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PUBLIC-PRIVATE SECTOR PARTNERSHIPS IN DEVELOPING COUNTRIES: PROSPECTS AND DRAWBACKS*

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Abstract

As it is well known the debate of new public management, together with the shortage of public funds in most developing countries, has had a considerable impact on social services delivery. Accordingly, many developing countries are searching positive impacts on the efficiency, equity and quality provision of the public services through increasing competition and active participation of the private sector, considering public-private partnerships (PPPs) as the appropriate instrument to attain such endeavour. Accordingly, PPPs have been used for many and widespread purposes, ranging from the construction of physical infrastructure, to the provision of health and social services, to public administration. But, while the idea of a PPP in general is theoretically appealing, its practical implementation in developing countries is not so easy as theory suggests. Perhaps partly for that reason, a large number of implemented PPPs have left the contractual parties dissatisfied, which may indicate that, either developing country authorities, or investors (or both) may have had too high expectations to what could be attained. Though some contracts have been granted under circumstances that made them susceptible to changes in the political environment, the large majority of the others have also suffered from inflated or unrealistic expectations. So, the need for a legal and regulatory framework, which can guarantee a transparent and credible relationship between the different actors, is critical. Unfortunately many, if not all, regulators in developing countries lack one, or more, qualities required for an effective regulation.

Keywords: *Contracting out, public services, market/government failure, infrastructures, public-private partnership.*

JEL codes: H4, H5, I18, I28, L33.

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1. Introduction

This paper analyses the prospects of Public-Private Partnerships (PPPs) in developing countries. In a precedent paper (Pessoa, 2004) we have argued that PPPs, conditional on some assumptions, can be efficient forms of enhancing well-being and of promoting growth. Our argumentation was grounded on a PPP definition and some assumptions. As a matter of fact, we have defined PPP as a sustained collaborative effort between the public sector and the private sector[1] to achieve a common objective while both players pursue their own individual interests. This definition implies that in a PPP each partner shares in the design; contributes a fraction of the financial, managerial and technical resources needed to execute, and sometimes operate, the project in accordance with each partner's comparative advantage, and partially takes on the risks associated with the project and obtains the benefits, expected by each partner, which the project creates.

Defined in the above-mentioned way, a PPP entails some assumptions. Firstly, a change in roles: a PPP requires a shift in the roles and attitudes of public and private entities, moving away from the usual client-contractor approach towards focusing on the core functions of supervision and regulation by the public authorities, and assuming greater responsibilities and risks in execution, operation and the mobilisation of resources by the private sector. This change requires a transformation of the partners as some capacities of the public sector are transferred away to the private sector.

Secondly, a sustained collaborative effort in order to attain a common objective is assumed. The basis of the third "P" of the PPP, entails a joint alliance between the public and private sectors beyond the traditional contractual relationship. Such association brings the best of each partner's competence to optimise the achievement of the common objective. Given the mid-term, or long-term, nature of that objective and the transformation generated by the shift in roles, the joint alliance needs to be sustained over a long period of time. The longer the nature of the objective, the larger are the uncertainties associated with the project and the more critical and relevant the third "P" of a PPP becomes.

[1] The composition of the private sector is complex. The private sector can be categorized into private-for-profit institutions and private not-for-profit organizations. Commercial enterprises essentially belong to the category of profit-oriented organizations, and NGOs, professional associations, and other non-government institutions are examples of not-for-profit organizations. Whereas the focus of PPP at first has been on the relationship between the government and the for-profit sector, recently there has been a shift of attention towards the role of the non-profit sector and its possible contribution in providing goods and services.

Finally, an assumption on the individual interests of each partner is crucial: generally, it consists of a return of investment for the private partner[2], and a net benefit to the society and the economy as a whole for the public entity, through the achievement of specific goals, such as the improvement of accessibility, the reduction of transport costs or the actual provision and deliverance of other public services in an efficient way[3]. These interests are channelled through the definition of risks. Thus, a clear assignment of risks is a precondition of the implementation of a PPP project.

Whereas the idea of a PPP in general is theoretically appealing, its practical implementation in developing countries is not so easy as theory suggests. On the one hand, there has been much confusion in using the expression PPP[4]. Often donor agencies and governments promoted privatisation and provided subsidies to private entrepreneurs in the name of building public-private partnerships (World Bank 1986), while they are promoting other forms of private involvement. On the other hand, governments of developing countries frequently overvaluate the actual usefulness of PPPs.

As we have said above, in order to fulfil the criterion of a "partnership" there must be some ongoing set of interactions, an agreement on objectives and methods as well as a division of labour to achieve the goals. So, public-private-partnerships are therefore no equivalent to the promotion of a free market economy, as usually some governments seem to consider. As a matter of fact, looking at the reality of PPP in developing countries, we note that the debate is very much concentrated on "complementarity" and not on cooperation (Robinson and White, 1997), which basically reduces the role of government to providing a favourable environment to the other social actors.

Given these conditions, this paper analyses some forms of involvement of the private sector and the potential of PPPs in developing countries. The outline is as follows. In section 2 we'll characterize what we mean by social sector and impure public goods. In section 3 we'll discuss the role of government in providing impure public goods. We'll dedicate section 4 to the make versus contracting out decision. In section 5 we'll describe some reasons, in an economics perspective, which must configure the role of private sector involvement in

[2] If the private partner belongs to the not-for-profit category, the private interest is generally a way of attaining its own main object more easily.

[3] The public authorities must put a clear and stable framework that will be sufficiently transparent to the private partner in place. This is notably the case for technical standards, taxation, and the setting of toll levels.

