

# PROCUREMENT SELECTION IN THE PUBLIC SECTOR: A TALE OF TWO STATES

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## ABSTRACT

The decision as to which procurement system to adopt is a complex and challenging task for clients of construction projects. Despite a plethora of tools and techniques available for selecting a procurement method, clients are still uncertain about what method to adopt for a given construction project to achieve success. This paper examines 'how and why' procurement methods are selected by public sector clients in Queensland (QLD) and Western Australia (WA). Findings from workshops with senior managers in procurement selection revealed that traditional lump sum methods (TLS) are preferred even though alternative forms could be better suited for a given project. Participants of the workshops agreed that alternative procurement forms should be considered for projects but an embedded culture of uncertainty avoidance meant the selection of TLS methods. It was perceived that only a limited number of contractors operating in the marketplace have the resources and experience to deliver projects using the non-traditional methods.

**Keywords:** Procurement, public-sector, procurement selection, uncertainty-avoidance

## 1.0 INTRODUCTION

There is consensus that there is one procurement method that is in some sense 'better' than all others for an individual project, but that no one procurement method is likely to be better than others for any project (Love *et al.*, 1998). Gordon (1994) however has suggested that the selection of an appropriate procurement method could reduce construction project costs by an average of 5%. While an appropriate procurement system may enhance the probability of project success (Naoum, 1994; Luu *et al.*, 2005), some decision-makers may encounter difficulties in ascertaining the suitability of various procurement approaches because it is virtually impossible for them to capture a diverse continuum of procurement options, client characteristics and needs, project characteristics and external conditions through their own experiences (Kumaraswamy, and Dissanayaka, 2001). A plethora of techniques have been developed to assist decision-makers in reaching an answer to which would be the most appropriate procurement method for a given project. The decision as to what procurement method to adopt has become a complex and challenging task as the number of methods available within the marketplace has proliferated in recent years (Mortledge *et al.*, 2006).

The Queensland (QLD) and Western Australian (WA) economies are experiencing an unprecedented boom founded on the demand for natural resources such as oil, natural gas, nickel and iron ore. In addition, these States have been subject to increased migration and this is likely to continue for years to come. This creates a demand for new building stock that places increasing pressure on the public sector to 'buy wisely' for their facilities and to meet the immediate needs of an increasing population (i.e., new schools, affordable housing, hospitals etc). This paper presents findings from an on-going research project that seeks to examine *how* and *why* particular procurement methods are selected by public sector clients in Australia. In particular, there is a need by a WA public sector client to formalize its

procurement method selection process to improve the transparency, accountability and probity of decisions.

## 2.0 PROCUREMENT SELECTION

Clients who are experienced are able to select a procurement approach that has worked for them before, or which they know will be suitable taking into account prioritised objectives and their attitude to risk (Mortledge *et al.*, 2006). Inexperienced clients, on the other hand, will need to seek advice from experienced professionals to assist them through the process. Mortledge *et al.* (2006) states that the selection of an appropriate procurement strategy has two components:

1. *Analysis* – assessing and establishing priorities for the project objectives and client attitude to risk.
2. *Choice* – considering possible options, evaluating them and selecting the most appropriate.

The efficient procurement of a construction project through the choice of the most appropriate procurement strategy has long been recognised a major determinant of project success (Bennett and Grice, 1990); and a failure to select an appropriate procurement approach as the primary cause of project dissatisfaction (Masterman, 1996). The selection of a procurement method is more than simply establishing a contractual relationship as it involves creating a unique set of social relationships whereby forms of power within a coalition of competing or cooperative interest groups are established. Differing goals and objectives and varying degrees of power within a project team are often the underlying conditions for triggering adversarial relations (Love *et al.*, 2004).

### 2.1 PROCUREMENT ASSESSMENT CRITERIA

A primary issue that is often raised within the construction industry relates to what clients want in order to be satisfied with their buildings and the means by which those buildings have been procured. Consequently, it is important to evaluate the clients' criteria, their importance and then seek performance to match the criteria. Conventional procurement selection criteria are based around the concepts of time, cost and quality (Rowlinson, 1999). While the use of such criteria can be used as a guide to assist decision-makers with an initial understanding of the basic attributes of a particular procurement system they *should not* be used as a basis for selecting the procurement method. This is because of the underlying complexity associated with matching client needs and priorities with a particular method (Kumaraswamy and Dissanayaka, 1998).

