments that should be financed by the private partner up to a maximum value of 20 million Euros. The tender documents mentioned that the private partner should propose a capital structure dividing its participation in two components: one parcel to buy the company's shares (the participation should be 49 per cent to 10 per cent) and one parcel as an additional paid-in capital (the company does not need to make a profit so that this capital can be remunerated). Other calls for iPPPs carried out in Portugal in this sector had slightly different schemes – with the two parcels completely defined or with the value of the up-front payment being set as an evaluation criterion (Marques and Berg 2011). The evaluation criteria for FAGAR were the ones provided by table 3.

[Insert table 3]

As one can see, some criteria are discretionary and would hardly differentiate among bidders; on the other hand, since there were no sub criteria (or they were not made publicly available) and no performance descriptors for each criterion, it would be very hard to measure the partial performance of each bid. Also, the weight given to the shareholders' agreement is curiously low, since this will be the main document that will regulate the PPP until its termination.

The initial base case and the shareholders' agreement were recently renegotiated (2009), only a few years after the awarding. This outcome provides a good illustration of the actual fragility of these arrangements, especially if we take into account that the first agreement was signed without significant market pressure. The local decision-makers involved argued that this renegotiation was mainly triggered by the entry into force of a new legal diploma (the legal regime for the local business sector, Cruz and Marques 2011). Furthermore, the signing of a new contract with the 'wholesale' utility (a PuP) was not foreseen in the contractual documents. The problem is that with this governance structure 'most of the project' risk is not borne by any of the partners. In fact, it is transferred to customers. This is mainly because, in a scenario where the mixed company internalize eventual losses, the local government is also directly harmed as a shareholder.

Therefore, it tends to agree with the requirements imposed by the private partners, which consist in raising tariffs (the statutes of the company state that the board of directors has the competence to approve the tariffs – the authorization of the municipal parliament is not necessary). In fact, this is not new (Marques and Berg 2011); generally the shareholders' agreements have very 'narrow' clauses (regarding fluctuations of demand, amount of investments, financing conditions, prices of raw materials, etc.) that lead to the restoration of the economic and financial equilibrium of the mixed companies. In this case the usual thresholds (e.g. allowing for a 20 per cent variation in crucial indicators) are not even mentioned in the contract. Instead, one clause states that renegotiation must occur 'if there is a substantial change in the company's profitability'.

Finally, the 'relational web' (Macneil 1974, p.595) of contracts does not provide the public partner with any mechanism to sanction the private partner if it fails to attain the desired performance (only in extreme cases would the private partners be financially liable). As it stands, this particular governance structure is a 'sure thing' for private partners in terms of recovering the initial up-front investment (plus a very interesting profit margin).

Urban waste sector

In Portugal, the market structure of the waste sector is somewhat similar to the water sector. 'Retail' services are usually produced in-house; overall, there are about 260 utilities operating in this segment. Regarding 'wholesale' services, there is a total of 26 utilities operating in the mainland: 11 PuPs, two cPPPs, three associations of municipalities (in-house production), four 100 per cent public intermunicipal companies and six mixed companies.

AMBILITAL was one of the first mixed companies to be created at the local (or, in this case, regional) level. The public shareholder (AMAGRA) is an association that includes seven municipalities, namely: Alcácer do Sal, Aljustrel, Ferreira do Alentejo, Grândola, Odemira, Santiago do Cacém and Sines. One of the first aspects that stand out is the absence of a public tender for the selection of the private partner. Initially, the iPPP agreement was directly negotiated with

SERURB which was lately incorporated in SUMA where Mota-Engil, a construction company, is a major shareholder (SUMA has half the market share – FCC and Lena Ambiente are the other two main players). We suppose that this (clearly faulty) occurrence was due to the lack of a proper legal framework regarding iPPPs at that time. Nowadays, this procedure would clash with the EU principles of equal treatment and non-discrimination and with legal rules in effect. In fact, as the Advocate General Ruiz-Jarabo Colomer stated in *Acoset SpA v. Conferenza Sindaci e Presidenza Prov. Reg. ATO Idrico Ragusa and Others* (C-196/08), four conditions must be satisfied in iPPPs:

