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Public procurement methods to enhance private investments in infrastructure

Antonio Vives¹ and Juan Benavides²

ABSTRACT

There is a need for enhancing investments in infrastructure given their contribution to economic growth and development. One of the ways is to leverage all available financial and technical resources: much has been written about the need to engage the private sector in the modalities of infrastructure service delivery. Much less has been written on the most suitable public tendering processes for identifying and selecting investments and partners. There is an implicit assumption that competitive procurement is the ideal, but there are many cases where the conditions for competition are not suitable or projects are complex or urgent and alternative methods must be explored. This paper proposes a conceptual model for selecting alternative methods under the less than ideal conditions prevailing in many developing countries and areas of developed ones.

KEYWORDS

Public procurement, competitive procurement, unsolicited proposals, performance-based contracts, relational contracts, developing countries.

I. INTRODUCTION

This paper deals with the choice of the project procurement method to select infrastructure projects in public works where private sector participation extends beyond being a mere contractor, where the private sector has a stake in the success of the project, puts its resources at risk (any modality from management contract to concessions to full ownership of the assets). It does not deal with the traditional fully public project procurement of goods and construction and other services from the private sector, once projects have been defined.³ It deals with the very first stage of the process, how and if to put the project for tender, which could be even before the project has been identified.

Traditionally it is thought that there are only two choices in the procurement of projects: through some form of competition, either direct or staged (for instance design-bid-build), or through unsolicited offers. There are advantages and disadvantages of these two broad methods of selection, mostly in relation to economic efficiency, including the avoidance of corruption. For

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³ These are covered by the rules for procurement procedures of multilateral institutions and government agencies. See World Bank (2006) and, for example, New York State (2007).

these methods to be the most efficient, conditions in the surrounding institutional and legal environment must be suitable. In many developing countries, and even at the sub national level of government in developed countries, these conditions are less than ideal and the authorities may have to go for a “second best” procurement method. Sometimes, these governments do not even have the capacity to know what it is needed, much less are able to structure and define a project to be tendered for competitive procurement. In other cases, governments may be capable but radically new project concepts are needed; competition for the minimum cost would be unable to select the most valuable solution, which is unknown beforehand. This paper analyses these methods and their variations and looks at the most suitable options under less than ideal conditions.

Most of the literature on project procurement deals with issues related to the enhancement of the efficiency, effectiveness and transparency of the process, with getting the most value for money. The procurement guidelines of the World Bank, paraphrasing its Articles of Agreement state that proceeds of the loans must be used “ with due considerations of economy and efficiency and without regard to political or other non-economic influences or considerations”; and “Open competition is the basis for public procurement.” (World Bank 2006 and UNCITRAL 2004, 2001). While some exceptions are allowed to open competition, the emphasis is on efficiency and transparency. This applies mostly to the procurement of goods and services of its projects, yet it has been extended to the selection of projects themselves, financed by the public sector, with or without multilateral loans and of projects with private sector participation. In practice that has produced a bias against non-competitive methods of procurement. The incentives of public sector bureaucrats tend to be avoiding problems by going by the book. Because of this conservatism, many worthwhile projects fail to be carried out, as we will discuss below.

The value added of this paper is to adapt concepts normally used in the procurement of goods and services of well defined projects or activities into the procurement of ill defined and complex projects under the less than ideal conditions prevailing in many countries and sub national entities. We consider non competitive methods and identify supplemental actions needed to overcome the lack of full competition. We aim to put it all in context, in a relatively simplified and understandable manner, to guide the thought process of public sector officials and the private sector interested in participating in public works of infrastructure. This paper is a sequel to our paper on the selection of delivery modalities and financial structuring in projects suited to the local conditions prevailing in the location of the project. (Vives, et al. 2009). Between these two stages lays the process of selecting the best project among those fulfilling the requirements of the contracting entity, the project that gives the best value for money, among those that are economically, financially, socially and environmentally feasible, which we do not cover. Our interest is in the choice of methods to select the project or projects to be considered (See Figure 1).

