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Development

[THE ROLE OF CIDB IN LIMITING CONSTRUCTION INDUSTRY CARTELS]

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Abbreviations and Acronyms

CCSA	Competition Commission of South Africa
CIDB	Construction Industry Development Board
CLP	Corporate Leniency Policy
FIFA	Fédération Internationale de Football Association (International Federation of Association Football)
GFIP	Gauteng Freeway Improvement Plan
JBCC	Joint Building Contract Committee
OECD	Organisation for Economic Co-operation and Development
SANRAL	South African National Roads Agency Limited
UK	United Kingdom
UN	United Nations
USA	United States of America

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Executive Summary

First signs of collusion in the construction sector came as a consequence of a corporate leniency application (CLP) by Murray & Roberts, through its subsidiary, Rocla, in 2007. This case exposed a cartel in the production of pipes, culverts and manholes as well as bid rigging in the supply of precast concrete products (Competition Tribunal, 2013a; Competition Tribunal, 2010). The cartel, as detailed in the case between the *Competition Commission v Southern Pipelines Contractors/Conrite Walls*, operated from 1973 to 2007 in Gauteng, Kwazulu-Natal and the Western Cape. Having endured for such a long period, the cartel was structured such that one member of the cartel was designated a 'banker' to compile a list of all contracts available during a specific period. Cartel members allocated regions and market share. The effects of the cartel were catastrophic. As the Competition Tribunal (2010:4) explained, "[c]artel members enjoyed a quiet and hugely profitable life, as evidenced by the drop in prices by between 25-30% post the disbandment of the cartel..." Further and in-depth study of the cartel showed overcharges ranging from 16.5-28% in Gauteng and 51-57% in Kwazulu-Natal (Khumalo, Mashiane and Roberts, 2014).

In the light of the uncovered collusion in the construction products involving some of the top-tier construction firms, CLPs in the sector as well as international trends on bid rigging, the sector became on the radar of the Competition Commission of South Africa (CCSA). This led the CCSA to prioritise the broader infrastructure and construction sector in 2008, amongst other sectors. The focus on the sector was also due to the infrastructure programme Government was embarking on and therefore it was vital that prices of inputs to the infrastructure programme were not inflated by anti-competitive behaviour and practices. With the sector under the spotlight, the CCSA embarked on an in-depth study of the value-chain of the construction sector and at the same time CLPs started flowing in.

Armed with the information on possible anti-competitive conduct in the sector, the CCSA launched investigations of bid-rigging and collusion in the construction sector in 2009. During the investigations, the CCSA established that bid rigging and collusive conduct was rife in the sector. In the circumstances, the CCSA decided, in February 2011, to invite firms involved in bid rigging and collusion to settle their contraventions provided they fully disclose the extent of their involvement and, where applicable, pay an administrative penalty.

In 2013, the CCSA concluded settlements with the majority of firms that were involved in bid rigging and collusion on various projects, for which the contraventions occurred between 2006 and 2009. The total administrative penalties out of the settlement process amounted to R1.46 billion. In total, 300 projects were affected by bid rigging and collusion for a period of at least between 2000 and 2009.

The construction sector, as revealed in settlements by firms with the CSSA, has been riddled with collusive practices for a number of years. The extent of such conduct has not been fully exposed in the settlements as more than half (53%) of the rigged contracts were not considered for settlement given that the contraventions had prescribed in terms of the Competition Act. What has been revealed is that the collusive practices took at least four forms, namely, (1) agreement on allocating customers and profit margins to be attained from

a contract, (2) cover pricing, (3) payment of loser's fee to a bidder who submitted a cover price, and (4) subcontracting as a way of compensation to losing bidders (CCSA, 2013).

This case study focusses on the roles of the Construction Industry Development Board (CIDB) as well as the CCSA in limiting construction sector cartels. There is a need to look into the complementary roles of the CIDB and CCSA in ensuring that firms are discouraged from partaking in collusive practices in the construction industry.

The CIDB has also been actively rooting out malpractice in the construction sector, and for the period between 2007 and 2012 sanctioned a number of firms for various contraventions of the CIDB Act. Firms as well as the individual directors have mainly been meted with suspensions for a specified period (generally 6 months to 12 months, and in few cases up to 60 months), required to reapply for registration, pay a fine not exceeding R100 000 and/or downgraded. There is therefore some powers vested on the CIDB to actively regulate the construction sector.

To understand the role the CIDB can play in limiting construction sector cartels, various stakeholders were engaged in order to explore the recommended competitive path for the sector. Lessons have also been drawn from countries such as the UK, USA, South Korea and Netherlands, who have experienced widespread bid rigging in the construction sector.

It has been recognised that the CIDB can play a more active role in limiting construction sector cartels in large infrastructure projects, particularly if it is granted sufficient powers to sanction firms that may be involved in collusive practices and also promote the participation of emerging firms to challenge the stronghold of the top-tier construction firms. Other than fining firms for up to R100 000 per contravention, the most severe sanction the CIDB can impose on firms is to permanently remove the firms from the register of contractors (and its directors) such that they are barred from participating in public sector contracts. Most stakeholders engaged and other authors such as Sohail and Cavill (2008) view the blacklisting of firms as one of the potent solutions to eradicate bid rigging in the construction sector.

The case study proposes interventions that could be necessary at the regulatory, procurement and firm level to ensure the construction sector charts a new sustainable competitive path.

Regulatory-level interventions

To ensure that there are less incentives for firms to engage in collusive tendering, the following regulatory interventions can be considered:

- Enhancing the powers of the CIDB to deal with procurement irregularities by contractors. This will require that there are appropriate and tougher sanctions such as increasing the quantum of possible fines, to meet the gravity of the procurement irregularities.
- Review of the CIDB grading system to take into consideration the ability of a contractor to execute the work as well as past performance. The thresholds have to be revised to be based on the allowable annual turnover thresholds to ensure that contractors do not take work beyond their capacity to perform. As per the current formulation, the thresholds do not provide a limit on the number of projects a firm can take within a

grade, that is, a firm may simultaneously take multiple projects of equal value but lack the capacity to deliver on all.

- Introducing support measures (e.g. deepening contractor development) and a regulatory framework to enable emerging firms to participate and bid for large infrastructure projects, instead of it being the terrain of only the top firms.
- Cooperation between the CCSA and CIDB on investigations, particularly on cases involving bid rigging in the construction sector.

Procurement-level interventions

To counteract future acts of bid rigging in large infrastructure projects at the procurement level, the following potential key interventions are necessary:

- Government should consider spreading out the expenditure on large infrastructure projects over a longer time horizon. The local construction industry did not have the capacity to undertake the number of large projects such as GFIP and Eskom power stations and FIFA world cup stadia that were initiated in the same period. In essence, the expenditure should be aligned with the capacity of local construction industry to absorb the work.
- There has to be consideration on the options to split large construction projects into packages to allow for broader participation by construction firms. This would ensure that contractors that would otherwise not qualify for one large project, could successfully bid for individual packages. However, such packaging of projects should be designed in a manner that does not compromise the quality of a given project.
- Instead of rules that require projects to be awarded to the lowest qualifying bid, a consideration should be given to the benchmarking model (or other alternative models) whereby the winning bid is based on a range of the prices of the bids at some percentile (see also Haberbush, 2000). The benchmarking model is similar to second-price sealed bids (one type of Vickery auctions) in which bidders bid independently, but the winning highest bid pays the second-best price. In the case of construction type bids, the second-best price would be second lowest. The benchmarking model could make it difficult for colluding firms to determine the price that would win the tender, thus negating the effects of a cover pricing scheme or complementary bids.
- Transparent tender evaluation and adjudication processes. It is important to have a good tender document to avoid scope for bidders to manipulate the process. It should be a standard requirement that the supply chain management framework is structured such that there is separate committees managing the development of specifications, evaluation of bids and the award of tenders. And that the decision for the tender award, and reasons thereof, should be communicated to all firms that bid.
- Improved project management capacity in the public sector to ensure that projects are completed within the specified cost, quality and time. This has to be complemented with a clear governance framework with strict monitoring and evaluation of projects.

Firm-level interventions

The solution for meaningful participation by emerging firms in the construction sector could be found in both contractor development, as advocated by the CIDB, and inculcating the entrepreneurial culture both for emerging and established firms. There can thus be measures introduced to promote competition and participation in the construction sector such that the level of competition improves, and these include:

- Procurement integrity management system to improve transparency. In addition to the Certificate of Independent Bid Determination for public sector tenders, firms should be required to declare that there has been no instance of corruption in the bidding process such as kick-backs to clients, payments to other firms in relation to the bid, bribes etc.
- Adherence to the CIDB code of conduct for all parties involved in construction procurement.
- Promotion of emerging construction firms through skills transfer and empowerment by the large construction firms.
- Promoting competition by foreign construction firms in large infrastructure projects.

With the mix of the proposed interventions at the regulatory, procurement and firm level, the South African construction industry could be less susceptible to collusive practices and, to a large extent, any other procurement irregularities.

