

# Procurement of subcontract packages



**Purpose**

The aim of this paper is to investigate how Main Contractor procurement procedures influence value on a project through competitively tendering Sub Contract packages; whereby cost is driven down by competition or single sourcing Sub Contract packages creating value through negotiation and innovation.

**Design/Methodology/Approach**

Empirical data was collected through structured questionnaires issued to Sub Contract companies and Main Contractor firms.

**1. 0 Introduction****1. 1 Background – What the Study is about**

When considering the procurement of a Sub-Contract package, the procurer is faced with numerous challenges. First he/she needs to gather all information required to decipher what needs to be procured and how the information can be transposed to potential Sub-Contractors. Secondly a contractual agreement is created including obligations and methods of compensation. Thirdly, the procurer needs to decide how to award the procurement contract between the Sub-Contractors, either through competitive tendering or single source negotiation. Ultimately the award method should result in the selection of a highly competent and desirable Sub-Contractor resulting in a cost effective product.

The award method may be appointed to Sub-Contractors in two ways. Either a single Sub-Contractor can be approached to discuss and agree the works

(single source tendering), or a number of Sub-Contractors can be invited to compete for it (competitive tendering).

With regards to competitive tendering it is important to distinguish the method or form of competition from the criteria used for the selection of Sub-Contractors. Ciria (1994, p15) states that competition may be either:

Open, where there is no limit on the number of Sub-Contractors invited to compete for work.

Or

Selective or restricted, where the number of Sub-Contractors invited to compete is limited.

For the purpose of this study open competitive tendering will not be taken into consideration to keep the number of variables to a constant. Where competition is referenced throughout the paper we are to assume selective or restricted competition.

## **1. 2 Research Focus**

This paper address's the potential increase of project value generated by detailing a partnering approach based on Sub-Contractor and Main Contractor relationship's; compared to that of traditional competitive tendering. Competitive tendering can be described as determining the value of the subcontract; whereas in contrast, negotiation is designed to create the value of the subcontract.

Since the Latham Report (1994) and Egan (1998) was published there has been a greater awareness regarding the possible benefits to single source a product or service. In theory if contractors and subcontractors engage and work together would it provide best value? Alternatively would value be added by competition? Competitive tendering is still widely recognised as an attractive procurement mechanism and is strongly advocated as it helps to stimulate and promote competition encouraging many potential suppliers.

This subject area has been addressed due to its close relationship with the Quantity Surveying profession. Accurate procuring of goods and services is essential to a projects success, having a direct impact on profit margins. This study is relevant to everyday work for a site based Quantity Surveyor dealing with nominated Sub-Contractors on a daily basis while working closely with the procurement team to procure future packages. Interest has motivated the investigation and address of the thesis question;

“ Single source or competitive tendering; which procurement route gives best value?”

### **1.3 Overall Research Aim and Individual Research Objectives**

The overall aim of this research is to advance an understanding of the impacts that tendering Sub-Contract packages through negotiation or competition have on a projects value. However, in order to understand tendering methods and its effects on value it is felt necessary to gain an insight into the forces driving Sub-Contractor and Main Contractor relationships and explore the barriers to implementation of both parties achieving maximum value. Further, this research will assess existing

practices, exploring the experiences and views of professionals involved with Sub-Contract procurement. In turn two main research vehicles will be exploited to facilitate this study: an in depth review of relevant literature and the collection of and analysis of empirical data. The chapter entitled Methodology contains the details of both research strategy and data collection techniques to be used to obtain empirical data. Specifically, a range of objectives have been developed and unpacked from the central question, the objectives of this research are to:

- Identify and investigate the forces driving single source and competitive tendering procurement routes.
- Evaluate critically the construction industries current views and opinions, compiling the attitudes of the experts.
- Explore and evaluate the advantages and disadvantages for each method of procurement.
- Formulate and propose recommendations on the procurement route that provides more value to a construction project.