1. *the company maintains that single corporate purpose throughout its existence;*
2. *the private participant is selected through a public tendering procedure, after verification of the financial, technical, operating and managerial requirements and of the characteristics of its tender, with regard to the service to be delivered;*
3. *the private participant assumes, as the industrial participant, responsibility for provision of the service and execution of the works; and*
4. *the tendering procedure is consistent with the principles of free competition, transparency and equal treatment as required under Community law for concessions, and, as the case may be, with the rules on the publicity and the award of public contracts.*

The PPP contract firmed between the parts does not stipulate a duration for the mixed company; this is not in accordance to EU guidelines in COM(2007)6661 and not having a periodical market consultation accentuates the lack of 'competition for the market' (Demsetz 1968), thus perpetuating the tendency for quiet life. Moreover, experience tells us that the lack of transparency and preliminary viability studies decrease the benefits of private sector participation (Fobil *et al.* 2008).

In 2001, the existing assets of the public shareholders (equipment, land rights, etc.) were transferred to the mixed company. These assets were monetized, representing the capital participation of the public partner. Usually, for political reasons and due to some legal requirements, mixed companies are not designed to have significant profits and the private shareholders are paid

through costs (and 'lateral contracts' Brux 2010). But in this case, the shareholders' agreement sets minimum thresholds for the profitability of this company (in 2009 the total costs of AMBILITAL were 3,268,006 € while the total income was 4,052,907 €), even though the amount that can be transferred to the partners is capped (like in rate of return regulation). Moreover, AMBILITAL has to pay for the consultancy of the private partner.

Once again, the few times that risks are addressed in the contractual documents are only to clearly transfer them away from the mixed company. Indeed risks like unpredictable events, *force majeure*, misuse and legal or regulatory changes are deflected in one clause of the management contract signed between AMAGRA and AMBILITAL. Since nowadays the final users only pay about 30 per cent of the total costs involved in waste management, these risks are likely to be allocated to tax payers.

No performance indicators whatsoever are included in the iPPP contract of AMBILITAL. Besides providing no incentives for cost-efficiency, this regulation by contract does not contain incentives to reduce waste production (for instance, by developing customer education programmes), to increase coverage or to engage stakeholders in more sustainable practices. Indeed, by setting limits to the profitability of the company (the contract states that the trade-off between net earnings and operating expenses must be within the interval 6.25 to 7.5 per cent) and no performance targets (e.g. percentage of waste separately collected or diverted from landfills), no incentives are provided. Finally, one should underscore the fact that this governance structure allowed for the exploitation of economies of scale by bundling seven municipalities in one PPP (also in line with the empirical findings of Bognetti and Robotti 2007; and Bel and Fageda 2010). Nevertheless, this grouping of municipalities resulted from an *ad hoc* policy decision instead of being based on proper technical studies (e.g. Marques and Simões 2009 found that the optimal scale for each service in Portugal would be around 300,000 inhabitants).

Urban transportation sector

Only about 53 municipalities provide urban transport services in Portugal; even so, these municipalities include around 61 per cent of the population. In table 4 we present the market structure of urban transportation, detailing the mode and the governance models in charge of delivering the services (some municipalities have more than one entity operating in their territory). It seems that local governments are not able or willing to provide transport by rail unless they can rely on the assistance of either the central state or private investors. Three major private players dominate the market (Barraqueiro, Transdev and Arriva which owns 31.5 per cent of Barraqueiro) covering almost half the population with access to urban transport services.

[Insert table 4]

In spite of some indications that open tenders minimize transaction costs in transport PPPs (Soliño and Santos 2010), the municipality of Oeiras opted for the negotiated procedure (this local government even sought legal advice to support its decision) and entered in an agreement with Teixeira Duarte (a major construction company). Although, due to the particular complexity involved in light rail infrastructure projects, the negotiated procedure could be the ideal option (Bajari *et al.* 2009), the lack of transparency and stakeholder participation put the project at stake. Indeed, SATU runs huge deficits nowadays (in 2010 the net loss was 2,988,900.68 €).

The allocation of risks was very blurred in this iPPP arrangement (see table 5); several risks were unmentioned in the contracts. On the other hand, some risks (like demand) would only be effectively transferred to the private partner if its remuneration scheme was connected (even if only partially) to key performance indicators. There is no management contract firmed between SATU and the local authority; instead, a series of shareholders' agreements specify the remuneration scheme of the private partner that consist of the amortisation of the additional paid in capital (i.e. a cost-plus contract). Furthermore, several 'lateral contracts' were awarded to the private partner.

