

IMPACT OF GOVERNMENT POLICIES AND REGULATIONS WHEN ADOPTING ALTERNATIVE PROCUREMENT METHODS

Chamal Wijewardana*, Himal Suranga Jayasena and K.A.T.O. Ranadewa
Department of Building Economics, University of Moratuwa, Sri Lanka

ABSTRACT

The freedom to choose a procurement method will significantly affect the sustainability of the project delivery process and the operation of the building as well. Even though there are number of different procurement methods subsist in the industry, traditional procurement methods and design and build procurement methods are dominate the Sri Lankan construction industry where some conventional procurement methods have numerous inefficiencies inherently or arising from specific contexts of application. With the development in the construction industry number of projects will towards to achieve the sustainability where difficult to adopt traditional procurement methods. However a general reluctance to adopt alternative procurement methods has previously been observed by many researches. They further have suggested that the reluctance is fuelled by the government policies. Hence this paper synthesizes the preliminary findings, providing a logical picture on the effect of government policies as a barrier to adopt alternative procurement methods and how far the current policies would help to popularize less popular procurement methods.

Keywords: *Alternative Procurement Methods, Barriers, Facilitators, Government Policies, Sri Lanka.*

1. INTRODUCTION

Construction industry encompasses a high complexity due to the involvement of many stakeholders, long project durations and the complex contractual relationships which contributes significantly in the development process in both development and developing countries. Therefore, stipulation in adopting a proper procurement method is vital as it leads to the success of a building project. While project success is perceived from widely different perspectives, sustainability has been increasingly recognized as a key parameter. The freedom to choose a procurement method will therefore significantly affect the sustainability of the project delivery process and the operation of the building as well.

Compared to other countries usage of conventional procurement methods in Sri Lankan construction industry is greater than the practice of alternative procurement methods. Shiyamani *et al.* (2005) stated that, the current review of the trends of project procurement systems used in Sri Lanka disclose that the Measure and Pay is the popular procurement method followed by Design and Build. Consequently the usage of alternative procurement system is underprivileged compared to other developing countries. Government, being the largest client and the regulator of the industry, is often thought of having significantly influenced the selection of procurement methods. If this is in fact true, it would be undesirable because various procurement methods have been developed to fulfil varying requirements of project stakeholders. Therefore, a research is a study was imitated to explore whether the government policies and regulations hinder adoption of alternative procurement methods. This paper presents its initial findings through a literature synthesis.

2. INTRODUCTION TO PROCUREMENT SYSTEMS

According to Wibowo (2010) construction industry contributes significantly in terms of scale and share in the development process for both developed and developing countries. The construction

* Corresponding Author: e-mail - chamalwijewardana@gmail.com

products provide the necessary public infrastructure and private physical structures for many productive activities such as services, commerce, utilities and other industries. Moreover Oyegoke *et al.* (2009) stated that construction project is a complex process that involves many stakeholders, long project durations and complex contractual relationships. Hence adopting a congruent procurement method will achieve the success of a construction project.

Dewage (2009) simply defines the procedure adopted to procure construction work is regarded as the procurement method of any construction project. Rashid *et al.* (2006) contended that, “The procurement of construction project is vast in scope since it involves the gathering and organizing of myriads of separate individuals, firms and companies to design manage and build construction products, building constructions and civil constructions”. In recent years construction procurement has been subject to considerable transformation from lowest cost to best value procurement and a revised agenda for delivering broader policy goals related to social and environmental sustainability (Oyegoke *et al.*, 2009). Tookey *et al.* (2001) stated that procurement is, therefore, a succession of 'calculated risks'. Current research considers procurement as a set of rationalistic decisions within a closed environment, aiming to produce generic, prescriptive rules for clients and advisers to use to select the 'best' procurement route for their project. They further stated that reducing procurement risk can be done through better procurement-system.

Moreover Mathonsi and Thawala (2012) argued that, “Procurement systems are vital in ensuring the successful implementation of a construction project, precisely executed for all phases of any particular project”.

Due to the various needs of clients different procurement methods are introduced. As Dewage (2009) stated, the well known main procurement methods that have been used at the present time in the construction industry are traditional method, design and Build method, management contracting method and construction Management method.