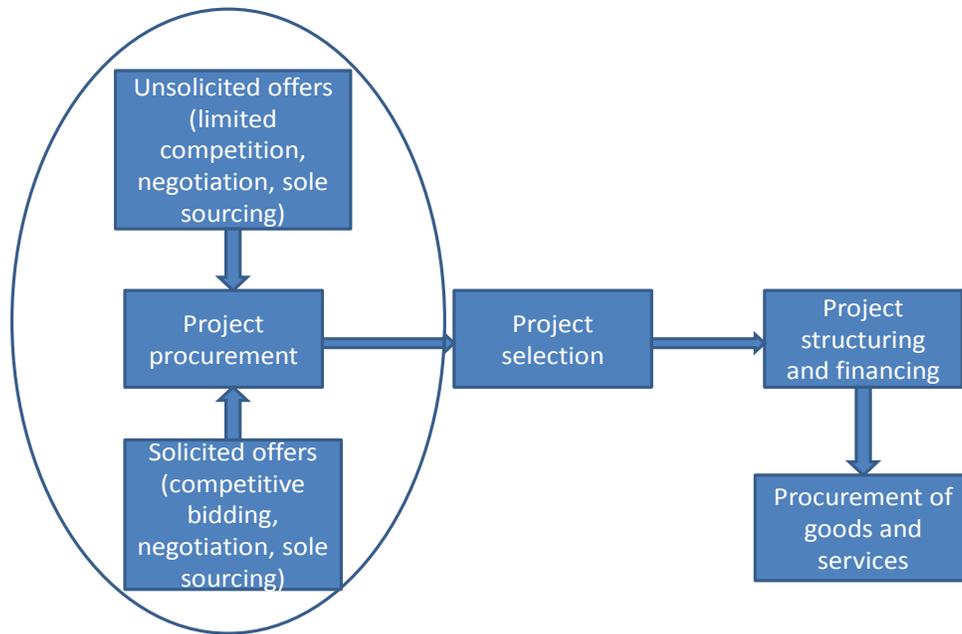


Fig. 1: Project procurement, selection and implementation process

II. OBJECTIVES OF PUBLIC PROCUREMENT OF PROJECTS

One of the key tasks in infrastructure project delivery is the selection of the procurement method to choose the project. But most of the attention, both in practice and in the literature is devoted to the decision on the structure of the project, the criteria and methodology for selecting between competing projects, the procurement of goods and services for the project (particularly if it is the responsibility of a government agency), the risk allocation between the parties and the financing of the project. The procurement method for the project is relatively neglected, probably based on the mistaken assumption that the only suitable method is competitive procurement and then it becomes a non issue.

Unfortunately, public works procurement is well known for corruption opportunities. This concern has dominated the design of rules and regulations regarding public procurement. These emphasize the principles of selecting projects with economy, efficiency and transparency and fairness. One of the most common ways to achieve this is through competitive procurement. Nevertheless, even when these processes are in place, given the usually large size of the projects and the asymmetry of power between the parties, corruption and collusion are still prevalent (Kenny and Soriede 2008) and Soriede 2006).

Furthermore, incentives for public servants in charge of selecting the projects tend to be rather asymmetric, on the negative side, with penalties for failing to apply the rules and little or no

rewards for getting the best deal for the public agency. This tends to reduce the scope for innovation and for the search of better procurements methods.

In developing countries, the procurement rules for goods and services, and by extension to projects, are heavily influenced by the standards of the World Bank and other development institutions, which apply to the projects financed with their resources, but that are extended to other projects, either by convenience or to comply with requirements arising out of the World Bank's "Country Procurement Assessments."

Furthermore, prevailing economic theories of procurement endorse competitive procurement and *discrete* contracting across the board. Discrete contracts are based on risk transfer "to the party that can manage it best". Competition would pick the contractor who can manage risks at the least cost. These arrangements create value in many circumstances. Yet their success has led to the biased view that *relational* contracts -where partners are chosen without competition are inferior. This vision assumes one or some of the following hypotheses: (i) competition is the only force capable of creating value or pressing costs down; (ii) relational contracts correspond to societies in which contracts must be self-enforcing because of contract enforcement failure; (iii) courts settlements are flawless and costless; and (iv) institution strengthening (better contract enforcement) will ultimately lead to convergence to the competitive ideal. Traditions and ideology have thus lead to a preference in the public sector for competitive procurement and its risk transfer consequences.

But is competitive procurement and risk transfer the most suitable method under all circumstances (with the exceptions normally allowed of emergency, proprietary technology, continuation of services, standardization and small amounts)? Do we have to throw the baby with the bathwater in order to reduce corruption? Do we have to assume that recourse to the law is the first resort when disputes arise? Do the courts always yield efficient outcomes?