[Insert table 5]

Besides not having the appropriate tools to carry out an effective contract management, the local authority has disincentives to apply sanctions to SATU. Since they are actively involved in the management of the mixed company, proceeding like this would consist of a form of self-punishment. A light-rail system seems to involve a degree of complexity (asset specificity and uncertainty framing the project) in line with relational contracting. However, this case presents too many serious problems so that the mixed company can be successful, especially concerning the preliminary viability studies and the management of the investors' access to the market.

Public schools sector

The Portuguese school education is divided into basic, secondary and higher education. Local governments have responsibilities regarding basic education (compulsory education) and also nursery schools; these responsibilities cover the construction, maintenance and management of schools facilities, and also the non-teaching staff, school meals and other family support features, transportation, and extracurricular activities for the first cycle of basic education and other school and social activities for the remainder cycles.

Managing public works is different from utility services and using iPPPs to deliver school infrastructures is definitely at odds with the common practices (even considering the school PFIs in the UK). In 2008 the publicly-owned municipal company Terras da Paixão issued a public call for tenders for the selection of a private partner to the creation of a mixed company that would be in charge of designing, building, financing and ensuring the maintenance of six new schools and one multipurpose venue. The evaluation criteria are shown in table 6. The multicriteria evaluation model did not include criteria to assess the robustness of the bids which could lead to the 'winners' curse'. Moreover, the equity internal rate of return was not evaluated (it is not even known), which can be a problem in case of future renegotiations. Four private investors bought the tender documents but only one bidder participated in the tender (a consortium of four companies, headed by Manuel

Rodrigues Gouveia or MRG– a construction company). The public authority set only 15 days for the submission of the complete proposals (the call for tenders was published on April 1, 2008 in the Official Journal of the Portuguese Republic). The mixed company CISTER - Equipamentos Educativos was created in that same year.

MRG has been focusing on the local infrastructure PPP market, having similar ventures in other municipalities (e.g. Campo Maior – municipal pools, Mafra – public schools, Odivelas – public schools and a sports facility, Oeiras – conference and exhibition centre, etc.). For what it is worth, we mention the fact that several iPPP arrangements are being investigated by a regional Public Prosecution Service for alleged irregular use of public money.

[Insert table 6]

Besides the short amount of time given to the preparation of the bids, the fact that the public authority chose to have a minority stake in the company share capital is also surprising. Moreover, the completeness of the submitted bid (that included architectural projects) was odd, given the time available. These practices discredit public administrations and lead to public distrust and contestation. Even though apparently this process cannot be rendered illegal (the time given respects the minimum threshold and both Portuguese and EU law are vague regarding procurement procedures of iPPP arrangements), the complexity required for the bids was not consistent with the deadline. Indeed, this elaborate arrangement seems to show that the local government is mainly trying to avoid fiscal consolidation and not seeking better value for money. The value for money assessment is implemented by most EU countries and generally requires PPP projects to show greater or equivalent value than traditional public procurement. Nevertheless, this assessment does not guarantee the affordability of the projects (EPEC 2010) and therefore an affordability cap should always be calculated. In the case of CISTER, neither an affordability cap nor a public sector comparator was ever calculated.

Trying to create a pack of different types of infrastructure in one single iPPP is also prone to some criticism because it might lessen competition by reducing the likelihood of having so many private companies with the required skills. On the other hand, the transference of risks was unsatisfactory because the responsibilities for cleaning, gardening and surveillance were allocated to the public sector; the public sector should only assume risks that are under its control. Local decision-makers tried to transfer availability risk to the private partners. However (EPEC 2010, p. 9) if 'the PPP contract does not provide for automatic and significant non-performance penalties to be applied in case of non-performance by the nongovernment partner' or 'such penalties are not systematically applied', the government bears the majority of the availability risk. In practice, this is what happens.