1. Introduction

The confirmation of settlements by the Competition Tribunal of South Africa (Competition Tribunal) in July 2013 marked a major milestone in the Competition Commission of South Africa's (CCSA) investigation of bid rigging and collusion in the construction sector. With 140 projects affected by the collusive practices eligible for settlement, the CCSA reached a settlement with firms on 57 projects for a combined administrative penalty of R1.46 billion.

Investigations of collusive practices in the construction sector are not unique to South Africa, as other countries such as the United Kingdom (UK), United States of America (USA), South Korea and Netherlands have looked into similar issues before. There are certain activities that were ingrained in the construction sector to the point where firms found collusion a normal business practice. The challenge, after the dismantling of the construction cartel, is to ensure the collusive practices do not resurface again and that the firms chart a new sustainable competitive path. Firms in the construction sector have an important role to play in the economy and should ensure that they align their businesses to the prevailing regulatory environment.

This case study focusses on the role of the Construction Industry Development Board (CIDB), and as the CCSA has a mandate to investigate collusive practices in all sectors of the economy, including the construction sector, the case study will also look into the complementary role the CIDB can play to ensure that firms are discouraged from engaging in collusive practices in the construction industry. There is also focus on the measures that could be introduced at a regulatory level to ensure increased rivalry in large infrastructure projects.

The case study presents an overview of the investigations conducted by the CCSA in the construction sector with particular emphasis on the form of collusive practices uncovered. Although the CIDB has legislation and regulations designed to ensure that the construction sector is competitive, develops and supports emerging contractors, and encourages a code of conduct for contractors, this has not stopped the construction firms from engaging in malpractices such as collusion and other forms of procurement irregularities. An assessment of the regulatory framework and practices in the construction sector shows some gaps that could have contributed to the collusive practices.

At the regulatory level, the Construction Industry Development Board Act no. 38 of 2000 (the CIDB Act), provides some sanctions for firms that contravene any regulations or the legislation itself. For instance, the CIDB can, in the main, deregister a firm from the register of contractors if it has breached the conditions of registration or levy a fine not exceeding R100 000 for contravening any regulations. The CIDB grading system is also not sufficiently flexible to ensure that emerging firms fully participate in large infrastructure projects, as there are limits on the number of firms that could form a joint venture for such a purpose. Other regulatory limitations are discussed in detail in section 7.

There is consensus from the stakeholders consulted that for large infrastructure projects there is a need to stage the roll-out of such projects rather than launching them at the same period. Moreover, to promote the participation of small and emerging construction firms, large infrastructure projects may have to be rolled-out in packages rather than as a single unit (one single big project). There is also a need to improve transparency at the adjudication stage of

bids, to ensure projects are awarded to the most competitive firms and in compliance with the relevant procurement legislation.

Despite there being the CIDB code of conduct for construction procurement, there has to be consideration of a more elaborate code for firms to ensure that they do not partake in corrupt activities like bid rigging or bribes when bidding for contracts. This should culminate into a robust integrity management system overseen by the CIDB, with appropriate sanctions for offenders.

The case study is structured into sections, with the first section setting out the introduction. Section 2 provides a brief presentation of the methodology followed as well as the materials and informants consulted. Section 3 gives a background of some of the key legislation applicable to the construction sector and an overview of the CIDB grading framework for construction firms. Section 4 provides some theoretical and empirical perspectives of bid rigging. Section 5 sets out the investigation of the construction sector by the CCSA and the fines levied, whilst section 6 analyses the forms of collusive practices that were uncovered. Section 7 provides an analysis of measures that could limit construction industry collusion, with recommendations for interventions that could be considered at the regulatory, procurement and firm level. Finally, section 8 concludes.

2. Methodology

In order to assess the construction sector and particularly the role of the CIDB in limiting construction industry cartels, the following key questions were identified for the case study:

- Unpacking regulatory barriers to entry in the construction industry and how the market could be open for more participation.
- Structural/regulatory factors that may contribute to bid rigging.
- How can competition work?
- What are the interventions that could contribute to a transparent, but competitive, bidding process?

Primary and secondary data was used to assess the questions of the case study. The primary data was collected through face-to-face unstructured interviews with the key informants identified upfront (see annexure D for the questionnaire with the main questions). Interviews were secured with the following individuals:

- Kabelo Ntiisa (Acting Procurement Manager) and Bongiwe George (Manager: Legal and Compliance) of the CIDB.
- Koos Smit (Engineering Executive) and Connie van der Walt (Group Engineering) of SANRAL.
- Mike Marsden (Deputy City Manager) of the City of Cape Town.
- Neil Cloete (Group CEO) of G. Liviero Civils.
- Gregory Mofokeng (Business Development Executive at Fikile Construction & Secretary General: Black Business Council in the Built Environment).

Other informants from the City of Johannesburg, Ethekewini Municipality, National Treasury, Giuricich Construction, GD Irons Construction, Group Five, PPC and SALGA were contacted but did not respond to the request for interview. In addition, the former CEO of Aveng was also contacted but did not respond.¹ Numerous follow-ups were made with all the identified informants without success, hence the case study is based on the views of those that replied to participate in the study.

The views of the contacted informants provide a fair and balanced representation of the construction industry as they cover the regulator, a major metropolitan municipality, firms that were implicated/affected in bid rigging as well as a large infrastructure projects client.

The secondary data was obtained from the settlements concluded between the CCSA and construction firms, CIDB regulations and articles in financial and business magazines.

Both the sources of information provided a useful basis on which the questions of the case study could be explored.

3. Background: Construction sector

This section reviews relevant legislation affecting the construction sector, the CIDB grading framework for contractors, the number of contractors in the main CIDB grading categories as well as the firms sanctioned for contravening the CIDB Act.

3.1 Legal and institutional

The key regulatory requirements affecting the construction sector are presented, in particular the CIDB Act, the Joint Building Contract Committee (JBCC) contractual rules, Broad-Based Black Economic Empowerment Act no. 53 of 2003 (BBBEE Act), the Competition Act no. 89 of 1998, as amended (the Competition Act) and the Constitution of the Republic of South Africa, 1996, as amended (the Constitution).

CIDB Act

The CIDB Act established the CIDB in order to implement an integrated strategy for the reconstruction, growth and development of the construction industry. There is also a recognition, in the CIDB Act, of Government's vision of a construction industry development strategy that promotes stability, fosters economic growth and international competitiveness, creates sustainable employment and addresses historical imbalances as it generates new construction industry capacity.

The objectives of the CIDB are expansive and aimed at both promoting the growth and development of the sector as well as providing a regulatory framework within which the sector should operate. These objectives, amongst others, are as follows (CIDB Act, 2000):

¹ Although an interview could not be secured with the former CEO of Aveng, Roger Jardine, he has delivered a public lecture at the Wits Business School on 8 October 2013 entitled 'Rejecting collusion and corruption: where to for the government and the private sector'. This lecture outlined his views and reflections on the construction sector collusion and the next steps that could be taken from a policy and business point of view.

- Promote the contribution of the construction industry in meeting national construction demand and in advancing (i) national, social and economic development objectives, (ii) industry, performance, efficiency and competitiveness, and (iii) improved value to clients.
- Provide strategic leadership to construction industry stakeholders to stimulate sustainable growth, reform and improvement of the construction sector.
- Promote best practice through the development and implementation of appropriate programmes and measures aimed at best practice and improved performance of public and private sector clients, contractors and other participants in the construction delivery process.
- Promote, establish or endorse uniform standards and ethical standards that regulate the actions, practices and procedures of parties engaged in construction contracts.
- Promote sustainable growth of the construction industry and the participation of the emerging sector therein.
- Promote appropriate research on any matter related to the construction industry and its development.

It is required of the CIDB to keep a national register of contactors to facilitate public sector procurement and promote contractor development, through the following measures (CIDB Act, 2000):

- Support risk management in the tendering process.
- Reduce the administration burden associated with the award of contracts.
- Reduce tendering costs to both clients and contractors.
- Enable effective access by the emerging sector to work and development opportunity.
- Assess the performance of contractors in the execution of contracts and thus provide a performance record for contractors.
- Regulate the behaviour and promote minimum standards and best practice of contractors.
- Store and provide data on the size and distribution of contractors operating within the industry and the volume, nature, performance and development of contractors and target groups.
- Enable access by the private sector and thus also facilitate private sector procurement.

There are various CIDB standards and regulations to give effect to the CIDB Act *inter alia* the Standard of Developing Skills through Infrastructure Contracts (2013), Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts (2013), Standard for Uniformity in Construction Procurement (2010), Code of Conduct for all parties involved in construction procurement (2003) and Construction Industry Development Regulations 2004 (as amended) (CIDB Regulations).

JBCC

The JBCC is a non-profit organization formalised in 1997 whose main function is to develop contractual documents that govern the relationship between the contactor and client to ensure the equitable distribution of risk in the construction sector. The contract documents developed by the JBCC are approved by the CIDB for use in the public sector.

