CAUSES OF COLLUSION AMONG PEOPLE IN CONSTRUCTION

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ABSTRACT

Collusion is an unethical and disreputable agreement among parties of similar interests, with the intention of achieving a goal through immoral and dishonest means. Proper ethical procurement practice in the construction industry will enable the Construction Industry Development Board (cidb) to achieve their mandate, which is to promote uniformity in construction procurement, efficient and effective infrastructure delivery, and development of emerging contractors, including transformation. It will also enable the Competition Commission of South Africa (CCSA) to achieve their mandate, which is fair competition in all industries. With collusion occurring, it will be difficult for the cidb and the CCSA to achieve their mandate. This study examined the influences of this practice among competitors and stakeholders in the construction industry. Various causal factors of collusion among parties were extracted from a review of existing and relevant literature, and they were further evaluated to arrive at the specific ones that are relevant to the construction industry and the selected area of study. Using these factors, closed-ended questionnaires were prepared and administered to construction stakeholders with an adequate level of experience in the construction industry. The number of questionnaires distributed was 50, of which 45 were returned. Five of the questionnaires were not correctly and completely filled out. The distribution method used was self-administration. In addition, purposive sampling was used. The findings from the 40 respondents indicate that the major cause of collusion in the construction industry is greed of various stakeholders that are tasked with the responsibility of managing and monitoring construction contracts and activities, particularly the contractors. Political influence, among other factors, was also identified as a major reason for collusion. Empowering emerging contractors, a well-regulated environment, fair competition, and improving procurement management are the most important solutions that can prevent collusion from occurring. Furthermore, good ethical practice is one of the solutions that professionals should adopt. In view of this, agencies, institutes, and boards concerned with the monitoring and regulation of professionals, contractors, and general construction activities should therefore ensure that appropriate sanctions and punishments are applied for any members found culpable.

Keywords: collusion, construction industry, corruption, project performance, project stakeholders, unethical practice

1. INTRODUCTION

Public and private procurement, particularly high-value and large projects, usually involves opportunities which attract collusive tendering (Organisation for Economic Co-operation and Development (OECD), 2010). There are various forms of collusion, which cartels

mostly practice, namely price fixing, bid rigging, and market allocation or division. Price fixing is when two or more competitors agree on increasing prices or restoring or otherwise keeping prices where their services are being sold. It is not necessary for horizontal competitors to conspire to charge similar prices (OECD, 2008). Price fixing has many forms. Any arrangement between competitors that aims to restrict competition is prohibited by competition law (OECD, 2008).

In the bid rigging form of collusion, contractors conspire to raise prices. This occurs in both the public and the private sectors. Analysis of private and public tenders where bid rigging has occurred indicates that the company that won the tender was close to the maximum project value that the procuring entity was willing to pay (Ilango, 2014). In other words, competitors agree in advance who should win a certain tender. In price fixing, by contrast, not all competitors participate in the conspiracy. In this form of collusion, competitors drive markets among themselves. Competing companies will allocate themselves to specific clients or a type of clients, territories or products. For example, they will choose one competitor to bid on contracts led by particular clients or a type of clients. Thus, they will not be allowed to bid on a contract without appropriate prior allocation (OECD, 2008). Furthermore, the companies also agree to bid to only certain geographic areas, but to hide the conspiracy, they will intentionally bid a higher price to clients in geographic areas not allocated to (CUTS, 2008).

Several investigations by a competition tribunal, the National Prosecuting Agency (NPA), and other authorities have shown widespread use of cartels and corruption within the South African construction industry (Hekima Advisory, 2014). This study examined the causes of collusion among stakeholders in the construction industry, with a view to suggesting appropriate measures for eliminating or reducing collusion in the industry.

2. A REVIEW OF THE CAUSES OF COLLUSION

Causes of collusion are the factors that motivate collusion to take place. Dorée (2004) asserts that the main factor responsible for collusion is contractor greed. An investigation by Khumalo et al. (2010) revealed that the practice of collusion has become standard business practice. A number of factors have been suggested by market participants on why they engage in collusive tendering. These include the fact that the time given to compile tender documents is not sufficient, construction companies do not have sufficient resources to complete the construction works, or they engage in collusion just to be known by clients for future projects.