2.1. CONSTRUCTION PROCUREMENT SYSTEMS USABLE IN SRI LANKA

Separated Procurement Systems

In this method there is clear rigid separation of design and the construction. Normally in this method construction started after the design is completed. In this method client first appoint a consultant to do the design. After designing is fully completed tendering procedure is being held and a contractor is selected to carry out the project (Ashworth, 1996).

Integrated Procurement Systems

In an integrated system the design and the construction clearly integrated each other. In this method normally construction started while the design is ongoing. The contractor enters into separate agreements with consultants, to complete the project according to agreement.

- Design and Build – Here it is contractor’s responsibility to do the construction as well as the full design according to the requirements of the client. This method is very popular when a competitive design wanted (Ashworth, 1996).
- Package deal – This is used only in special type of design build project where the employer chooses a suitable design from a given catalogue (Ashworth, 1996).
- Turn Key – In a turnkey project contractor provides all the necessary resources required to carry out the project, including the design, construction as well as the finance (Bagnall, 1999).
- Develop & Construct - Consultants appointed to design the building to a certain stage and then constructors complete and guarantee the design and competition, either using client’s consultants or their own designers (Seeley, 1997).

- Private Finance Initiative (PFI) – A system whereby the private sector (usually as a consortium) undertakes to finance the total procurement process on behalf of the public sector, payment being delayed until the project is complete and ready for occupation at handover (Bagnall, 1999).

Management Oriented Systems

The major difference in this system is, adding a new separate management layer in to the design and construction. In this procuring system all the managing functions are carried out by that management layer. This is a good improvement of the separated model (Rameezdeen and De Silva, 2002).

- Management Contracting – An expert builder is appointed on a fee basis well before work starts on the site to advise the design team (Potter, 1995).
- Construction Management – A construction expert is appointed early on, for a fee, to manage the construction process (Potter, 1995).

Collaborative Systems

The basic principle of these systems is the collaboration between two or more parties to achieve successful project objectives through fair dealings, commitment and shared investment (Bagnall, 1999). Partnering is one of possible collaborative system.

- Partnering - Partnering is a technique, which attempt to create an effective project management process between two or more organizations. It aims at generating an organizational environment of trust, open communication and employee involvement and whereby quality and efficiency are continuously improved and both parties derive economic advantage (Bagnall, 1999).
- Joint Venture - The unusual step beyond partnering is the joint venture contract between a major client and providers of the facility; perhaps where co operation is vital. A 51% majority shareholding in the joint company or undertaking provides controlling ownership for one of the partners however depending on the circumstances other proportions are possible (Harris and McCaffer, 2001).

3. PROCUREMENT METHODS PRACTICE IN SRI LANKAN CONSTRUCTION INDUSTRY

The studies of Joseph and Jayasena (2008) shows that some researches shown that in Sri Lanka the traditional procurement system is dominating the procurement market over the years and Design and Build procurement system use as next alternative option among alternative procurement systems however less in practice. What they had synthesized from the contemporary literature is given in Table 1.

Table 1: Trend in methods of procurement in Sri Lanka (source: Joseph and Jayasena, 2008)

% of use(Average) Procurement system	1977-1981	1982-1986	1987-1991	1992-1996	1997-2000	2001-2003
Measure and pay	55	50	58	50	64	72
Lump sum	12	10	8	7	10	5
Prime cost	10	8	5	4	3	1
Design and build	22	31	28	35	21	22
Management contracting	1	1	1	1	1	0
Joint venture	0	0	0	3	1	0
Total	100	100	100	100	100	100

By using the information in Table 1, procurement methods adopted in Sri Lankan construction projects can be categorized as common and uncommon procurement methods practiced in Sri Lankan context as shown in Figure 1.

