

CORRUPTION IN THE SUPPLY CHAIN: SOUTH AFRICAN CONSTRUCTION MANAGERS' EXPERIENCES

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Using an online survey, construction managers' experiences of corruption in the supply chain of the South African construction industry is investigated. A majority of respondents considers that corruption is widespread in the sector. Kickbacks, conflict of interest, tender rigging, and fronting are considered the most prevalent forms of corruption, with the first three reported as the forms most experienced by construction managers. Government officials (as clients), sub-contractors, and fellow contractors are perceived to be the most involved in corrupt activities. Contractors engage in the submission of inflated claims as a negotiation margin, in collusive tendering, and in the employment of illegal workers. Sub-contractors are reportedly involved in the provision of sub-standard work, the employment of illegal workers, and collusive tendering. Corruption is most prevalent during the bid evaluation and tendering phases. Factors seen to facilitate corruption include a lack of transparency in the awarding of contracts, the private opening of tenders facilitating the manipulation of tender results, and the operating environment of the industry. Barriers to the reporting of corruption include a belief that no action will be taken, a lack of confidence in anti-corruption agencies and the judicial system, plus the fear of being stigmatized as a 'whistle blower'. Combatting corruption in the construction industry requires a more forensic approach to detecting it, better reporting channels, and measures for protecting informants. More education and training in ethical standards would help to develop a better business culture and higher moral values in the business environment.

Keywords: corruption, construction industry, contractors, construction managers, South Africa

INTRODUCTION

Corruption is commonly defined as rottenness, willingness to take bribes, and moral evil. To the extent that it has moral connotations, un-ethical behavior is synonymous with corruption.

Corruption is seen as a growing challenge for businesses and society (Transparency International, 2009). Citing World Bank estimates, Ostermann and Staudinger (2008) indicate that corruption represents 5% of the world economy; translating into some US\$1.5 trillion per year¹. Corruption is reported to increase income inequality and poverty (Gupta et al., 2002). The International Monetary Fund (IMF) (1996), Dreher et al. (2007), and Sohail and Cavill (2008) provide a comprehensive overview of the causes and consequences of corruption. Dreher et al. (2007) identify the impact of corruption on the world economy as contributing to low economic growth, stifled investment, increased inequality, and the inhibited provision of services. The construction industry has been identified as the most corrupt sector in the world (de Jong et al., 2009). Transparency International (2005) describes it as an industry possessing characteristics that render it particularly susceptible to corruption. These characteristics include the size, complexity and uniqueness of projects, the number of contractual links, the lack of frequency of projects, and the culture of secrecy.

The study reported here explores the perceptions and experiences of construction managers with regard to corruption in the supply chain of the South African construction industry. A web-based, online survey questionnaire was used to collect data. The paper commences with a background review of corruption in the construction industry, followed by a description of the survey design and administration. The findings of the survey response data are then presented and discussed. Finally, conclusions are drawn and recommendations are made.

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BACKGROUND TO THE STUDY

A number of studies have addressed the issues of un-ethical behavior and corruption in the construction industry. More specifically, May *et al.* (2001) examined the nature of bid-cutting in construction tendering in Queensland from economic, legal, ethical and management perspectives. Fan *et al.* (2001) investigated the ethical behaviour of quantity surveyors in the Hong Kong construction industry, finding a relationship between age and ethical standpoint.

Zarkada-Fraser and Skitmore (2000) studied the attitudes and behavioural intent towards collusive tendering of key individuals in the tendering process of the Australian construction industry. They conclude that collusive tendering is a result of a decision with moral content, and that there is a minority of tenderers that would consider participating in collusive tendering under specific circumstances. This particular group presented a distinct demographic and decision-making profile. Vee and Skitmore (2003) found that project managers, architects and building contractors surveyed had all experienced or witnessed some degree of corrupt practice. A survey of construction industry ethical practices in the USA (FMI/CMAA, 2004) found that 84% of the responding building owners, architects, building services firms, construction managers, contractors and subcontractors had been exposed to unethical practices. CIOB (2006:23) reports on corruption in the UK construction industry, concluding that “*corruption is present in most aspects of the UK construction industry*”.