[4] For both a clarification of the concept of PPP and a historical perspective of the public-private mixing, see Wettenhall (2004).

providing impure public goods. Section 6 describes some conditions that are favourable to the establishment of PPPs and relates them with some requirements in order to assure an effective regulatory framework in developing countries. The paper closes with some conclusions for discussion and future research.

2. "Impure" public goods

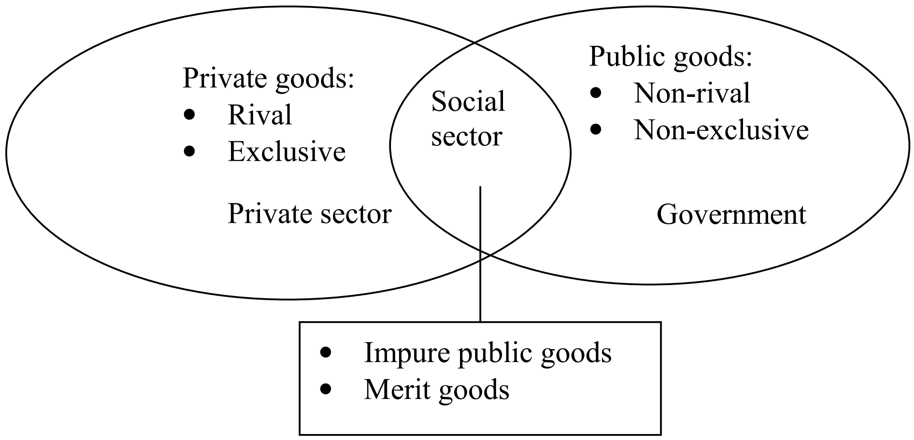
As it is well known, the role of government in formerly developed countries started from the very limited scope of Adam Smith's "cheap government" that provides only defence and the administration of justice. However, it is widely acknowledged that the relative share of government fiscal activities tended to increase steadily in the national economy towards a greater government (see, for instance, Peacock and Wiseman 1961).

Economics teach that the pricing mechanism of the market secures an optimal allocation of resources, if certain conditions are met. For private goods, these conditions are satisfied reasonably well over wide areas in the so-called market economy. In these areas, the government normally does not have itself to get involved with matters of resource allocation. There are, however, a number of conditions where the market forces cannot secure optimal results, and here we are faced with the problem of how the government can interfere to obtain a more efficient resource allocation.

According to public economics literature, we can distinguish between public goods and private goods. Pure public goods are best thought of as a scientific term used to describe a hypothetical good that is non-rival in consumption and, simultaneously, has a zero degree of exclusion. In the actual economy, goods that are nearer this concept are defence and administration of justice. By contrast, a pure private good is a supposed good whose benefits are completely rival in consumption and has simultaneously a perfect degree of exclusion. So, depending upon the degree of each characteristic, goods and services are classified from the pure public good on one extreme to a pure private good on the other. There is a wide consensus that the main role of government is providing pure public goods.

No doubt, there are a wide variety of intermediate areas between two extreme cases in relation to various degrees of non-rivalness and exclusion. We may call relevant goods provided in these areas "impure public goods". As a consequence, as shown in Figure 1, both private sector and government have an overlapping zone from which impure public goods are provided to the national population. In the context of this paper, social sector is defined as a set of activities that deals with goods (named impure public goods or merit goods) included in that overlapping zone.

Figure 1. Social sector and impure public goods



So, the distinction between private and public goods by using two characteristics is not of an absolute kind. Inefficiencies occasionally arise in the provision of private goods through the market process. Wherever such is the case, we could say that an element of public goods is involved with certain social value. The difference is essentially one of degree, but its distinction remains of fundamental importance.

However, theoretically an unambiguous line can be drawn between two types of goods (private goods provided for adequately by the market and public goods satisfied through the government action), in practice we need to consider situations where government corrective action is required to secure an allocation of resources that is in line with consumer preferences. Certain goods are satisfied by the market, subject to the exclusion principle, within the limits of effective demands. But, if they are considered so meritorious that their satisfaction ought to be provided for through the government over and above what is supplied by the market and paid for by private buyers, they become a sort of "public" goods. This second type of public goods is usually referred to as merit goods, whose typical examples include such services as free education, free health services, subsidized low-cost housing, etc[5].

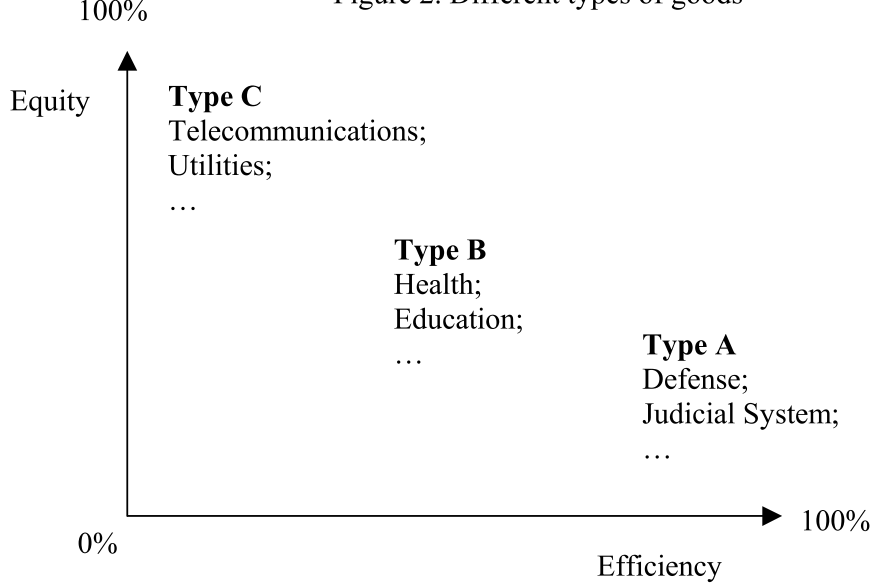
[5] See Musgrave (1959, pp. 13-14).

