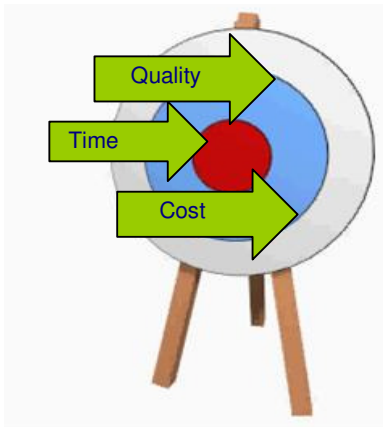


**Article Category: PROCUREMENT**

## **The Need For A Standardised Technique For Tender Evaluation In South Africa**

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### **Introduction**



*Some contractor selection methods currently in existence are criticised as incomplete and biased, and lacking consideration in terms of the contractor's ability to achieve simultaneously, time, cost, quality and safety standards.*

Contractors may feel that although their price may not have been the lowest, they would have produced a building of superior quality. In a similar way, a client might, in hindsight of the building being erected, believe that perhaps he did not receive the correct advice. Alternatively the advice may have been given to him, but he chose not to heed it. Further, the professional consultants may have done their research on the contractor, but could not be sure that the areas that were investigated were exhaustive. The question needs to be posed as to which contractor is the most suited to do the job? In a recent survey amongst tenderers and consultants, 77% of respondents indicated that there is a need for a standardised tender evaluation technique.

### **Prequalification and Tender Evaluation**

The subject of contractor selection has been researched extensively. *Fong and Choi (1999)* suggest that the selection of a capable contractor is one of the most important tasks faced by a construction client who wishes to achieve successful project outcomes. *Wong, Holt and Cooper (2000)* state that numerous researchers have highlighted 'essential' contractor selection criteria and that contractor evaluation continues to receive close attention by construction researchers and practitioners.

In spite of all this research done on the subject, poor contractor performance is something that has plagued the construction industry for decades. A common contention has been that problems can be brought to a project as soon as the 'wrong' contractor is chosen.

Clive Lewis (RICS President, 1993) stated: "I believe in a competitive UK construction industry, but I do not believe in the sort of competition which drives that industry out of existence. A viable and robust construction industry, operating efficiently and delivering against client requirements on time, price and fitness for purpose, is an essential part of a recovering economy." Tender evaluators often put all their efforts in competitive pricing, but ignore the importance of "value for money".

### **Criteria for Contractor Selection**

A study by *Hatush (1996)* into current procurement practice concluded that all types of arrangements comprise of five common process elements, or subsystems, namely project packaging, invitation, pre-qualification, short-listing and bid evaluation. *Nahapiet and Nahapiet (1985)* suggested that for each of these subsystems there are a variety of actual and possible alternatives available. These are in the form of different types of

project packages, invitational forms, pre-qualification systems, short-listing methods and bid evaluation procedures. These will in turn offer the client a variety of combinations of expertise, risk, flexibility and costs. *Hatush and Skitmore (1997)* question which is the best combination of subsystem alternatives, or does any such combination produce roughly the same outcome? It is said that the answer lies in the opportunity cost involved, that one new system has higher benefits than the extra cost in finding and designing it. With this there lies the problem that the result will only be known after the system has been implemented and even this is only possible if accurate records are kept. The solution then seems to be through subjective assessment

*Pasquire & Collins (1996)* recommend that full consideration should be given to a standardised pre-qualification procedure with clear definitions of the information required from the contractor - a model that all involved in the tendering process can refer in order to evaluate the competitiveness of the tenders available. The amount of information required should be as concise as possible. Such procedures would streamline pre-qualification practices, ultimately reducing their cost to the industry.

