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THE INFLUENCE OF PROCUREMENT METHODS ON DISPUTE RESOLUTION MECHANISM CHOICE IN CONSTRUCTION

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The success of major infrastructure projects is crucial to economic development. Clients' expectations that infrastructure projects will meet their objectives are however confronted by hackneyed construction and engineering challenges relating to cost overruns, delays, issues of quality and disputes. In dealing with major construction disputes, the focus has been on the promotion of the use of alternative resolution mechanisms. The discussions in the literature on the subject have, however, failed to align the procurement method with the parties' selection of dispute resolution mechanism in the event of disputes. The result of the failure has been cost in terms of resources and relationships. An understanding of the link between procurement methods and DRM will avoid situations where cooperating construction entities end up as adversaries mainly as a result of how disputes between them are resolved. This study reports on the preliminary phase of on-going research into the avoidance/ resolution of major infrastructure project disputes. Initial findings, based on a critical review of the literature and an analysis of DRM provisions in standard forms of contract, show that: (i) The standard contracts have virtually the same provisions on dispute resolution regardless of the procurement method: arbitration, adjudication/dispute board ; (ii) whilst there is ample evidence of the impact of choice of procurement method on project success generally, the literature on the relationship between procurement methods and dispute reduction and resolution is fragmented and of limited direct relevance. What research exists on the subject is primarily confined to an examination of the relationship between procurement methods and dispute frequencies. There are, however, indications from the literature of strong connection between choice of procurement methods and DRM. The implications of the initial findings for the design of the rest of the on-going study are examined.

Keywords: construction, dispute resolution mechanisms, procurement methods, project success, collaborative procurement.

INTRODUCTION

The emerging consensus on the relationship between infrastructure development and economic development points to a positive correlation between the two (Calderón and Servén 2010). The expectation that an infrastructure project will meet its objectives is however confronted by clichéd construction and engineering challenges relating to

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cost overruns, delays, issues of quality and disputes. Reports and research in the field have explored the impact of choice of procurement method on project success (Love *et al.* 1998; Franks 1998; Egan 1998; Morledge *et al.* 2006). However, information on the link between procurement methods and dispute reduction and resolution has been fragmented and generally dealt with as an ancillary issue (Critchlow 1998). There is a general lack of alignment of principles underlying DRM selection and procurement objectives and methods of the parties. An understanding of the link between these themes will avert situations where cooperating construction entities end up as adversaries mainly as a result of how disputes between them are resolved. The result of the failure is cost in terms of resources and relationships. In this paper, the relationships between procurement methods and disputes resolution mechanisms are explored with the aim of drawing attention to how decisions on each of the themes taken separately, without regard to the other, could result in less than satisfactory outcomes. Various standard form contracts are analysed to determine the extent to which parties' selection of DRM is influenced by the procurement methods they use.

As an initial step in an on-going study, a critical review of the literature is indispensable, hence the approach for this preliminary study. The paper begins with a brief outline of the existing procurement methods for construction and engineering works. This is followed by an examination of the impact of the various methods on disputes. Then there is a discussion on the relationship between procurement methods and DRM. The types of contracts used under the various procurement methods are briefly examined to assess the extent to which the link between procurement methods and DRM is reflected in construction agreements in practice. The implication of the findings from the literature on the rest of the research design is then discussed.

OUTLINE OF ENGINEERING AND CONSTRUCTION PROCUREMENT METHODS

Successful acquisition of a major infrastructure project, building or engineering, requires prior thorough preparation. Apart from the development of the project concept, the initial preparation will include the selection of appropriate organisation(s) or individuals for the procurement of the project. Procurement, in this context, has been defined as the process of acquiring new services or products and includes contract method, contract documentation and contractor selection (Bower, 2003). Love *et al.* (1998) regard procurement as an organisational system that identifies relationships and assigns responsibilities among key players in the construction process.

Various authors have provided their respective classifications of the available procurement methods. Masterman (2002) identifies three categories of procurement systems in respect of building projects; the separated and cooperative procurement systems, the integrated procurement systems and the management-orientated procurement systems. Each system has its variants. Negotiated contracts, two-stage tendering, continuity contracts, serial contracts and the cost-reimbursable contracts are variants under the separated and cooperative procurement category (Traditional Methods). Alternatives of the integrated system (Design and Build) include Package deals, design and construct and turnkey. The main methods under the management-orientated systems are management contracting, Design and Manage and Construction management. Franks (1998) identifies the designer-led competitive tender system (the traditional system), the designer-led construction managed for a fee (management contracting and construction management), Package deals (package deal turnkey;

design and build; design, build, finance and operate/private finance initiative) and Partnering as the main procurement routes for buildings. Morledge *et al.* (2006:108) have classified what they referred to as “commonly adopted basic procurement frameworks” into design-bid-build (traditional system), measurement, construction management, management contracting, and design and manage and design and build. Whilst most of the classifications outlined above relates to buildings, they are equally applicable to other construction and engineering works as well (Bower, 2003).

