

## PROCUREMENT AND RISK MANAGEMENT

### Refereed Paper

### **COST OF TENDERING: ADDING COST WITHOUT VALUE?**

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### ABSTRACT

Uncertainty about the cost of tendering has led to research being conducted to understand the cost of tendering within the Australian construction industry. This has involved reviewing work done in Australia and overseas as well as exploring the efforts within the construction industry to collect cost of tendering information. While there is currently awareness of the cost of tendering and that efforts should be taken to minimise this cost, there is little precise understanding of it in terms of value or how it happens. This paper explores the barriers to understanding the cost of tendering. Throughout the worldwide construction industry tendering is acknowledged to be complicated, adding considerable cost to construction. Efforts to understand the cost of tendering are confounded by issues that are both visible and invisible to formal accounting of the construction process. This paper intends to demonstrate the problems and their causes. Anecdotes are derived from the literature, observations of construction purchases, and interview data to demonstrate the barriers to understanding the cost of tendering. This is augmented by corresponding observations of other major purchases. Problems and causes are described in terms of these anecdotes. Because of the diverse activities undertaken by constructors and limitations of accounting categories, expenses associated with tendering are difficult to capture and quantify. These problems are explained through examples. Even in those cases where there are genuine intentions to capture costs of tendering there is a failure to do so. It appears that implementation difficulties are so insurmountable that either people do not bother or management redirects effort from collecting cost of tendering data. It is also shown that the expense of tendering and uncertainty of outcomes leads tenderers to engage in concealed behaviour to reduce the uncertainty and cost associated with tendering. That is, collusion. For this reason especially, it is concluded that tendering and associated costs need to be understood in greater detail.

**Keywords: Cost of tendering, procurement, selection, construction**

## 1.0 INTRODUCTION

This paper explores the tendering process and introduces the need for a clear model of where the costs occur in that process. By doing so, understanding of the cost of tendering for any project becomes a matter of overlaying such a model on the project plan and extracting understanding of where costs can be expected to occur and their magnitude.

Because of the diverse activities undertaken by both purchasers and tenderers and limitations of some accounting systems to report on custom categories, expenses associated with tendering are difficult to capture and quantify. These problems are explained through an interpretation of the literature, observations of purchases, and interview data to demonstrate the barriers to understanding the cost of tendering.

Even in those cases where there are genuine intentions to capture costs of tendering there is a failure to do so. It appears that implementation difficulties are so insurmountable that either people do not bother or management redirects effort from collecting cost of tendering data. It is also shown that the expense of tendering and uncertainty of outcomes leads tenderers to engage in concealed behaviour to reduce the uncertainty and cost associated with tendering. That is, collusion. For this reason especially, it is suggested that tendering and associated costs need to be understood in greater detail.

While there is currently awareness of the cost of tendering and acknowledgement that efforts should be taken to minimise this cost, there is little precise understanding of it in terms of value or how it happens. The cost of tendering is not well understood in Australia or elsewhere in the world. This paper proposes a model of the cost of tendering through defining the tendering process in terms of measurable components and collecting sufficient data to understand the costs incurred in each component. The paper also presents estimates of orders of magnitude of the cost of tendering based on specific cases of procurement organisations at the macroscopic level, whilst evidence from an international business profile benchmarking study provides some insights into the impost on Small and medium-sized enterprise (SME) sector firms in the construction industry supply chain. This data is derived from owner managers perception of the cost of tendering in their firm.

## 2.0 LITERATURE REVIEW

Apart from a current study underway at the University of Reading as referred to in Hughes et al (2001), there appears to be little research into the cost of tendering. The Commonwealth of Australia (1994) conducted a cost of tendering study that looked at the cost to tenderers of Department of Defence contracts (Haddad (2004)). The survey is not conclusive about the costs of tendering, but does indicate some superficial supplier data and anecdotal opinions. Being a survey conducted by a market research company, it relied on the diligence of those providing answers to questions and assumed that they understood the questions and were qualified to provide meaningful responses. The survey does present some ideas about how to structure a more detailed inquiry.