**Pre-qualification and bid evaluation**

It is necessary to collect and analyse information in order to fairly evaluate the criteria for pre-qualification and bid evaluation, at least the following:

- The contractor’s permanent place of business
- Financial stability to sustain the cash flows likely to arise during the construction period
- Extent of plant and equipment to do the work properly and with least cost and effort
- Technical capability (including human resources) sufficient to complete the requirements of the contract
- Competence and plant capacity to complete the project within the constraints imposed by the contract
- Experience of projects of a similar nature and value
- The frequency of previous failures to perform contracts properly or whether they have not been completed on time
- The current position of the contractor to complete work within a reasonable quality
- Existing project commitments
- Details of sub-contractors normally used for sub-contract work
- The contractor’s relationship with subcontractors, or employees
- The facilities, including testing, quality control, etc. to ensure a high quality level (ISO 9001:2000 certification); and the ability to comply with the health and safety regulations

According to *Hatush & Skitmore (1997)*, the above information used for the assessment of criteria for pre-qualification and bid evaluation falls into five groups namely: general information used mainly for administration purposes, financial information, technical information, managerial information and safety information.

**In search of a model**

*Moore*, citing *Hatush, et al (1997)*, proposed a quantitative system for selecting contractors for fast track projects in which an evaluation team initially visits the contractor’s home office to collect the required information and assign preliminary scores for the criteria used. Table 1 demonstrates how this is carried out. A maximum point value is assigned for each aspect of the construction project execution. These values have been weighted according to their relative importance on the project. It was recommended that in order to avoid the possibility of individual bias, at least three evaluators should be used for each scoring category.

**Table 1: Relative importance of project execution factors**

Maximum points	Criteria
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5	Craftsmen availability
5	Training or skill level of craftsmen
25	Supervision: 80% interviews and reference checks on 8-10 people 10% foreman quality and training 10% foreman availability
10	Productivity improvement programme
25	Systems and procedures: Cost, schedule, material control, personnel, accounting, sub-contracts, purchasing, safety
5	Field organisation, work rules, work policies
3	Safety record
2	Geographical experience
3	Experience with the specific type of facility
5	Quality control
2	Home office support
2	Executive involvement – leadership
5	Small tools and construction equipment (condition and procedures)
3	Engineering co-ordination
100	TOTAL

(Source: Moore 1985)

*Holt GD, Olomolaiye PO and Harris FC (1993)* proposed a modification of the above system (pre-qualify/select) with quantifiable indices. This comprises a three-stage process requiring the calculation of what is called a P1 scale index to investigate the more general areas surrounding potential tenderers e.g. contractor organisation, financial matters, management resources, past experience and past performance. The P1 scale is used to select a number of contractors to be invited to tender on the project. A P2 scale index is calculated for the second stage to assess the invited/selected tenderers further in the light of specific factors, namely experience of similar construction projects, plant resources available, qualification of key personnel, current workload, prior relationship with Client, home office location, etc. Finally, a P3 scale index is calculated by using the P2 scale index and the tender prices of the invited tenderers (P2 component x 40% + Tender Price index x 60%)

*Wong et al (2000)* also suggests that there should be an interaction of project specific criteria and tender price, to highlight the need for selection by 'value' during the evaluation of tenderers. The most important issues for clients of the construction industry are quality, cost and time and yet the vast majority of construction projects are procured based mainly on cost.

### **Current tender practices**

Up to the early 80's most projects were let by using the open tendering system where any contractor could submit a tender based mainly on bills of quantities. This method allowed good and bad builders to compete on "equal terms" and sometimes resulted in ridiculously low tenders. Construction consultants soon realised the dangers in this and especially in the case of private clients realised the potential of selected tenders and negotiated contracts. Nowadays the majority of construction projects for the private sector are awarded via one form or another of the selective or negotiated tendering method.