Zarkada-Fraser and Skitmore (2000) suggest that collusive tendering and corrupt practices are committed by an informed professional, a person with a particular attitude and characteristics and a sense of right and wrong, but who has a set of personal and organisational objectives to meet. Public officials frequently use public powers for their own benefit, for instance allowing bribes from contractors in exchange for granting tenders (OECD, 2010). Ayodele et al. (2011) explain that corruption is when one uses one's powers to be dishonest, to perform illegal practices, or to act immorally Unethical practice in any industry, including the construction industry, is labelled violation of the Competition Act and the Construction Industry Development Board (cidb) rules and regulations.

Collusion arises from a poor regulatory environment, procurement management, and the way firms behave (Hekima Advisory, 2014). Ratshisusu (2014) contends that competition

among horizontal competitors, procurement practices that are transparent, and oversight that is effective is vital for the construction industry. Ayodele et al. (2011) explain the causes of corruption in their study of corruption in the construction industry. Their study highlights that poverty and politics in the awarding of contracts, or "Godfatherism", are the main causes of corruption in the construction industry.

The OECD (2012) has recognised that a transparent and anti-competitive public is vital to ensure that services and goods that are being delivered by the government offer value for money. However, according to the OECD (2012), procurement systems by the government can be stymied by bid rigging and other collusion practices. In view of this, this section examines various causes of collusion among stakeholders in the construction industry.

2.1 The regulation factor

Regulation is an important tool in any field of work, or industry, for that matter. Several investigations have provided literature on the effects of regulations, particularly regarding competition in markets (OECD, 2014). In South Africa, there are certain laws that have been passed to promote fair and competitive markets and eliminate unethical behaviours, with the aim of promoting growth and development in all industries. The cidb is empowered to regulate the construction industry in South Africa, through registering contractors and regulating by means of a set of regulation requirements. Companies must follow certain regulatory requirements, particular with regard to registering of contractors. These regulations by the cidb include grading of contractors, which is a critical tool to have, as it ensures that contractors in the industry have the minimum requirements to undertake any project.

However, Ratshisusu (2014) argued that the cidb system for grading contractors has two main deficiencies. Firstly, adequate information is not provided to clients. This information includes the ability and the capacity of contractors to undertake the construction works. Furthermore, if this information is provided to the client, it could help the client to establish whether the contractor is fit to undertake the works, based on the grading. This information can be made available by the cidb.

2.2 The company factor

Companies have a pivotal role to play in ensuring a culture of competition in the construction industry. In essence, there should be a culture of competition amongst companies, rather than a culture of cooperation through collusive tendering. According to Ratshisusu (2014), a culture of bid rigging has existed for some time in the South African construction industry, where only the top-tier companies participate. An investigation by Khumalo et al. (2010) revealed that the practice of collusion has become standard business practice, which South African companies have adopted. In this regard, Ratshisusu (2014:602) points out that the top-tier construction companies engage in collusive tendering so as to harm the clients, but also to prevent participation of new contractors. Munshi (2013) states that emerging companies believe that collusion has robbed them of opportunities to grow, and that these companies feel that they have the right to compensation. Ratshisusu (2014) contends that if bid rigging had not occurred among the top-tier companies, new companies could have emerged by now.

For instance, projects that involve the construction of residential properties, civil works, such as roads, and building works, such as convention centres, would have been a great

opportunity for small to medium construction companies to gain the experience needed to acquire the cidb higher grading. Take the Netherlands, for example, where companies have been in collusive tendering, with the aim of excluding emerging companies (Dorée, 2004). Ratshisusu (2014) suggests that collusive tendering cases in South Africa should be prosecuted thoroughly, so as to obtain better insights into the methods that should be used to destroy the culture of collusion. Furthermore, it is necessary to change the manner in which companies compete for projects, as a way of eradicating collusive tendering. Most emerging companies do not engage in collusive tendering, as they mainly rely on subcontractor works (Ratshisusu, 2014). Furthermore, almost all companies that have the capacity and the ability to deliver large infrastructure projects, according to Hekima Advisory (2014), tend to engage in collusive tendering, rather than competing with emerging contractors.