Sohail and Cavil (2008) highlight the risks that corruption poses to construction and engineering companies themselves, and advocate the role of accountability in combatting corruption. Sichombo *et al.* (2009) describe the benefits of technical auditing in the Zambian construction industry. Corruption in the Malawian construction industry is investigated by Shakantu and Chiocha (2009). Forms of corruption were found to include bribery, fraud, collusion, price fixing, kickbacks, and negligence. They conclude that the nature of the industry renders it susceptible to corruption, and that local conditions and procurement systems shape the form and extent of corruption.

Conflict of interest fits less easily into the canon of corruption outlined above, since at first sight it appears more remote from the criminal connotation of corrupt activities. We tend to regard it as a minor concern, to be avoided if possible, but occurring almost by accident and rarely leading to serious consequences. Provis (2008) suggests that conflict of interest can be compared to the Chinese business concept of ‘*guanxi*’, the nature of business relationships and the way in which they are developed and used. It is more than this, however, since business processes, in addition to relationships, may involve conflicting obligations; conflicting roles; and conflicting opinions, attitudes and beliefs – all of which may arise intra- as well as inter-personally. All of these entail decision-making in terms of identifying conflicts, prioritizing interests, exploring options, choosing whether or not to act and whether or not to declare the interest or conceal it. It is within the realm of conscious decision-making about conflict of interest that its more serious and potentially corrupt and criminal consequences are born. Furthermore, since conflict of interest is closely aligned with un-ethical conduct and the moral associations of the latter, the link with corruption cannot be denied. According to Cressey (1973), cited in Wilson (2004), economic crime such as embezzlement derives from three juxtaposed elements: opportunity, pressure (motivation), and rationalization (moral justification). From this perspective, the implications of conflict of interest for corruption are thus more fully understood.

The impact of corruption on the construction sector worldwide is significant, estimated at some US\$340 billion each year (Sohail and Cavill, 2008). The implications of all this are that corruption is widespread in the global construction industry, and that its effect, on the industry itself and upon national economies, is significant. However, there is a dearth of literature relating to the nature and extent of corruption in the South African construction industry. What exists is limited in depth and scope. The research described here is intended to address that shortcoming.

QUESTIONNAIRE DESIGN AND METHOD OF DATA COLLECTION

Drawing on the work of Zarkada-Fraser and Skitmore (2000), Vee and Skitmore (2003), CIOB (2006), Bowen *et al.* (2007), and Shakantu and Chiocha (2009), a sectioned questionnaire was drawn up, utilizing a mixture of closed, dichotomous, declarative and multiple-choice questions. Using a four-part structure, the survey questionnaire sought demographic, cultural and professional background information from respondents; explored the extent of personal exposure to corruption and the prevalence of corrupt activities; investigated contractors’ subcontractors’ and suppliers’ experiences of corruption; and examined perceptions of the causes of, and barriers to, corrupt practices. The reporting of corruption was also explored. A web-based, online questionnaire survey (see

Wright, 2005; Fielding *et al.*, 2008) was adopted to collect data from registered construction managers in South Africa. Advantages of this method of data collection include: access to unique populations, savings in time, and cost effectiveness (see Wright, 2005). Registered construction managers were emailed by the Council for the Construction Project and Construction Management Professions (SACPCMP), given a URL where the questionnaire could be accessed online, and asked to participate. Disregarding notified email rejection messages ('bounces'), the response rate is 7.2% ($n=50$; $N=696$). Further qualitative research, using a case-based 'long interview' approach is intended to enhance the validity of the findings by permitting triangulation of data.

ANALYSIS OF THE DATA

The data have been analysed using the IBM Statistical Package for the Social Sciences (IBM SPSS V19.0 for Mac) software application. Percentages stated relate to the responses to individual questions.