An enlightened economist such as Dixit (2004; p. 10) stresses that "Even in modern countries where a well-functioning institution and apparatus of government-provided law exists, economic-or indeed, non-economic- disputes do not immediately lead to litigation. Recourse to the law is often the last resort, not the first one." Moreover, Dixit (2004; p. 10-11) warns that "Sometimes formal law may yield outcomes that are worse for all parties than private ordering. Therefore the outcome that parties expect to obtain in the court (net of the costs of using the court system) becomes a backstop or threat point to private negotiation." If cost minimization is taken for granted and gains from joint-value creation are shared, partners can be chosen without competition and disputes will occur sparsely.

Given the nature of infrastructure projects and the conditions prevailing in less developed countries and some areas of developed ones, there may be some reasons to consider alternative procurement methods. Infrastructure projects tend to be relatively large, non standardized, with relatively long periods of time for their procurement and definitely for their implementation, with

asymmetry of power and of resources between the public agency and the supplier of the project. Inflexible risk allocation may lead to a situation in which one of the parties go bankrupt, setting the stage for (valid or not) costly legal disputes. And some of the conditions required for effective competitive procurement may not apply everywhere.

Evidence in developed countries suggests that competitive tenders with risk transfer do not fit complex, dynamic projects and inhibit innovation. The resulting contracts leave no room for adjustment if the market fundamentals of the project change. They are conceived as legal shields forcing every party to maximize its value but not necessarily the value of the project. It is no surprise that such contracts tend to maladapt and end up in adversarial relationships. The most that can be expected with competitively awarded contracts is “good faith”: outperforming efforts by the party that is contracted out will not be rewarded by the infrastructure off taker, be it private or public. Dixit (2004; p. 11) summarizes this very clearly: “(...) availability of court enforcement may, in a seeming paradox, reduce the extent of good behavior that can be sustained in the long-term relationship.” Discontent with discrete contract outcomes has fostered the search for different varieties of relational contracts.

We do not advocate the avoidance of competition or discrete contracts. Non-bidding partner selection and cooperative risk allocation could be manipulated to serve special interests. We must be aware of the motivation of politicians that tend to drive the infrastructure investment processes. One of the key ones is the one of expediency, as some political leaders (mayors, governors, etc.) could be limited in their planning horizons, which makes them favor speedy processes (Beato and Vives 2000) and competitive procurement could be a long process. Politicians may prefer not to start some public works so as not to leave the opening and credit to the next administration. Better to have a second best water system or none at all? This is a very relevant question for developing countries. This is not to say that their political preferences for expediency should dominate considerations of economy and efficiency, but if methods can be found with the proper safeguards, then there may be more economically sound projects.

Furthermore, excessive emphasis on economy and efficiency lead some projects to neglect the broader social and environmental impacts of the projects, beyond compliance with the minimum bid requirements (and during execution, these issues are the first to suffer, in an effort to contain costs as pure engineering aspects take precedence and the contractor will tend to cut the “soft” items). Notice the statement in the World Bank’s procurement policy mentioned above that requires considering only economy issues and to neglect non-economic considerations (if they cannot be quantitatively evaluated and included in the bidding documents) under the assumption that the latter ones may foster excessive costs.⁴ This not to say that non competitive procurement

⁴ While there has been considerable resistance to include social and environmental consideration in the part of procurement officers, there has been some progress in advancing Environmentally and Socially Responsible Procurement policies, ESRP, in goods and services. In the case of projects this is still confined to compliance with

will ensure compliance, but, as we will see below in relational contracts or performance-based contracts, there are some ways to manage these impacts.

The bias, then, in public procurement have been towards priority on the issues of economy, efficiency, transparency and fairness, but while this is promoted by competitive procurement, in some cases, it may be necessary to opt for second best in order to provide the public services that society demands. In the next sections we discuss these possibilities.

III. SELECTION OF PROCUREMENT METHODS

In this section we discuss competitive procurement and alternative procurement methods and the compatibility of local conditions with the procurement method. All of the proposed methods imply substantial financial and managerial efforts from the private party, which is most interested in project success.

A. Procurement methods

We discuss two alternative modalities: unsolicited proposals and solicited proposals and the use or not of competition. Our survey of the international experience suggests that some variations may be instrumental when institutions are weak or, at the opposite side of the spectrum, when well-functioning institutions meet complex, long-term projects. In the former case, by challenging the status quo, in the latter case, by adopting a long-term approach stimulating innovation and reducing the scope for disputes.