### 2.2 DETERMINATION OF SELECTION CRITERIA

Several studies have used the NEDO (National Economic Development Organisation) (1985) criteria (or modifications) in an attempt to develop a procurement selection framework (e.g., Love *et al.*, 1998; Tucker and Ambrose, 2000). Kumaraswamy and Dissanayaka (1998) and Luu *et al.* (2003a) undertook an extensive review of the normative literature and identified key criteria that were considered by clients when selecting a procurement method. Luu *et al.* (2003a) state that the use of a limited number of factors such as those identified by NEDO (1985) may give rise to the selection of a sub-optimal procurement system. Since the selection of procurement system is influenced by *client characteristics* (Moshini and Botros, 1990), *project characteristics* (Ambrose and Tucker, 2000), and the *external environment* (Alhamzi and McCaffer, 2000), procurement selection criteria representing the constraints imposed on the project should be considered before a decision is made.

The major challenge for clients when selecting a procurement method is identifying the criteria for the project, but the question is that if projects are different in nature and clients' needs are constantly changing due to internal and external demands, would the same criteria be applicable for all projects? Any weighting given to criteria will invariably change as would the criteria type. The selection of an appropriate procurement method can be effective in mitigating the risks inherent in a project. Hibberd and Basden (1996) suggest that a contractual arrangement should initially be selected so as to take into consideration how risk would be transferred between parties, therefore determining the nature of the procurement method so as to fulfil the client's objectives. Noteworthy, the contract itself will assign and allocate the risk and responsibilities of parties involved in a project.

### **3.0. TOOLS AND TECHNIQUES FOR PROCUREMENT SELECTION**

Despite the difficulties associated with procurement method selection a number of structured methodologies, tools and models have been developed. The approaches developed range from simple (Franks, 1990) to highly complex (Luu *et al.*, 2005). It is important, however, that selection is done logically, systematically, and in a well-organized manner by the clients' principal adviser (Love, 1996). The range in choice of procurement system is now so wide and projects are becoming so complex that the selection process needs to be carried out in a disciplined and objective way within the framework of the clients overall strategic project objectives (RICS, 2000).

Each of the procurement selection methods developed to date attempts to cross-reference project variables with existing procurement systems that are available in the marketplace. As a result, Sidwell *et al.* (2001b:p.24) state that this "shoe-horns one-off projects and their particular parameters, priorities and external conditions into off-the-shelf delivery systems". Many of the procurement selection systems developed (e.g., NEDO, 1985; Skitmore and Marsden, 1988, Moshini and Botros, 1990; Ambrose and Tucker, 2000; Cheung *et al.*, 2001) ignore an array of factors, are limited in their options available for consideration, are conditional and not widely applicable, and simply not user friendly (Alhazmi and McCaffer, 2000). While all the systems identified by Sidwell have their merits they tend to be prescriptive and not recognise the complexity associated with the selection process. Often there are many stakeholders that need to be involved in the selection process and decisions are dependent upon the interaction of many variables that incorporate a high degree of subjectivity and intuitive judgement (Mortledge *et al.* 2006). Many of the systems developed have not been tried and tested in practice over a period of time so as to determine if the method selected was able to produce a successful outcome for the client. There are, however, examples where systems have been developed and tested for one-off projects (e.g., Al-Tabtabi, 2002).

### **4.0 RESEARCH APPROACH**

Considering the sheer number of criteria and procurement selection methods that clients' are confronted with the challenge for selecting an 'appropriate' procurement method is a daunting process. In examining *how* and *why* public sector clients select a procurement method, a triangulated research process, which encompasses focus groups, case studies, and a questionnaire survey, has been adopted. The research approach and subsequent findings from three focus groups that were undertaken with senior project and policy managers in QLD and WA are presented hereinafter.