Tender evaluation techniques very often rely mainly on the tender amount. It is quite evident that to award a contract based on "cost" only is somewhat risky and short-sighted. *Holt et al (1993)* cites *Russell & Skibniewski (1988)*:

"It is unwise to pay too much but it is worse to pay too little. When you pay too much you lose a little money, that's all. When you pay too little you sometimes lose everything because the thing you bought was incapable of doing the things it was bought to do. If you deal with the lowest bidder it's as well to add

something for the risk you run, and if you do that you will have enough to pay for something better”

Construction projects by the Public Sector is governed by the “Affirmative Procurement Policy”. Department of Public Work contracts worth less than R2-million are no longer awarded to the lowest bidder. The affirmative procurement policy makes use of a 88-2-10 scoring system: 88 points are allocated on the basis of price, 2 on the basis of gender and 10 on the basis of historical disadvantage.

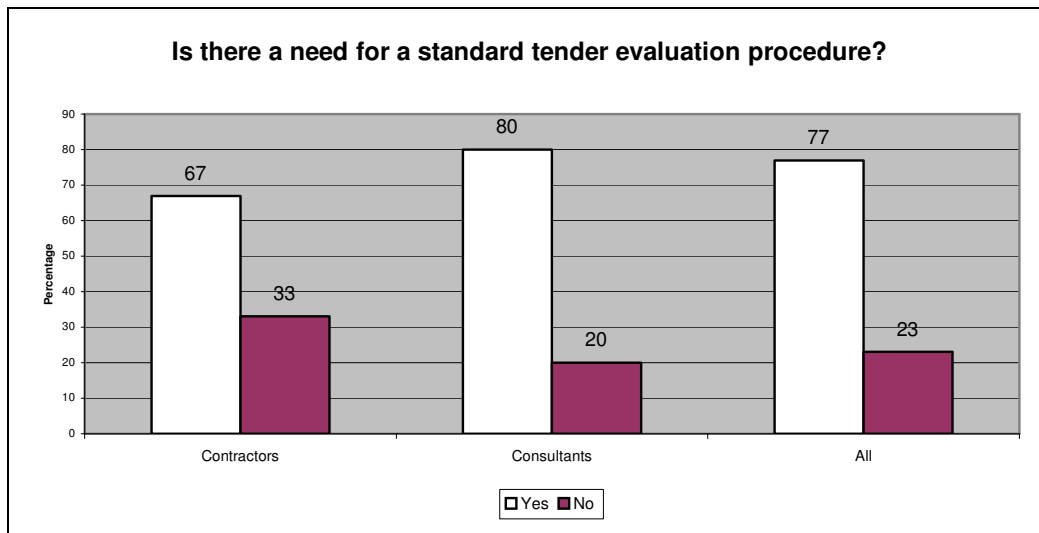
Points are given to Affirmable Business Enterprises in which women or individuals who were previously disadvantaged by statute, hold the majority holding. The Department of Public Works claims that it is not enough for women or blacks to be silent partners or non-executive directors – they must be involved in decision-making and delivery.

Affirmative businesses must also fall within certain limits in terms of their size. This process is intended to help the development of entrepreneurs. It is also required that they must be registered as taxpayers in South Africa. For larger contracts, to ensure effective participation by emerging contractors, the Department of Public Works sets a minimum participation goal for black entrepreneurs.

In a study conducted by one of the authors to get the opinion of architects, contractors and quantity surveyors on tender practices in South Africa (2001), the following results were obtained:

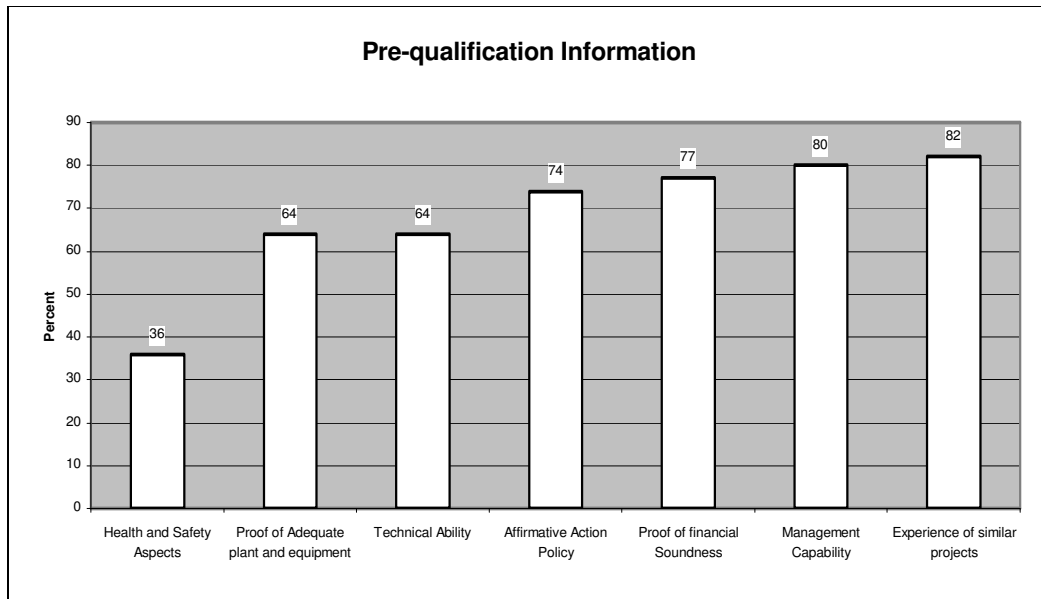
1. The need for a standard tender evaluation procedure

More than ¾ of the respondents (77%) was of the opinion that there is a need for a more standardised method of tender evaluation. This amplifies the need for more research into this field. Consultants (Architects and Quantity Surveyors) felt even more strongly on this as 80% of them maintained that there needs to be a more standardised method to assist in the evaluation process. 67% of the Contractors was in favour of this.



**Figure 1: Need for a standard tender evaluation procedure**

2. Information which tenderers have to submit as part of the pre-qualification process:



**Figure 2: Pre-qualification information**

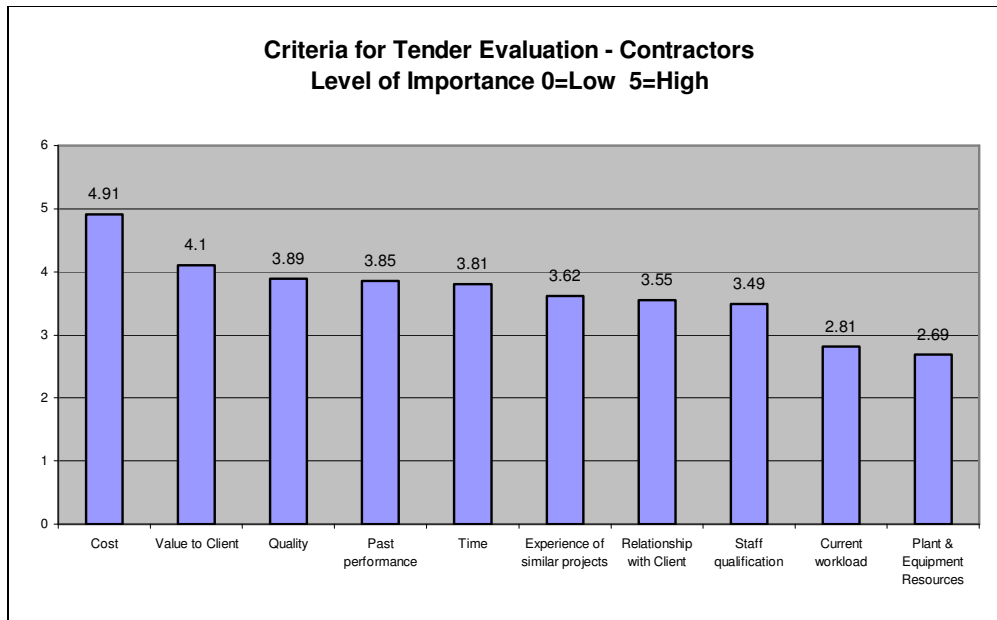
The graph indicates the number of times (percentage) tenderers were requested to provide the relevant information. The fact that health and safety policies were only asked 36% of the time is a matter of concern as this aspect has a major impact on construction costs.