1. Unsolicited proposals: sole sourcing and limited competition

It was traditionally assumed that that the only public works projects to be considered will be those defined and solicited by government agencies and selected through some form of competition. There are cases where the public entity is not even considering any project and it is the private sector the one that identifies the need and sometimes it is willing to undertake it at its own risk and with its own finance. Unsolicited proposals amount to an institutional challenge, when it becomes the only realistic recourse left to twist the arm of the *status quo* in order to expedite entry of valuable facilities. For example, a municipality knows that it has a problem of sanitation services, but the utility management it is overwhelmed with more pressing, urgent, issues. Also, given the limited financial resources of the public utility, it simply sees that as problem whose solution will have to wait. But along comes a private firm that recognizes the problem and sees a business opportunity. It thinks it can design the works, arrange construction and financing if, for instance, the utility can arrange for availability payments. Should the unsolicited bid be rejected just because it has not been originated in the public sector and the local legislation requires competitive procurement? Given the corruption problems in the

the minimum requirements of laws and regulations and their enforcement, which in developing countries may be deficient.

country, management is even unwilling to consider such a proposal, lest it reinforce the perception of collusion with the private sector and of corruption. Can we find a way out?

This case of unsolicited offers is exceptional and in many cases it is not considered in the rules and regulation for public procurement. Hodges and Dellacha (2007) present examples and cases where unsolicited offers are allowed and regulated. The guidelines of the United Nations Commission on International Trade Law, UNCITRAL, do consider the possibility of unsolicited offers under some circumstances (UNCITRAL 2004, 2001). Unsolicited offers can be used with no competition or with limited competition. Some forms of limited competition have been used after the unsolicited proposal is accepted and others are invited to bid. The most common forms are:

- **Swiss Challenge**, where the original proponent is given the chance to match the best counterproposal.
- **Bonus**. For the purposes of the final bid evaluation, the original proponent is awarded bonus point or given a discount on the bidding price (for example, it will win if it less than 10% over the best offer). Can be thought of as form of compensation for the expense of developing the unsolicited proposal.
- **Best and final**. Could involve elements of the previous two methods. In general there is an initial round where two finalists are selected and if the original proponent is not selected it is given the chance to participate in the second round. Sometimes it is given a bonus in the first round, but invited to bid in the final round even if it loses. The original proponent may be compensated for the development costs.

One must caution that, however, unsolicited proposal can be an attempt to circumvent competition.⁵ Nevertheless, there may be cases when unsolicited offers should be considered as they may bring advantages over solicited competitive procurement, particularly in less developed environments where government's capacity to identify and specify projects is limited.

2. *Solicited proposals: sole sourcing and competitive procurement*

Competitive procurement is the most economically efficient method but not under all circumstances. It requires the existence of, *de minimus*, the following conditions:

- Significant number of well qualified interested local or international contractors
- Government agency's capacity, or access to capacity, to prepare the bidding documents and analyze the resulting bids
- Relatively large projects, due to the high transactions costs of competitions
- Clear procedures and trust in the selection process
- Level playing field and rule of law (contract enforcement, legal stability)
- Well defined and/or relatively standardized project
- Insurable and/or manageable risks

⁵ See Hodges and Dellacha (2007) for caveats and UNCITRAL (2004) for suggestions on the processes.

Where these conditions are present, competitive procurement will be the most suitable method. We will rearrange and expand this list in subsection C. Competitive procurement is consistent with a wide spectrum of contract modalities, including management contracts, concessions, Build-Operate and Transfer (BOT), Build Own and Operate (BOO) and Built Own, operate and Transfer (BOOT) whenever the enabling conditions permit. Conventional civil works contracts are the less restrictive choice.

In competitive procurement, there are some variants that can enhance the attractiveness to the private sector: joint ventures and alliancing. As discussed in Vives et al (2006; p.47), joint ventures permit firms to enter new markets they could not reach via direct investment or privatization. Joint ventures can accommodate otherwise conflicting interests or may have a cooperative stance. By sharing ownership with the private sector, governments become residual claimers that are interested in preserving the performance gains that the private partner could introduce. For this modality to function the private sector must hold control managerial decisions, instead of having a unanimous decision making setting. The use of competitive procurement to select the private partner in a joint venture lacks credibility whenever the rule of law, as Dixit states, is “ineffective or absent.” In this circumstance, the match between public and private partners to conform a joint venture will be defined by negotiation. Trust is replaced by benefit-sharing. Long-term joint ventures are difficult to sustain because of agency problems in the public sector (including government turnover or instability). China, with a party dictatorship, has been successful at using joint venturing with foreign investors.