SAMPLE PROFILE

The majority of the participating construction managers are male (89%), 'White'² (92%), aged 40 years or older (81%), and possess at least a Bachelors and/or Honours degree (68%). Proportionately more respondents (74%) are employed in larger organisations (>100 employees). Only 20% report working in firms with 50 or less employees. Most construction managers (47%) report high levels of work (exceeding R500m turnover value per annum). Respondents work in Gauteng (41%), KwaZulu-Natal (15%) and the Western Cape (13%); the three most populous and economically-active provinces (out of nine) in South Africa. The construction managers who participated in the survey may generally be described as well-educated, experienced persons, 'White', and male.

NATURE AND EXTENT OF CORRUPTION AND PARTICIPATION IN CORRUPT ACTIVITIES

Using a 5-point Likert scale (1=strongly agree; 5=strongly disagree), respondents were asked to indicate their assessment of whether or not corruption is widespread in the South African construction industry. Seventy-five percent (75%) respondents concurred that it is. Respondents' *personal experiences* ('Yes/No') of the various forms of corruption being examined, namely, fraud, tender rigging and collusion, embezzlement, fronting (the substitution of a sham organization for the real one to circumvent regulations), bribery, kickbacks and extortion, and conflicts of interest, were sought. Tender rigging and collusion is the form of corruption most experienced by respondents (65%), followed by kickbacks (64%), conflict of interest (61%), and fronting (55%).

Using 5-point Likert scales (1=very frequently; 5=very seldom), the *prevalence* of the various forms of corruption, as well as the *degree of the involvement* of various industry stakeholders in corruption, were explored. Respondents view kickbacks (67%) as the most prevalent form of corruption, followed by conflict of interest (63%), tender rigging (61%), and fronting (61%). Government officials (as clients) are reportedly the most frequently involved in corruption (83%) compared to the other respondent groups, followed by sub-contractors (64%), and fellow contractors (58%). Engineers, architects and quantity surveyors are reportedly the least corrupt professional groupings.

Respondents' experiences regarding the forms of corruption most associated with the various industry stakeholders indicates that government officials (as clients) are most associated with bribery, kickbacks, and conflicts of interest. Architects, engineers and quantity surveyors are most associated with conflict of interest, kickbacks and tender rigging; whilst contractors are involved with tender rigging, bribery, and fronting. Corruption by the contracting fraternity is explored more fully below.

NATURE AND EXTENT OF SPECIFIC FORMS OF CORRUPT ACTIVITIES UNDERTAKEN BY CONTRACTORS, SUB-CONTRACTORS AND SUPPLIERS

A majority of survey respondents (62%) report that fellow contractors engage in the submission of inflated claims as a 'negotiation margin'. A third (34%) state that collusive tendering by contractors is widespread, as is the employment of illegal workers (29%). Some 31% of respondents report that contractors engage in the extortion of payments from sub-contractors or suppliers in return for work.

When the activities of sub-contractors are examined, the following forms of corruption are reported as being the most widespread: the employment of illegal workers (59%); the provision of lower quality work than that required in terms of the contract specification (56%); and collusive tendering (46%). Other types of corrupt activities by sub-contractors include: the submission of fraudulent time sheets (36%), and the submission of fraudulent invoices (35%).

Fewer respondents see material suppliers as engaging (at least 'frequently') in all the listed types of corruption. A notable exception is in the case of collusive pricing, where 56% of all respondent contractors claim that this practice is widespread. Suppliers are also

perceived by respondents (41%) to provide lower quality materials than that specified in the contract documents. Other forms of corruption reportedly undertaken by suppliers include: bribery to secure a supply contract, the provision of lower quantities of materials than originally ordered, and the submission of fraudulent invoices. Responding construction managers indicate overwhelmingly that the two most prominent phases for corrupt activities are the bid evaluation and tendering stages.