The literature that does exist is largely anecdotal and conversational explanations of how tendering costs occur in practice. These works come from industry and can be perceived as efforts to influence industry policy makers and politicians. As academic

literature they are not necessarily rigorous, but they do provide a source of discursive data and hints of questions for practitioners.

The Commonwealth of Australia (1994) study notes that, while some improvements were acknowledged, a variety of problems are identified with the tendering process – albeit limited to supplying to the Commonwealth of Australia – that suggests a lack of concern for resolving problems associated with the cost of tendering. It seems that there is a reluctance to understand the cost of tendering. Yet, the costs are quite clearly distinguishable if separated into components.

### **3.0 THE COMPONENTS OF TENDERING COSTS**

Tendering is a process that takes place to provide a transparent selection process that is based on objective criteria. It is most important in organisations that are exposed to a degree of public scrutiny from stakeholders. These stakeholders could be the general public in the case of government departments, or shareholders in the case of businesses. Indeed, there are benefits to the tendering process, but there are also costs. More to the point, if these costs are not managed effectively then they can be quite significant and not provide proportionate returns.

Tendering costs occur during three phases of any tendering process. These are:

- Preparation of tender documents by purchaser
- Preparation of response to tender by prospective suppliers
- Assessment of submitted tenders and selection of supplier

#### **3.1 PREPARATION OF TENDER DOCUMENTS**

Purchasers incur costs associated with the preparation of documents that are issued to tenderers. These include specifications and instructions specific to the item being purchased. They also incur costs to assemble a list of prospective tenderers to whom tender documents will be sent. These documents may be posted to tenderers, but more complicated purchases may require face-to-face meetings with individual tenderers or collective briefings for all tenderers to attend.

#### **3.2 PREPARATION OF RESPONSE TO TENDER**

On receiving tender documents, prospective suppliers are required to make several levels of assessment. There is generally a time constraint to do so. In the first case, they need to understand the good or service being tendered and determine whether or not they have the capability to supply. Where they decide to proceed with submitting a tender, they then need to engage in an appropriate degree of pre-design work to demonstrate to the purchaser that they are aware of the implications of the tender and that their solution is the most appropriate. Reply to tender may take the form of a document or include physical models or involved presentations. There appears to be a concern that, once being invited to tender, refusing to do so will remove the prospective tenderer from future tender invitations. This may be leading to wasted effort preparing tenders that relate to work outside the capabilities of organisations that would be better declining the invitation to tender.

#### **3.3 ASSESSMENT AND SELECTION**

When tenderers submit their responses to tender, the purchaser undertakes assessment and selection processes. As with the preparation of responses to tender, purchasers are under an obligation to complete assessment and selection within

specified time constraints. Especially in cases of complicated tenders, where there is a two stage assessment, purchasers are under an obligation to complete their assessments within a reasonable time and reply to tenderers.

#### **4.0 BARRIERS TO UNDERSTANDING TENDERING COSTS**

Without a clear understanding of the cost of tendering, an industry wide assumption has been that the cost of tendering is far too high and that it needs to be reduced. This blind sort of groping for meaning has led to a solution to reduce the cost of tendering through pre-qualification of tenderers. However, with such a vague understanding of the cost of tendering there could be an equally vague understanding of the notion of pre-qualification and, in some cases, an expectation could be held by purchasers that tenderers should pre-qualify for each individual tender. This misunderstanding of the concept of pre-qualification undermines the benefits that could be derived from a well-managed pre-qualification program.

A worldwide survey of procurement documentation from a wide range of public and private organisations suggests it is clear that there is an awareness of the cost of tendering. However, in most cases purchasers merely acknowledge that the cost of tendering is significant and to be aware of the internal costs and those incurred by tenderers. Apart from that, there is no effort made to understand these costs. For example, a typical comment made about the cost of tendering is:

*"If contractors are winning typically one tender if four, then we're paying four times the cost of tendering for each contract. The industry needs to find a better way to avoid wasting this money."*  
<http://www.contructingexcellence.org.uk>

The following sub-sections explore some of the barriers to understanding tendering costs.