Obviously, the satisfaction of merit goods cannot be explained in the same terms as that of pure public goods. Although both are two so-called public goods in that the government provides them, different principles are applied. Public goods in general constitute a special problem caused by market failures, but the provision of merit goods because involve interference with consumer preferences fall within the scope of consumer autonomy, as private goods are satisfied.

Some goods that the government is now provided for may fall on the frontier between private and public sectors (i.e., social sector in our terms), where exclusion can be applied to part of the benefits gained but not to all. Public provision for free educational or for free health services are typical cases in point. Such services are of direct benefit to the particular pupils or residents, but apart from this, everybody enjoys from living in a more educated or healthier community. Thus, goods that come into view of society as merit goods may include substantial positive externalities.

Figure 2 intends to clarify the basic nature of goods in whose provision government is involved by using two criteria: efficiency and equity.

Figure 2. Different types of goods



Efficiency is taken on the horizontal axis while equity corresponds to the vertical axis. It is apparent that goods of type B, usually classified as merit goods (v. g., education and health), would be located in the intermediate position, between pure public goods (type A) and more rival goods.

However, government has provided for other services (type C), not generally named as merit goods. Utilities such as water supply, gas, electricity and telecommunications and certain modes of transport such as rail, all include natural monopoly characteristics arising from persistent economies of scale and scope. These characteristics mean that competition is unlikely to develop, or if it develops, it will be uneconomic because of the duplication of assets. Although technological advances, notably in telecommunications, have reduced some of the natural monopoly characteristics in utilities, permitting economic competition in certain areas of service delivery, nevertheless each of the utilities retains some natural monopoly features. As a consequence, privatisation of these industries, in whole or in part, threats the introduction of private-sector monopolies that will exploit their economic power in the market place, leading to supernormal profits and a consequent reduced consumer welfare. Consumers may suffer from both no or limited choice of goods and services and face monopoly prices.

On the other hand, looking at equity, a society might be interested in correcting the final allocation of goods and services as it closely depends on the initial distribution of wealth. Therefore the government might want to correct these inequities by a policy, which directly benefits the poorer part of the population, e.g. providing services at a low cost or for free to the poorest part of society. It is, however, quite arbitrary to draw the vertical line of social value among each item, because it depends on value judgments. Consequently, the amount of social goods provided for by the government is unclear in a political process influenced by specific social values[6].

3. The role of government in social sector

In the provision of public and social goods economic theory suggests that market failure and equity considerations call for governmental intervention. The role of government can be described as consisting of the following:

- *Overcoming market failures.* For goods of type A and type B, market failure means essentially an underprovision, e.g. in the case of the health sector either non patient-

[6] A position of strong individualism, like the prevailing in the US, could demand that merit goods be provided for, to a considerable extent, by private sector, while the prevalence of social values, like in the North European Countries, tends to extend the desirable sphere of merit goods.

related preventive services or disease control and vaccination/immunisation programs. Where needs are likely to go unmet because of market failure, there is a role for the government to step in. When the social benefits of services exceed the private benefits, there is likely to be sub-optimal provision and this often calls for government provision. As one example, people typically contract sexually-transmitted diseases (STDs) accidentally. By bearing some of the cost of detecting and treating STDs, governments confer benefits not just on the individuals treated, but also on those who may otherwise be at risk of infection. The same can be told about vaccination programs and other forms of diseases control. Another example of market failure in developing countries is the education of girls. Many families fail to see any benefit from sending girls to school or are averse to give up the household labour, or income, they make available. However, as a social investment, girls' education is crucial because it is associated with improved opportunities for them to live longer, richer, and more rewarding lives — and with better health and social outcomes for their children. Thus, by encouraging the education of girls, through educational scholarships or consciousness-raising campaigns, governments can benefit both girls themselves as well as their families and communities. This example may be extended to the health sector, as the welfare of infants depends heavily on the health status of the mother. For goods of type C market failures mainly relates to the existence of co-ordination malfunctions induced by scale economies. There is the case of external economies that arise when a new highway is built or as the size of a telecommunication service increases. The market failure is that at a given point in time, current prices may not convey the information about prospective expansion that is relevant to attaining a lower cost of production (Scitovsky, 1954; Chenery, 1960).

- *Providing for the poor, the rural and under-served populations.* Providing health care or education in rural areas tends to be particularly difficult, and generally unprofitable from a private viewpoint. Not only rural populations are often small or dispersed but also private providers are often scarce or nonexistent[7]. The public sector is best-placed to provide a safety net for citizens who cannot pay market prices for health or education. However, this can be achieved by providing services directly or by creating incentives for the private sector to carry out the task.

[7] Government clearly has a role providing services here, but it can also act in other ways. It can place obligations on private providers to provide broader access when they occupy a monopoly position or consider subsidizing access to private systems for disadvantaged groups.

- *Implementing appropriate regulations to ensure quality.* In education, quality is usually monitored by evaluation and accreditation, with private institutions expected to meet minimum standards. Consumers will also act as a force for quality, but only if they have sufficient information. Governments can act as important providers of this information. But the existence of asymmetrical information is also overwhelming in the health sector. When drugs are sold on the open market the manufacturer is usually better informed on the efficiency and safety of the drug than the purchaser. To address the described market failures the government usually reacts doing something to minimise the effects of asymmetric information, e.g. the official registration of health professionals and official recognition of drug quality.