Regardless of the cidb Act of 2000, with the objective of encouraging the participation of emerging contractors in the construction sector, it was expected that the growth of emerging contractors would increase dramatically, to such an extent that they would compete against the top-tier companies. However, in reality, only the top-tier companies are able to obtain tenders for large infrastructure projects (Ratshisusu, 2014). Munshi (2013) argued that large construction companies are lacking transformation and skills transfer, and that they tend not to empower emerging construction companies. With regard to the above-mentioned issues, the cidb has put programmes in place, particularly for emerging contractors, on how to grow their companies in the industry. The programmes focus mainly on fostering an entrepreneurial culture (Ratshisusu, 2014).

2.3 The procurement factor

The process of procurement firstly starts with identifying a certain project. If it is a government project, then the budget for that project is drafted. It is then the government's responsibility to deliver the project. According to Dorée (2004), the government used to deliver public construction projects on its own, i.e. the professionals employed by the government would design, plan and construct the work without consulting external services. However, developing countries, including South Africa, have copied higher-income national systems of separating key functions. Thus, responsibilities are divided among a larger number of people, who essentially perform complementary activities. According to Sohail and Cavill (2008), these participants must comply with different control mechanisms, the purpose of which is to ensure accountability.

However, Ratshisusu (2014) argued that once two or more parties engage in collusion, or agreements, it is easy for them to break the rules. As a result, an environment is created where control mechanisms need to be strengthened. The concern of Van de Rijt et al. (2010) is the reason for frequent breakdowns of control mechanisms. Sohail and Cavill (2008) stated that the problem arises from separating functions, which creates the opportunity for breakdowns, because mechanisms for controlling are separated at each stage of the procurement process (i.e. planning, design, and construction). Furthermore, functions are sequential, i.e. one stage has to be completed before the next stage can start. However, in practice, functions overlap, and there is interdependence among the participants at different stages.

The type of procurement procedure plays a role for collusion to take place. According to Van de Rijt et al. (2010), the Dutch Parliamentary Committee (DPC), in reaction to collusion in 2002, proposed a tougher public sector procurement procedure as a strategy to combat corruption. This clearly shows that procurement procedures are prone to collusion.

According to the City of Cape Town and the South African National Roads Agency Ltd (SANRAL), the manner in which the government has planned large infrastructure projects has been prone to collusive tendering. When the CCSA was conducting an investigation into collusive tendering between 2006 and 2009, the government had already begun with large construction projects for roads, FIFA World Cup stadia upgrades, and Eskom power stations (Hekima Advisory, 2014). Furthermore, for road construction, SANRAL separated some parts of the work into packages, and then invited certain companies to participate in tendering. Ratshisusu (2014) explains that at the time there were contractors that were already capable of undertaking large infrastructure projects, so basically it was their chance to grow and gain experience.

Ratshisusu (2014) put forward the idea that large infrastructure projects, such as Eskom power stations and World Cup stadia upgrades, were prioritised by large companies, as there was an opportunity to make money. This clearly shows that the procurement procedure that the government uses for large infrastructure projects fosters collusion by companies (Ratshisusu, 2014).

Ratshisusu (2014) states that the government has poor capability to undertake or manage large infrastructure procurement, and that it is prone to collusive tendering. Furthermore, it has been said that the government lacks the required skills to procure for large infrastructure projects, such that they end up consulting external services which have the capacity to manage such projects. Hekima Advisory (2014) put forward the idea that the main cause of bid rigging is that management of the procurement process is being done by external consultants.

The manner in which the government awards projects contributes to collusive tendering. Usually projects are awarded to the lowest qualifying bid, which makes it easy for companies to decide that the winning bid should be low. It is vital to change the manner in which contracts are awarded. It was found by Ratshisusu (2014) that this principle of awarding the lowest bid always leads to the winner's curse, because certain companies will price low, with the intention of winning the bid, but with no capacity to deliver such work.

The awarding of contracts on the basis of the lowest qualifying bidder on bids that are sealed depends on a certain number of key assumptions, such as that the design is completed before tender. The consequences of this assumption would be that if the designs are incomplete, this means that there might be changes in the post-contract stage, which gives contractors a chance to negotiate for variations and ridiculous claims (Sohail and Cavill, 2008). In addition, the main reason the system of awarding contracts to the lowest bidder is prone to collusive tendering is that all aspects of the project are already finalised and detailed in the tender document.