##### **4.1 DIFFICULTY IN DETERMINING RESOURCES ALLOCATED TO TENDERING**

Understanding tendering costs depends on collecting accurate data and being able to present it in a meaningful way. Because people and resources used to conduct the tendering process are not specifically dedicated to the tendering process, determining what resources are consumed during tendering is difficult to do. This is further complicated by how individuals and organisations are rewarded and the manipulation of data that occurs when people may try to optimise their personal rewards.

##### **4.2 DIFFICULTY OR RELUCTANCE TO IMPLEMENT**

While there have been initiatives put in place to record the cost of tendering, there is little evidence that these are implemented at all. Government and commercial purchasers acknowledge that *the cost of tendering is significant and that efforts should be made to reduce this cost*. They further acknowledge the cost of tendering in terms of both their operations and those of tenderers. Many large government departments have produced tendering regulations that include such a clause. These are based on various standards and guidelines such as the *Australian Standard Code of Tendering*, AS4120 (Standards Australia 1994) and *Guidelines for Tendering*, published by Australian Constructors Association (2001).

Notwithstanding the effort to acknowledge the cost of tendering, there is no reported attempt to quantify this cost. While some organisations have a stated policy that there

will be "application of some rigor to examining the cost of tendering" (Defence Materials Organisation), when questioned, the Director General Contracting Policy and Operations advised that no effort has been made to implement this initiative. Other government agencies attempt to allocate costs to the tendering process. Yet, when representatives are questioned they assure that the data captured is at best a very rough estimation of the real human and material resources consumed in their tendering processes.

### 4.3 GREED AND BLATANT CORRUPTION

People can be led to behave by the reward structure of their environment. In some cases, it has been observed that people satisfy their greed or engage in various forms of corruption to achieve personal goals. Gellerman (1986) speaks of good managers making bad ethical choices, but Wakin (1984), drawing on Learner (1975, p. 111) goes further, suggesting that 'bottom line' ethics are adhered to by 'careerists', whose behaviour suggests that their blatant self interest overrides every factor. There is likely to be a wide distribution along a continuum characterized by both these extremes. However, Gellerman (1986, p. 3) does refer to cases where individuals 'made a conscious, cold blooded decision to take no protective or remedial action, in the flagrant disregard of the rights of others'.

In drawing on examples of bad ethical choices, Gellerman (1986, pp. 5-7) proposes that there are four rationalizations with which people justify their decisions. First, they perceive what they have decided to be 'within reasonable ethical and legal limits'. Second, it 'is in the individual's or the corporation's best interests'. Third, it "is "safe" because it will never be found out or publicized'. Fourth, if the action contributes to objectives 'the company will condone it and even protect the person who engages in it'.

In the subsequent 20 years since Gellerman's article was published, some spheres may have seen an end of the discourse that leads to these rationalizations. However, there remain examples of blatant disregard, as demonstrated by Rowell (1996) for environmental and social issues; anecdotal evidence of this are the frequent and often violent protests held to demonstrate opposition to World Trade Organisation and other globalisation initiatives. While this reaction may not be warranted, it reflects a possible negative perception in the wider community.

Foucault (1973, 1978, 1991) observes that those in power influence what becomes the dominant discourse and that they impose that discourse to exert power, even to the point that they establish reality in terms of what benefits themselves. Perhaps it is because controversial discussions frequently are controlled by the discourse imposed by others that Foucault (1991, p. 381) refuses to engage in polemics. Pfeffer (1981, p. 30, 59) observes that those who 'get what they want' have 'the social power to get it'. People in positions of power might well – consciously or unconsciously – dominate decisions regarding sustainability issues and prevent appropriate discourse in the same way that doctor's gaze (Foucault 1973) prevents patients from appropriate medical diagnosis and service (McKenzie and Carey 2000).

The Giles Commission (1992) into the construction industry raises the issues of collusive tendering in the construction industry.