- *Controlling costs.* Quite frequently, governments act to put a ceiling on fees private sector providers can charge. This is controversial, as it causes a market distortion, and should be done with care. However, restrictions may be necessary where there is little competition, no parallel public provision, or where consumers are relatively poorly informed about their needs and the quality of the provision. Pharmaceutical cost is one area where the potential for excess profits is high and control may be necessary, but in goods of type C the problem is also real.

- Additionally, the government must deal with other examples of market failures, such as the problem of adverse selection and moral hazard, associated to the privaty run insurance schemes, which leads to an unequal coverage of health care services[8].

The presented stylised facts on the role of government have been mainly derived from theoretical considerations. In practice, however, some of the above mentioned points have to be equated with the possibility of government failures. If one looks at the role of the government's performance in practice one has to recognize that due to allocative inefficiency, operational inefficiency and equity problems the state sometimes poses more problems than solutions. Additionally, if social services are provided for free and are accessible, then the quality is often so bad that people prefer to go to a private provider and to pay fees with a certain guarantee of a quality treatment. But if people prefer a private provider even if they have to pay fees, a question arises: Why not "contracting out"?

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[8] Private insurers will only include good risks in their schemes. This behaviour makes risk pooling among a society difficult and leaves the bad risks to the public sector.

4. Why not "contracting out"?

The expression "contracting out", in this context, means the outsourcing of activities formerly done by the public sector as popularised by the discussion of new public management. Such debate, opened in developed countries, like the USA and the UK, spills over to the developing ones with a considerable impact on social services delivery. Additionally, in the context of a worldwide welfare systems reform, decentralisation of services from the national to the local level is frequently suggested in conjunction with an improved participation of the population in determining and implementing the services. Contracting out could be an element in this overall strategy (WHO 1998).

The main strength of the private sector is its variety, with players acting for different motives. In particular, there is an important distinction between profit and non-profit organizations. In recent years, non-profits have proved especially skilled at improving provision to the poorer people, their size and flexibility allowing them to achieve notable successes in areas where governments have failed.

Looking at the private sector in general, the following strengths are usually referred to:

- *Improving quality.* Private providers must develop their businesses and, in most situations, this involves retaining existing customers as well as attracting new ones. They tend to be highly innovative and also to learn from their competitors, thus aiding the transmission of best practice. The private sector can also act as a leader in demanding that information is made available to the public.

- *Improving customer service.* Public services are recognized the world over for low-standards of customer care. In recent years, many business sectors have been revolutionized by a new customer-focus. Education and health stand to make similar gains. It is interesting to note that when poor people are seriously ill, they often borrow to see a doctor privately.

- *Improving management standards.* Management standards are generally higher in the private sector, with staff usually better paid and motivated. So, business can act as a partner transferring important skills for a great lot of sectors including the ones of health and education.

- *Investing in research and development.* The private sector is well suited to carry out research and to develop new techniques. The returns from investment in social areas have successfully mobilized private investment in pharmaceuticals, surgical instruments, and other medical practices[9].

- *Developing new services and market-based systems of rationing.* The private sector has an essential role where demand is expanding or the patterns of demand are changing. When these changes happen, it is an increasingly important provider of higher education, for example. Skills development and professional development, for instance, can be funded privately, either directly at the level of the firm or through reimbursement mechanisms. It is inevitable that some costly procedures, perhaps of limited efficacy, cannot be funded universally. The government is able to set the context of what is considered an essential service available for all. The private sector can ration access to other services using the price mechanism.

However, on efficiency grounds governmental agencies, as well as private companies, need to consider the costs and benefits of contracting out versus in-house provision. With regard to the benefits, it is usually argued that contracting-out allows savings on the long-term costs of hiring specialised experts, who may be required only in very specific periods of time being under-occupied for the rest of the time. On the other hand, public bodies often attempt to fill the "capability gap" by contracting out functions where "in-house" capacity is limited[10]. This may be particularly required for capabilities that are highly specialised.

Consequently, contracting out, if done in the right fashion, enables governmental agencies to benefit from the combined force of specialization and competition, and therefore to reduce their costs substantially. The savings provided by adopting outsourcing, seem in some cases significant. Overall, it has been estimated that the benefits of competitive contracting out may allow reductions in costs by as much as 10-20 percent, at the same time as constant quality is maintained[11]. If the advantages are so important, public bodies need to assess their functions according to their relevance to their core values, and contract out all the others[12].

Alongside these attributed benefits to contracting out, the cost side should not be overlooked. Contracting out will increase transaction costs, including both contracting and monitoring

[9] Nevertheless, the government must retain an important role in financing basic research that can produce important building blocks for subsequent applications that may improve well-being and for which short-run commercial gains are not apparent.
[10] In order to develop specific systems or carry out training on a short-term basis, it could be more effective to acquire capabilities externally.
[11] See Domberger (1998).
[12] See Prahalad et al (1990) for a managerial perspective on this subject.

costs[13]. Moreover, the costs related to the loss of monopsony purchasing power and the social costs arising from equity problems (Robinson, 1990; von Otter and Saltman, 1992)[14] could be significant. But, these direct costs are not the only ones that we must control in public services provision. In this specific sector, contracting-out requires maintaining minimum levels of qualified staff in-house in order to specify employment terms clearly and in a way that fits the specific purposes of the activity, or to correct the service provided externally in the event of provider failure. Table 1 synthesises the pros and cons of contracting out.