BBBEE Act

The main objective of the BBBEE Act is to advance economic transformation and enhance the economic participation of black people within the South African economy, with the view to eradicate the inequalities of the apartheid past. Key elements of the BBBEE Act in businesses are ownership, management control, employment equity, preferential procurement, skills development, enterprise development and corporate investment. This legislation requires that the procurement process, in both private and public sectors, takes into account the BBBEE credentials of a concerned firm. The BBBEE Act applies to all sectors of the South African economy.

Competition Act

The Competition Act provides for the regulation of prohibited anti-competitive practices (including price fixing, market allocation and bid rigging) and mergers and acquisitions in all sectors of the South African economy. A firm that contravenes the Competition Act is liable to a fine of up to 10% of its annual turnover.

Constitution

All other laws in South Africa have to comply with the Constitution. Section 217(1) of the Constitution requires that:

When an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective.

Moreover, section 217(2) of the same Constitution, enjoins the specified organs of state or institutions to implement procurement policies to provide for “categories of preference in the allocation of contracts; and the protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination”. Transparent procurement in the public sector is therefore a constitutional requirement.

3.2 Grading of contractors

Since their adoption in 2004, the CIDB Regulations provided a framework for grading contractors in terms of their capabilities and the volume/nature of the projects they can undertake. Initially, the grade of a contractor was based on two methods, one based on the track record and the other on the available capital. The latter method meant that a contractor could achieve a high grading provided it had available capital, regardless of its track record. This led to the amendment of the CIDB regulations in 2013 to provide for a ranking framework based on both the track record and available capital. The current grading of contractors is set out in table 1.

Table 1: CIDB contractor grading

Designation	Upper limit (R) of tender value range	Best Annual Turnover (R) (50% of Upper Limit of tender value range)	Largest Contract (R) (22.5% of Upper limit of Tender value range. 20% for Grade 2)	Available Capital (R) (10% of Upper limit of Tender value range. 5% for Grade 3 & 4)
1	200 000	-	-	-
2	650 000	-	130 000	-
3	2 000 000	1 000 000	450 000	100 000
4	4 000 000	2 000 000	900 000	200 000
5	6 500 000	3 250 000	1 500 000	650 000
6	13 000 000	6 500 000	3 000 000	1 300 000
7	40 000 000	20 000 000	9 000 000	4 000 000
8	130 000 000	65 000 000	30 000 000	13 000 000
9	No limit	200 000 000	90 000 000	40 000 000

Source: CIDB Regulations, 2013 (as amended)

The CIDB grades, from 1 to 9, determine the value of tender a firm can bid for based on its annual turnover, value of projects undertaken and available working capital. This system thus regulates the extent to which firms can participate in bids in the public sector. There are, however, provisions in the CIDB regulations to allow firms to enter into joint ventures, such that they could receive a higher grade in order to bid for certain projects, as shown in table 2.

Table 2: CIDB grading for Joint ventures

Designation	Deemed to satisfy joint venture arrangements
3	Three contractors registered in contractor grading designation 2
4	Three contractors registered in contractor grading designation 3
5	Two contractors registered in contractor grading designation 4 ; One contractor registered in contractor grading designation 4 ; and Two contractors registered in contractor grading designation 3 .
6	Two contractors registered in contractor grading designation 5 ; One contractor registered in contractor grading designation 5 ; and Two contractors registered in contractor grading designation 4 .
7	Two contractors registered in contractor grading designation 6 ; One contractor registered in contractor grading designation 6 ; and Two contractors registered in contractor grading designation 5 .
8	Three contractors registered in contractor grading designation 7
9	Three contractors registered in contractor grading designation 8

Source: CIDB Regulations, 2013 (as amended)

The joint venture arrangements set out in the CIDB regulations ensure that firms are provided an opportunity to bid for work that they would otherwise not qualify for individually. For instance, in the case of large projects with the value of over R130 million (grade 9), there is a provision for a joint venture by three grade 8 firms, which could provide some scope for competition for grade 9 contractors.

3.3 Number of registered contractors

There are many construction firms registered with the CIDB in South Africa, as required by the CIDB Act. Most of these firms are concentrated in the lower CIDB grades. For example, to be registered as a grade 1 contractor, a firm is not required to have any turnover, worked in a project or even have working capital. According to the CIDB the bulk of the professional construction work is accounted for by grade 5 to 9 contractors, and the activity in this category provides a better indication of the health of the sector. Most of the work is in the general building (GB) and civil engineering (CE) sub categories of construction sector. Table 3 presents the number of contractors who exited, entered or are currently active in the grades 5 to 9 category.

Table 3: CIDB register of contractors (grade 5-9), 2009 to 2013

	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
General Building					
New entrants	266	348	142	44	26
Exits	157	179	71	28	12
Current	432	613	309	112	54
Civil Engineering					
New entrants	305	378	162	47	23
Exits	177	219	82	25	15
Current	465	718	353	129	67

Source: CIDB

There is a high number of firms active in the GB and CE construction categories between grade 5 and 7, with the numbers lower for the grade 8 and 9. Similarly, a number of firms have also exited from the sector either as a result of a downgrade, liquidation or voluntary exit. Although grade 9 is the highest a contractor can achieve, its threshold starts at contract value of over R130 million, meaning that the firms so graded can qualify to bid for large infrastructure projects. In practice, of the 67 firms registered under grade 9 for civil engineering, only a few (about 7) have the capabilities to undertake large civil engineering projects like the construction highways, stadium, power stations and such like.

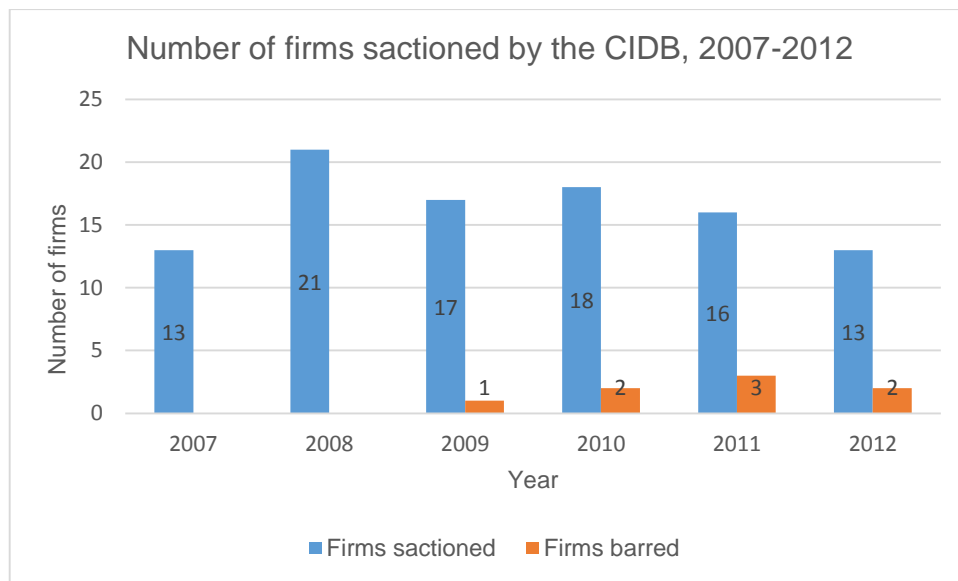
3.4 Enforcement of the CIDB Act

Contractors seeking to bid for public sector contracts have to be registered on the national register. If a contractor is awarded a public sector contract, and is unregistered, it is liable for a fine not exceeding 10% of the value of the affected contract. For any other offences, a person (legal person) who contravenes the CIDB Act and/or any of its regulations is liable for a fine not exceeding R100 000.

Since 2007, the CIDB has sanctioned a number of firms for various contraventions of the CIDB Act and regulations. Firms as well as the individual directors have mainly been meted with suspensions for a specified period (generally 6 months to 12 months, and in few cases, up to 60 months), required to reapply for registration, pay a fine not exceeding R100 000 and/or downgraded. Figure 1 shows the total number of firms sanctioned by the CIDB between 2007

and 2013, including those that were removed from the register of contractors indefinitely or for 5 year periods or longer.

Figure 1: Number of firms sanctioned by the CIDB, 2007-2012



Source: CIDB government gazette notices, 2007-2012

Note: Statistics from the CIDB are only available from 2007.

In total, the CIDB has, between 2007 and 2012, sanctioned 98 firms (including their directors) for various forms of irregularities, of which 8 were barred from registering indefinitely or for periods of at least 5 years. The most common contraventions are submitting falsified financial statements, forged tax clearance certificates, inaccurate track record and bogus affiliations of members of staff to various professional associations (see annexure B). In recent times, the CIDB has also sanctioned public sector clients such as government departments for not publishing tenders or appointing firms that are not on the register of contractors.