*"Involvement in collusive and anti competitive behaviour including the surreptitious receipt and payment of special and unsuccessful tenderers fees."*

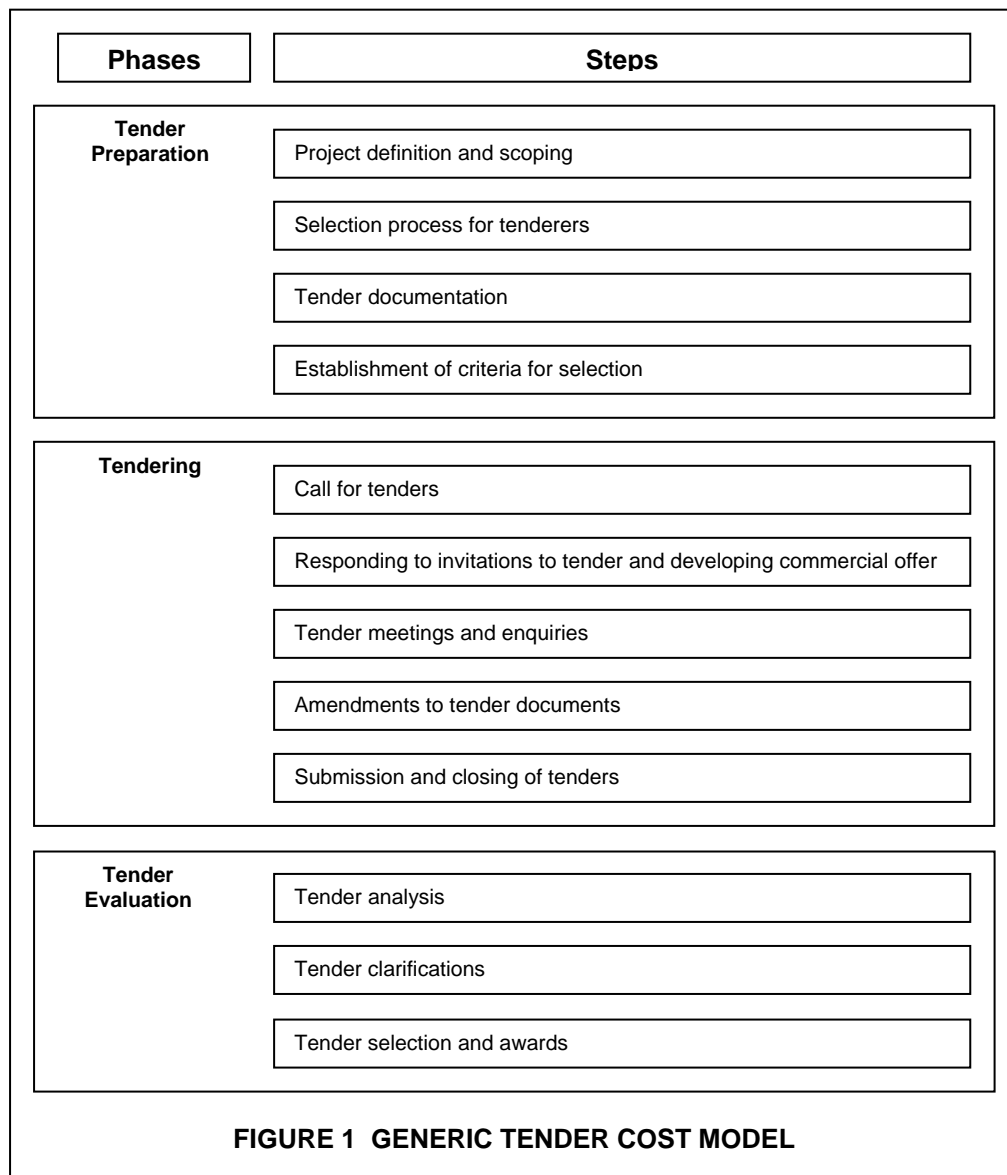
The implied message is that the cost of tendering is significant. This has been further substantiated by confidential discussions with construction industry representatives. Some have explained how tenderers for a project enter into an arrangement where they each add an amount which is distributed to unsuccessful tenderers.