Other information which occasionally has to be provided includes (in no specific order) proposed site staff to be used, bar charts, concrete production rates, sub-contractors proposed, current workload, ISO certification and, attitude towards claims!

### 3. Relative importance of tender evaluation criteria

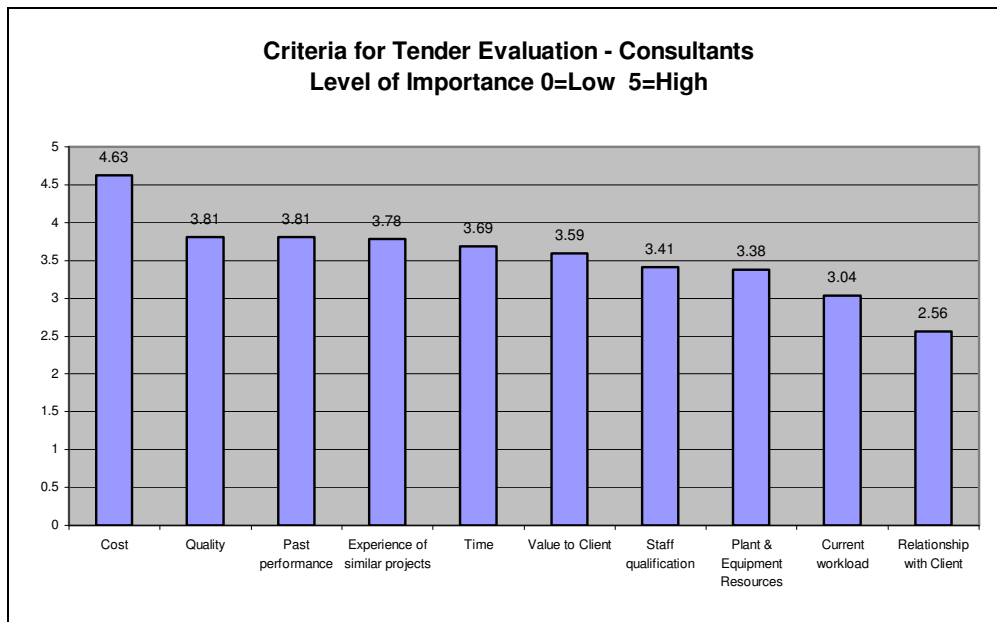
To determine whether there was a difference of opinion about the level of importance of the various evaluation criteria between Contractors (Tenderers) and the Consultants (who evaluate the tenders), the data provided by each group was analysed separately.

#### a. Contractors / Tenderers



**Figure 3: Criteria for Tender Evaluation - Contractors**

b. Consultants (Architects and Quantity Surveyors)



**Figure 4: Criteria for Tender Evaluation - Consultants**

Many authors rate *Cost*, *Time* and *Quality* as the most important factors to the Client in any construction project

In the research both Contractors and Consultants viewed *Price* (Cost) as the most important criteria when tenders are evaluated with a very high rating of 4,9 and 4,6 respectively (where 0=Low and 5=High). *Quality* was rated the 3<sup>rd</sup> highest by Contractors and 2<sup>nd</sup> highest by Consultants. *Time* was rated by both groups as the 5<sup>th</sup> most important factor in the evaluation process with *Value to Client*, *Past Performance* and *Experience of similar projects* being rated higher than *Time*.

To Consultants *Experience of Similar Projects* was more important than to Contractors (4<sup>th</sup> and 6<sup>th</sup> respectively), while *Value to Client* was rated significant more important

to Contractors than to Consultants (2<sup>nd</sup> and 6<sup>th</sup> respectively). The last mentioned result may raise a few eyebrows as Consultants are primarily there to ensure that the client is given *value* for his/her money.