#### **1. 4 Value of this research**

At the risk of oversimplification of the purpose and value of each of the above objectives, objective 1 focuses on methods, reasons and emerging issues. Whereas it is in objectives 2, 3 and 4 is where this research will make key contributions to the field of Sub-Contract package procurement through single sourcing or competitive tendering. Each of the objectives must not be viewed as separate, unrelated issues. The listed objectives are necessarily interlinked. The first objective – on investigating procurement routes – will cover the strategic drivers and methods associated with the procurement of

Sub-Contract packages. For example, it will, in effect, attempt to answer the question ‘are there forces driving companies to procure Sub-Contract packages in certain ways and, if so, what are they and what do they involve?’ An example of such driver could be perceived as communication, which if the case, may act as a driver to encourage negotiation through single sourcing Sub-Contractors. Objective 2 – on critically analysing the construction industries views – provides an opportunity to gain meaningful insight into the views of professional staff, and management from Sub-Contractor and Main Contractor backgrounds, on what would encourage them to procure Subcontract packages through either negotiation or competition, what would discourage them and how these link to value creation as well as their views on the industries past and current approaches. Objective 3 – on the advantages and disadvantages – is of obvious relevance to assist in the analysis of each procurement route and links in with objective 4. Finally objective 4 – formulating recommendations – will, as a result of both a review of literature and the collection and discussion of empirical data, make recommendations. The objectives are not to be seen as independent of each other, but rather as all linked to issues surrounding procurement routes and how they can add value in the construction industry.

## **2. 0 Literature Review**

### **2. 1 Introduction**

This literature review will examine the main issues surrounding the drive for single sourcing and competitive tendering associated with Sub-Contractor selection. Emphasizing current obstacles and potential benefits for each

procurement routes from both parties. The study within this review of literature focuses on objectives 1 and 2 as set out in sub-section 1.3 of the Introductory chapter (the third objective will be completed through the vehicle of empirical data collection and analysis, while the final objective – objective 4 – is derived as a result of findings from objectives 1, 2 and 3):

- Identify and investigate the forces driving single source and competitive tendering procurement routes.
- Evaluate critically the construction industries current views and opinions, compiling the attitudes of the experts.
- Explore and evaluate the advantages and disadvantages for each method of procurement.
- Formulate and propose recommendations on the procurement route that provides more value to a construction project.

By exploring the above areas of literature, a significant contribution will be made to this research. At the end of this chapter it is hoped that a critical understanding of key issues is exhibited, that the reader will be better informed in these areas and that there will emerge a clear focus, and justification, for empirical research in the field of Sub-Contractor procurement methods and their effect on value during a construction project.

## **2.2 Forces driving single source and competitive tendering procurement routes.**

### **2.2.1 Historical Events & Government Legislation**

Subcontracting became a popular practice in the 1960's and over the years established itself as an integral part of the industries production process.

Projects were procured using traditional methods of delivery with main

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contracts being awarded through competitive tendering (Uher, 2009; Davenport, 2009, p. 200). During these years the economy was stable with little inflation and low interest rates, the contractor was seen as the 'Master Builder' due to employing most of its own direct labour and only specialised areas of work such as mechanical and electrical were subcontracted. Since the late 1960's the world's economies experienced periodic economic downturns, increased inflation and higher interest charges. With the Construction Industry being highly susceptible to economic fluctuations, the adverse economic actions changed the traditional practices of the construction industry; one of the foremost changes being the shift towards subcontracting.