FACILITATION OF CORRUPTION AND BARRIERS TO REPORTING IT

Survey respondents were requested to provide information relating to factors which can facilitate corruption within the industry; and barriers to the reporting of corruption. Chief amongst facilitation factors (86% of survey respondents) are a lack of transparency in the awarding of contracts, and the private opening of tenders; the latter reportedly being used to as an opportunity to modify the bid results during the tender evaluation period. The operating environment of construction projects is also seen as a complicating factor by 81% of respondents.

Upon corruption being detected, the most widespread responses of survey participants are that it is either reported to their superior or the organization (90%), or to the client and the professional consultants (77%). However, 57% of respondents report that corruption is sometimes never reported. Based on their experiences, respondents cite the following barriers to reporting corruption: belief that no action will be forthcoming (85%); lack of confidence in the relevant anti-corruption agency and the judicial system (83%); fear of being stigmatized as a 'whistle blower' (72%), and a concern that the Protected Disclosures Act (RSA, 2000) does not adequately protect 'whistle blowers' in South Africa (70%). Other barriers cited by participants include fear of retaliation and physical harm to self or family, fear of an occupational penalty (e.g. dismissal) by the employer, and being unaware of the reporting channels to be followed.

DISCUSSION OF THE RESULTS

Three out of four of the construction managers responding to the survey agree that corruption (in various forms) is widespread in the construction industry in South Africa. There is thus no high moral ground for South Africa to occupy in this matter. Most respondents came to their opinion through personal experience, although the survey did not ask them to distinguish between encountering corrupt activities and being involved with them. In their experiences, tender rigging and bid collusion feature frequently. This justifies the current situation, where the Competition Commission of South Africa is probing alleged bid-rigging and anti-competitive conduct associated with construction projects involving new spectator facilities and transport infrastructure improvements for the 2010 FIFA Soccer World Cup. The enquiry covers some 70 projects (located throughout the nation) valued at ZAR29bn. Many of the major construction companies in South Africa are allegedly implicated. Some have already applied to the Commission for corporate leniency in the form of reduced penalties in return for cooperation and disclosure. The outcomes of the enquiry are almost certain to include recommendations for more rigorous procurement processes for public works (particularly in the early phases encompassing bid enquiry and contract award), more precautions in the tender process and greater scrutiny and evaluation of bids. The often-cited quotation (usually attributed to Thomas Jefferson) about "*the price of peace is eternal vigilance*" is apposite here. More severe penalties are also likely to be imposed. While all this is laudable, a strong 'trickle down' effect will be necessary to reduce other forms of corruption such as 'kickbacks' and 'fronting'. Ways will also have to be found to address similar corruption activities inevitably occurring in private sector construction projects, as well as reaching out to the sub-contractor and supplier actors in the construction supply chain.

Sichombo *et al.* (2009) suggest that all this can be accomplished by adopting technical auditing processes, a term usually understood to describe the work of professional quantity surveyors, and certainly this must be used to combat forms of corruption such as false claims, over-pricing, and over-invoicing. However, 'forensic auditing' might be a more appropriate term to represent a different, more 'arm's length' independent approach needed to deal with tender rigging and collusion. For example, forensic data analysis systems now enable tax authorities to interrogate and cross-match financial data to expose anomalies and pursue miscreants. Similarly, software applications are used by most universities to detect plagiarism in student work. These forensic applications are risk-based, reporting on the likelihood that tax evasion or plagiarism has occurred, as well as their extent. Both types of detection systems are accretively knowledge-based to improve their consistency and reliability. Companies failing to satisfy such forensic analysis might be called upon to demonstrate conclusively how they have not engaged in corrupt activity

Not surprisingly, perhaps, the construction managers reported contractors as being the industry stakeholders most frequently involved with bid collusion. Exclusion from participation in public sector tenders might be an effective sanction available to counter this, but this does not address private sector concerns. Furthermore, the potential effect on competitiveness (fewer tenderers; less competition) must be considered, although this could be countered to some extent by creating easier access for new and smaller contracting companies.