From the various classifications provided above, the following procurement methods can be identified: (i) the traditional methods; (ii) the integrated approaches; (iii) the management-orientated methods; and the collaborative/ relationship-based procurement methods (partnering, project alliancing and Private Financing Initiatives / Private-Public Partnerships). It is noted that there are divergent views on whether or not partnering is a procurement method. However, in this work, it has been treated under the collaborative methods due to its focus on enhancing team work and how that influences DRM selection. Each of the procurement methods outlined has its advantages and disadvantages in relation to project delivery generally and dispute occurrence and selection of resolution mechanisms in particular. As explained in the next section, evidence from the available literature points to a relationship between the use of particular procurement methods and dispute frequencies.

PROCUREMENT METHODS AND DISPUTE OCCURRENCE

Previous research on causes of conflicts and disputes in the construction industry are varied, and the findings well rehearsed (Fenn *et al.* 1998; Kumaraswamy 1998; Love *et al.* 2010). Several factors have been identified by the literature on construction as causes of disputes including failure to meet the clients’ primary objectives in relation to cost, time and quality. However, project disputes are, to some extent, the consequence of how projects are procured. Conlin *et al.* (1996) have found that there is a correlation between the types of procurement method used and the types and frequencies of disputes. Studying procurement methods in use by private, public and local authority clients in the UK, the authors found that projects which utilized the traditional procurement method experienced higher conflicts in budget and payment issues, performance issues, delay and time related matters and in negligence (Conlin *et al.* 1996).

Reasons for the higher number of disputes found in projects where the traditional procurement method is used are traceable to the key features of the procurement method. These include fragmentation (Latham 1994), price competition (Bourn 2001), poor communication, and the sequential process which results in delays (Morledge *et al.* 2006). The issue of fragmentation associated with the traditional procurement method is not limited to the construction process. There is also fragmentation of the client-project team relationship. Designers and contractors are employed separately both in time and space. The relationship between them is often based on suspicion (Ndekugri and Turner 1994). Each entity - client, design consultant or contractor - promotes its interest without much regard for the interest of the others in the transaction. The results are poor communication, confrontation and adversarialism (Latham 1994; Masterman 2002). Masterman (2002) opines, that designs, under the traditional method, are hardly explicit enough to provide accurate bills of quantities, hence the inevitability of excessive variations, a well-known cause of construction disputes (Semple *et al.* 1994; Bourn 2001). A survey conducted in Malaysia, involving one hundred and fifty construction practitioners, on the relationship between

procurement methods and disputes also revealed that dispute frequencies are higher in traditionally procured projects than in projects where other methods have been used (Yusof *et al.* 2011).

Research on the effect of the use of other procurement methods such as design and build has pointed to reduction in disputes. Ndekugri & Turner (1994) reported a survey of contractors, designers and building clients on design and build issues. One of the findings indicated that the use of design and build procurement method leads to a reduction in disputes. The authors reported that the few disputes encountered by design and build projects related to abortive work, inaccuracies in client's brief, conflict between the brief and the contractor's proposals and valuation of variations. Conlin *et al.* (1996) also found that design and build disputes were few as compared to disputes arising from projects where traditional procurement methods have been used. Design and build disputes were primarily quality related.

As is the case with traditional procurement methods, the review received by design and build as a procurement method in relation to disputes stems from its characteristics. Ndekugri and Turner (1994) set out to test what, at the time, was regarded merely as a popular belief; that is, the fact that design and build carried less risk of arbitration and litigation because the contractor is responsible for all matters of design and construction, including issues of functionality and fitness for purpose. Seventy-nine percent (79%) of contractors, eighty-nine percent (89%) of clients and eighty-six percent (86%) of architects, agreed to the assertion that the very characteristics of design and build procurement reduces risks of disputes, subject to conditions such as clarity of client's brief and the contractor's proposals and avoidance of variation. The philosophy underpinning this procurement method promotes integration of processes and project team members. Though the client/supplier relationship still remains, the single point responsibility arrangement between the client and the contractor reduces the contending interests to just two; that of the client and the contractor.