4. Bid rigging in perspective

4.1 Bidding markets in brief

In the basic form, bidding markets, according to Riley and Samuelson (1981:381), posit a scenario of 'thin markets characterised by a fundamental asymmetry of market position', between a single seller (the client) and numerous buyers (the bidding firms). In such a setting the seller looks to sell the goods or services at the price reflective of the rivalry between the buyers, with most bids/actions requiring a reserve price depending on risk profile of the buyer. The common auction rules are English (known as ascending bids), Dutch (known as the high bids), first-price sealed bid auction and second-price sealed bid auction (the last two known as the Vickrey auctions) (Riley and Samuelson, 1981; see also Goeree and Offerman, 2004; Klemperer, 2004).

English or ascending bids are those in which an auction runs until there is no other high bid, whereby the winner is the highest bidder. Dutch bids are run such that the auctioneer starts

from the highest price and gradually lowers the price, and the first bidder to take the price wins the bid. English bids can be open or closed, whilst the Dutch bids are open.

With the Vickrey auctions, the first-price sealed bid occurs in a manner that the bidders bid independently, and the one who pitches the highest bid wins. On the other hand, with the second-price sealed bids, bidders bid independently, but the winning highest bid pays the second-best price. The award for the bid on the second-best price is done to minimise the so-called winner's curse.

The auction principles, particularly the Vickrey auction methods, equally apply to bidding for infrastructure construction projects, wherein the client (being the single procurer of services) and the bidding firms engage in a bidding process. In this instance, the client determines a budget for the cost of the service upfront and engage in a bidding process to pick the lowest credible bid within its budget. The accuracy of the client's budget would then determine if the project can be completed within the cost estimates of the winning bid.

Klemperer (2004) also notes that bidding markets are susceptible to collusion as firms can attempt to manipulate the outcome of a bid. The concluded construction sector investigations in such countries as South Africa, UK, South Korea, USA and Netherlands point to the pervasive nature of bid rigging.

4.2 Bid rigging and public procurement

It is widely accepted the world over that collusion amongst firms is the most egregious competition law violation. The extent of bid rigging in public procurement, a form of collusion, led the Organisation for Economic Cooperation and Development (OECD) to adopt Guidelines for fighting Bid Rigging in Public Procurement in 2009, which guidelines preceded the key recommendations made in 2012 for eradicating bid rigging (OECD, 2009 & 2012). It is expressly recognised by the OECD that an open, transparent and competitive public procurement is vital to ensure that goods and services procured by governments offer 'value for money' (OECD, 2012). However, much as public procurement systems could be stymied by instances of bid rigging, certain procurement rules also contribute to bid rigging (OECD, 2012). It is therefore important to look into the causes of bid rigging from both the firm and regulatory perspectives.

The OECD recommends the promotion of competition in public procurement through maximising participation of bidders by focusing on the following interventions (OECD, 2012):

- Establishing participation requirements that are transparent, non-discriminatory, and that do not unreasonably limit competition.
- Designing, to the extent possible, tender specifications and terms of reference focusing on functional performance, namely on what is to be achieved, rather than how it is to be done, in order to attract to the tender the highest number of bidders, including suppliers of substitute products.
- Allowing firms from other countries or from other regions within the country in question to participate, where appropriate.
- Where possible, allowing smaller firms to participate even if they cannot bid for the entire contract.

Bid rigging in public procurement affects many goods and services procured by governments such as textbooks, food, construction and professional services. This case study focuses on the construction sector. Table 4 highlights the general examples of corrupt activities at various stages of the procurement and delivery process of a typical construction project.

Table 4: Examples of Corruption in Different Stages of Infrastructure Delivery

Stage of service delivery	Key stakeholders	Examples
Project selection	Public clients Private clients	<ul style="list-style-type: none"> ▪ Selection of projects ▪ Selection of uneconomical projects because of opportunities for financial kickbacks and political patronage
Planning stages	Public clients Private clients Financiers Legal advisors	<ul style="list-style-type: none"> ▪ Project structured for personal gain ▪ Planning in favour of high value projects (white elephant) and against the interests of the poor ▪ Project requirements overstated or tailored to fit one specific bidder
Inspection stages	Regulatory authorities	<ul style="list-style-type: none"> ▪ Weak oversight and supervision mechanisms ▪ Kickbacks to inspectors
Design	Design consultants Public clients Private clients	<ul style="list-style-type: none"> ▪ Corrupt selection of consultants ▪ Overdesigned and overpriced projects ▪ Bribes for regulatory approvals
Bid and contract signage stage	Contractors Subcontractors Suppliers	<ul style="list-style-type: none"> ▪ Political influence ▪ Kickbacks for construction and supply contracts ▪ Inappropriate bidding procedures ▪ Bid corruption ▪ Bid rigging ▪ Compensation payments, cash-plus contracts and entrance fees
Construction	Contractors Subcontractors Suppliers	<ul style="list-style-type: none"> ▪ Non-implementation ▪ Bribes ▪ Concealing substandard work
Service delivery	Public clients Private clients Contractors Subcontractors	<ul style="list-style-type: none"> ▪ Ghost/absent workers ▪ Siphoning off supplies to market ▪ Favouritism in hiring/promotions ▪ Use of contacts/money to get better/faster service or to prevent delays ▪ Elite capture of infrastructure services
Maintenance and management stages	Public clients Private clients Contractors Subcontractors	<ul style="list-style-type: none"> ▪ Corruption in procurement of equipment or spare parts ▪ Bribes ▪ High maintenance costs due to poor workmanship

Source: Sohail and Cavill (2008)

Note: Some of the examples have been shortened and others omitted.

Sohail and Cavill (2008) do note the pervasive nature of corruption (including bribery, embezzlement, kickbacks and fraud) in the construction sector as a major cause of poor or non-delivery of infrastructure projects. Although there have been measures designed at a global level (like UN and OECD conventions on bribery and corruption), Sohail and Cavill (2008: 734) argue that “these top-down approaches are rarely accompanied by effective enforcement and so have proven largely ineffective”, as construction sector specific mechanisms are seen to be the more effective. In the case of South Africa, construction specific regulations are under the purview of the CIDB, whose existence could not prevent the widespread construction collusion at least up to 2009.

According to Sohail and Cavill (2008), to root out corruption in the construction sector, the following should be the areas of focus:

- Raising awareness on such matters as ethical standards and good business practices.
- Strengthening professional institutions like trade associations.
- Prevention of corruption.
- Enforcement and monitoring mechanisms.

Sohail and Cavill (2008), amongst other enforcement and monitoring mechanisms, also recommend that companies caught out bribing should be ‘blacklisted’. As regards the transparency and rooting out collusion in construction sector procurement, the views of Sohail and Cavill (2008) accord, in the main, to the best practices recommended by the OECD. However, instead of advocating for blacklisting of firms as Sohail and Cavill (2008) argues, authors such as Haberbush (2000) and Gupta (2001) advocate for better designed bid processes to reduce the incentives for firms to collude.

In assessing the cause of bid rigging in the US public sector procurement, Haberbush (2000) noted the facilitating factors to include the practice of limiting competition from the outset of a bid (pre-qualification), sealed bid process, limited deterrents for bid rigging, difficulties in detecting bid rigging schemes and joint ventures. To counteract bid rigging in public procurement, Haberbush (2000) recommends that procurement processes should require firms to disclose compliance programmes when bidding for work. Other measures include redesign of bid documents to move away from the requirements of awarding tenders to the lowest bid, removing restrictions on bidder eligibility to bid, improving bid evaluation processes in order to detect bid rigging patterns as well as introducing stronger punishment for firms involved in bid rigging (Haberbush, 2000).

4.3 Rivalry in bidding markets

In a market with thriving rivalry, “[a] competitive bidder must determine an optimal bid given its likely costs and the probable distribution of the other firms’ bids” (Porter and Zona, 1983: 528). The profit maximisation problem for each firm is of the following form (Porter and Zona, 1983; Lee and Hahn, 2002):

$$\max_b E \Pi(b) = (b - c_{it})\varphi_{it}(b) ,$$

where b is the submitted bid, c_{it} is the cost for firm i for job t and φ_{it} is the probability that the bid for firm b is the winning bid.

The higher the probability of firm i winning the bid, the larger the profits it makes, vice versa. In the event the firm does not win the bid, it makes zero profits (and incurs minimal costs related to the preparation of the bid). Firms tend to be incentivized to collude through such schemes as bid rotation or submitting complementary bids in order to increase their probability of winning a bid, thereby garnering larger profits and at the same time dampening competition.

However, in a sector such as construction where there is repeated interaction between firms, there could be added incentives for firms to collude. As Gupta (2001: 454) explains "...cooperation results from the common wisdom that if one firm bids aggressively against its rivals, the rivals would bid aggressively on the future projects or in other markets". The interaction between bidders, as Gupta (2001) argues, can also be used by regulators to detect collusive behaviour.