Veterans of many years of submitting tenders have explained their solution to the expense of tendering in terms of the collusion reported by the Giles Commission (1992). One person interviewed stated that:

*"Each company submitting a tender added a certain amount that (in the event of winning the tender) was understood to be distributed among the other tenderers (those who did not win the contract)."*

## 5.0 GENERIC TENDER COST MODEL

Having demonstrated that it is likely that cost of tendering data will be distorted (if collected at all), it is suggested that a tender cost model will provide some guideline to categorise and verify cost of tendering data that is collected. Having such guidelines is viewed to provide a catalyst to collect data and a framework to categorise the information collected. The following model, shown in Figure 1, (Australian Constructors Association (2001)), could provide a foundation for such a framework.



It is suggested that each of the proposed steps could provide demarcation of categories to which human and material resources could be allocated. It is envisioned that these categories need further development and refining.

The reason for advocating the further development of such a model is that tendering costs seem to have escalated to an extent that they can be seen as a factor in contractor's risk assessment. The costs must be weighed against the perceived likelihood of success. It is likely that the client can mitigate at least some of the costs of the tendering process. This is unlikely to eventuate in an environment where the client is unaware of the costs of tendering and consequently unaware of the additional costs that they as client are carrying as a consequence of their espoused tendering processes. In the event that the client is imposing excessive and unnecessary costs on the contractor through the tendering process, then they are adding costs without adding value. In the quality management environment, this is classified as waste.

Major advances in productivity, profitability and quality have been achieved in manufacturing industry as a consequence of increases in knowledge and understanding of quality. One of the imperatives that drove the improvement in manufacturing performance was the development and implementation of a 'quality costs model'. This model partitioned the costs of achieving a desired standard of output into 'prevention costs', appraisal costs' and 'failure costs'. This approach enabled managers to make rational decisions about where improvement investment should be targeted. In the case of costs of tendering in public sector construction project procurement, it is likely that the use of such a model would enable the capture of cost of tendering data that enable similar rational decisions to be made about the structure and content of the tendering process. The next section, therefore, seeks to quantify the costs of tendering for a variety of circumstances based on data acquired from a variety of informants and sources.

## **6.0 ESTIMATION OF TENDERING COSTS**

The cost of tendering at the macroscopic level can be estimated on the basis of anecdotal evidence and documented sources. This is particularly useful from the perspective of the large procurement organisation, for example government departments and large national utilities. From the perspective of the small and medium-sized enterprise, databases used for international business profile benchmarking that have data on construction provide some indication of the costs of tendering as experienced by procurement executives and owner managers. Although neither of these sources provides definitive audited costs, they both provide an indicative cost. In view of the fact that the client ultimately carries the cost of tendering, it is in the client's interests to seek to mitigate these costs to ensure that a business enterprise client returns value to its shareholders and that a public sector client obtains the triumvirate of efficiency, effectiveness and value for money. In the case of the business enterprise client, the choice is more straightforward since, if the cost of tendering is perceived to be excessive, it is open to the business to adopt another approach that is more cost effective. For that reason, this work will restrict itself to tendering costs as they might impact on public sector organisations as clients and SME sector subcontractors as suppliers.

### **6.1 PUBLIC SECTOR ORGANISATIONS**

For public sector clients, the need for transparency and openness demand that the public servants who engage with the construction industry representing the public sector client have transparent and defensible processes. This underpins the

confidence that the taxpayer requires to have for the accountability of procurement processes. The requirement for accountability has placed increasing pressure on public servants and one of the approaches to securing efficiency, effectiveness and value for money has been the use of various tendering mechanisms. In fact, such was the belief in the efficacy of the tendering process, in many cases, it was mandated through legislation. More recently, there has been a move away from that belief, as public sector clients, like their counterparts in the manufacturing sector before them, began to take a more holistic view of efficiency, effectiveness and value for money. However, it is fair to say that, in the case of public sector construction project procurement, it has proved easier to criticise the failings of the tendering process than it has to find an appropriate, robust and defensible replacement.

One of the reasons for the relative inertia in the construction sector has, of course, been that, as suggested earlier in this paper, it has proved to be difficult to capture the cost of tendering. This has hampered innovation in the approach to construction procurement, since one of the major drivers of seeking a 'new approach' is to improve competitiveness. In the absence of information about the actual costs of tendering, there is also no value that can be attributed to the payoff of the innovation. The fact that these costs are frequently invisible to the client and can be very diffuse has camouflaged the real impact of cost of tendering on the total costs incurred by the client in public sector construction project procurement.