#### **4.1 FOCUS GROUPS**

Focus group interviews were used to gather information relating to the feelings and opinions of the participants in a non-threatening environment (Krueger and Casey, 2000). Convenience sampling for selecting participants was used as it is deemed to be the most common method of selecting participants for focus groups. Essentially, participants were

selected for their familiarity with the project procurement selection process of their organisation. During the interviews, participants were given freedom to discuss issues, listen to their peers, provide reflective comment and arrive at a shared understanding of collective experiences regarding procurement use and selection. Whilst working with the groups, the researcher(s) appeared to be ‘genuinely naïve’ and avoided leading questions so as to allow corroboration to naturally occur. The questions presented to participants were ordered in terms of their relevance. The focus group discussion revolved around *five* questions:

1. What project types/ factors do you consider in selecting a procurement method?
2. What procurement methods are you familiar with? For each what are their individual characteristics? What are their advantages/disadvantages? Which characteristics/advantages/disadvantages do you find most important in selecting a procurement method?
3. What is the most common procurement method used by your agency? Why?
4. What is the process followed for assisting government in selecting a procurement method. What is good about this process? What improvements could be made?
5. What forms of procurement method would you like to see more use of? Why?

Each of the focus groups that were undertaken lasted one and half hours in duration. Notes were taken and the findings from that were derived presented to participants to check for accuracy, and reliability.

## 5.0 RESEARCH FINDINGS AND DISCUSSION

### 5.1 FACTORS CONSIDERED IN SELECTING A PROCUREMENT METHOD

The New South Wales Department of Commerce (2006) states that an appropriate procurement method for a project will depend on several project characteristics including; the factors that impact upon its delivery and desired risk allocation. As a result appropriate selection will provide value for money, manage risk and meet project objectives. Similarly, findings from the focus groups revealed the following criteria in Table 1.

Table 1. Selection criteria identified

Queensland	Western Australia
Project time and cost risk profile; Project value; Project complexity; Market forces; Location (area/geography); Client knowledge, maturity and control; Refurbishment/new project; Political considerations; and Project quality.	Project value; Project complexity; Project type (standard/novelty); Location (regional/local); Stakeholder integration; Political considerations; Client needs; and Industry culture.

The criteria of *project value*, *project complexity*, *location*, *client factors* and *political considerations* were identified by both public sectors. Criteria of *project time and cost risk profile*, *market forces*, *whether refurbishment or new project* and *project quality* were unique to QLD. Criteria of *project type*, *stakeholder integration* and *industry culture* were unique to WA. Significantly, the focus attendees in QLD also identified their procurement selection policy document. As such, it was discovered that the factors identified by the focus attendees in QLD are either driven or guided by this document, therefore forming part of a more *structured* process than those factors identified in WA which formed part of an *implied* process in determining a procurement strategy for each project procured by the client.

The focus attendees in WA could not identify any formal policy or technique they used for procurement selection. When compared with QLD, it was also discovered that the process of procurement method selection for the WA public client significantly relies more on the intuition and experiences of those responsible for its selection. It was observed from discourse during the two focus groups in WA that the underlying culture (i.e. beliefs structured as a hierarchy of values) of the organization had an important influence in procurement selection process: *uncertainty avoidance*. Such cultures “shun ambiguous situations” (Hofstede, 1991:p.116) and in this context any alternative consideration from the default Traditional Lump Sum (TLS). The key decision-makers who had extensive industry experience with a particular procurement method were more likely to select a method that had worked for them in the past, rather than take the perceived risk of choosing an unfamiliar method (See Mortledge et al., 2006). This observation is in-line with Mortledge *et al.* (2006) and the DISR (Department of Industry Science and Resources) and Nation Building Control Council (cited in APP 1998).

## 5.2 PROCUREMENT METHOD FAMILIARITY

Procurement systems can be classified as: traditional (separated); design and construct (integrated); management (packaged); and collaborative (relational). Each of the aforementioned systems has an array of methods associated with them. Participants had familiarity and limited experience with several procurement methods identified in Table 2.

Table 2. Procurement methods identified

Queensland	Western Australia
Traditional lump sum (TLS); Design and construct (used only for schools); Document and construct; Management contracting (QLD version); Serial contracting (bundling of projects); Schedule of rates; Design, manage and construct; Alliance; Public-private-partnerships; and Single select.	Traditional lump sum (TLS); Design and construct; Novation; Design, manage and construct; Public-private-partnerships; and Package deals (used only for housing).

The *TLS*, *design and construct*, *design manage and construct* and *public-private partnership* procurement approaches were identified by both public sectors. Procurement approaches of *document and construct*, *management contracting*, *serial contracting*, *schedule of rates*, *alliance* and *single select* were unique to QLD. *Novation* and *package deal* procurement approaches were unique to WA. Evidently, QLD has experience in a broader range of procurement methods than WA. It was also discovered that QLD had significantly greater flexibility in the procurement of their projects than WA.