The most documented precedent in cooperative contracting is the Toyota lean management model that included close interaction with part suppliers (Gil 2009). More recently, BP decided to design a relational contract to explore oil reserves in the North Sea (“alliancing”) during the 1990s. This procurement method selects partners according to core alliance principles (commitment to teamwork, relationship development, encouragement of innovation and trust; Sakal 2005). All uninsurable risks are shared between alliance participants, as opposed to transferred. The compensation structure is designed to share gains or losses with respect to target costs or benefits, using open-book accounting. Those targets are the outcome of a cooperative design process. Decisions are taken by unanimity. Alliance disputes and conflicts are dealt with internally. Formal litigation comes only after a range of other provisions (Bell Gully 2009).

Alliancing/relational contracts have been applied for infrastructure projects mostly in common law countries (UK, Australia, New Zealand and -to a minor extent- US). For example, an extension of the Heathrow airport in London was arranged in this format. Relational contracts for greenfield projects in the road sector are often design-build, and many maintenance projects are contracted for the entire life cycle of the road (Altamirano 2007). Full delivery – Program Management contracts delegate a set of projects to a private party (including design) to capture scale and scope economies. It has been proposed in Finland, where the state wishes to minimize the role of the state and trust levels are among the highest in the world.

Alliances come mostly under two major modalities. In *private* alliancing, the state fully delegates the design, funding, construction (and operation, when applies) to a consortium of private firms. *Public-private* alliancing refers to the case in which a public sector agency partners with private firms, mostly during the specification and design phases. This way the public sector receives a hands-on technology transfer training as a bonus.

The success of alliancing critically depends on selecting the right partners and trust. Additionally, “suppliers must be keen to reap reputation benefits from participation” (Gil 2009). If reputation effects are strong enough, alliancing could be used in institutionally weak countries, at least in principle. As trust seems to co evolve with institutional quality, this possibility may be impractical to use in many developing countries, unless trust development has developed following its own dynamics.

B. Local conditions affecting choice of procurement

The conditions prevailing in the country or area will determine the suitable choice of procurement method. In general the conditions in developing countries are less than ideal for competitive procurement, characterized by weaknesses in the institutions, in the rule of law, in the development of construction and project firms and the existence of corruption. These conditions may even be weaker at the subnational level where the responsibility for many infrastructure projects is now located. Surprising for some, these weaknesses are also present at the subnational level in developed countries. The World Bank recently published the first version of the Doing Business report that looks at the subnational level in developed countries. It is interesting to note that in the indicator of Dealing with Construction Permits, Rome and Padova ranked 83rd and 86th respectively, while as a country Mexico ranked 33rd and Colombia 54th.

Obviously there are many issues that can affect the choice of procurement method in a given case, but in order to simplify and keep the conceptual framework manageable, we propose an analysis based on six major local conditions:

- Institutional capacities. Extent of public agency skills and financial resources to prepare bidding documents, design and analyze project proposal; extent of the rule of law/prevalence of corruption.
- Competitive suppliers sector. Extent of competition among project suppliers.
- Interest of national and international contractors and sponsors.
- Timing of the project (for instance, emergency needs to replace crumbling infrastructure)
- Project size, innovation and complexity.
- Trust/balance of power between the contracting parties.

These conditions are aimed at describing sector capacities and needs, the overall institutional environment, the characteristics of the project and the industrial organization of supply and trust.

IV. SELECTION OF FEASIBLE PROCUREMENT METHODS

A. A conceptual model

In order to find the most suitable procurement method we match local conditions with the different procurement methods outlined above. Figures 2A and 2B summarize the model.

Fig. 2A Procurement modalities

| Procurement Local conditions | UNSOLICITED | | SOLICITED | |
|-----------------------------------|---------------|------------------------|---------------|------------------------------------|
| | SOLE SOURCING | LIMITED COMPETITION | SOLE SOURCING | TRADITIONAL COMPETITIVE BIDDING |
| WEAK INSTITUTIONS | Y | Y | Y | Z |
| FEW BIDDERS | X/Y | X/Y | Y | Y |
| CONTRACTORS ARE NOT INTERESTED | Y | Z | Y | Z |
| URGENCY | Y | X | Y | Z |
| HIGH COMPLEXITY/ SIZE | X/Y | Y | Y | Y |
| DISTRUST | Z | Z | Z | X/Y |

X: recommended

Y: possible

Z: not recommended

Figures 2A and 2B should be read the following way: every time there is at least one Z in a column, the modality should not be used. The presence of Y's indicates that detailed analysis should be conducted to decide on the viability of using the modality. If no modality is thought feasible for a particular combination of local variables, this implies that safeguards and mitigation measures must be set in place.