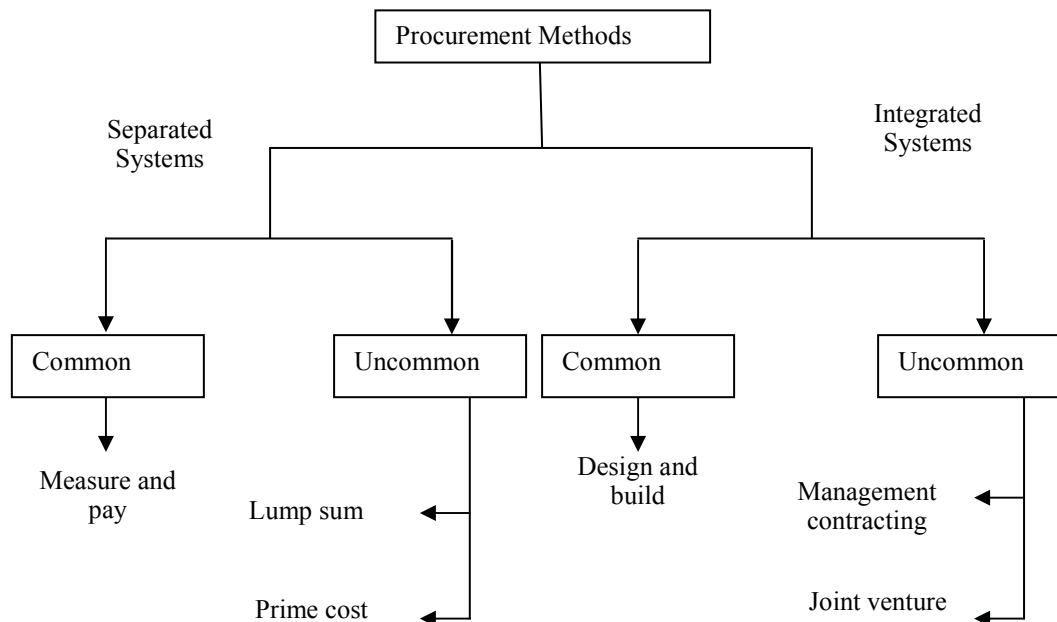


Figure 1: Categorization of Construction Procurement Methods in Sri Lanka

According to Ratnasabapathy and Rameezdeen (2007), in order to assort a condign procurement system, there is a need to distinguish various factors from the internal and external environment in the operational area of the project and industry. Eventhough the majority of public works in Sri Lanka is procured using measure and pay system. There is a reluctance of the public sector to use other non-traditional procurement methods.

4. NEED OF HAVING MANY PROCUREMENT METHODS

Ratnasabapathy and Rameezdeen (2007) reported that, different procurement systems are used for different projects and the precise choice may help to avoid problems and be the key to the attainment of project specific goals. Tookey *et al.* (2001) stated that in today there are number of different types of procurement routes available for clients to choose from which has their own proponents and inherent strengths and weaknesses. Therefore a choosing procurement method is very crucial in construction project. To satisfy the requirement of time completion on time or earlier a plethora of non traditional procurement methods have emerged in the marketplace, which has resulted in design and construction schedules being compressed and construction commencing before the final design is complete (Hanna *et al.* 1999).

Therefore there should be different procurement methods existing to choose the proper one for particular project. According to Love *et al.* (2008) choosing the appropriate procurement system for construction projects is a complex and challenging task for clients particularly when professional advice has not been sought. Eriksson and Westerberg (2010) reported that in recent years there has been an increasing interest in world about the use of partnering in order to improve collaboration among construction project actors. The value that lies in having this model tested is potentially great as the construction literature has many indications that cooperation and collaboration may be a good strategy for achieving project success.

5. FACILITATORS AND BARRIERS FOR ADOPTING NEW PROCUREMENT METHOD.

Selecting a procurement method is a daunting task for the client due to various factors governing a construction project. The most common criteria influencing the choice of procurement method include time, controllable variation, complexity, quality level, price certainty, competition, responsibility, risk avoidance, price completion, government policy and client's familiarity in a procurement method (Hashim *et al.*, 2006). Figure 2 outlines the process of selecting best procurement method for a project while Table 2 identifies the facilitators and barriers for each procurement method