Since the early 1990's the Construction Industry has continued its conflict-ridden competitive tendering culture, together with adversarial working relationships throughout its supply chain, (Brindley, 2004). The Construction Industry continued to pressure its suppliers to lower prices, along with delaying payments to them so that it could profit from a level of interest. This tradition placed risk on smaller businesses causing them to cease to exist or execute projects at inferior quality. Authors in the early 1990's were somewhat certain about their view between main contractor and subcontractor relationships; with main contractors driving prices down even if detrimental to quality, not paying subcontractors on time and in some cases forcing smaller companies to cease trading. The UK government, concerned by these facts employed Sir Michael Latham in 1994 and Egan in 1998 to produce two reports. Latham advocated the need for a Code of Practice for subcontractor procurement and for statutory backing to 'fair



payment terms' (Latham, 1994). Consequently in 1996 the Construction Industry Board published and implemented a Code of Practice for the Selection of Subcontractors and the Housing Grants and Regeneration Act. In addition, Egan (1998) pointed out that partnering through the supply chain is a critical approach with which the UK construction industry can drive innovation and sustain incremental improvement in performance.

In recent years main contractor supply chain relationships have changed from the traditional adversarial to the joint venture, with tendering experiencing a retreat from traditional methods of procurement towards single source processes. According to Davenport (2009) the contribution of subcontractors to the total construction process can account for as much as 90 per cent of the total value of a construction project. One of the results of this is that main contractors are concentrating their efforts on managing site process's rather than employing direct labour to undertake construction work. Main contractors have recognised the positive impacts that closer working relationships with subcontractors can have on package value and quality. Most work undertaken on construction partnering has been between client and main contractor relationships with little mention of adopting partnering with subcontractors.

### **2. 2. 2 The Contracting Framework**

A central problem in procurement is that both Sub-Contractors and Main Contractors share uncertainty about many important design changes that occur after the contract has been awarded. These changes are usually a consequence of design failures, unexpected conditions and changes in regulations, which have an effect on project costs. This observation suggests <https://assignbuster.com/procurement-of-subcontract-packages/>

that relationships between both parties can become adversarial hindering supply chain relationships. Therefore project design completeness will have an impact on the procurement award method selected. (Tadelis, 2006; Bajari, 2006) argue that simple projects, requiring an uncomplicated design ought to be procured using fixed-price contracts as they have high ‘ design completeness’. Therefore preventing the need for contract variations, and are best awarded through competitive tendering. In contrast (Tadelis, 2006; Bajari, 2006) state that complex projects demanding large design give rise to surprises throughout the projects due to low levels of ‘ design completeness’. Implying that there will be a high chance for variations therefore it should be awarded through negotiation. The insight for these thoughts is through incentives to reduce costs that follow on site variations consequently having an effect on a projects overall value. In fixed price contracts, the Sub-Contractor offers the procurer a lump sum price to carry out the works as specified, with any changes being negotiated throughout the contract.

The incentives for a Sub-Contractor to reduce tender costs offered by fixed price lump sum tendered contracts will lead to increased costs for the Main Contractor through variations when changes need to be negotiated. This valuable surplus to the Sub-Contractor leads to efficiency loss through the Sub-Contractor wishing to use these changes to his advantage. On the topic of competitive tendering Tadelis (2006, p. 4) states:

“ While competitive bidding does have the advantage of unbiased awarding of projects, it fails to respond optimally to ex post adaption.”

Therefore it appears that competitive tendering stifles coordination between Sub-Contractors and Main Contractors before specifications and drawings have been finalised. After all a Sub-Contractor has no incentive to offer the procurer advice on value engineering or innovative ideas, if anything the Sub-Contractor would benefit from holding any information from the Main Contractor as they would offer a competitive advantage over the rival competitors. Once awarded the contract the anticipated design errors will be discovered and the Sub-Contractor will be in a position to claim excessive variation costs. However In negotiated single source tendering both the Main Contractor and Subcontractor typically spend time discussing the project before construction begins. During these discussions the Sub-Contractor will have better incentives to suggest potential cost saving techniques through design and specification changes. Accompanying this more design pitfalls will be picked up before a project begins, potentially adding value.

The competitive pressure through negotiating contracts with a single Sub-Contractor is weak with the procurer not achieving all the potential cost savings.