According to Ratshisusu (2014), concerns have been expressed on the role of consulting firms when managing the procurement process, particularly in the private sector. As there is no express requirement for a public procurement process in private sector projects, the consulting companies are often provided the latitude to identify and recommend a suitable

contractor for a project. According to Sohail and Cavill (2008), the main concern is that consulting firms appoint contractors based on favouritism, and they tend to accept their participation in the tender process even if they don't have the capacity to undertake the work. Therefore, Ratshisusu (2014) put forward the idea that if a contractor does not have the capacity to undertake the work yet still participates in the tender process, the contractor will end up colluding, as they know whom they are competing against.

Khumalo et al. (2010) provide a number of similar reasons why tenders engage in collusion, or cover pricing, namely the short period for preparing tender documents, the cost of bidding, and avoiding offending customers by not tendering. Several findings by Dlamini (2010) describe that there are changes in the business cycle. Throughout the period of recession, or the downturn in the economy, collusive tendering, cover pricing, and bid rigging may be used as a means of distributing the available work so as to prevent financial disaster for those who are participating in the market. However, the findings by Dorée (2004) also highlighted that those who are participating in the market do not consider collusive tendering a violation of the law or a criminal offence. Also, it has been argued that competition law is not breached when a phony high bid is put in during the bidding process. However, Khumalo et al. (2010) state that any interaction between horizontal competitors with the aim of reaching an agreement through collusion is a violation of competition law. In addition, according to the OECD (2009), any joint decision with the aim of supressing other competitors is indeed a wrong practice as defined in the act.

The summary below highlights the factors that cause collusion. Khumalo et al. (2010) suggest that greed is the main factor. Sohail and Cavill (2008) suggest that political influence is one of the factors that cause collusion. Zarkada and Skitmore (2000) argue that poor ethics and corporate governance is a cause of collusion. Another cause of collusion, according to Ratshisusu (2014), is the size of the project. The OECD (2010) argues that most large construction projects are prone to corruption. Ratshisusu (2014) suggests that a poor regulatory environment is one of the main causes for companies to engage in collusive practices. Furthermore, it has been found that awarding tenders based on favouritism is also a main cause of collusion (Sohail and Cavill, 2008). The other cause of collusion is poor procurement management (Van de Rijt et al., 2010).

According to Sohail and Cavill (2008), the number of contractual links has an impact. The more contractual links, the more procurement systems are manipulated. Khumalo et al. (2010) suggest that entrenched interest is one of the causes of collusion. Ratshisusu (2014) suggests that the inconsistency of anti-corruption policies is another factor that causes collusion among people. Ray et al. (1999) argue that the period given to compile tender documents should be sufficient. Furthermore, good oversight and supervision of procurement procedures is vital (Sohail and Cavill, 2008). In addition to procurement procedures, Hekima Advisory (2014) suggests that too many stages in the procurement procedure can cause collusion. Sohail and Cavill (2008) urge that separation of key functions is also a cause of collusion. According to Ayodele et al. (2011), poverty is also one the factors that cause collusion and corruption among people.

3. METHODOLOGY

To examine the causes of collusion in the South African construction industry, a survey design was adopted, with the intention of obtaining information from individuals and

experts in the area of study. Using a quantitative approach, questionnaires were administered to construction professionals practising within construction, consulting and government establishments within the Gauteng region of South Africa. These included quantity surveyors, architects, construction managers, project managers, and engineers. The number of questionnaire distributed was 50, and 45 were returned, of which 5 were not correctly and completely filled out. The distribution method used was self-administration. Purposive sampling was used. A minimum of five years' experience was used as a basis for the choice of respondents. This was to ensure that the respondents possessed a minimum level of knowledge of the industry, by virtue of their practice and involvement in construction processes and activities.

The questionnaire was prepared to evaluate the perceptions of professionals regarding the causes of collusion, and it gave respondents the opportunity to rank the identified causes. The questionnaire was divided into two sections, where the first section solicited general and background information from the respondents, while the second section focused essentially on the causes of collusion in the construction industry. A cover page was also provided, which consisted of a cover letter providing a description of the lead researcher and the institution with which he is affiliated. The cover letter sought permission from the respondents to participate in the survey, and it also explained the main purpose of the study.