Table 1. Pros and cons of contracting out

Pros	***Cons***
Reducing costs, for the same level of quality Filling the "capabilities gap"	• Private providers respond to the population's willingness to pay for public services. As a result, they will serve those groups in the population who are most willing to pay, such as affluent urban residents. The result will be increased inequity in access and use of public services.
The replacement of direct, hierarchical management structure by contractual relationships between purchasers and providers will increase: • transparency of prices • competition	• Because of lower willingness to pay, private providers will undersupply socially desirable services, such as immunizations and personal preventive care. This will worsen allocative efficiency in the corresponding sector. • Driven by the profit motive, and because they have significant control over demand, private providers will take advantage of clients by supplying more than is required. This is particularly significant in health care services. This is inefficient and may result in health-weakening actions.
Which will lead to a gain in efficiency	• Private providers can also take advantage of clients by providing low-quality services, which may result in welfare losses[15].
	The actual effect of these four major worries is as greater as there is lack of competition.

[13] See Coase (1960) for the economic framework in the "make vs. buy" decisions, and Brueck (1997) and Donahue (1989) for its practical applications.
[14] In addition, some other impacts should be taken into account, too. As Mills (1995) argues, the introduction of contracts may both lead to a fragmentation or lack of co-ordination within the broader public service system, and could have an impact on staff resources with a drain of key personnel to the for-profit providers.
[15] See Berman (1997).

As is apparent from the analysis of table 1, several factors come into play in reaching efficient decisions. Factors like the need to fill a "capability gap" or to reduce costs would advise the contracting out of some functions. If this is the case, public bodies face the need of, at least, maintaining quality constant. Such decisions should be based on the identification of the agency's core functions and consideration of the costs and benefits of contracting out versus in-house provision. In the last twenty-five years, more and more governments in developing countries are turning to private sector participation as an alternative answer to the traditional solutions based on conventional projects centred on public investments in new capacity and training. Let us see some of those solutions.

5. Private sector involvement in public services

As highlighted in previous sections, the provision of public services has undergone major changes in the last two decades with many developed and developing countries choosing to move away from the traditional public sector model of service provision and to introduce private sector participation. The involvement of private sector in public services has followed, in general, six basic forms:

- **Short term service contracts**. In this option, specific tasks, usually everyday maintenance jobs, are contracted to the private sector, but overall services management remains within the public sector. This type of contracts has been implemented in many countries with good records of success and is often seen as a first step towards PPP. In order to define the compensation to the private sector partner, two types of contract are frequent. In a quantity-based maintenance contract, the remuneration of the contractor is based on unit prices defined in the contract and the quantities are measured on site. The other type — performance-based maintenance contract — is derived from the previous one type of arrangement, by shifting the focus from administration (maintenance activities and resources) to certain performance conditions valued by the users. In this case, the payment is based on a fee directly stated in the agreement and linked to performance indicators.
- **Management contract**. A management contract is an arrangement by which a private company is entrusted with various types of tasks, relating to the organization and maintenance operations usually performed by the public authority. This type of contract involves the payment of a fee to the private company. Usually, the function of the private

firm is to respond to day-to-day routine maintenance needs by contracting private companies, on behalf of the public entity.

- **Lease**. In this form, a private company leases the assets of a utility, and maintains and operates them, in return for the right to revenues.

- **Greenfield Projects**. These are new projects usually built and operated by the private sector that takes on the commercial risk. Political and exchange rate risk can sometimes be shared with the public sector. Such projects can take many forms, but the most common is **Build-operate transfer (**BOT). In this option, very usual in public works, the private sector develops, finances and operates bulk facilities. Under a BOT, the responsibility of the concessionaire is not limited to the operation and maintenance of the infrastructure but it also includes a component of initial construction, upgrading or major road rehabilitation. Massive investment and consequent mobilization of private funding sources are therefore required from this company, which is to be repaid from the revenue collected from service users (usually tolls). The BOT arrangement stresses the responsibility of the private entity during construction and operation of the infrastructure and the transfer of the assets to the public entity at the end of the operation period. The high initial investment required from the private sector and the consequent long concession period turn the distribution of risk between the parties into a key element of success in such schemes. Others forms of Greenfield projects include Build-Own-Operate-Transfer (BOOT), Design-build-operate (DBO), Design-Build-Finance-Operate (DBFO) and Build-Lease-Transfer (BLT)[16].

- **Concession**. In a concession a public entity owns the assets, but it contracts with the private sector for operations, maintenance and investment. For instance, a road concession is an arrangement under which, the owner of the road, delegates to a private entity (concessionaire) the responsibility for providing and maintaining a specified level of service to road users in exchange for the right to collect revenue from those users. Besides the issues inherent in a concession agreement, an operation and maintenance concession is similar in scope and approach to what is required and negotiated in a typical operation and maintenance agreement between private parties under a BOT-type arrangement.

- **Divestiture**: the assets of a public utility are sold to the private sector.

[16] Other variations on this type of contract have been implemented with a consequently growing number of acronyms used to label them (v. g., BOO, BTO).

From the above description, it is obvious that several aspects may distinguish the diverse forms of private involvement. If the principal reason of the participation of the private sector is the large potential for gains in efficiency in the public sector, it may be expected that projects with higher level of private sector involvement deliver more efficiency gains. However, the consequent risk of failure grows correspondingly. The following table summarises advantages and drawbacks of the different options from a theoretical perspective.