Procurement methods and procedures which emphasize collaboration not just within the project team but also between the client and the project team exhibit even more awareness of the correlation between such methods and disputes. Some definitions of partnering, for example, view the process as a useful mechanism for dispute avoidance and resolution. Cowan, one of the key progenitors and promoters of partnering, defines partnering as a process which enhances cooperation in contract management with the view to reduce stress, litigation and cost (Cowan 1991; Cowan *et al.* 1992; Li *et al.* 2000; Crowley and Karim 1995). Under partnering, adversarial and confrontational relationships give way to collaboration and cooperation not just among project team members but also between client and the team (Bower 2003; Stehbens *et al.* 1999). Communication is enhanced, goals and interests are shared (Morledge *et al.* 2006). The change in attitudes and the emphasis on trust and good faith in partnering arrangements are the drivers in its dispute prevention scheme. It is the case that every partnership arrangement will often include dispute escalation provisions which determine how disputes are to be resolved promptly and speedily (Seddon 1999). Beyond this, most partnering arrangements will include other alternative DRM such as mediation and conciliation (Critchlow 1998).

Recent assessment of partnering as a method aimed at construction dispute reduction and resolution has questioned its viability as a mechanism for dealing with disputes (Hinchey 2012). Project alliancing and integrated project delivery systems (used in the

USA) have been found to be more effective in dispute reduction and resolution. Hinchey (2012) argues that this is as a result of the fact that these procurement strategies seek to align the objectives and interests of project parties in an enforceable contractual arrangement and also result in the project owner bearing virtually all risks on the project. The collaborative procurement method adopted for the Heathrow Terminal 5 Project and the consequent drastic reduction in disputes still remains an example of how choice of a procurement method can impact dispute reduction and resolution (Deakin and Koukiadaki 2008).

RELATIONSHIP BETWEEN PROCUREMENT METHODS AND SELECTION OF DRM

The selection of dispute resolution mechanism is a discretionary act by parties to a contract. It is therefore difficult to state with certainty what considerations may inform the choice of a particular mechanism over others. However, it is also the case that procurement method has a bearing on what dispute resolution mechanism will attract the most attention of parties to a construction project. By examining the procurement method employed on a project and the kind of relationships that the method engenders or envisages among participants, one can get a sense of the kinds of DRM the parties ought to incorporate into the agreement or activate when there is a dispute. As shown by Figure 1 below, the procurement methods exist on a continuum ranging from those with most fragmented relationships, goals and interests (the Traditional Methods -TM) to those which are based on collaborative relationships in terms of collective promotion and safeguarding of the objectives and interests of all parties and shared goals (the Collaborative Methods -CM). In between are the Management Methods (MM) where a third party or parties hold fragmented relations together and the Integrated Methods (IM) where though client and team are separated, members of the latter are integrated with shared goals and objectives.

Fragmented relationships, separate goals and interests and competition breed confrontation and adversarialism. Each party is likely to insist on its rights and exploit the weaknesses of the other as much as possible. Parties involved in projects where such conditions exist are likely to seek right-based DRM at the earliest opportunity. On the other hand, where the parties to a project have shared goals, interests, objectives, risks and rewards, the relationship becomes one of interdependence and the intermeshing of interests is often of an intensity sufficient to make the parties willing to collaborate to resolve disputes (Fuller, 1971). The kind of relationship that exists between parties to a dispute and the extent to which parties' objectives and interests concur should, therefore, be key determinants of the kind of dispute resolution mechanism which the parties use.

Figure 1 illustrates the connection between the various procurement methods and the likely DRM to be employed. Projects executed under the traditional procurement methods naturally, will employ adversarial mechanisms such as litigation, arbitration and mediation as the means of resolving disputes even at the very inception of the disputes. This is due to the competitive, fragmented and confrontational relationships that the method promotes. Alternatively, the shared goals, interdependence and collaboration which undergird the collaborative methods should necessarily signify a propensity to negotiate solutions for emerging disputes. As discussed below, the linkage between procurement methods and DRM is not often reflected, in reality, in the contract types.