To rate the causes of collusion in the construction industry, a rating scale with five points was adopted. The adopted five-point scale was as follows: 1 = strongly disagree (SD); 2 = disagree (D); 3 = neutral (N); 4 = agree (A); and 5 = strongly agree (SA). The five-point scale was transformed to a mean item score for each aspect, so as to rank the factors. The ranking helped to identify the relative importance of each variable as recognised by the respondents. The calculation of the relative mean item score (MIS) was determined from the total of all weighted respondents and then related to the total response on a particular aspect. This was based on the principle that respondents' scores on all the selected criteria, considered together, are indices of agreement with the causes of collusion. The mean item score (MIS) was calculated using the formula

$$MIS = \frac{1n1 + 2n2 + 3n3 + 4n4 + 5n5}{\Sigma N}$$

where

n1 = number of respondents for factor 1,

n2 = number of respondents for factor 2,

n3 = number of respondents for factor 3,

n4 = number of respondents for factor 4,

n5 = number of respondents for factor 5,

and N = total number of respondents.

After analytical calculation and computation of the standard deviation (SD), the variables were then ranked in descending order of their mean item score, from highest to lowest.

4. FINDINGS AND DISCUSSION

From the received 45 questionnaires, 40 were completely filled out, and they were analysed accordingly. Figure 1 reveals the findings related to construction projects that frequently experience collusion. The respondents perceived that 17.4% of construction projects that experience collusion are road construction projects, followed by shopping mall projects (15.1%), building renovation projects (12.8%), stadia projects (12.8%), hospital projects (11.6%), public office projects (11.6%), railway construction projects (7.0%), and housing estate projects (7.0%).