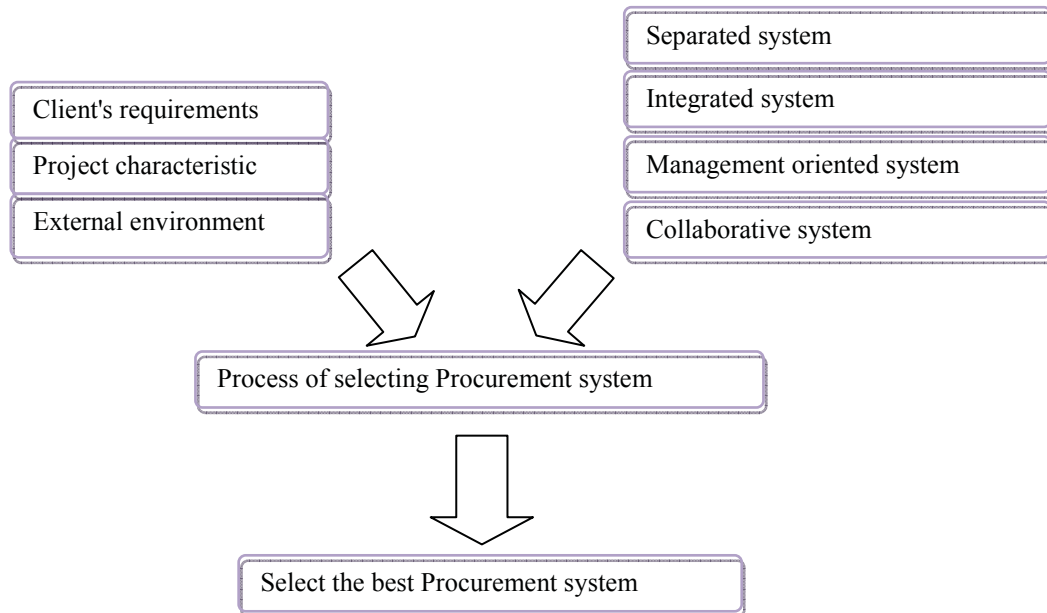


Figure 2: Selection of Best Procurement Method (Source: Ratnasabapathy and Rameezdeen, (2007)

“Non-traditional methods such as design and build and construction management have been advocated as methods for overcoming some of the problems inherent in traditional methods however yet it would appear from these findings that their use is minimal” (Love, 2002).

6. GOVERNMENT ROLE IN CONSTRUCTION INDUSTRY

6.1. MAJOR CLIENT AND REGULATORY BODY IN CONSTRUCTION INDUSTRY

Ofori (1990) specified that, the government is an important participant in the construction industry of every country, playing the role of a major client, regulating authority and the administrator of the development of the industry. Government policies and regulations are very rigid external factors which affect to the construction procurement selection. Hence Hashim *et al.* (2006) argued that, client's choice of procurement method could be affected by various government policies. This could be seen where the clients have to follow government procedure in choosing a particular procurement rout to construction project.

6.2. INFLUENCE OF GOVERNMENT ON PROCURING CONSTRUCTION PROJECT

Rameezdeen and De Silva (2002) critique that, in Sri Lanka, the majorities of public works are procured using measure and pay system. Furthermore Rameezdeen and De Silva (2002) stated that the above reluctance is due to the bureaucratic barrier created by financial regulations and administration regulations of the country.

Joseph and Jayasena (2008) reported that Government contribution in promoting Design and Build in Sri Lanka is very less state that is the number one reason. Very less contribution is given by the Ministry of Finance to the development of Design and Build procurement system as a regulatory body of Sri Lanka. It is found that the very less government contribution in developing Design and Build is the first most significant impediment to the development of Design and Build procurement system in Sri Lanka. In Sri Lankan context, the traditional procurement system is widely used for both private and public projects up to now, since the government and regulatory bodies promoting the traditional procurement method and widely use in public project procurement.