Fig. 2B Procurement modalities

| Procurement Local conditions | UNSOLICITED | | SOLICITED | |
|---------------------------------|---------------|------------------------|---------------|------------------------------------|
| | SOLE SOURCING | LIMITED COMPETITION | SOLE SOURCING | TRADITIONAL COMPETITIVE BIDDING |
| STRONG INSTITUTIONS | Y | Y | Y | X |
| MANY BIDDERS | Z | Z | Y | X |
| CONTRACTORS INTERESTED | Z | Z | Y | X |
| NO URGENCY | Z | Y | Z | X |
| LOW COMPLEXITY/ SIZE | Z | Y | Z | X |
| TRUST | Y | Y | Y | X |

X: recommended

Y: possible

Z: not recommended

For instance, traditional competitive procurement is recommended under relatively ideal conditions, while the alternate methods are suggested when there are weaknesses in the competitive environment, when there may be government or market failures. When several of the local conditions are weak, we would suggest taking the least favorable recommendation. For instance if there are weak institutions, competitive procurement should not be used, regardless of the other conditions.

The proposed selections must be seen as suggestions and the reader may have his/her own opinions and may consider more variables in the selection of procurement procedures. The proposed model is meant as guide for analysis more than a definite tool.

B. Safeguards and mitigation measures

There are economic and political issues in choosing alternative methods and deviating from traditional competitive procurement. Furthermore, those methods may have many variants that have not been discussed above and that may enhance their economic and political viability. The choice of procurement method tends to be in the hands of bureaucrats and normally the incentives for these officers are to avoid risks, even if that means getting less projects underway. They would prefer to follow the rule book and avoid problems.

To temper this problem, the rule book can and must be changed, allowing the choice of alternative methods, enhancing the selection process to minimize problems and capture benefits, safeguarding economic efficiency.

As mentioned above, for unsolicited proposals there is the possibility of introducing some form of post selection limited competition. For both, solicited and unsolicited proposals, efforts could be made to introduce performance-based covenants, with independent performance measurement and auditing. In some cases it may be possible to introduce profit sharing mechanisms if returns exceed expectations and covenants that call for contract review under certain conditions. Most of the contracts under alternative procurement will have a stronger element of negotiation than those awarded under competitive procurement and this calls for more flexibility in changing the contract. Given the asymmetry of power between the parties, weak government agencies may need independent support to conduct these negotiations and supervise contracts.

In these alternative methods, there is a higher potential for corruption, abuse of power and bureaucrats are more exposed. To partially mitigate these risks, government agencies will have to perform or have performed careful **value for money** analysis⁶ for the alternatives selected. This value for money analysis is only as good as the information available. Normally, the private sector will have more resources to tilt the analysis their way. It is critical for government agencies to devote resources to these analyses, as their credibility will rely heavily on them. Some have labeled these attempts as Garbage In, Garbage Out. If this is the case, the public sector must make sure it has very good “trash collectors” that can sift through the information trash.

Needless to say that **transparency** will be critical when using alternative methods. Government agencies will have to disseminate as much information as feasible over the selection process and the project itself. Given the weaknesses in most government agencies, at least in developing countries, capacity building is a critical component, but it may take time and in many cases is, unfortunately, reversible. Also, **road shows** may attract the interest of foreign investors. **Sector planning and funded maintenance funds** may reduce the need for of urgency, and commitment to maintain assets and to professionalize sector practice may help foster trust on governments.

V. CLOSING REMARKS

The reliance on competitive procurement may enhance the economic efficiency of procurement process but under the weak conditions prevailing in most developed countries and at the sub national level of some develop ones, it may be a procedure that can restrict the number of projects undertaken or add significant lime to the process. While there are not a panacea, alternative procurement methods describes in this paper, may, under some conditions, allow government agencies to implement infrastructure projects and attract private sector participation. Flexibility in procurement is needed if we are to increase infrastructure investments

⁶ Partnerships Victoria (2001).

There may have to be a trade-off between the economic efficiency of competitive procurement and the convenience of alternative procurement methods. In all cases, the decision is not obvious. If it is a matter of selecting second best, let it be the best of the seconds.

Use of these methods should not be seen as a way to avoid the institutional weakness, but should be seen only as a temporal and exceptional solution, while efforts to strengthen the environment for competitive procurement continue. We have presented a conceptual model to help in making that decision and proposed a few mitigants to overcome the weaknesses of the alternative methods.

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