Table 2. Pros and cons of the different private involvement options

Option	***Pros***	***Cons***	***Typical duration***
Service contract	Can inject good technical expertise	Unlikely to greatly improve performance where overall management is weak	6 months to 2 years
Management contract	Gains in managerial efficiency	Gains can be difficult to enforce; public entity remains responsible for investment	3-5 years
Lease	Commercial risk borne by the private sector, giving strong performance incentives	Administratively demanding; public entity remains responsible for investments	10 to 15 years
Greenfield projects	Good way of getting efficient delivery of bulk services, with private investment	Not a good solution if supporting distribution systems are in bad shape, or traffic levels are uncertain	15 to 30 years
Concession	Potential for high efficiency in operations and investment	Requires considerable commitment and regulatory capacity	25 to 30 years
Divestiture	Potential for high efficiency gains	Requires credible regulatory framework	Indefinite, but may be limited by a license

As it is apparent from table 2, options that yield higher social benefits also tend to demand a higher level of government commitment, and a better prepared institutional framework.

According to the *PPI database* (World Bank, 2006), Between 1990 and 2003, there were over 2750 projects with private participation in infrastructure in developing countries, with total public and private investment in these projects amounting to 785.758 billion of US 2002 dollars (table 3).

The analysis of the importance of PPPs in developing countries shows a concentration around a scarce number of sectors and around a reduced number of countries. Table 3 illustrates the importance of PPPs in four sector and six large regions together with the prevalence of each type of PPP by sector and region.

Table 3. Type of PPP by Sector of activity and Region

	Total	Type of PPP:			
	(USD millions)	Management and Lease (%)	Concession (%)	Greenfield (%)	Divestiture (%)
Sector:	**785,758**	**0.1**	**14**	**45**	**41**
Energy	260,224	0.0	4	54	42
Telecom	362,194	0.1	1	44	54
Transport	123,553	0.3	57	37	6
Water	39,787	0.3	67	18	15
Region:					
E. Asia and Pacific	186,729	0.0	16	63	21
Europe and Central Asia	118,580	0.1	5	46	49
Latin America	373,592	0.1	17	29	53
Middle East and North Africa	30,958	0.1	25	47	28
South Asia	45,026	0.0	2	90	8
Sub-Saharan Africa	30,879	1.4	12	53	34

Source: World Bank (2006).

It is apparent from the table that private participation in infrastructure in developing countries has been concentrated in the telecommunications sector, which accounted for 46.1% of the cumulative investment in 1990-2003. Energy, which includes electricity and the distribution of natural gas, attracted the second largest share of investment, accounting for 33.1% of the cumulative investment in private infrastructure projects. In contract, private participation in the water sector has been limited, accounting for 5.1% of cumulative investments over the same period. The limited amount of private involvement in water utilities is likely to reflect the inherent difficulties that face privatization in this sector, in terms of the technology of water provision and the nature of the product.

The transport sector represents only 15.7 per cent of total investment. One half of this investment has gone into toll roads, with the rest in railways, seaports and airports. Unlike in telecommunications and energy, concessions are by far the most important form of PPP in this sector, owing partly to the political sensitivity of transferring public assets to the private sector. In the 1990s, three quarters of toll road concessions involved expansion or rehabilitation of existing roads rather than the construction of new infrastructures. Divestitures have been rare and have mostly occurred in China where minority stakes were sold in several state-owned toll road companies in order to finance future road construction (OECD, 2005).

In regions, policy makers appear to have a preference for greenfield projects, which allow new infrastructure to be built without necessarily having to embark on major structural reforms. Exceptions are found only in Latin America and transition economies where divestitures were more widespread, reflecting major privatization programs in many countries in these regions.

The greater prevalence of greenfield projects in Asia and of divestitures in Latin America show that private investment has tended to complement public expenditure in Asia and replace it in Latin America. As a matter of fact, in Latin America private participation in infrastructure was often part of a broader reform program where divestitures and concessions of existing assets predominated in the cumulative investment in private infrastructure projects. In contrast to Latin America, the Asia region has focused on the creation of new assets through greenfield projects.

Table 4 shows the occurrence of each type of PPP across sectors and regions. Most concessions contracts are seen in the transport sector and most divestitures in telecoms. Greenfield projects were quite equally divided between energy and telecommunications, as are management and lease contracts between telecoms and transport. The largest share of both concessions and divestitures has arisen in Latin America, while greenfield investments are much more evenly distributed. Almost one half of the management and lease contracts have been implemented in Sub-Saharan Africa.

Predictably, divestitures and greenfield projects, which involve actual investment, have taken the largest part of PPPs (85.6%). The latter tend to be most prevalent in the energy sector, divestitures in telecoms, and concessions in both transport and water sectors.

Table 4. Importance of PPPs by sector and Region

	Type of PPP:			
	Management and Lease	Concession	Greenfield	Divestiture
Sector:	884	112,653	352,489	319,732
Energy	2%	10%	40%	34%
Telecom	44%	5%	45%	62%
Transport	40%	62%	13%	2%
Water	15%	24%	2%	2%
Region:				
E. Asia and Pacific	0.2%	27%	33%	12%
Europe and Central Asia	8%	5%	15%	18%
Latin America	43%	57%	31%	62%
Middle East and North Africa	2%	7%	4%	3%
South Ásia	0.0%	1%	11%	1%
Sub-Saharan África	48%	3%	5%	3%

Source: World Bank (2006)

Although almost all developing countries have witnessed some form of private investment in infrastructure since 1990, private investors in infrastructure have tended to be directed to a small group of developing countries: the ones with relatively large, rich or fast-growing markets. Table 5 shows the top 25 destinations for investment in PPPs in infrastructure in developing and transition economies in the 1990-2003 period.