### **2. 3 The construction industries current views and opinions**

Competitive tendering is widely recognised as an attractive procurement method and is commonly supported for numerous reasons. Largely it is viewed as a means of promoting and stimulating competition amongst Sub Contractors. By its nature open competitive tendering invites potential Sub Contractors from many venues reducing the likelihood for price inflation (Tadelis, 2006; Bajari, 2006). Fair market price discovery is beneficial to this type of tendering with open competitive mechanisms being transparent,

making it easier to prevent corruption. (Cira, 1994) suggests that competitive tendering has three significant advantages over negotiation which are as follows:

- Competition encourages a systematic approach which is more likely to yield the right Sub-Contractors than negotiation with a single Sub-Contractor
- Competition is a transparent process and so helps satisfy the increasing demand for accountability in both public and private sectors.
- Competition can give clients better value for money, particularly when compared on the basis of both their ability and fees.

An interesting point made by CIRA, 1994 pg 14 arguing against competition was that Sub-Contractor input at an early stage cannot be described well enough to allow fair competition. This is because the Sub-Contractor helps define the works needed and bids consist of an element of judgement due to incomplete design. CIRA also mentioned that initially competition is a time consuming and expensive process and costs may outweigh any value saved. However the benefits of selecting the most suitable Sub-Contractor for the job could outweigh this initial investment. Competition can have practical exceptions to its use through complicated packages where only one Sub-Contractor has the specialist expertise needed. Or services are needed urgently and there is not enough time to undertake the competitive process properly.

Competitive tendering, where the lowest bidder gets awarded the contract, is deeply embedded in the construction industry and can be destructive in

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the long term as the need to minimise transactional costs tends to reduce quality and client satisfaction. The emphasis on cost competition, and the traditional adversarial Main Contractor – Sub-Contractor relationships, results in frequent changes in participating firms from one construction project to another. This makes collaboration between them difficult. Partnering leading to single sourcing between Sub-Contractors and Main Contractors has been cited as effective approaches to overcome these difficulties and add value to a project. (Dainty, 2001) identified the following barriers to integration from the subcontractor point of view:

- Financial/cost-related issues related to competitive tendering based on price, which has developed adversarial relationships that result in serious problems with regard to payments;
- Planning/time-related issues, such as false expectations on part of the main contractor and unrealistic schedules; and
- Attitude-related issues, such as arrogant conducts, exclusion of the subcontractor from the early phases, lack of praise for good performance, poor site management practices, and lack of understanding of subcontractors' problems.

Latham (1994) defines partnering as a contractual arrangement between two parties for either a specific length of time or for an indefinite time period. The parties agree to work together, in a relationship of trust, to achieve specific primary objectives by maximizing the effectiveness of each participant's resources and expertise. It is for this reason, that principal contractors are oblivious of the fact that sub contractors can bring added value to the construction project (Dainty et al., 2001).

Conversely authors such as (Dimitri, 2006) recognise competitive tendering as an attractive procurement mechanism, stimulating and promoting competition, hampering corruption and inviting more potential subcontractors to price work. Although the single sourcing approach has shown promising results, there are some cases in which subcontractors have considered that it did not add any value, while some main contractors have seen little benefit in forming alliances with firms that they do not regularly work with (Dainty et al. 2001).

Egan (1998) feels that sub contractors should be involved in the design team as early as possible. An argument which is echoed by Briscoe et al. (2004), who believes that sub contractors should be procured early, therefore need knowledge and ability to exercise value engineering and other innovation exercises. The primary reason for selecting sub contractors is their innovation and knowledge, not necessarily for the lowest price. However, high performing sub contractors use their innovation and knowledge, and can often deliver a better service at a lesser price. Low performing sub contractors offer only on low price, while high performing contractors offer value (Garrison, T. 2006).

The next stage of this research will detail the Research Methods to be used to capture the empirical data, including details on the research strategy to be adopted, data collection techniques, sample selection and management of the researcher's role.