The act of initiating the tender process for a significant construction project effectively triggers a time lapsed cascade of additional tendering like processes as the major cost components of the project are identified and costed to enable the final bid to be assembled. This paper shall now seek to quantify the costs incurred in tendering a project. Clearly, the complexity of the project including the level of innovation for example, will influence the costs in any particular project. However, by engaging with experts and examining the cascade processes, it is possible to estimate the costs associated with the tendering process. In addition, the impact of the costs of tendering shall be computed for government departments with significant responsibility for construction project procurement. In many cases, the greatest cost cannot be estimated. The tendering capability of a firm may, in fact, be a limiting resource. If this is the case, then the result may be that the best and most capable contractors may not even enter the tendering process because the actual costs associated with the process cannot be justified given the perceived prospects of success, or because the opportunity costs associated with one particular project may be regarded as excessive and unjustifiable given the perceived prospects of success. If the most appropriate contractor does not enter the process because of tendering costs this is likely to be detrimental to the project to an extent far in excess of the real or perceived tendering costs.

The combination of tendering costs and the probability of success is such that the total tendering costs for any individual project will escalate as the number of contractors entering the tendering process increases as well as with the relative complexity of the project and the extent of the imaginative value adding design. For example, based on the experience of the project team, if a public sector client seeks tenders from six capable contractors for a design and construct project; each of these is likely to seek tenders from, say ten subcontractors, depending on the scale and complexity of the project. If each of these ten subcontractors initiated a further cascade down to twenty suppliers of different sizes and types, then the involvement of the six initial contractors has resulted in some form of response from  $(6 + 60 + 1200) = 1266$  businesses in the area. Using this model, each additional contractor proceeding to tender adds a further



211 businesses to the list of those involved in the tendering process. Clearly, all businesses will have incurred costs associated with the tender, but few will receive business as a consequence. The contractors will have entered the process with an average of one chance in six of emerging successful in gaining the contract. For a relatively complex \$20 million infrastructure project where the design and schedule of quantities is provided, it has been estimated within the project team that the cost of tendering is in the region of 0.5% of the value of the contract for each contractor tendering. This does not include the costs to the subcontractors and suppliers further down the chain of supply. Thus, for a case of six contractors, the total cost is 3% of contract value, or \$600K.

For a similar design and construct project that involves each tenderer in significant design activity before the schedule of quantities and the tendering process takes place, it is estimated that the cost of tendering will escalate to around 3% of the value of the contract for each contractor. In the earlier case where six contractors were involved, the tendering process for the contractors could amount to 18% of the value of the contract, or \$3.6 million.

Consequently, for a government department involved in significant construction project procurement activity, if we take the six contractor hypothesis, for each \$100 million voted by parliament for construction projects, anything between \$3 million and \$ 18 million is likely to be consumed by the tendering process if we ignore the cascade effect down past the contractor. The challenge is to establish whether the process of tendering is delivering that degree of value for money on one hand and whether by innovation in the process, based on a careful appreciation of the costs, could deliver an equivalent result without consuming this level of resource. This model and analysis has ignored the cascade effect of the tendering process on the subcontract sector, which makes up the majority of firms in the construction sector. Evidence from another source provides some insights into that sector.

## **6.2 SME SECTOR SUBCONTRACTORS AND SUPPLIERS**

As part of a program of work that included applying business profile benchmarking to small and medium-sized enterprises using the UK Benchmark Index, a module was used that was specifically designed for use with contractors. This work was not focused on the cost of tendering from the perspective of the public sector client, but from the perspective of a performance indicator for the construction sector SME subcontractor (Mohamed, (1996), Dalrymple (2000)). The data collected includes cost of tendering as a percentage of turnover and various measures of success rates in the tendering process.