Gupta (2001) established that large contracts are prone to bid rigging and that bid prices are higher when there is repeated interaction between firms in other markets than when there is none (see also Haberbush, 2000). In the construction industry, especially for large contracts, there are generally fewer firms capable to undertake the work, as such repeated interaction between firms tends to be inevitable. The nexus of the issue should therefore be to design bids such that firms, even with repeated interactions, are incentivised to compete.

4.4 Some evidence of bid rigging

4.4.1 USA

According to Porter and Zona (1983), more than half of cases filed with the antitrust division of US Department of Justice between 1982 and 1988 involved bid rigging or price fixing in a number auction markets including construction. Porter and Zona (1983) looked into ways to detect bid rigging in highway construction in the US (New York state) in the 1980s. The state was required to award the bid to the lowest 'responsible' bid provided the price reasonably accords with the estimates for the work. The auction took a sealed bid form, where the bids were opened in one room with the bidders present and afterwards the winning bid was announced. Porter and Zona (1983) argue that this bidding practise provided a platform for firms to monitor any collusive arrangement that may have been in operation. Similarly, Gupta (2001) looked into the bids for the construction of highway in the US's state of Florida between 1981 and 1986, which followed the same bidding patterns as in the state New York. The bid rigging patterns observed in New York were also evident in Florida.

4.4.2 South Korea

Lee and Hahn (2002) looked into bid rigging in the South Korean public works construction projects by assessing contracts awarded between 1995 and 2000. The bid rigging in South Korea, like in the US's states of Florida and New York, was implemented by the firms through rotational and complementary bidding (or cover pricing), in the latter other bidders in collusive arrangement, except one, submit the bids to lose (Lee and Hahn, 2002; Porter and Zona, 1983; Gupta, 2001).

4.4.3 UK

The UK's OFT uncovered widespread bid rigging practices in the construction sector for the investigation period between 2000 and 2006. Investigations were concluded in 2009 with 103 firms found to have been involved in bid rigging (mainly cover pricing, with instances of compensation payments) affecting 199 projects (OFT, 2010). The fines levied amounted to

£129.2 million (circa R2,3 billion), although 25 of the fined firms appealed the decision (OFT, 2010). Bid rigging affected both public and private sector projects, with 57% of the projects public and the residual private (OFT, 2010).

4.4.4 Netherlands

In the Netherlands, a television documentary in 2001, where whistle-blowers detailed the extent of bid rigging in the construction industry, led to a public outcry and subsequent investigations by the Cabinet, the Department of Justice and the Dutch Competition Authority (Dorée, 2004). In the main, the following factors facilitated the bid rigging in Netherlands (Dorée, 2004):

- The bid rigging scheme was such that when a new entrant was identified in an area, the colluding parties will ensure that they bid so low to exclude such an entrant from the market.
- Colluding firms had to pay each other compensation for submitting phony bids.
- Transparent selection procedures that had to be followed by public sector clients made it easier for the firms to manipulate the procurement process.

4.5 What of competition in the construction sector?

Dorée (2004: 154) further argues that “[t]o improve the situation of the construction industry requires further non-conventional procurement methods and less selection based on the lowest bid”, in line with “...construction reform policies adopted around the world...”. Key drivers of the construction sector, according to Dorée (2004), should be based on value and quality-driven competition, integrated team delivery and long-term commitments. Dorée (2004:154) asserts that a sector like the construction sector is susceptible to “ruinous competition” and as such competition cannot be sustained.

The Netherlands experience, like in all other countries where there has been bid rigging in the construction sector, shows that both the firms’ stratagems and procurement processes facilitate bid rigging (Haberbush, 2000; Lee and Hahn, 2002; Sohail and Cavill, 2008; Gupta, 2001; Porter and Zona; 1983). The main challenge is to ensure that such collusive practises are eradicated at all levels of the procurement chain. Therefore, assertions by others like Dorée (2004) that competition in the construction sector is not feasible, suggest that without some form of cooperation between firms the benefits of competition cannot be realised. The construction sector like any other sector with no features of a natural monopoly can be competitive if there is rivalry between the firms. And by its very nature, competition is robust such that some firms will prosper whilst others will not; the solution cannot be cooperation but innovation and rivalry.

5. Construction sector collusion

5.1 The investigation at a glance

First signs of collusion in the construction sector came as a consequence of a corporate leniency application (CLP) by Murray & Roberts, through its subsidiary, Rocla, in 2007. This case exposed a cartel in the production of pipes, culverts and manholes as well as bid rigging in the supply of precast concrete products (Competition Tribunal, 2013a; Competition Tribunal,

2010). The cartel, as detailed in the case between the *Competition Commission v Southern Pipelines Contractors/Conrite Walls*, operated from 1973 to 2007 in Gauteng, Kwazulu-Natal and the Western Cape. Having endured for such a long period, the cartel was structured such that one member of the cartel was designated a ‘banker’ to compile a list of all contracts available during a specific period. Cartel members allocated regions and market share. The effects of the cartel were catastrophic. As the Competition Tribunal (2010:4) explained, “[c]artel members enjoyed a quiet and hugely profitable life, as evidenced by the drop in prices by between 25-30% post the disbandment of the cartel...” Further and in-depth study of the cartel showed overcharges ranging from 16.5-28% in Gauteng and 51-57% in Kwazulu-Natal (Khumalo, Mashiane and Roberts, 2014).

In the light of the uncovered collusion in the construction products involving some of the top-tier construction firms, CLPs in the sector as well as international trends on bid rigging, the sector became on the radar of the CCSA. This led the CCSA to prioritise the broader infrastructure and construction sector in 2008, amongst other sectors. The focus on the sector was also due to the infrastructure programme Government was embarking on and therefore it was vital that prices of inputs to the infrastructure programme were not inflated by anti-competitive behaviour and practices. With the sector under the spotlight, the CCSA embarked on an in-depth study of the entire value-chain of the construction sector and at the same time CLPs started flowing in.

Armed with the information on possible anti-competitive conduct in the sector, the CCSA launched investigations of bid-rigging and collusion in the construction sector in 2009. During the investigations, the CCSA established that bid rigging and collusive conduct was rife in the sector. In the circumstances, the CCSA decided, in February 2011, to invite firms involved in bid rigging and collusion to settle their contraventions provided they fully disclose the extent of their involvement and, where applicable, pay an administrative penalty.

In 2013, the CCSA concluded settlements with the majority of firms that were involved in the bid rigging and collusion on various projects, for which the contraventions occurred between 2006 and 2009. The total administrative penalties out of the settlement process amounted to R1.46 billion. Tables 5 and 6 provide the information on the projects that were affected by the scourge of bid rigging and collusion.

Table 5: Projects affected by the construction cartel: Prescribed versus Non-prescribed

	Prescribed	Non-prescribed	Total
Number of projects	160	140	300
Number of projects (%)	53%	47%	100%
Value of projects	R9.9 billion	R37.1 billion	R47 billion
Value of projects (%)	21%	79%	100%
Total project settled: 57			

Source: Competition Commission SA

In total, 300 projects were affected by bid rigging and collusion for the period of at least between 2000 and 2009. Of these projects, 160 (53%) fell outside the prescription period, set

out in section 67 of Competition Act, within which a complaint can be brought against parties involved in prohibited anti-competitive practices, hence the distinction between prescribed and non-prescribed projects in Table 5. Therefore, the projects considered for settlement were those deemed non-prescribed, constituting 47% of the affected projects. At the conclusion of the CCSA's settlement process, there were settlements on 57 projects out of the total non-prescribed projects of 140.

The value of the non-prescribed projects amounted to R37.1 billion (79% of the total projects), largely accounted for by the FIFA World Cup stadia construction and the Gauteng Freeway Improvement Plan (GFIP). In terms of value, the CCSA's investigation and settlement covered a substantial portion of the projects affected by bid rigging.

Table 6: Projects affected by the construction cartel: Private versus Public

	Private	Public	Total
Number of projects	75	225	300
Number of projects (%)	25%	75%	100%
Value of projects	R19 billion	R28 billion	R47 billion
Value of projects (%)	40%	60%	100%

Source: Competition Commission SA

The uncovered bid rigging and collusion in the construction affected both private and public sector projects. However, most of the rigged projects were for the public sector (75%) whilst the residual was for private sector projects (25%). In terms of value, the rigged projects for public and private sector accounted for 60% and 40% of the infrastructure spend, respectively. In total, projects to the tune of R47 billion were affected by bid rigging and collusion across the private and public sector projects.

5.2 Key large infrastructure projects affected

A number of projects in both public and private sector were affected by the bid rigging and collusion in the construction sector, details of which are found in the settlement agreements confirmed by the Competition Tribunal (see annexure A). Firms that settled with the CCSA revealed the information of the projects where bid rigging occurred. Table 7 shows the firms that settled as well as the administrative penalties confirmed by the Competition Tribunal.