NORMATIVE STANCES

Recalling the Schaeffer and Loveridge (2002) classification of forms of public-private cooperation (figure 1), the first three cases would fall into the 'Partnership' quadrant while the public schools case would be better framed within the 'Joint venture' quadrant (since, in the long run, maintaining public schools is a much more 'well defined' problem than managing a network infrastructure service). In fact, this seems logical due to the special features of utility services. However, it looks like this form of cooperation is more appropriate for development projects where both partners can extract positive externalities (i.e. when 'public benefits' are comparable to 'private benefits' Rangan *et al.* 2006).

All case-studies analysed in this article are subject to much criticism. There is an evident case of market concentration regarding PPPs in the utilities sector (presumably the European panorama is not so different since 'giants' like Veolia, Suez, RWE, FCC, Transdev, Arriva, etc. are widespread). Besides, it seems that in services with economic interest, the participation of a private investor in the share capital of the companies is regarded as 'easy money' (the up-front payment by the private partner to buy the shares) that can be invested elsewhere; in services without economic interest, private partners are simply used to take the debt out of the public balance sheet. There are no clear goals for the mixed companies and there is a 'veil of secrecy' cloaking the procurement and

monitoring processes (which has been observed in other types of PPPs, Asenova and Beck 2010). None of the cases studied included a public sector comparator, affordability caps or the proper drafts of the shareholders' agreement during the procurement phase. The private partners bear very little risk in mixed companies and they can always opt out and sell the shares back to the municipality (and the public partner is forced to buy them back). According to Eurostat rules, fiscal consolidation should take place and the debt of the companies should add up to the debt of the local governments. However, this is not currently the case.

Trying to develop a relational agreement while carrying out a regulation by contract (which is imposed by EU rules, arguably to avoid corruption and promote transparency and accountability) seems to be contradictory; nevertheless, we think that proper mechanisms to encourage continuity (Williamson 2002) but also efficiency can be devised and put in place. The quality level can be fixed *ex-ante* or be in line with limits imposed by the current legal standards, but if the performance in terms of costs is not satisfactory, then sanctions should be applied. The financial effects of these sanctions could be shared while the space for mutually finding the best way to achieve the targets could also be provided (adopting a 'relational approach' for dealing with the daily challenges). We acknowledge the fact that it is extremely complex to devise this type of governance structure (Spiller 2008), especially when massive investments and conflicting goals are involved (which is different from the examples provided by Schaeffer and Loveridge 2002 regarding 'ideal-type joint-ventures' or 'ideal-type partnerships' or even the examples provided by Røiseland 2011 regarding 'hybrid forms of collaboration'). Contractual documents are often drafted by lawyers acting for the private investors (indeed, the 'quality of the drafts' is frequently a criterion in the multicriteria evaluation models of the tenders). We think that the drafting of the shareholders' agreements should be a competence of local governments (who should strive to ensure that the contracts do not have 'traps').

Mixed companies arise when local decision-makers wish to retain some degree of control over the services while keeping them at arm's length. However, these complex governance structures

should be confined to very special infrastructure investments (framed by singular uncertainty and asset specificity). Only in these cases does it make sense to craft a relational governance structure where mutual trust, altruism and strategic alliance play a major role (Reeves 2008). Conversely, it makes no sense to use a mixed company when a public infrastructure can 'easily' be delivered through a simple 'transactional contract'. When a local government opts for partial privatisation it assumes that there is a welfare loss inherent to the pure public provision and that the market failures that justified pure public management are too severe to opt for a purely contractual agreement (like a cPPP).

Sometimes, local governments can be lured by the potential to have higher up-front payments (when selling the shares) and tend to be overly optimistic considering initial assumptions and estimates. To help in this phase, the public sector comparator and the affordability cap should always be calculated. The value for money test must be a requirement for public authorities and not just a moulded proof of their initial political decisions. Indeed, the whole life cycle approach is the key to solve the major shortcomings of PPP projects. Theory tells us that the 'adjustments in the relationship require flexibility in the contract which in turn requires that the contract be complex' and that 'concession contracts are rigid by origin' (Spiller 2008, p. 21). Therefore, in these circumstances, the mixed company (theoretical) model seems appropriate. However, in practice, we find that they have often the same problems of concessions (and sometimes worse, because, as shareholders, local governments might agree to dilute financial losses in the tariffs charged to the customers).