**Ethics Statement**

When undertaking a research project careful consideration must be taken to ensure that any material contained within the project causes no harm or potential harm to anyone, or organisation.

“ Ethics is the science that deals with conduct, in so far as this is considered as right or wrong, good or bad.” (Dewey, 2008)

An ‘ Ethics Review Checklist’ has been completed (Appendix A) which has highlighted a potential area for approval. This is due to the methods of research being undertaken which involve human participation. These activities specifically include questionnaires; to ensure they are executed in a morally correct and ethical manner the following steps will be taken.

Ensuring that the subjects have the option to grant voluntary consent the questionnaire will be structured in a way that participants can opt out of answering either individual questions or not participate at all. This is honoured by all questionnaires being issued to the subjects via e-mail, permitting candidates to return the document in their own time and at their own will with no pressure to respond, therefore there will be no reason for any of the participants to feel uncomfortable.

All questionnaires issued will be sent with a participation consent form and information sheet. The questionnaire refers to this documentation via a disclaimer that by returning the survey the subject agrees to the terms and conditions and privacy statement as disclosed in the consent form. This disclaimer ensures the subject that careful consideration is being taken to ensure that all participants and respective companies remain anonymous, to

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prevent any possible harm. Subjects will be referred to by job role only with no mention of name or company to eliminate any matters of commercial risk or damage to reputations.

Feedback will be issued to subjects that assisted in the research thanking each subject for his/her time and input; including a summary of the findings once all research has been populated.

In line with the Data Protection Act 1998 upon completion of the research all completed questionnaires and sensitive data will be destroyed, including any stored on hard disk and in the recycle bin. Two hard copy publications of the finished article will be produced for the university, in addition with one electronic; these publications may be available for public viewing in the university library which is disclosed in the participation information sheet.

I intend to conduct a number of case studies for research; therefore it is incredibly important that each case study will be alphabetically referenced, with no mention of any information that could identify the individual, project, location, contractor, client or consultants. All material will remain unidentifiable including any diagrams, illustrations or drawings used. This ensures that all parties involved can be assured that there will be no information detailed in the document which could potentially cause harm. All sensitive material collated will be dealt with due care, and destroyed in the correct manner either by shredding hard copies or deleting the information from hard disk.



Any secondary research undertaken will be wholly and correctly recognized to the author and source throughout the dissertation by means of Harvard referencing.

## **Methodology**

### **Introduction**

A valuable aspect to this research relates to Objective 2: the opportunity to study the construction industries current views and implementation in practice in a subject that, although generating much discussion, is in terms of research in its embryonic stages.

### **Research Strategy**

One research method that will be adopted, related to research strategy, is a questionnaire. What is a questionnaire approach and why is it suitable for this research?

Cohen and Manion (2007: 317) describe a questionnaire accordingly:

The questionnaire is a widely used and useful instrument for collecting survey information, providing structured , often numerical data, being able to be administered without the presence of the researcher, and often being comparatively straight forward to analyse.'

According to this definition, a questionnaire is therefore concerned with seeking individual's views, facilitating this researcher's drive to probe deeply into answering the thesis question as to which procurement route provides more value by seeking representative's opinions. Cohen and Manion's definition also gives merit to a questionnaires practical consideration, aiding

the justification for using this researchers chosen research strategy and data collection technique.

### **Data Collection**

The questionnaire has been structured using primarily qualitative research as it is linked to in-depth exploratory study. Enabling the opportunity for ‘ quality’ responses exist through open ended questions, probing participants thoughts and views. Denzin and Lincoln (2003) hold that qualitative research involves studying ‘ things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them’.

The subjects have been selected through convenience sampling, a non-probability approach to sampling as they have been exclusively targeted. Convenience sampling was used because of its expediency through issuing questionnaires to staff in the organisation for which this researcher works, and to subcontractors whom this researcher has dealt with. Through having a prior association with the subjects a better rate of return has been achieved, with subjects wanting to engage more in the research. In addition to this further time will be spent by each individual on providing more detailed responses further enhancing the thoroughness of this paper.