Table 7: Construction collusion settlements

Firms	Administrative penalty
WBHO	R311 288 311
Murray & Roberts	R309 046 455
Stefanutti	R306 892 664
Aveng	R306 576 143
Basil Read	R94 936 248
Raubex	R58 826 626
Haw & Inglis	R45 314 041
Rumdel	R17 127 465
Giuricich	R3 552 568
Vlaming	R3 421 662

Tubular	R2 634 667
G Liviero	R2 011 078
Hochtief	R1 907 793
Norvo	R714 897
Esofranki	R155 850
Total	R1 464 406 466

Source: Competition Tribunal

In public sector projects, bid rigging affected municipalities and public entities such as Eskom and SANRAL; see annexure A for a list of all projects settled. The major public sector projects affected were the roads (GFIP) and FIFA Soccer World Cup stadia construction.

In the construction of roads, the top construction firms, namely, Grinaker LTA (an Aveng subsidiary), Basil Read, Haw & Inglis, WBHO, Concor and Raubex, reached an agreement at the Road Contractors meetings in 2006 to allocate tenders for the construction of roads. In addition, the firms agreed that firms not interested in winning the bid or not allocated project would submit cover bids to ensure that those interested win the bid, which practice is commonly referred to as cover pricing.

Another major project was the construction of the new FIFA Soccer World Cup stadia. The bid rigging agreement was concluded in 2006 by Grinaker LTA, WBHO, Murray & Roberts, Group Five, Concor and Basil Read. These firms met twice to allocate, amongst each other, the construction of the stadia, namely, Mbombela (Nelspruit), Peter Mokaba (Polokwane), Moses Mabhida (Durban), Soccer City/FNB Stadium (Cape Town), Nelson Mandela Bay (Port Elizabeth) and Greenpoint (Cape Town). The firms moreover agreed to exchange cover prices in their respective bids to ensure that the agreed allocations are realised and also agreed on a profit margin of 17.5% to be attained from the construction of the stadia.

The collusive practices on the construction of roads and stadia were instigated by the top-tier of South Africa construction firms graded for large projects in CIDB's GB and CE categories for grade 9 firms. Although there are just over 50 firms registered for CDIB 9 in the GB and CE categories, in reality only the top-tier of these firms are capable of handling large infrastructure projects. There has not been emerging construction firms that have been able to challenge the stronghold of the top-tier construction firms. It, therefore, made it easier for the top firms to reach an agreement as there would be no credible threat of rivalry from the other CIDB 9 category firms.

In the private sector, projects affected included industries/sectors such as mining (Anglo Platinum, Xstrata LionOre), paper and pulp (Mondi and Sappi), university residences (Universities of Pretoria and Cape Town) as well as private residences. The uncovered bid rigging also extended to mining infrastructure projects in Burkina Faso, Zimbabwe and Botswana.

6. Forms of collusive tendering

The construction sector, as revealed in settlements by firms with the CSSA, has been riddled with collusive practices for a number of years. The extent of such conduct has not been fully exposed in the settlements as more than half (53%) of the rigged contracts were not considered for settlement given that the contraventions had prescribed in terms of the Competition Act.

What has been revealed is that the collusive practices took at least four forms, namely, (1) agreement on allocating customers and profit margins to be attained from a contract, (2) cover pricing, (3) payment of loser's fee to a bidder who submitted a cover price, and (4) subcontracting as a way of compensation to losing bidders (CCSA, 2013). Each of these formulations of bid rigging and collusion is discussed in detail below, highlighting how the modus operandi of the firms unfolded.

- **Scenario 1: Allocating customers and fixing profit margins**

This form of bid rigging occurred mainly at a high level, where firms gathered together to allocate customers for anticipated construction work. The instances uncovered in the settlements were the road contractors meeting (for anticipated GFIP and other road construction works), FIFA World Cup stadium allocation (for construction of world cup stadia), Wade list meeting (for electrical work) and Cape club meeting (for construction works in the Western Cape).

In the meetings, firms would allocate bids and, in some instances, agree on the profit margins to be attained. The firms were found to have been involved in this form of conduct without the knowledge of the clients.

- **Scenario 2: Cover pricing**

Cover pricing has been defined in the settlements as an instance of collusive tendering as follows (Competition Tribunal, 2013):

Cover pricing occurs ... when conspiring firms agree that one or more of them will submit a bid that is not intended to win the contract. The agreement is reached in such a way that among the colluding firms, one firm wishes to win the tender and the others agree to submit non-competitive bids with prices that would be higher than the bid of the designated winner, or the price would be too high to be accepted, or the bid contains special terms that are known to be unacceptable to the client.

The former CEO of Aveng explains the finer details of the cover pricing scheme as follows (Jardine, 2013):

The main practice appears to have been what is called "cover-pricing". A strong management system was clearly in place, including succession planning because when one person was promoted or left the company he would bring his successor to a meeting (according to evidence submitted, these meetings usually occurred at 5 star hotels), introduce the new person and do a formal hand-over. Some of the younger people knew that if they wanted to get ahead in their companies this was "the way it is

done". The tenders were then allocated as follows: the firm not wanting the business gives a "cover price" to a competitor who then wins the award on submitting a lower price than the "cover price". In some cases, the firm submitting the "cover price" will be compensated through a "losers' fee".

The settlement by firms as confirmed by the Competition Tribunal revealed that a significant number of the collusive tendering was in the form of cover pricing, for both public and private sector contracts (see Annexure A). Firms, individually or as joint ventures, decided on cover prices based on capacity constraints or as an act to inflate the bid price.

Cover pricing arising from capacity constraints, often rife in private sector projects, occurs when firms are invited to bid for work and have neither available capacity nor appetite for the work. In this instance, an invited firm would then request a cover price from another firm to bid such that the invited firm does not win the tender. Some of the firms argue that this form of cover price takes place as firms are generally reluctant to turn clients away.

In instances of cover pricing as means to inflate tender costs, firms would agree on projects they should share amongst themselves, and use cover pricing to ensure that the outcome is achieved. This form of cover pricing is solely designed to ensure that the rivalry in the identified projects is eliminated thus making it opportune for the firms to extract higher than normal profit margins.

Despite the form of the cover pricing or phony bids, it has been established in the countries that have uncovered bid rigging in the construction sector that such conduct is orchestrated to deceive the buyer that there is competition when there is not, with the ultimate goal of achieving higher prices. In essence, construction firms were able to consistently influence the outcome of bids for infrastructure projects through cover pricing. And as shown in the details of the settled projects affected by bid rigging, firms have particularly been successful in ensuring that contracts are allocated to the chosen firm. It is only in very few instances of cover pricing (on settled projects) where one of the firms engaged in cover pricing did not win the tender, see for example the projects to construct the N2 Section 10-Gamtoos to van Staden River, Peter Mokaba Sports Stadium, Millwood Village Residential Project and Kempton Park City Mall (Annexure A).

Cover pricing has been the form of collusive pricing that allowed firms to continuously rig bids to influence the outcome of a tender process. In this way firms have been able to allocate contracts, eliminate competition and achieve higher prices that would not have been achieved absent the bid rigging.

- **Scenario 3: Payment of losers' fee**

In certain instances, cover pricing was combined with payment of losers' fee, which meant that participants to the cover pricing scheme were paid a losers' fee. This was a ploy by the construction firms to ensure that those participating in the cover pricing scheme were compensated, in some instances with payments in excess of R1 million.

According to the former CEO of Aveng there was even fraudulent accounting to conceal the losers' fee in the companies' books. In essence, the losers' fees were accounted as follows (Jardine, 2013):²

These "losers' fees" were apparently disguised through fake accounts in line items called plant and machinery, scaffolding hire or labour. Money came in and out of these accounts, they kept a score sheet to keep track of who owed monies, invoices were raised, and if another project came up offsets were applied.

This form of accounting was, obviously, designed to hide these fraudulent payments from the auditors' radar.

- **Scenario 4: Subcontracting**

Collusive tendering also occurred whereby participating firms were guaranteed subcontracting work for submitting false bids to clients. When the identified firm wins the tender, participating firms were rewarded with subcontracting work.

In sum, the construction firms engaged in collusive tendering/bid rigging in the form described in the scenarios above. For many years, before the investigations by the CCSA, the firms were rigging the procurement processes on major infrastructure projects in South Africa with impunity. As the law has caught up with the firms, the challenge for the industry will be to adapt to a competition culture by abandoning the collusive tendering practices.

7. Measures that can limit collusion

There are various measures that could be considered for the construction sector to rid itself of the collusive tendering past and move towards realising a competition culture. Due consideration ought to be given to the regulatory environment, procurement management and the behaviour of firms.

For the construction sector to be competitive, there has to be effective regulatory oversight, transparent procurement practices and competitive rivalry among firms.

7.1 Regulatory level

The CIDB is empowered to regulate the construction sector to promote growth and development of the sector. There are regulatory requirements that firms have to adhere to particularly with respect to the register of contractors, which the CIDB keeps and grades firms according to their capacity to carry out construction work. The stakeholders engaged cite the CIDB grading of contractors as a necessary tool to ensure that firms in the sector meet certain minimum requirements to undertake projects.