Some issues regarding the structuring of successful PPPs cut across all sectors. During the preparation phase, local decision-makers should endorse the value for money assessment, set clear goals for the future iPPP, ensure transparency at all times and study the potential for inter-municipal cooperation. Some studies show that more than being connected with project size, transaction costs vary mainly with the stability of the policy environment and the familiarity that all stakeholders have with that environment (Klein *et al.* 1996). Afterwards, before selling the public

tender documents, municipalities should carefully prepare all relevant financial statements, organize a compendium of all applicable environmental laws (as well as other regulations and standards), design a standard contract (with some crucial clauses not open for competition) and provide a clear description of the bid evaluation and *ex-post* contract management procedures. To avoid the 'winner's curse' (where the most optimistic bidder is preferred to the best bidder), public authorities ought to consider including a pre-qualification phase or, instead, be extremely careful while choosing between evaluation criteria and threshold criteria. A good practice is to use a two-stage procurement procedure where two bidders would be selected; however, dialogue with the second would only occur if the negotiations with the winner of the first stage were not successful (Marques and Berg 2011). During the negotiation phase, the performance targets, the investment milestones, the dispute resolution provisions, as well as the tariffs and quality standards to be attained by the mixed company should be clearly stipulated in the shareholders' agreement and management contract.

Although it is true that in 'traditional' public projects many risks are silently assumed by customers and taxpayers (Klein *et al.* 1996), the fact is that the current state of affairs is unsustainable regarding the risk management practices in mixed companies. Local governments should include a risk matrix in the tender documents stating the intended allocation of risks in a clear, objective and effective way. An effective (real) and efficient (the right entity assumes the right risk) transference of risks reduces the overall economic cost of infrastructure projects and decreases the likelihood of renegotiation. In practice, the majority of the renegotiations of PPP contracts should trigger a reclassification of the assets when the allocation of 'most of the project risk' between the partners is altered to the detriment of the public interest (EPEC 2010).

Even in relational agreements, local governments should 'think ahead' and systematically consider the most likely possibilities and future disputes that might arise. After this exercise, public authorities need to develop mechanisms for managing these contingencies. In current iPPPs, public authorities have disincentives to apply sanctions against themselves, since they are actively involved in the

day-to-day management (simultaneously playing the role of a referee and a player). Hence, new mechanisms that link the remuneration of private partners to key performance indicators ought to be developed (always adopting an output orientation). Being better informed is not enough to conduct an effective 'internal regulation'; the proper tools for monitoring the contracts must also be available. Appointing a contract manager responsible for ensuring the adherence of the partners to crucial contractual clauses would also be a good practice for mixed companies.

Considering the Portuguese case (although with applicability in other countries, such as Italy or Spain), an office for disseminating lessons learned (that, nowadays, are scattered along the whole territory) and for helping in the monitoring of the various governance schemes that is accessible to all local governments should be promptly considered. The negative consequences of not doing this will result in many local governments 'learning the hard way'. A possible model for our proposal is the Dutch Knowledge Centre on PPPs; currently integrated in the Ministry of Finance, this office develops standards for preparatory, tendering and contracting procedures (including a public-private and a public sector comparator) and has checklists for risk and contract management.

CONCLUSION

From a theoretical point of view, the rationale behind mixed companies is to structure a perfect (or the best possible) equilibrium between cost-efficiency and social concerns. As Eckel and Vining (1985, p. 83) put it, they are 'used as an instrument of public policy', in our case, by local governments. Yet, taking into account the empirical evidence, it seems that 'no man can serve two masters' (Laffont and Tirole 1991); i.e. mixed firms tend to be steered towards the private sector's objectives (where making the best possible profit is paramount) instead of fully protecting the general interest.

One enigmatic feature of local mixed companies in charge of delivering public infrastructure is that the relationship between the owners (public and private) takes place within the company (particularly in the board of directors) but, at the same time, is bounded by the contents of the

shareholders' agreement. In principle, the 'competitive advantage' of mixed companies when compared to concessions should be that the 'spirit of the contract' should prevail over the 'letter of the contract' (Macneil 1974). In fact, mixed companies should be devised to mitigate the 'risk of renegotiation' and provide a framework to cope with unexpected events (why enter in these complex arrangements otherwise?). Nevertheless, we acknowledge that having more (and better) information and voting rights within the special purpose vehicle enables 'a more relational approach' (by implicating some sort of negotiation) when compared to concession agreements where the 'purely contractual' nature of the relationship creates a distance between the partners.