Table 2: Facilitators and Barriers Procurement Systems (Sources: APUC Guidelines, 2008; Love, 2002; Kumaraswamy and Dulaimi, 2001; Joseph and Jayasena, 2008)

Procurement system	Facilitators	Barriers
Separated systems	Client can control and maintain quality and specifications. Cost certainty. Direct contractual relationship with consultants and main contractor. Standard contract conditions available.	Clients' risk is high. Restrict cost controlling during construction works. Longer time scale.
Integrated systems	Shorter time scale. Clients' risk is low. Cost certainty. Standard contract conditions available.	Client is not allowed to do changes in designs. Clients' requirements are fully detailed before signing the contract. Support with negotiated tendering.
Management oriented systems	Client has the fully control of time. Shorter time scale. Client can manage controllable variations.	Client risk is high. No cost certainty. Lack of standard contract conditions.
Collaborative systems	Win win method. Suit for large scale projects.	Lack of standard contract conditions. Lack of awareness in construction industry.

6.3. INFLUENCE OF GOVERNMENT ON CONSTRUCTION PROCUREMENT IN SRI LANKAN CONTEXT

In every country construction contractors are subjected to different standards set by government institutions. In Sri Lanka all contracting firms require a licence to legally perform in the industry. National Construction Association of Sri Lanka (NCASL) and Institute of Construction Training And Development (ICTAD) are the institutions who formulate standards for the construction industry. (Dheeran, 2009)

Government policies and regulations are very rigid external factors which affect to the construction procurement selection. Rameezdeen and De Silva (2002) critique that, In Sri Lanka, the majorities of public works are procured using measure and pay system. Furthermore Rameezdeen and De Silva

(2002) stated that the above reluctance is due to the bureaucratic barrier created by financial regulations and administration regulations of the country.

Joseph and Jayasena (2008) reported that Government contribution in promoting Design and Build in Sri Lanka is very less state that is the number one reason. Very less contribution is given by the Ministry of Finance to the development of Design and Build procurement system as a regulatory body of Sri Lanka. It is found that the very less government contribution in developing Design and Build is the first most significant impediment to the development of Design and Build procurement system in Sri Lanka. In Sri Lankan context, the traditional procurement system is widely used for both private and public projects up to now, since the government and regulatory bodies promoting the traditional procurement method and widely use in public project procurement.

6.4. EFFORT FROM REGULATORY BODIES IN SRI LANKA ON CONSTRUCTION PROCUREMENT

The National Procurement Agency (NPA) is the principal authority for formulating and effecting amendments to these Guidelines; issuance of manuals, SBDs, evaluation methodologies, standard contracts, and specifications. Any clarification of the provisions of these Guidelines or the aforementioned documents may be sought from the NPA. (NPA guidelines, 2006)

According to Rameezdeen and De Silva (2002) Economic growth has favoured some of the alternative methods to emerge in Sri Lanka. Design and Build is one such method developed mainly due to the industrial growth of the country. The dominance of separated procurement systems in Sri Lanka because to government influence on the construction industry of Sri Lanka. Moreover the government as a major client and the regulator neglected and created a barrier for the development of alternative procurement methods. The construction regulatory agency in Sri Lanka, the Institute for Construction Training and Development (ICTAD) has only considered measure and pay until recently in developing guidelines for the industry. Very little effort was made by the ICTAD to promote other procurement methods in Sri Lanka. Only in 2001 ICTAD published a guideline called "Standard Bidding Document for Procurement of Works Design and Build Contracts". This is the first guideline to be published by the ICTAD for an alternative procurement arrangement. This has further strengthened the hold of measure and pay as the dominant procurement method in Sri Lanka.

Government is a major external party which influences the construction industry of any country. Therefore it is obvious that there is a reluctant in practice of alternative procurement methods in Sri Lankan context and there is an influence of government when adopting alternative procurement methods.

7. CONCLUSIONS

In Sri Lankan construction industry few number of procurement methods are used. Even though there are many problems occurred with conventional procurement methods, alternative procurement methods are hardly appeared in Sri Lankan context. According to literature, Government of every country plays an important and major role in construction industry as the major client and the major regulating authority. As a major regulating authority government has introduced polices and regulations which affected to the construction industry. Therefore, government policies and regulations on construction industry are likely to significantly affect the adoption of alternative procurement methods.

8. REFERENCE

- Advanced procurement for universities and colleges (APUC), 2008. *Guide to Procuring Construction Projects*. London:s.n.
- Ashworth, A., 1996. *Contractual procedures in the construction industry*. 3rd ed. England: Wesley Longman Ltd.
- Bagnall, 1999. *Tenders and contracts for building*. 3rd ed. United Kingdom: Blackwell science Ltd.