Respondents are construction professionals and range from job roles such as estimators to surveyors and project managers to directors. The wide variety of job roles will give me the levels of unbiased data required to reach a conclusion. This method of research has been selected with the aim that subjects ideas and insights may lead to other, more detailed and representative research.

Two different questionnaires were issued via electronic mail to a pre populated list of employees with one questionnaire issued to subcontractors and the other to main contractors. The purpose of this was so that the questions could be tailored to suit either the contractor or subcontractor, it was important to collate both views to reach an accurate conclusion. The theory behind using E-mail to distribute and collate the questionnaires was that it is much more reliable than circulation by post, easier to manage and track, whilst being convenient to people encouraging a larger participation as well as being more environmentally friendly and cost effective. Limited background data was requested such as position in company and level of industry experience as I felt other information would be irrelevant and not unpack the central question. There are no more than ten questions asked per questionnaire, it was felt that no further questions were required as a conclusion can be drawn from the results and that by using fewer questions the participant is more likely to contribute as it will not encroach on their working day. The questions have been structured in a standardised manner so that they can be interpreted and analysed efficiently, there is a balance between open and closed questioning.

## **Framework for Data Analysis**

### **Limitations and Potential Problems**

Convenience sampling suits this area of study because it is industry specific, by targeting known subjects this reduces the limitations of the research as there is only one researcher so manually sourcing or random sampling would be very time consuming with no guarantee of the quality of results. A perceived limitation with using questionnaires for research is that they are

limited in number. This is predominantly justified due to the lack of time available as a student. To negate this risk the subjects were carefully selected to ensure a high rate of questionnaire return and an increased level of detailed answers.

## **Methodology & Rational Behind the Questions**

### **Questions issued to Sub-Contractors**

Interviews were dismissed as a potential research strategy; the rationale behind this is for the reason that unlike questionnaires they are not anonymous. Therefore interviewees may hold back from their true feelings or not give as much detail in their answers. This researcher has counteracted this by using open ended questions in the questionnaire permitting the subject the opportunity to express concerns and genuine views with the knowledge of total incognito; further substantiating that by using a questionnaire counts as valid empirical research due to its suitability and relevance to this research paper. This researchers own primary data has been collected due to the lack of previous literature available on this subject; the majority of accessible information is concerned with client and contractor relationships and not contractor/subcontractor relations.

## **Findings**

### **Introduction**

This chapter reveals the results of the survey described in Chapter 3 Methodology. This research concentrates on obtaining the views of Sub-Contractors and Principle Contractors with regards to single sourcing or competitively tendering Sub-Contract packages.

## **Survey Findings; Description, Analysis and Synthesis – Main Contractor**

### **Question 1. 0**

The first question – Question 1. 0 – was: ‘ Do you feel that repeat work with the same subcontractor improves the working relationship in terms of discussing site issues/valuations?’

- Response

17 (81%) of subjects questioned felt that working with the same Sub-Contractor improves the working relationship with 4 (19%) arguing against the majority. One respondent responded positively: ‘ A collaborative working relationship forms the basis of a much stronger approach to on site discussions and subsequent resolution of variations.’ Another stated: ‘ It needs to be two ways, with both parties fully buying into the benefits.’ One member conjectured that repeat business can improve working relationships however; at times this can be tested due to commercial pressures. No Main Contractor respondents stated a reason behind why repeat work with the same Sub-Contractor does not improve the working relationship. The replies from Main Contractor personnel suggest that there is still a problem with collaborative working. Although 81% of respondents viewed repeat work with the same Sub-Contractor in a wholly positive light, 19% felt differently.

### **Question 2. 0**

The second question – Question 2. 0 – was: ‘ Do you believe that repeat work with the same subcontractor gives a higher quality of workmanship?’

- Response

This question gave rise to many mixed views with 57% of the subjects surveyed believing that repeat work with the