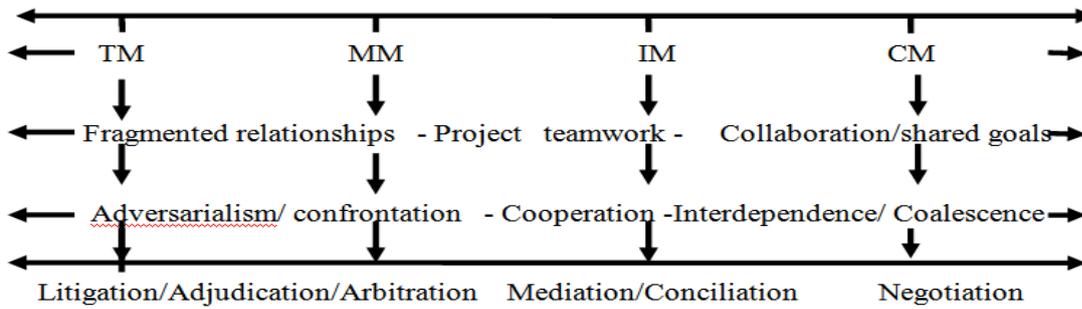


Figure 1: Procurement Methods and DRM: A Conceptual Model of their relationships

Keys: TM-Traditional Methods; MM-Management Methods; IM-Integrated Methods; and CM- Collaborative Methods.

PROCUREMENT METHODS, CONTRACT TYPES AND DRM

The use of standard forms, with necessary modifications to suit specific projects, is the norm in the construction and engineering industry. Apart from regulating key issues affecting the project such as responsibility of the parties, costs of project, time, quality, risk distribution, performance etc., the standard forms also provide information on how disputes are to be resolved. Traditional procurement contracts often contain resolution mechanisms which emphasize right-based adversarial approaches. Almost all the traditional procurement contracts in the UK provide for adjudication, arbitration and litigation as the primary resolution mechanisms. JCT Standard Building Contract, 2005, GC/Works/1 With Quantities (1998) and the NEC Engineering and Construction Contract Third Edition, for example, provide for adjudication, arbitration and litigation as the DRM available to parties.

Two main reasons may account for this. The first is the widespread adversarial culture which still prevails in the industry in spite of the several efforts to reform. The second reason is the intervention by the Housing Grants, Construction and Regeneration Act, 1996 (HGCR Act) as amended by Part 8 of the Local Democracy, Economic Development and Construction Act 2009 (LDEDC Act). Deriving from the recommendations contained in the Latham Report, 1994, the HGCR Act and the LDEDC Act require all construction contracts under their scope to include provisions on parties' right to adjudication, failing which such statutory rights shall be implied. These statutory interventions have made adjudication the most used dispute resolution mechanism in the UK today. Contracts such as JCT Major Project Construction Contract, 2005 Edition and the ICE Conditions of Contract Measurement version Seventh Edition (1999) which may be used for projects which are traditionally procured, recommend conciliation and mediation in addition to adjudication, arbitration and litigation because they are also suitable for use in transactions procured through methods other than the traditional methods (Clamp *et al.* 2007).

The design and build and the management contracts are equally dominated by adjudication, arbitration and litigation as the main DRM, with a few others such as the ICE Design and Construct Conditions of Contract Second Edition (2001) including conciliation and mediation as options. The choice of adversarial mechanisms to resolve disputes in integrated or management-orientated procurement contracts is not surprising for two reasons; firstly, these procurement methods have evolved within an overwhelmingly adversarial culture; and secondly, the procurement methods do not focus on building cooperation and trust or advocating cultural changes as does partnering or alliancing, for example.

Some standard forms on partnering, unlike those related to the traditional, integrated and management procurement methods emphasize a clear preference for non-adversarial methods of dispute resolution. The ACA Standard Form of Contract for Project Partnering PPC2000 is one such example. This standard form is the first to merge conventional contracts and the partnering agreement (which, on its own, is non-binding); it is unlike the NEC3 Partnering Option X12 which keeps the Partnering arrangements as an optional document which may be incorporated into the main NEC3 Contract (Clamp *et al.* 2007). The PPC 2000 provides a problem-solving hierarchy which starts with the Client's representative and "escalates" rapidly to the Core Partnering Group, a conciliator or a mediator or any other form of alternative dispute resolution mechanism agreed by the parties if the problem remains unresolved. The parties' rights to adjudication under the HGCR Act and LDEDC Act are preserved. In extreme situations where problems remain unresolved after all the above options, the parties may consider arbitration and litigation as the final means of determining the dispute. The use of the multi-tiered dispute resolution mechanism ensures that relationship – based approaches to resolving disputes are exhausted prior to the use of any adversarial mechanism. The use of an adversarial resolution method may invariably be linked to a deterioration of relationship between the partners.