In the words of Moszoro (2010, p. 27) we know that, from the public sector perspective, 'the transfer of managerial skills and knowledge that justifies the participation of the private partner in the SPV should be well defined and secured in a properly drafted and executable legal documentation'. In this article we have seen that this is very difficult to attain in practice when very high sunk investments are involved and the partners have distinct ultimate goals; i.e., here we are not concerned with 'regional development' projects that can have positive externalities both for local governments and private investors (examples of projects where the objectives of both sectors are more or less aligned, can be found in Schaeffer and Loveridge 2002 or Røiseland 2011). Furthermore, from the private sector perspective (p. 27), 'the lower cost derived from the public financing should be secured for the entire lifespan of the project'. This is not problematic if most of the funding is provided upfront. The benefits to the general public are mainly related to affordable, equitable and stable tariffs and minimum quality standards. The overall framework of the mixed companies in charge of delivering urban infrastructure seems to fail in properly securing the 'public interest perspective'.

Local governments are failing to ensure that the theoretical features of the mixed company model are translated into practice. The iPPP model does not solve all contract failure by itself, and these failures are even more pressing in utility services. Arguably, if the tender/contract process and market competition worked optimally, or even at a satisfactory level, the outcomes could be better.

In fact, the functioning of this specific governance model cannot be completely detached from the tender/contract process; e.g. referring to the award of a public contract to an iPPP, the Commission even states in COM(2007)6661 that ‘the open and restricted procedures [...] may, due to the particular financial or legal complexity of such contracts, not offer sufficient flexibility’. As we have already mentioned, the relational character of mixed companies (that should necessarily entail mutual trust and altruism in order to be effective) is limited by the contractual framework that necessarily needs to be devised.

For all the reasons stated, mixed companies will hardly be the solution for all the financing problems of social infrastructure faced by local governments. However, if practitioners wish to equip this model with greater capacity to protect the public interest, certain provisions must be taken to cope with conflicts of interest (e.g. defining the proper scope for action of local decision-makers in a clear manner) and some priorities should be realigned (e.g. giving less emphasis to up-front payments and more to the robustness of the base cases and the internal rate of return required by private investors). More case-studies in other contexts should be carried out to assess whether the pitfalls of this governance structure are similar to the ones described in this article.

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TABLE 1 *The four case-studies*

Case Studies	FAGAR	AMBILITAL	SATU	CISTER
Municipality	Faro	7 municipalities	Oeiras	Alcobaça
Population (no.)	58,698	113,000	172,021	55,641
Infrastructure sector	Water ('retail')	Urban waste ('wholesale')	Urban transportation	Basic schools
Year of creation	2005	2001	2002	2008
Procurement procedure	Open tender	Direct award	Direct award	Open tender
Services produced	Drinking water, wastewater, refuse collection and urban cleaning	Waste treatment and recycling	Light rail	Design, construction, financing and maintenance of basic schools
Duration of the contract (years)	35	Not specified	Not specified	25
Private partner	AGS and Hidurbe	SUMA	Teixeira Duarte	Manuel Rodrigues Gouveia (consortium leader)
Private share capital	49%	49%	49%	51%

TABLE 2 *The market structure of the water sector*

	cPPP	iPPP	PuP	Total*
'wholesale' market	1	0	20	21
'retail' market	28	5	0	279

* including municipally-owned utilities

TABLE 3 *Evaluation criteria and respective weights for a water iPPP*

Criteria	Weighting
a) Proposed tariffs	30%
b) Shortest term of the partnership (with a maximum of 50 years)	10%
c) Capital structure of the mixed company	15%
d) Greater distribution of dividends to the municipality of Faro	15%
e) Merit of the economic and financial viability studies	15%
f) Merit of the plans for conservation and maintenance of the municipal systems of water, wastewater and urban waste, including their respective renewals	10%
g) Proposal of shareholders' agreement	5%

TABLE 4 *The market structure of urban transportation*

Mode	Governance Model	Number of municipalities	Population
Bus	Municipal service	5	825,447
	Municipal company	2	249,254
	Mixed company	1	54,780
	Concession	45	5,129,577
	Public company (central state)	5	1,328,504
Metro, tram and light rail*	Mixed company	1	172,021
	Concession	1	166,103
	Public company	1	489,562
	Public-public partnership	1	216,080
Inland waterways	Municipal company	1	73,100
	Public company (central state)	3	743,292