Of particular concern is the survey finding reporting the extent of involvement of government officials in various forms of corruption. Survey participants overwhelmingly pointed to them, in their roles as public service employees active in the building procurement process, as being far more frequently involved in corruption than all other stakeholder groups.

It is possible that exposure to education and training in ethical standards is less consistent and less frequently provided (through their vocational studies) to public servants and employees in contracting, sub-contracting and supplier companies; compared to that in the *curricula* of qualifying degree studies mandated for professional construction disciplines such as architecture, engineering and quantity surveying. Construction management degrees should at least match them in this regard. Ideally, however, ethics should be introduced early and widely across the younger section of the population, preferably before entry to secondary education, so that a more appropriate ethical culture can be encouraged to develop in society. Prescriptive, penalising legislation cannot achieve this outcome effectively or alone, and a positive shift in moral values is needed in the context of business practices.

The survey findings also support the call of Sichombo *et al.* (2009) for greater protective measures for whistle-blowers in the construction industry. Knowledge of appropriate reporting channels needs to be far more widely communicated throughout the industry.

At this stage, the research findings partly support the ‘fraud triangle’ theory of Cressey (1973). In terms of the *opportunity* leg of the theory, support can be clearly detected in terms of the corrupt activities associated with the processes of building procurement (pre-construction tender rigging; bid collusion; kickbacks), and in the status and roles of actors (government officials; contractors; sub-contractors; suppliers). The *pressure* aspect of Cressey’s theory is evident in the highly competitive commercial environment of the construction industry. However, support for the essential *rationalisation* component of the theory does not emerge clearly from the research findings, as survey participants were not asked directly to suggest why corrupt activities occurred, nor how they might be justified.

CONCLUSIONS

It is clear that corruption is considered to be widespread in the South African construction industry, and this must be regarded as unacceptable for all stakeholders (a party engaging in corruption will almost certainly also become a victim of it through other links in the supply chain).

The *opportunity* aspect presents the most obvious target for action, through the established processes of building procurement. An urgent focus of attention should be upon the tendering and bid evaluation phases, since these are likely to be where the most serious instances of corruption occur, but no stage can be entirely ignored, nor can anyone in the whole process be regarded as above suspicion.

The *pressure* component of corruption may be a more difficult issue to address, since competition is the cornerstone of free-market economies. A deeper understanding of the *rationalisation* of corruption is needed before the socio-pathological nature of this aspect can be countered. That understanding will have to be derived from exploration of the incremental downward journey of corruption: from minor breaches of rules, to conflicts of interest, and thence to criminal acts.

Measures to combat corruption, and to facilitate its detection and reporting, are likely to embrace modern ICT-based technologies and software applications with a forensic capacity surpassing that already practiced among the professional disciplines engaged in the construction industry. Shifts in the culture and moral values of business are also needed.

Deeper investigation of the issues raised by the survey findings (particularly into the rationalisation aspect), and more detailed exploration of counter-measures to corruption, is intended through follow-up case-based research.

NOTES

1. Currency exchange rate as at 11th October 2011: ZA Rands 12.31 = Pound Sterling 1.00; ZA Rands 7.88 = US\$1.00
2. In terms of *apartheid* legislation, people in South Africa were racially classified as ‘White’, ‘Black’, ‘Coloured’, or ‘Asian’. For the purposes of enforcing *apartheid*, people were generally categorised as either ‘White’ or ‘Non-White’. While the latter term has some pejorative

connotations, it remains a useful label for categorizing several groups of people who were formerly disadvantaged because of their ethnicity. It has been solely used in that capacity in this research. Post-apartheid South Africa has seen the introduction of ‘positive discrimination’ or ‘affirmative action’ as a vehicle to assist previously disadvantaged persons (PDIs) – who are mainly recognized as ‘Non-whites’ and women (RSA, 1996). Affirmative procurement policies are examples of mechanisms developed and implemented by the public sector to facilitate change. Within the context of the construction industry, affirmative action has, for example, taken the form of preferential procurement in the award of building contracts and the appointment of professional consultants.

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