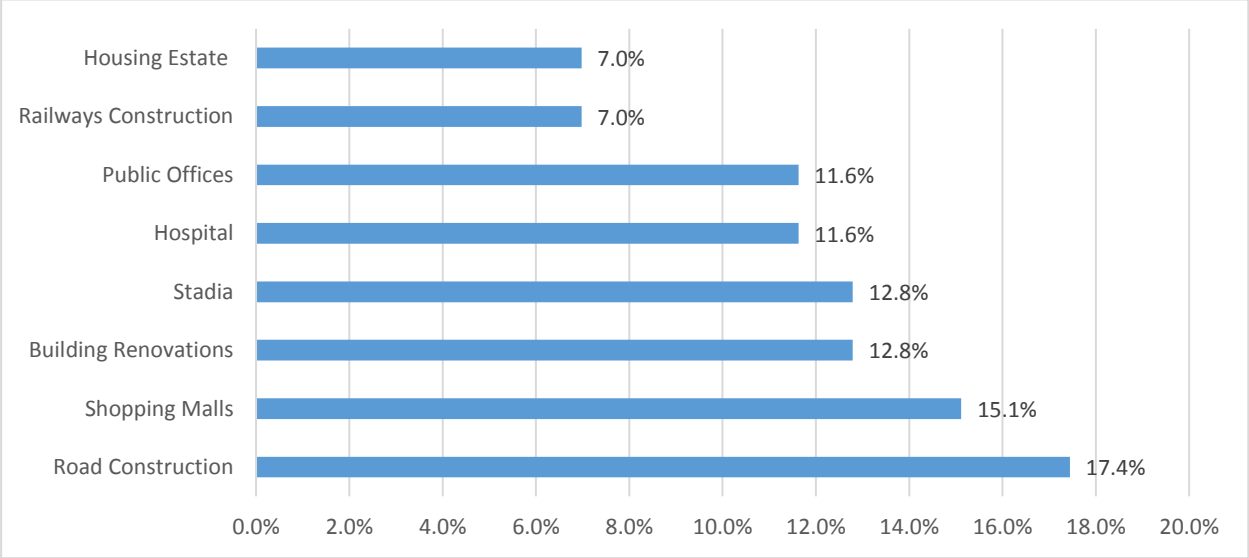

Figure 1: Construction projects that frequently experience collusion

Table 1 reveals the respondents ranking of the factors causing collusion in the construction industry. The Cronbach's alpha value for this section is 0.813, indicating a good level of reliability of the data. According to the ranking (R) using the calculated mean item score (MIS) and the standard deviation (SD), it was observed that the most common factors were the following: contractor greed was ranked first, with an MIS of 4.12 and an SD of 0.980; political influence, with an MIS of 4.00 and an SD of 1.204, was the second-most common factor; poor ethics and corporate governance was ranked third, with an MIS of 3.98 and an SD of 0.987; size of the project was ranked fourth, with an MIS of 3.90 and an SD of 0.944; poor regulatory environment, with an MIS of 3.76 and an SD of 0.969, was the fifth-most common factor; favouritism in awarding contracts was ranked sixth, with an MIS of 3.71 and an SD of 1.146; ignorance of clients was ranked seventh, with an MIS of 3.63 and an SD of 1.090; poor procurement management was ranked eighth, with an MIS of 3.61 and an SD of 1.022; high number of contractual links was ranked ninth, with an MIS of 3.59 and an SD of 1.048; entrenched interests was ranked tenth, with an MIS of 3.56 and an SD of 0.950; inconsistency of anti-corruption policies was ranked eleventh, with an MIS of 3.56 and an SD of 1.097; period given to prepare tender documents, with an MIS of 3.49 and an SD of 1.287, was the twelfth-most common factor.

Table 1: The causes of collusion in the construction industry

Factor	MIS	SD	Ranking
Contractor greed	4.12	0.980	1
Political influence	4.00	1.204	2
Poor ethics and corporate governance	3.98	0.987	3
Size of the project	3.90	0.944	4
Poor regulatory environment	3.76	0.969	5
Favouritism in awarding contracts	3.71	1.146	6
Ignorance of clients	3.63	1.090	7
Poor procurement management	3.61	1.022	8
High number of contractual links	3.59	1.048	9
Entrenched interests	3.56	0.950	10
Inconsistency of anti-corruption policies	3.56	1.097	11
Period given to prepare tender documents	3.49	1.287	12
Poor oversight and supervision	3.41	1.072	13
Too many stages in procurement procedure	3.29	1.031	14
Separation of key functions	3.05	0.921	15
Incomplete designs	3.00	1.025	16
Poverty	3.00	1.342	17

Other causes of collusion included poor oversight and supervision, with an MIS of 3.41 and an SD of 1.072, too many stages in the procurement procedure, with an MIS of 3.29 and an SD of 1.031, separation of key functions, with an MIS of 3.05 and an SD of 0.921; incomplete designs, with an MIS of 3.00 and an SD of 1.025, and poverty, with an MIS of 3.00 and an SD of 1.342.

The findings of this study are similar to the findings of Dorée and Kashiwagi (2015), where contractor greed was revealed to be the main factor that causes collusion. Sohail and Cavill (2008) suggested that political influence is also a main factor that causes collusion. A study by Ratshisusu (2014) revealed that poor procurement management is one of the main factors that cause collusion, which was confirmed by the findings of this study. Zarkada-Fraser and Skitmore's (2000) study suggested that collusive tendering is a decision made by an individual, which confirms the finding of this study that poor ethics and corporate governance is one of the factors that cause collusion. However, the findings are inconsistent with those of Sohail and Cavill's (2008) study, where incomplete designs was highlighted as a major factor causing collusion.

5. CONCLUSION

The objective of this study was to determine the factors that cause collusion in the construction industry. The reviewed literature revealed that the main causes of collusion include such factors as contractor greed, ignorance of clients, poor ethics and corporate governance, a poor regulatory environment, poor oversight and supervision, poor procurement management, separation of key functions, favouritism in awarding contracts, too many stages in the procurement procedure, incomplete designs, a high number of contractual links, political influence, poverty, size of the project, entrenched interests, inconsistency of anti-corruption policies, and period given to prepare tender documents.

The findings obtained from the analysis of the questionnaires administered to construction professionals revealed that contractor greed, political influence, poor procurement management, poor ethics and corporate governance, size of the project, poverty, favouritism in awarding contracts, a poor regulatory environment, inconsistency of anti-corruption policies, entrenched interests, and period given to prepare tender documents were the top causes of collusion among people in the construction industry. Empowering emerging contractors, a well-regulated environment, fair competition, and improving procurement management are the most important solutions that can prevent collusion from occurring. Furthermore, good ethical practice is one of the solutions that professionals should adopt.

Collusion in the construction industry will not only affect the performance of construction projects, but will also result in a bad reputation for stakeholders in the industry, particularly consultants and contractors. Therefore, to eliminate or reduce the occurrence of collusion, there is a need to empower emerging contractors, maintain a well-regulated environment, ensure fair competition among bidders, and improve procurement management techniques and procedures. Furthermore, stakeholders in the industry, particularly construction professionals tasked with the responsibility of regulating, maintaining and controlling construction processes and activities, need to maintain good ethical practice in dealing with other internal and external members of the industry.

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