There are, however, two main deficiencies with the CIDB grading system.

First, the grading does not provide sufficient information to clients on the capacity and ability of firms to undertake construction works. It could assist clients if the grade of the contractors

² The practise of recording loser's fees as plant hire was confirmed by a number of representatives of firms before the Competition Tribunal for settlement hearings, including Esorfranki, Murray & Roberts and WBHO.

matches the capacity and ability of the contractor concerned to undertake a construction project at a given point in time, which information can be made available by the CIDB. For instance, the CIDB grade 9, which is the highest grading a contractor can attain, has more than 50 firms than can potentially qualify to undertake the large infrastructure projects, but in reality only the top firms like Group Five, Aveng, Murray & Roberts, Basil Read, Raubex, Stefannuti and WBHO can deliver such projects. The number of firms in the CIDB grade 9 category gives a false impression that there is a high number of large construction firms, whereas competition for large infrastructure firms only occurs between the top firms.

Second, the provisions in the CIDB regulations for joint venture arrangements to allow firms to compete for CIDB grade 9 projects limit that possibility to only a consortium of three grade 8 firms at a time. There is thus no flexibility to allow a group of emerging contractors, at different stages of development, to form consortia to compete for large infrastructure projects. As such most of the emerging contractors rely on subcontracting work thus limiting their potential to grow.

There is also a concern on the penalties provided for in the CIDB Act, in the event of contraventions by firms. At best, the CIDB can deregister a firm from the register of contractors or levy a fine not exceeding R100 000.

Therefore, to ensure that there are less incentives for firms to engage in collusive tendering, the following regulatory interventions can be considered:

- Enhancing the powers of the CIDB to deal with procurement irregularities by contractors. This will require that there are appropriate and tougher sanctions such as increasing the quantum of possible fines, to meet the gravity of the procurement irregularities.
- Review of the CIDB grading system to take into consideration the ability of a contractor to execute the work as well as past performance. The thresholds have to be revised to be based on the allowable annual turnover thresholds to ensure that contractors do not take work beyond their capacity to perform. As per the current formulation, the thresholds do not provide a limit on the number of projects a firm can take within a grade, that is, a firm may simultaneously take multiple projects of equal value but lack the capacity to deliver on all.
- Introducing support measures (e.g. deepening contractor development) and a regulatory framework to enable emerging firms to participate and bid for large infrastructure projects, instead of it being the terrain of only the top firms.
- Cooperation between the CCSA and CIDB on investigations, particularly on cases involving bid rigging in the construction sector.

The CIDB, with enhanced powers, can contribute to a competitive and efficient construction sector, thus contributing to the attainment of both the objectives of the CIDB Act and Competition Act.

7.2 Procurement level

From the procurement level, much of the bid rigging in the large infrastructure projects that were undertaken in South Africa, according to the City of Cape Town and SANRAL, is a result

of the way government planned the projects. During the CCSA's investigation period for bid rigging, 2006 to 2009, government launched construction projects for roads (GFIP), FIFA World Cup stadia and Eskom power stations. At the time, there was only handful of firms that had the proven track record to embark on such large scale projects. For instance, in the roads construction SANRAL divided the work into packages and invited specific firms to bid for each individual package. As revealed in the Competition Tribunal settlements, the firms (Grinaker/Aveng, Basil Read, Concor/Murray & Roberts, WBHO, Raubex and Haw & Inglis) met to discuss the cover pricing scheme such that those firms not interested in the bids submit phony bids. It can be inferred that the availability of other lucrative construction opportunities such as the FIFA World Cup and Eskom power stations provided room for the firms to sacrifice other work. In this regard, most of the stakeholders noted this infrastructure projects glut as the main reason firms sought to collude in order to extract the most rents.

In addition, there are noted concerns on the capacity of the government institutions to manage procurement of large infrastructure projects. There is said to be lack of requisite skills to procure services for large infrastructure projects, such that engineering consulting companies are retained to manage the process on behalf of a government institution. This, in the view of some of the stakeholders is another main contributing factor to bid rigging, as the management of the procurement process is often outsourced to third parties.

The nature of the procurement process for public sector projects, particularly the requirement that projects must be awarded to the lowest qualifying bid, contributes to bid rigging, since firms can easily pick whose bid should be the lowest. In most instances where cover pricing was found, the tender was awarded in line with the cover pricing scheme devised by the firms. This may call for a consideration of other criteria to evaluate prices. It has also been found that the lowest qualifying bid principle invariably leads to the winner's curse, as some firms would price too low to secure a project but with no available capacity to undertake such work.

There are also concerns noted in private sector infrastructure projects, particularly on the role of consulting engineering firms tasked to manage procurement. As there is no express requirement for a public procurement process in private sector projects, the consulting firms are often provided the latitude to identify and recommend suitable contractors for a project. When firms are contacted by the consulting engineers for such projects, they tend to agree to participate in the tender process even in instances where they do not have the available capacity to undertake the work. The lack of capacity of some of the firms identified to participate in a tender process results in them (those capacity constrained) to request their competitors to provide a cover bid such that the outcome of the bidding process is manipulated.

To counteract future acts of bid rigging in large infrastructure projects at the procurement level, the following potential key interventions are necessary:

- Government should consider spreading out the expenditure on large infrastructure projects over a longer time horizon. The local construction industry did not have the capacity to undertake the number of large projects such as GFIP and Eskom power stations and FIFA world cup stadia that were initiated in the same period. In essence,

the expenditure should be aligned with the capacity of local construction industry to absorb the work.

- There has to be consideration on the options to split large construction projects into packages to allow for broader participation by construction firms. This would ensure that contractors that would otherwise not qualify for one large project, could successfully bid for individual packages. However, such packaging of projects should be designed in a manner that does not compromise the quality of a given project.
- Instead of rules that require projects to be awarded to the lowest qualifying bid, a consideration should be given to the benchmarking model (or other alternative models) whereby the winning bid is based on a range of the prices of the bids at some percentile (see also Haberbusch, 2000). The benchmarking model is similar to second-price sealed bids (one type of Vickery auctions) in which bidders bid independently, but the winning highest bid pays the second-best price. In the case of construction type bids, the second-best price would be second lowest. The benchmarking model could make it difficult for colluding firms to determine the price that would win the tender, thus negating the effects of a cover pricing scheme or complementary bids, and this is currently being considered by SANRAL and National Treasury.
- Transparent tender evaluation and adjudication processes. It is important to have a good tender document to avoid scope for bidders to manipulate the process. It should be a standard requirement that the supply chain management framework is structured such that there is separate committees managing the development of specifications, evaluation of bids and the award of tenders. And that the decision for the tender award, and reasons thereof, should be communicated to all firms that bid.
- Improved project management capacity in the public sector to ensure that projects are completed within the specified cost, quality and time. This has to be complemented with a clear governance framework with strict monitoring and evaluation of projects.

7.3 Firm level

For there to be a culture of competition in the construction sector, firms have a pivotal role to play. Competition, in essence, should take place between the firms rather than the culture of cooperation through collusion and bid rigging. The cause of bid rigging, as most stakeholders noted, has been the entrenched culture of collusion that had for many years infiltrated the top-tier of South African construction firms. The top-tier construction firms thus engaged in bid rigging not only to the detriment of clients but also the participation of emerging firms. As noted by Munshi (2013), “Emerging contractors believe collusion robbed them of the opportunities to grow, for which they are entitled to restitution.” In the absence of bid rigging, which perpetuated at least from 1999/2000, by the top-tier construction firms it is conceivable that new firms could have emerged over the years had the opportunities not been denied by the scourge of bid rigging.

For instance, there are contracts that involved the construction of residential properties, roads and convention centres that would have provided the needed experience and exposure to the emerging firms in order achieve higher CDIB grading. In the case of the Netherlands, for example, firms involved in bid rigging engaged in predatory bidding to exclude emerging firms; perhaps if some of the cases in South Africa are prosecuted, there could be better insights on

the modus operandi of the bid rigging scheme. There is a need for a shift in the manner firms compete for projects, such that the culture of collusion and bid rigging is eradicated.

The firms involved in bid rigging on large infrastructure projects were, in the main, Group Five, Murray & Roberts, Aveng, Stefanutti, Basil Read and Raubex. These are, historically, the established construction firms in South Africa. Most emerging contractors are not implicated in the bid rigging, as they are mainly roped into projects for limited subcontracting work. The top-tier firms, knowing their wherewithal to undertake large infrastructure projects, opted to collude rather than compete, as the stakes were deemed high given the magnitude of the projects.