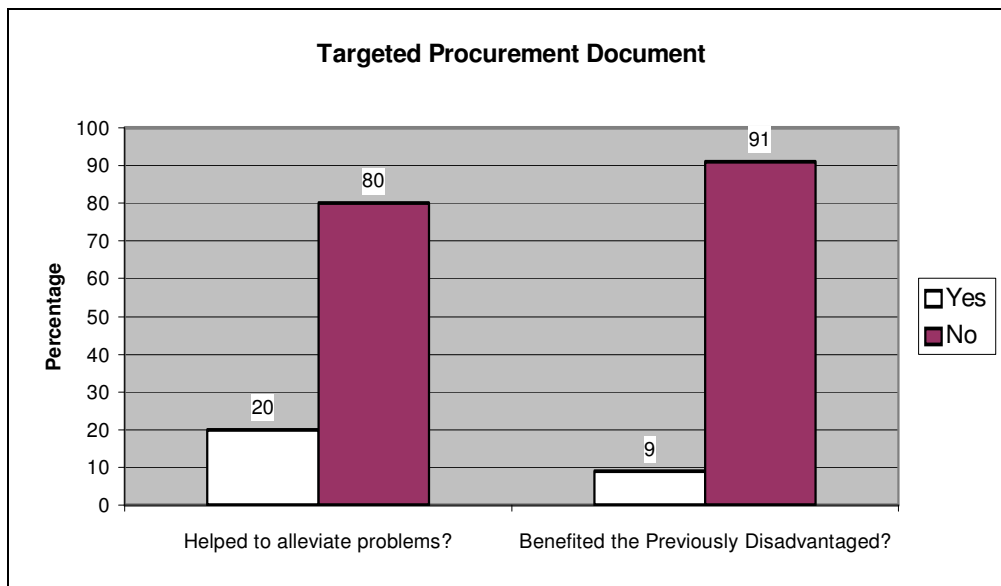
*Plant and Equipment* was rated the 2<sup>nd</sup> lowest by Contractors – this can possibly attributed to the fact that plant and equipment can be hired any time and does not have to be owned by the company. The *Relationship (of the contractor) with Client* was not seen by Consultants as important as it was rated as the least important criteria. This may indicate that consultants is in favour of giving all tenderers a “fair chance” by eliminating all traces of partiality. There may, however, be many advantages to the client if there is a good relationship between the contractor and him/herself.

It is also disturbing to note that none of the respondents commented on the importance of Health and Safety aspects (e.g. safety record of tenderer) to be taken into account when evaluating tenders.

#### 4. Targeted Procurement

The Department of Public Works developed a ten-point plan for procurement reform to create accelerated opportunities for the small, medium and macro enterprises sector (SMME) and to support people to access those opportunities. A series of strategies incorporated in the plan focus on access to information, training, balancing risk management and targeted preferencing.

Although a high percentage (80%) of respondents were aware of the Targeted Procurement Document many were of the opinion that the document has not helped to alleviate the problems encountered with tendering. Only 9% of the respondents believed that the Previously Disadvantaged Contractors did benefit by the Targeted Procurement Document.



**Figure 5: Targeted Procurement Policy**

Some of the negative points about the Targeted Procurement Documents, according to respondents, include:

- The document is focused on social problems and not on performance
- The points system is not adhered to
- Evaluators are still mainly influenced by Cost