The UK Benchmark Index database contained over fifty companies and a comprehensive set of performance measures that characterise the SME subcontractor sector was held for each company. For this group of companies, the cost of tendering was estimated to be around 1.7% of turnover for the lower quartile and 5.8% of turnover for the upper quartile. From the point of view of success rate, the lower quartile estimate was a 16% success rate and the upper quartile enjoying an estimated 60% success rate. From the perspective of value of business won against value of business tendered for, the lower quartile reported around 20% with the upper quartile reporting just under 60%. Thus, in the SME sector, companies may be spending between one and a half percent to around six percent of their turnover on the tendering process. The companies seem to enjoy success rates of gaining about one in every six contracts bid for to about two in every three contracts bid for. The data on the

database is from a variety of contracting businesses. The evidence from the database is consistent with data from another source where it was reported that:

*“Generally the cost of tendering in comparison with turnover is quoted as follows:*

- *General Contractors 1% to 2%*
- *Specialist Sub Contractors (Mechanical, Electrical, Fire and Lift) 3% to 5%*
- *General Sub Contractors 4% to 8%*

*Success rates (i.e the number of successful tenderers compared with number entered) is quoted as follows:*

- *General Contractors 1:6 to 1:15*
- *Specialist Sub Contractors 1:10 to 1:20*
- *General Sub Contractors 1:15 to 1:50 ”*

The costs of tendering are similar to those captured by the database, but the success rates recorded in the database are somewhat better on the database than reported by the alternative source. Nevertheless, both sources of evidence indicate that the costs and consequences of the tendering process for the SME subcontracting sector are significant and detrimental.

## **7.0 CONCLUSION**

Because of the diverse activities undertaken during the tender process and limitations of accounting categories, expenses associated with tendering are difficult to capture and quantify in a rigorous way. Even in those cases where there are genuine intentions to capture costs of tendering there is a failure to do so. It appears that implementation difficulties are so insurmountable that either people do not bother or management redirects effort from collecting cost of tendering data. It is also shown that the expense of tendering and uncertainty of outcomes leads tenderers to engage in concealed behaviour to reduce the uncertainty and cost associated with tendering. That is, collusion. For this reason especially, it is concluded that tendering and associated costs need to be understood in greater detail.

There are barriers to understanding the cost of tendering. Throughout the worldwide construction industry tendering is acknowledged to be complicated, adding considerable cost to construction. Efforts to understand the cost of tendering are confounded by issues that are both visible and invisible to formal accounting of the construction process. This suggests a need to investigate and understand the problems and their causes. The evidence from various sources that is presented earlier in this paper indicates that the cost of tendering constitutes a significant impost on the costs of construction projects. A parallel was drawn with the issues associated with the cost of quality and the way that the development of a comprehensive model acted as the catalyst for quality improvement activity in the manufacturing sector. Another factor that creates an imperative towards the development of a generic model for tendering costs and a concerted effort to quantify these costs also comes from the experience in the quality costs field. Once practitioners began to collect and classify quality costs, it became more apparent what the sources and magnitudes of quality costs actually were. The experience was that many more costs than had originally been thought were able to be recognised as the costs associated with not getting things ‘right first time’. Quality costs were found to amount to up to 30% of turnover for companies that had not embarked on a serious quality improvement program.

The generic model of the tender costs proposed would provide a way to predict tender costs, collect actual tender costs, and then compare planned to actual tender costs. There is also the possibility that a similar experience may emerge to that reported in the case of the development of a rigorous quality cost model in the case of quality management. The quality improvement activity was focused on eliminating or mitigating the effects of activities that added cost without adding value. With a similar experience in the case of the cost of tendering, it is possible that the approach to public sector construction project procurement could be transformed to enable a higher proportion of the taxpayers' funds to be devoted to the delivery of the construction project and less funds would be dissipated in preparation of long, complex and very expensive tender documentation on the part of the contractors who are, inevitably going to be unsuccessful in their quest to secure the contract. In the case of quality management, an influential factor was the realisation that as much cost was accumulated in making a defective product as was accumulated in the process of making a product that was 'fit for purpose'. The parallel is that unsuccessful participants in the tendering process incur equivalent costs to those of the successful contractor. However, there are large numbers of unsuccessful participants in the tendering process as it is currently constituted.

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