* Funicular railways and elevators are not included

TABLE 5 Allocation of risks (as can be perceived in the shareholders' agreements)

Risk	Allocation
Conception of the network	Shared
Expropriation and licensing	Public
Environmental	?
Construction	Private
Maintenance of infrastructure	Shared
Maintenance of vehicles	Shared
Operation (energy costs, availability)	Shared
Technological (innovations in the sector)	?
Performance (reliability, customer satisfaction)	Public
Demand	Public
Capacity	Public
Financing	Private
Inflation	Customer
Legal/regulation	Public
Unilateral changes (frequency, timetables, routes)	Public
Public contestation	Public
<i>Force majeure</i>	?

TABLE 6 *Evaluation criteria and respective weights for a school sector iPPP*

Criteria	Weighting
a) Financial structure of the bid	45%
a1) Strategic and development plan of the project	50%
a2) Financing structure	50%
b) Contractual framework	40%
b1) Organisational and contractual model proposed	25%
b2) Draft of the statutes	15%
b3) Shareholders' and technical and financial cooperation agreements	60%
c) Technical quality of the bid	15%
c1) Execution plans	50%
c2) Partial schedules	50%

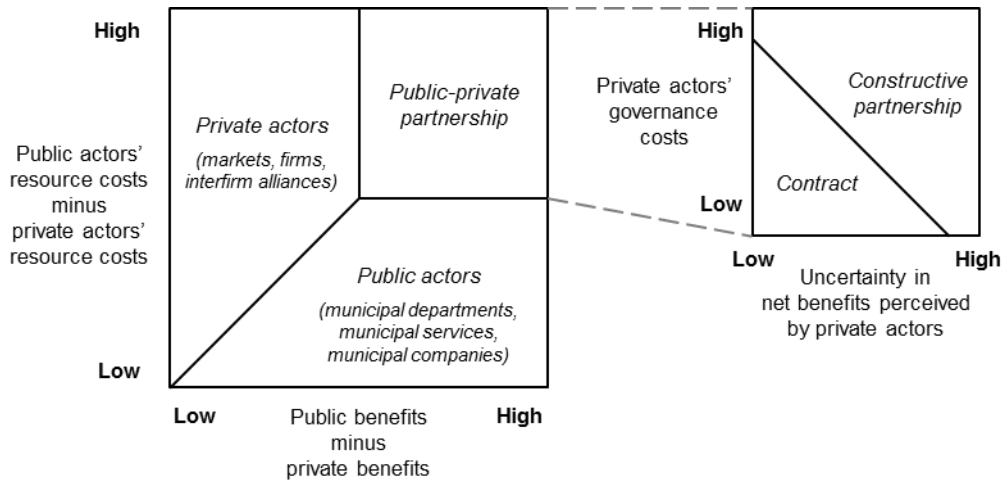


FIGURE 2 *Expected actors and transaction modes based on relative benefits, resource costs, uncertainty and governance costs (adapted from Rangan et al. 2006)*

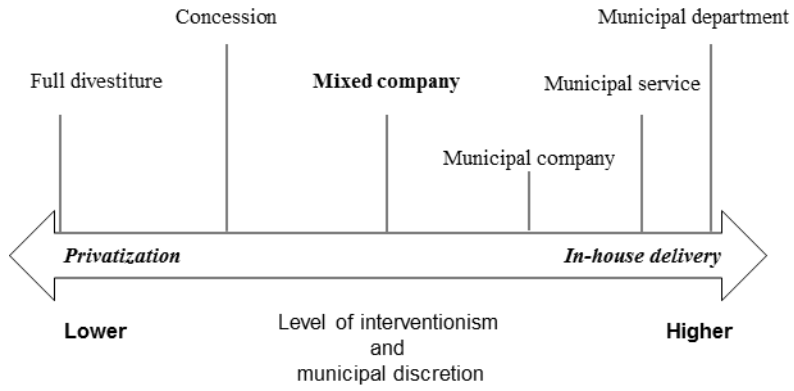


FIGURE 3 *Range of governance structures for regulating local public monopolies*