Despite their limited experience, the participants from WA in particular had knowledge of global procurement trends and emerging methods which have been used in the United Kingdom such as Heathrow Terminal 5. Examples where these emerging methods could be considered were in remote locations of QLD and WA where the scarcity of resources has necessitated a more *collaborative* approach to procurement in lieu of the more commonly used traditional lump sum method. Smith *et al.* (2002) have suggested that in regional areas *coopetition* in congruence with an alliance framework should be used as a form of procurement strategy with local small-medium-sized firms so they can compete with metropolitan contractors.

### 5.3 PROCESS USED BY PUBLIC SECTOR IN SELECTING A PROCUREMENT SYSTEM

Traditional lump sum (based on AS 2124 contract type) was the most commonly used by both agencies to deliver projects. It was estimated that approximately 95% of projects delivered in WA, and approximately 90% of projects delivered in QLD, in the last ten years had been procured using TLS. Discussion within the focus group sessions left little doubt that not only was this method the most common, but also the default option for both these agencies.

Participants in QLD revealed that their operating procedures are either driven or guided by their own in-house document. In particular, the Procurement Selection and Generic Contracts section of this document guides them through the primary project constraints they would face to derive at a procurement system. It generally begins with the time constraint as less time is normally available for the contract documentation stage in larger projects, hence leading them toward adopting a form of procurement that runs the project's design and its construction in parallel (The State of Queensland, 2007).

In addition, participants in QLD revealed that they recently began relying on quality-based selection criteria (QBS) for tender selection under the default TLS procurement, which involves cost by negotiation, and determined based on the methodology, capacity, experience, track record, environmental sustainability and capability of the tenderer. In contrast to this relatively structured approach, participants in WA revealed that they would only contemplate an alternative procurement method to TLS when:

- circumstances were perceived to be 'abnormal', for instance to obtain something beyond their budgetary constraint; or
- a minister, the WA Department of Treasury or the like suggested a system of procurement other than the default TLS; for instance, when treasury introduced a *new* Public-Private-Partnerships process; or
- in association with *non-standard* or *non-profile* projects where the procurement options would be discussed or negotiated with clients of the agency; sometimes using a recently launched 'business case navigator' as a referral tool.

Reasons for the popularity of TLS identified by participants are identified in Table 3.

Table 3. Reasons for use of Traditional Lump Sum

Queensland	Western Australia
Client expertise is not required; Project develops slowly; Ability to input into design and make changes; Political imperative; and Proven cost savings.	Policy; Ability to deal effectively with risk (cost, time, quality); Familiarity and acceptance within the local industry; Satisfies public accountability; Provides maximum client control over the project's outcome; and Provides cost certainty.

Although both public sectors provide unique reasons for their predominant use of the TLS procurement approach, none of the reasons provided by one public sector were in contradiction to the reasons provided by the other. Compellingly, several reasons identified by all the focus groups may be relative to each other. In other words, several reasons

identified may possibly be the result of other reasons that were also identified. For instance, the TLS procurement approach is a popular selection as:

*Clients have control over a TLS procured project's outcome because they are able to effectively deal with risk therefore providing cost certainty and even cost savings.*

*Client expertise is not required because a TLS procured project develops slowly so they are able to input into design and make changes.*

*Policy is influenced by political imperatives.*

From these three statements, it is possible to identify the root causes of the popularity of TLS as being due to: the ability to effectively deal with risk (mentioned by WA), its slow project development (mentioned by QLD) and political imperatives (mentioned by QLD). Rowlinson (1999a: p.49) has argued that the concept of cost certainty is a "fallacy in the context of traditional approaches that are based upon full drawings and bills of quantities (BoQ)". This approach should provide a client with a firm, fixed price for construction but in practice very few projects are actually completed within the tendered price (Rowlinson, 1999a; Love, 2002). Complete drawings and BoQs are generally not available when a projects goes to tender. Rowlinson (1999a:p.49) therefore asks why do clients' continue to use this method when it can be argued that it leads to: a lack of flexibility; a price to pay in terms of claims-conscious behaviour; and the fallacy of cost certainty.