The 25 countries presented in table 5 account for almost 90 per cent of total. Among the developing regions, Latin America accounted for the great bulk of the cumulative investment in infrastructure. Together 3 Latin American countries (Brazil, Argentina and Mexico) account for more than a third of total PPP investment in the developing world.

The extreme concentration of the investment in Latin America countries, where corruption has high indexes by international standards or in Transition Economies acknowledged by poor market regulation, can explain almost partly some recent disappoint about PPPs that contrast with the higher expectations prevalent in the middle of 1990s[17].

Table 5. Investment in PPPs by country, 1990-2003

Country	USD millions	per cent	Country	USD millions	per cent
Brazil	157,098	19.7%	Czech Repub.	16,388	2.1%
Argentina	72,858	9.1%	South Africa	15,959	2.0%
China	61,170	7.7%	Russia	14,784	1.9%
México	59,753	7.5%	Colombia	13,779	1.7%
Malaysia	36,695	4.6%	Peru	13,762	1.7%
India	33,108	4.2%	Morocco	12,812	1.6%
Philippines	31,017	3.9%	Venezuela	11,858	1.5%
Indonesia	29,210	3.7%	Pakistan	7,487	0.9%
Thailand	23,662	3.0%	Slovak Repub.	5,837	0.7%
Chile	22,003	2.8%	Egypt	5,689	0.7%
Poland	18,025	2.3%	Romania	5,321	0.7%
Turkey	17,719	2.2%	Bolivia	4,848	0.6%
Hungary	17,415	2.2%	**Top 25**	**708,257**	**88.9%**

Source: World Bank (2006).

PPPs have been an important vehicle for the investment of OECD multinational companies (MNCs) in developing countries' utilities and infrastructure sectors. According to OECD (2005) there is a propensity for larger investment size to involve a greater domination by multinational players. For instance, in telecommunications, the top 20 investors account for over 60 per cent of total investment (see OECD, 2005, table 5). MNCs domiciled in OECD countries represent only 1 per cent of private investors, but 30 per cent of total investment in telecommunications and energy. Consequently, infrastructure projects are under control of a small group of large firms.

[17] See OECD (2005). This report explains the decrease in actual investment in infrastructure projects involving PPPs by the fact that either developing country authorities, or investors (or both) may have had too high expectations to what could be reached.

This implies that, for example, a government negotiating the terms of private participation is not necessarily faced with an "atomistic" group of suppliers, and may in practice be dealing with one corporate entity with a market power comparable, or even superior, to its own. This fact needs to be kept in mind when we emphasize the need of strong regulatory bodies in developing countries.

6. Conditions for building PPPs and the need of regulation

Both macroeconomic and microeconomic conditions affect the building of a PPP in a specific country: in a macro level we find all the incentives for putting up a PPP; in a micro level we find all those circumstances related to the capacities of the different actors in acting as a competent partner. Concerning the macro level, political factors are important: without an overall political environment favouring both private for-profit and not-for-profit activities no real partnership can be established. In countries where civil society and/or the private sector are discriminated, the government will remain the dominant supplier of social services.

Apart from the political factor, the economic situation in a country is important. A financial and economic crisis is often the starting point for the rethinking of government activities. As a matter of fact, we can mostly find two actual factors in the origin of the increasing attentiveness to PPPs. First, there are fiscal pressures that have led governments to look for innovative solutions and for maximum effectiveness in reallocating resources. In this strand, various studies have shown that there is a large potential for gains in efficiency in the public service sector. Second, some other studies demonstrate that private providers either non-profit or for-profit oriented can play an important role in social service provision, a role which has been, in the past, largely neglected by governments.

However, in spite of the role that the private sector can play in social service provision, the financial engagement of the government in the public services sector is crucial in the mid to long-term for the sustainability of a PPP, as the poorer part of the population will continuously depend on public support. Finally, on the macro level, the legal framework is important. The credibility and transparency of the cooperation between the different players are critical determinants for a long-term success of a PPP.

Concerning the micro-level, several conditions are important for establishing a PPP. First of all, there must be an interest and a commitment of some individuals to make a PPP happen. As in the Venezuelan case (Jütting, 1999), the personal involvement of the users of services helped to provide an efficient and equitable service provision. If there is an interest in a PPP and an acceptance of the different partners to be involved, then one has to look at the capacities of the different actors. In this respect, we have to consider not all the skills of the staff to provide specific services, but also the financial availability for an engagement in service provision and the overall organisational and management structure.

The need of efficiency calls for the existence of independent regulatory bodies[18]. Ultimately, the sustainability of the reforms and the ability of the public sector to use money more effectively in leveraging private money will depend significantly on the political commitment to design and carry out effective regulatory policies.

The main changes in the last two decades in provision of public services, both in developed and developing countries, calls for strong and competent economic regulation of infrastructure and social sector services, in order to ensure that the interests of all parties are protected. Such protection is necessary first and foremost, to defend the customers' interests but also those of the public and private parties to a contract[19]. Those institutions in charge of regulating public services, which we refer to as "regulators" in this paper, can either take the form of an independent regulatory agency, or be set up as a specialised cell under line Ministries, or even be a department within line Ministries.

The role of institutions in charge of carrying out regulatory functions is even more important in developing countries than in developed ones. In the former, owing to several reasons that affect differently the two groups of countries, a much more intrusive and demanding form of regulation is required. Besides the reduced educational level of the population and the scarcity of infrastructures, which may restrict the availability and circulation of information, many other reasons affect the effectiveness of the regulation in developing countries. However, in developing countries the need for regulation is even more vital, because they are usually characterized by non-competitive industry structures and/or lack of capital market discipline. In such environments, too little market information is revealed and information asymmetries are overwhelming.