- Dewage, D. Y. J., 2009. Criterion in choosing a procurement method.
- Dheeran, K. U. 2009. *A Quantitative analysis of the impacts of Government Economic Policies on the Performance of the Construction Industry*. University of Moratuwa, Sri Lanka.
- Eriksson P. and Westerberg M., 2010. *Effects of procurement on construction project performance*. Division of Entrepreneurship and Industrial Organisation, Lulea University of Technology, Sweden.
- Hanna, A., Russell, J. S., Gotzin, T. W. and Nordheim, E. V., 1999. Impact of change orders on the labor efficiency for mechanical contractors. *Construction and Engineering Management*, 125(3),176–184.
- Harris, F. and McCaffer, R., 2001. *Modern construction management*. 5th ed. United Kingdom: Blackwell science Ltd.
- Hashim M., Yuet M.C., Yin N.C., Hooi N.S., Heng S.M. and Yong T.L., 2006. Factors influencing the selection of procurement systems by clients. *International Conference on Construction Industry*, 21st June – 25th June 2006 Padang, Indonesia.
- Joseph, A. L. and Jayasena H. S., 2008. Impediments to the Development of Design and Build Procurement System in Sri Lanka. In proceedings of the CIB International Conference on Building Education and Research, Heritance Kandalama, Sri Lanka. 286-287
- Kumaraswamy, M., and Dulaimi, M. 2001. Empowering innovative improvements through creative construction procurement. *Engineering, Construction and Architectural Management*, 8(5), 325 – 334.
- Love E.D., Davis P.R., Edwards D.J. and Baccharini D., 2008. Uncertainty avoidance: public sector clients and procurement selection, 21(7),753-776.
- Love, P.E.D. 2002. Influence of Project Type and Procurement Method on Rework Costs in Building Construction Projects. *Journal of Construction Engineering and Management*, 128(1), 18.
- Mathonsi, M. D. and Thwala, W. D., 2012. Factors influencing the selection of procurement systems in the South African construction industry. *African Journal of Business Management*, 6(10),3583-3594.
- National procurement agency(NPA), 2006. *Procurement guidelines*. Colombo:Department of government printing,.
- Ofori, G.,1990. *The construction industry: aspects of its economics and management*. Singapore: Singapore University Press.
- Oyegoke, A. S., Dickinson, M., Khalfan, M. M. A., McDermott, P. and Rowlinson S., 2009. Construction project procurement routes: an in-depth critique. *International Journal of Managing Projects in Business*, 2(3),338 – 354.
- Potter, M., 1995. *Planning to build*. London: Construction industry research and information association.
- Rameezdeen, R and De Silva, S. 2002. Trends in construction procurement systems in Sri Lanka. *Built-environment-Sri Lanka*, 2(2), 2-9.
- Rashid, R. A., Taib, I. M., Ahmad, W. A. W., Nasid, M. A., Ali, W. N. W. and Zainordin, Z. M., 2006. *Effect of procurement systems on the performance of construction projects*. Department of Quantity Surveying, University of Teknologi, Malaysia.
- Ratnasabapathy, S. and Rameezdeen, R. 2007. A decision support system for the selection of best procurement system in construction. *Built Environment Sri Lanka*, 7(2),43-53.
- Seeley, I. H., 1997. *Quantity surveying practice*. 2nd ed. London: Macmillan press Ltd.
- Shiyamani, R., Rameezdeen, R. and Amaratunga, D., 2005. Macro analysis of construction procurement trends in Sri Lanka. In *Proceedings of the 5th International Postgraduate Conference in the Built and Human Environment*, 525-536
- Tookey J.E., Murray M., Hardcastle C. and Langford D., 2001. Construction procurement routes: re-defining the contours of construction procurement. *Engineering, Construction and Architectural Management*, 8(1), pp.20 – 30
- Wibowo, M. A., 2010. *The contribution of the construction industry to the economy of Indonesia: a systemic approach*. Civil Engineering Department, Diponegoro University, Indonesia.