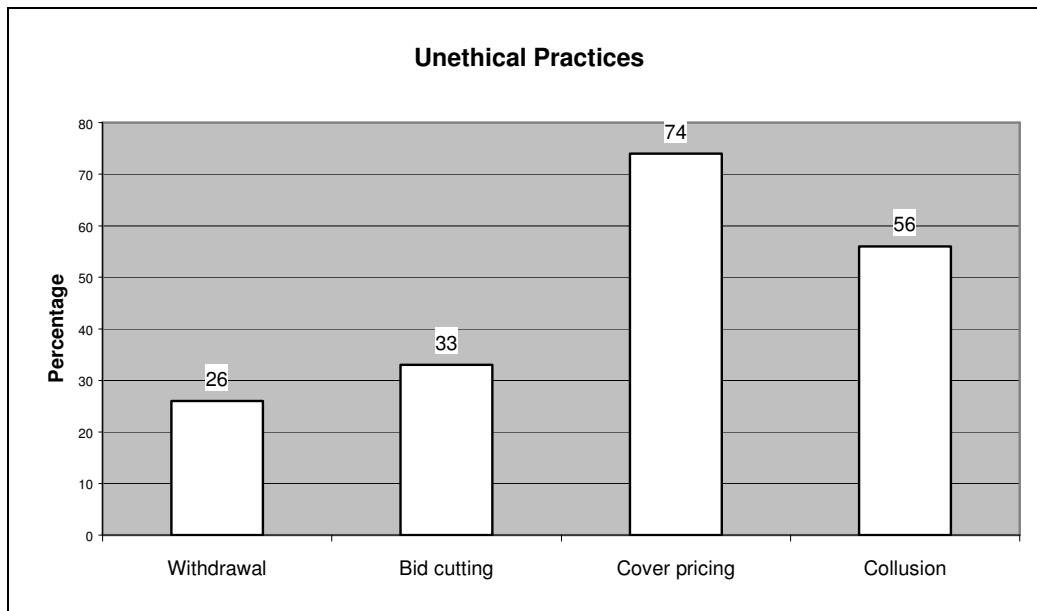
- 90% of Tenderers are not completing the document properly. It takes a highly skilled person to interpret and understand the document – emerging contractors do not always have these skills with the result that they eliminate themselves automatically.
- A certain percentage of the materials should come from PDI's (Previously Disadvantaged) but this is not always possible because these suppliers cannot supply the quantity, quality or timeously.
- The document is open to abuse and manipulation
- The document is too complicated to understand
- The Previously Disadvantaged Contractors are not completing the document correctly and disqualify themselves (do not receive the necessary points)
- No skills transfer taking place
- Poor quality arising
- The document is theoretically sound but has numerous "grey areas" which makes "window-dressing" possible; a mechanism needs to be put in place to monitor that the desired results are actually achieved
- It is subject to corruption

### 5. Unethical Practices in Tendering

There appears to be a fair amount of unethical practices taking place during the tendering process, especially:

- Withdrawal
- Bid cutting
- Cover pricing
- Collusion

Figure 6 indicates the extent to which respondents have encountered unethical practices during tendering.