It has been said that the main focus of partnering is not dispute reduction or resolution (Barlow *et al.* 1997; Critchlow 1998). However, it is logical to posit that the use of non-adversarial mechanisms to resolve dispute is a natural consequence of a collaborative and interdependent relationship such of the nature of partnering. As the adversarial and confrontational relationships and culture give way to a more cooperative and collaborative culture, so will the quest to settle disputes by adversarial means within the construction industry reduce.

Although the literature gives an indication of a strong link between procurement methods and DRM, the standard contracts (which reflect current practice), on the whole, have virtually the same provisions on dispute resolution regardless of the procurement method: arbitration and adjudication/dispute board. They do not reflect the wide range of ADR methods available. However, nothing stops the parties from incorporating or using mediation or other ADR techniques not mentioned in the Standard form contracts. Indeed, one would expect parties to collaboratively procured projects to do this. Consequently, the matters that will be investigated in the study include the extent of use of ADR methods and reasons for non-use. The foregoing finding and the issues raised have implications for the design of the research as next discussed.

RESEARCH DESIGN

The qualitative research approach is best suited for this kind of research for several reasons. Firstly, the subject-matter of the research- dispute resolution- is a social phenomenon which occurs in a real world setting. Secondly, the views of participants in construction projects are crucial to our understanding of the extent of use of ADR methods and barriers to their use. Thirdly, the appropriate instruments required in studying complex human interactions such as those exhibited during project delivery and selection of DRM must be those which offer some flexibility in terms of administration on the field. This statement accords with the social constructivists or the interpretivist view of research (Berger and Luckmann 1967; Lincoln and Guba 2000). Most of the major treatises on research design, such as the Handbook of Qualitative Research (Denzin and Lincoln 2005), point towards a qualitative research

approach being most appropriate for research with the types of features outlined above.

Finally, the very questions that this enquiry is to explore are the types best suited for qualitative research. Questions to be examined at the next stage of the research include; (i) how often do parties attempt resolution with methods other than the contractual ones? (ii) what are the barriers to the use of suitable DRM not stipulated in the contract and how can these obstacles be countered? (iii) What impact do these choices have on dispute resolution and relationships between the parties? These questions seek, among other things, an in-depth understanding of the extent to which parties use DRMs other than those agreed at the contract formation stage and what impact such choices have on the relationships of the parties. Although qualitative research offers various approaches for data collection and analysis such as ethnography, phenomenology, grounded theory (Corbin *et al.* 2008), the biographical method and narrative research (Creswell 2009) a qualitative case study seems the most appropriate for the questions outlined above (Yin 2009; Stake in Denzin & Lincoln 1998; Flick 2006). Yin argues that case study research is useful where the aim of the research, among other things, is to explain, explore, or describe an intervention in its natural setting. He states further that in making a choice between case study and other social science strategies, consideration should be given to the research questions to be investigated and the type of study envisaged. If the enquiry is about “how” and “why” some social phenomenon works, and extensive and in-depth study envisaged, then case study will be a good choice of strategy. This type of study raises a number of challenges; sample or case(s) selection, the theoretical implications of a context-based study, issues of verification and generalizability (Eckstein 1975; Achen & Snidal 1989; Flyvbjerg 2006; Gerring 2007; Collier and Mahoney 1996; Stake 1995; Seawright and Gerring 2008; Yin 2009). It is expected that this research will examine these challenges and their impact on the plausibility of the research design envisaged.

CONCLUSION

The literature reviewed confirms the impact of procurement methods on dispute frequency and the selection of DRM. Some key conclusions deducible from the above discussions are as follows. Firstly, every construction project has the potential to encounter disputes regardless of the procurement method used. Secondly, mechanisms outlined to deal with such disputes are often not selected with the principles undergirding the relationship created by the procurement method in mind. Indeed, an analysis of standard form contract provisions on dispute resolution reveals that arbitration, adjudication/dispute board - essentially binding ADR methods- are the main DRMs often outlined regardless of the procurement method used. Paying attention to the link between procurement methods and DRM will see parties making use not only of the binding DRMs but also the non-binding types. Parties to projects, particularly those which are collaboratively procured, have no reason not to consider the use of other DRMs not incorporated into their contracts. The literature is however silent on the extent to which parties are utilising these non-binding DRMs and the reason why these DRMs may not be enjoying similar patronage as the others such as adjudication and dispute boards. In order to explore these issues comprehensively, a qualitative research approach is adopted. The choice of this approach for the rest of the research stems from the contemporary character of the subject matter, the fact that it is based in a natural setting and the kind of questions to be investigated. A qualitative case study is thus the appropriate method of enquiry going forward

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