## 5.4 PERCEIVED EFFECTIVENESS/IMPROVEMENTS OF THE SELECTION PROCESS

Table 4 identifies the perceived benefits of the current way of doing things within each State.

Table 4. Perceived effectiveness of the selection/improvement process

Queensland	Western Australia
Access to expertise and control; Reassurance of the process (probity); Mutual understanding with contractors and consultants (synergy); Cooperative approach; Guaranteed construction sum; Distribution of project savings (sometimes); Reasonable return on investment; and Incentives to perform.	Value for money; Better quality control; Familiarity; and Industry familiarity.

Both public sectors identified *familiarity / understanding* and *value for money / reasonable return on investment* as benefits to their own processes for procurement selection. The QLD public sector advocates that their more-structured procurement selection process provides: *access to expertise and control, probity, a cooperative approach, a guaranteed construction sum, incentives to perform* and *sometimes a distribution of project savings*. The WA public sector advocates that their more-implied procurement selection process provides them with *better quality control*. Evidently, participants in QLD were able to identify significantly more benefits of their more-structured, less-implied process of procurement selection than the participants in WA.

In general, participants acknowledge the need for a formal selection process for reasons associated with transparency and accountability in the decision-making process. It was perceived, however, that the WA market did not have the skill and experience to deliver projects using non-traditional methods, particularly *construction management* and *management contracting*. Ways in which Participants suggested that their organisation could improve their own procurement method selection process are identified in Table 5.

Table 5. Ways of improving the selection process

Queensland	Western Australia
The need for contractors to tender for the ongoing cost of maintenance for 15 years in addition to the project's construction cost.	The need for a more comprehensive and sophisticated procurement selection process for high profile projects, such as arenas, stadiums and convention centres; and The need for a shared and 'agreed' general understanding of the definitions of all procurement systems.

It was perceived that participants in QLD were generally satisfied with their more-structured, less-implied process of procurement selection. In comparison to WA, they would seem to have a good reason to be. After all, the WA public sector's concerns with their implied procurement selection process appear to have been addressed by the QLD public sector, largely due to the establishment and implementation of their in-house document. Yet, the QLD focus group identified the need for their more-structured procurement selection process to enable contractors to include the cost of ongoing maintenance for 15 years in addition to the project's construction cost in their tender submissions. The QLD public sector's concern was not addressed by the WA public sector and may therefore a consideration for the future.

Despite the particular need for WA to improve the way they select procurement methods, it was suggested by participants in WA that any improvement to the existing system could be destabilising as decision-makers were comfortable with the *status quo*. The continual use of TLS by the public sector may stifle technological innovation, particularly the design and constructability of public sector buildings. Other States within Australia are actively pursuing alternative forms of procurement and this has put increasing pressure of the WA State Government to examine other forms of procurement. Particularly, procurement methods that participants suggested that they would like to see more use of were construction management, and design and construct in conjunction with an alliance agreement. Though, it was suggested that alliances would only be considered by participants for complex or large infrastructure projects. While WA has been slow to adopt alternative forms of procurement compared to other States such as QLD, New South Wales and Victoria, it is essential they learn from their previous experiences with regard to the use of methods used and how they justified their selection.

## 6.0 CONCLUSION

A plethora of tools and techniques have been developed to determine an ideal procurement method for a specific project. Yet, no specific techniques have gained widespread acceptance, particularly by the organisation involved in this research. While forms of ranking and weighting of specific client priorities against the attributes of a particular procurement method are used by public sector agencies in New South Wales and QLD, WA has used a more informal and intuitive approach based on the personal experience of the decision-maker. Because of an innate culture of *uncertainty avoidance* in WA, TLS methods are the norm and default unless otherwise directed through following a set of guidelines or a specific request is made by a Minister or the Department of Treasury or another agency is made. Moreover, it was perceived by those involved in the WA focus groups that the marketplace within WA does not have the management experience to effectively embrace alternative forms of procurement. The research identifies a particular need to develop a pragmatic framework that public sector clients in WA can use to select an appropriate procurement. A procurement framework should be able to guide the decision-maker rather than provide a prescriptive solution, which the author's consider an appropriate strategy to undertake. Learning from previous experiences with regard to procurement selection will further provide clients with knowledge about how to best deliver their projects.

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