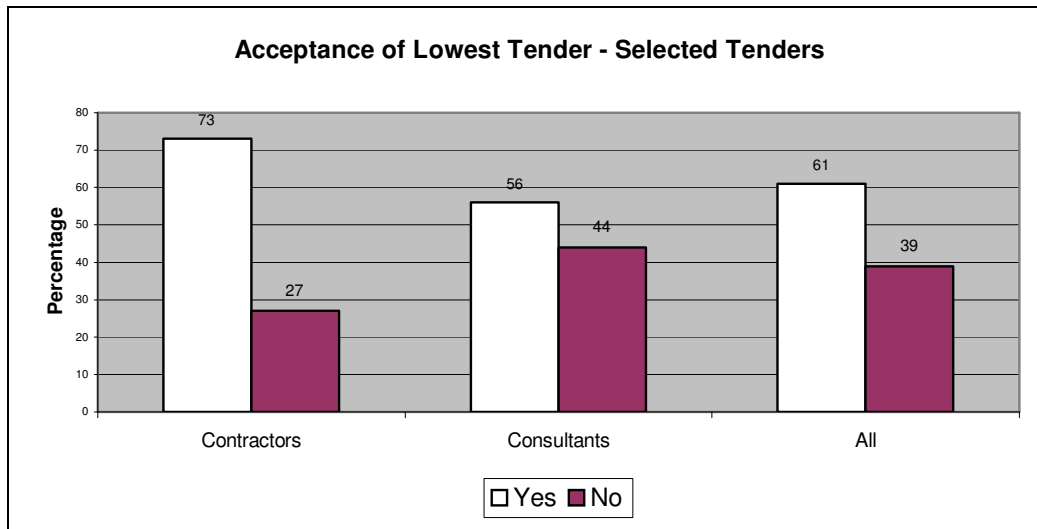
**Figure 6: Unethical Practices**

Almost  $\frac{3}{4}$  of the respondents (74%) has indicated that they have encountered the practice of "Cover Pricing" during the tendering process. The main reasons for cover pricing is little interest in the project, lack of resources to complete the project successfully, not enough time to compile a detailed tender, a desire to remain considered for future appointments or having a little chance of winning due to a large number of firms competing for the contract.



Most of the respondents (95%) indicated that they believe ethics should play a more important role in the evaluation of tenderers in that consultants should pay more attention to identify unethical practices

## 6. Acceptance of Lowest Tenderer – Selective Tendering



**Figure**

### **7: Acceptance of Lowest Tender**

*Contractors* felt very strongly about the lowest tenderer being accepted in the case of selected tendering – 73% of them suggested that the lowest tenderer must be accepted. Interesting to note that only 56% of the *consultants* felt the lowest tenderer should always be accepted; arguably they must feel that other criteria should also be taken into account, even if it is selected tenders.

### **Conclusion**

The research results indicate that there is definitely a need for developing a model to assist consultants in the tender evaluation process. Although *Cost* is considered the most important criteria when evaluating tenders, there are many other important factors which must be taken into account to ultimately give the Client *value for his money*.

To get a technique that encompasses all the factors for all different types of projects may be very difficult as there still needs to be some form of flexibility as it also depends on the *type of client* (Public or Private Sector - there are currently distinct differences between Public and Private sector projects – as well as the *nature* of the particular contract. No one system will suit all situations – there may even have to be a different model for different types of construction – e.g. housing, civil engineering contracts, refurbishments, commercial projects, etc. Time may be of the essence for one project and cost may be insignificant, or vice versa.

There is also great concern about the State Tender Board sometimes overriding the recommendation of the consultants with the acceptance of tenders, for *whatever* reason. Political influence should not be a deciding factor in determining contract awards – especially in the Public Sector. Whatever policies are applied should be interim, at some stage in the future affirmative action policies should become unnecessary. The consultants have a professional obligation to evaluate the tenders in a professional and ethical way to ensure that the most appropriate tender is accepted. Ethics and merit should never be compromised and politics should play no role whatsoever, *in the interest of the Client!* The main focus should be on *Value for money* and not the name on the tenderer's letterhead.

The research also indicated that there is strong evidence that the Public Sector's Targeted Procurement Document is not achieving its intended goals. The biggest obstacle appears to be that the emerging contractors do not have the necessary skills to complete the documents properly – it takes a high level of business skills and education to submit a proper tender. The mentorship programme is a slow process which does not take place overnight. This often leads to emerging contractors requesting consultants to assist them in pricing bills of quantities resulting in very little, if any, skills transfer taking place. If this is to become the norm, an adaptation of the old English Admiralty tender system of providing tenderers with pre-priced bills of quantities using fair rates on which the tenderers tender for a percentage mark-up or mark down on the overall rates (not per individual items), may be more suitable for emerging contractors.

The authors believe that it may be possible to develop a computerised "Expert System" to assist in the evaluation of tenders, one where consultants can enter certain parameters peculiar to the specific contract and adding a point rating to the various criteria to be taken into account. The system should also make allowance for "What if" scenarios to ensure that the contract is awarded to the best contractor. Such a system will ensure that each tender is sincerely evaluated on its own merit. □

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