[18] For details on how specific features of regulatory contracts have been implemented in various developing countries and the lessons that can be drawn from that knowledge, see Bakovic *et al*. (2003).

[19] Since the beginning of utility reforms in the late 1980s – early 1990s, it is estimated that about 200 regulators in some 130 countries have been granted the functions of regulating public services such as telecommunications, water, and electricity (World Bank, 2004).

In addition, regulators in developing countries face other specific challenges, when large portions of the customer base for infrastructure services are poor and unconnected, tariffs are being kept artificially low, baseline information for decisions tends to be limited or unreliable and the regulators have difficulties in establishing their credibility and in implementing sound governance arrangements.

As a matter of fact, to be effective, regulators are required to fill three qualities: competence, this quality being measured by access to technical expertise in a wide variety of areas; independence, both from government interference and from capture by service providers and interest groups; and legitimacy, i.e., both long-lasting by existing legal principles and practices and being transparent and accountable.

Many, if not all, regulators in developing countries lack one or all of the qualities required for effective regulation. These deficiencies can be due to different reasons, including limited resources, repeated political interference in regulatory decisions, difficulty in attracting and retaining competent staff, and short or no history of performing regulatory functions. All these deficiencies are particularly apparent in the case of countries emerging from social conflict or where the political environment makes it difficult to set up any kind of independent institution.

Where there is lack of independence we can't prospect either great legitimacy or competence. This lack in turn limits capacity of agencies in charge of regulation to act as effective regulators, i.e. to promote adequate levels of investment in the regulated sector through the setting of tariffs that recover costs without depriving part of the society from using the services, to attract private investment and/or to monitor the public sector for superior performance.

Of course, developing countries can contract out regulatory functions taking profit of the developing assistance[20]. Though this can be a temporary solution it is in many cases seen as a foreign intromission in internal affairs and it is consequently felt as a lack of independence of the regulators. Furthermore, as has been acknowledge "paradoxically, those regulators who would most benefit from contracting out are the ones that have most difficulties in entering into such agreements to bring about a satisfactory outcome, either for lack of financial capacity or capacity to monitor performance…" (World Bank, 2004).

[20] For a discussion of the theoretical rationale for contracting out by public or private agencies and how this rationale may be applied to utility regulation in order to improve regulatory effectiveness, see World Bank (2004).

7. Concluding remarks

Owing to the worldwide welfare systems reform, public bodies are permanently confronted with the decision of whether they should produce a service internally or contract it out. In many cases, developing countries experiment forms of private sector involvement in provision of impure public goods both of type B (education, health care) and of type C (infrastructures, utilities), searching efficiency gains and relying in PPPs for attaining this endeavour. However, the results are very different from one to another type of goods. While telecommunications and other infrastructures have had a great receptivity by Foreign Investment, education and health care are generally overlooked.

In numerous developing countries the role of the private sector in providing public goods of type B is still neglected or limited to a typical contract in an outsourcing way, overlooking the potential benefits of genuine PPPs, namely the ones involving not-for-profit private sector organizations. The theory shows that PPPs, namely through the capacity of not-for-profit private actors to participate in the provision and determining/management of social services have a positive effect on efficiency, equity and quality of service provision. In some countries, Venezuela for example (Jütting, 1999), a substantial part of the population was formerly excluded from both public as well as for-profit provided health care. Only after the explicit recognition and building of linkages between the not-for-profit sector and the government, did poor people have the chance to set up their own systems.

In developing countries, the poor population especially depends on the support of the public sector. But, beside the role of the government concerning social protection, another important role is the setting of rules and standards of conduct. The design of rules and regulation and its enforcement are crucial in efficiency and equity grounds, where government decides contracting out public services or involve itself in a partnership.

The involvement and the delegation of power to the local level are important. Without the active participation of the communities and the municipalities, which can better deal with information asymmetries, it is difficult to implement innovative solutions in social sector services. Such solutions should integrate the local people in designing, providing and monitoring services. Moreover, if they use voluntary work they can provide services at lower costs. Finally, through such self-help activities mid-term to long-term benefits in form of a strengthening of social capital among community members might mature.

On the other hand, the use of PPPs for the provision of type C goods, where the majors PPPs are built, is subject of some drawbacks too. First, developing countries are to a great extent dependent to the foreign investment of a restrict number of large companies, with the consequent effects on the negotiation of the contracts. Second, the capacity of these countries to design a regulatory framework (either in legislation or through a contract) is very limited. Third, the non-competitive industry structures and/or lack of capital market discipline makes mandatory the quality and credibility of regulation.

The development of an outline on how to build a PPP in the public services sector of developing countries is both undesirable and unattainable. It depends on a variety of country specific conditions that set the framework for cooperation between the different actors. Moreover, PPPs vary across-countries in targets, forms, processes and parties. The most successful co-operative arrangements, stem from a flexible approach drawing and adapting experience of other cases, but are not simple copies (Gentry and Fernandez, 1998).

History suggests that fine-tunings are often more difficult to put into practice than large reforms. If governments and international development aid will support this emerging policy agenda, a new hybrid model of PPP will emerge with a significantly larger positive impact for users, operators and current, as well as future, taxpayers. However, the corrections needed to the reform path require a strong political commitment at the national as well as at the local level. This commitment is also needed because addressing these issues implies strong redistribution of rents.

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