Despite the enactment of the CIDB Act in 2000 with the view to promote participation in the construction sector, there has not been emerging construction firms that have grown to compete at the level of the top-tier firms, which points to the challenges for emerging firms. Although there are over 50 CIDB grade 9 construction firms, this has not translated to the increased level of competition in the space for large infrastructure projects. Some stakeholders ascribe this to the lack of the entrepreneurial culture by the emerging construction firms who tend to focus less on growing and building their businesses, and more on short-term financial gains. Others point to the lack of transformation of large construction firms, skills transfer and empowerment of the emerging construction firms (Munshi, 2013). The solution for meaningful participation by emerging firms in the construction sector could be found in both contractor development, as advocated by the CIDB, and inculcating the entrepreneurial culture both for emerging and established firms.

There can be measures introduced to promote competition and participation in the construction sector such that the level of competition improves, and these include:

- Procurement integrity management system to improve transparency. In addition to the Certificate of Independent Bid Determination for public sector tenders, firms should be required to declare that there has been no instance of corruption in the bidding process such as kick-backs to clients, payments to other firms in relation to the bid, bribes etc.
- Adherence to the CIDB code of conduct for all parties involved in construction procurement.
- Promotion of emerging construction firms through skills transfer and empowerment by the large construction firms.
- Promoting competition by foreign construction firms in large infrastructure projects.

According to Dorée (2004), there is the risk for the construction firms, in the case of the Netherlands, to revert to collusive practices if appropriate structural and behavioural remedies are not adopted. However, firms ought to be aware that there are potential costs of engaging in collusion, with far reaching consequences, as the former CEO of Aveng explained (Jardine, 2013):

I want to warn all Directors and Senior Officers of companies who are tempted to engage in collusive or cartel behaviour. You should not only focus on the profitability of a cartel but you should realise that cartel behaviour comes at a major cost which includes creating an internal climate where trust and suspicion dominate corridor talk

as internal investigations unfold. It also brings on reputational risks, financial exposure, and exhausts management's time. My message is simply this: The long term costs of cartel behaviour are materially worse than the benefits of any possible short term profits.

Clearly, there are costs for firms who engage in bid rigging, as this takes management time to productively work on the business to increase productivity, innovate and grow the business. Firms have to do more than regulatory compliance but change their behaviour to eradicate the culture of collusion in their businesses.

8. Conclusion

The CIDB can play a more active role in limiting construction sector cartels in large infrastructure projects, particularly if it is granted sufficient powers to sanction firms that may be involved in collusive practices and also promote the participation of emerging firms to challenge the stronghold of the top-tier construction firms. The sanctions should be complementary, rather than supplant the mandate of the CCSA.

The case study proposes interventions that could be necessary at the regulatory, procurement and firm level to ensure the construction sector charts a new sustainable competitive path.

With the mix of the proposed interventions at the regulatory, procurement and firm level, the South African construction industry could be less susceptible to collusive practices and, to a large extent, any other procurement irregularities.

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Appendix A: List of settled projects

Project	Year	Client	Condu ct	Firms that colluded	Firm that won the bid
Public sector					
SANRAL tender: Mount Frere	2006	Eastern Cape Department of Roads and Transport	Cover price	Grinaker LTA Haw & Inglis Rumdel WBHO	WBHO
Phase III: Langeni Sawmill to R61	2006	Eastern Cape Department of Roads and Transport	Cover price	Rumdel Haw & Inglis	Rumdel
Soccer City Stadium	2006	City of Johannesburg	Cover price	Grinaker LTA Stefanutti	Grinaker LTA
Coega Office Block Development	2005	Coega Development Corporation	Cover price Loser's fee	Grinaker LTA WBHO	Grinaker LTA
Northern Waste Water Treatment Works	2006	Johannesburg Water Department	Cover price	Grinaker LTA Group 5	Group 5
UCT Ladies Residence Project	2005	University of Cape Town	Cover price	Grinaker LTA Group 5	Group 5
New Tuks Residence	2006	University of Pretoria	Cover price	Stefanutti Giuricich	Stefanuutti
Durban ICC	2007	eThekwini Municipality	Cover price	Grinaker LTA Group 5 Stefanutti WBHO Fikile Construction	Group 5/WBHO JV (referred to as Masinya JV)
Bayhead Road Extension Khangela Bridge	2006	eThekwini Municipality	Cover price Profit share	Basil Read Group 5 Stefanutti	Basil Read/Stefanutti JV
Durban Undersea Tunnel Project	2004	eThekwini Municipality	Fixing margins on bid prices Loser's fee	Hochtief Concor Group 5 Dura Stefanutti Nishimatsu Grinaker LTA	Hochtief/Concor JV

Green Point Stadium 2A (TN. 124Q/2006/07)	2006	City of Cape Town	Cover price	WBHO Group 5	WBHO/Murray & Roberts JV
Green Point Stadium (TN. Q06/63)	2006	City of Cape Town	Cover price	Stefanutti WBHO	WBHO/Murray & Roberts JV
N17 Link Road to Soweto	2006	Johannesburg Roads Agency	Loser's fee	WBHO Group 5	Group 5
GFIP-Package A, B and E	2006	SANRAL	Allocation of packages Cover price	WBHO Concor Stefanutti	A – Group 5 B – WBHO E – Group 5
Upgrading of 14 km N2 between Tsitsikama and Witelsbos	2006	SANRAL	Cover price	WBHO Concor	Concor
Rehabilitation of N12 between Beefmaster and Bloemhof	2006	SANRAL	Cover price	WBHO Concor	Concor
National Route 5, section 4 between Senekal and Vaalpenspruit	2006	SANRAL	Cover price	Concor Group 5	Group 5
N1 North, N1 South and N17 Maintenance Contract	2001	SANRAL	Loser's fee	Murray & Roberts/ Concor Group 5 Basil Read	N1 North & N1 South – Group 5 N17 – Basil Read
N1 Section 16 Glen Lyon/Zandkraal	2006 /7	SANRAL	Cover price	Basil Read WBHO Raubex	Basil Read
N1 Section 15 Glen Lyon/Zandkraal	2006 /7	SANRAL	Cover price	Basil Read WBHO Raubex	Raubex
R40 Baberton Reconstruction Project	2006 /7	SANRAL	Cover price	Basil Read WBHO Raubex	WBHO
Rehabilitation of N1-Springfontein	2006	SANRAL	Agreed not to submit tenders	Haw & Inglis Raubex Grinaker LTA	Blackto Surfaces (Pty) Ltd, not party to collusive tendering, won the tender
N11 Amersfoort to Ermelo	2007	SANRAL	Cover price	Haw & Inglis Raubex Concor	Raubex

N2 Section 10 – Gamtoos to van Staden River	2006	SANRAL	Cover price	Haw & Inglis Grinaker LTA	Koelro Construction, not party to cover price, won the tender
Upgrading of Trunk Road 57/3 - Alice to Middledrift	2006	SANRAL	Cover price	Haw & Inglis Rumdel WBHO Raubex	Haw & Inglis
Upgrading of National Route – Hilltop to Baberton	2006	SANRAL	Cover price	Raubex WBHO	WBHO
Upgrading of N1 from Zandraal to Verkeerdvlei	2007	SANRAL	Cover price	Raubex Basil Read	Basil Read
Upgrading of N1 Section 15, Glen Lyon to Zandraal	2007	SANRAL	Cover price	Raubex Basil Read WBHO	Raubex
Braamhoek Quarry Dam	2007	Eskom	Cover price	Grinaker-LTA B&E International	B&E International
Komati Chimney Project	2006	Eskom	Cover price	Concor Grinaker LTA	Grinaker LTA
Peter Mokaba Sports Stadium	2006	Polokwane Municipality	Cover price	Concor G Liviero	WBHO, not party to cover pricing, won the tender
Olifantspoort Water Reticulation Works	2008	Lepelele Nothern Water	Cover price	Stefanutti Group 5	Group 5
Private sector					
Tati Activox Area 1 and 2	2007	Botswana Metal Refinery (Pty) Ltd	Cover price	Grinaker LTA Stefanutti Murray & Roberts Basil Read	Grinaker LTA/Stefanutti JV
Tati Activox Main Civils	2006	Lion Ore South Africa (Pty) Ltd	Cover price	WBHO Grinaker LTA Stefanutti	Grinaker LTA/Stefanutti JV
Tati Nikel DMS	2007	Tati Mining Company	Cover price	Grinaker LTA Stefanutti Murray & Roberts Basil Read	Murray & Roberts
Sappi Amakhulu Project	2008	Sappi SAICCOR	Cover price	Grinaker LTA Stefanutti Group 5	Stefanutti/Group 5 JV

Mondi Multi Fuel Boiler	2005	Mondi	Loser's fee	Stefanutti JT Ross	Stefanutti
PPC Dwaalboom Expansion Project-Coal Raw Mill line 2	2006	PPC	Cover price	Grinaker LTA Concor Stefanutti	Concor/Stefanutti JV
PPC Dwaalboom Pre-Heater Project	2006	PPC	Cover price	Grinaker LTA Concor Stefanutti Group 5	Concor
PPC Dwalboom Expansion Project-Kiln Line 2	2006	PPC	Cover price	WBHO Concor Stefanutti	Concor/Stefanutti JV
Relocation of In Pit Crusher Contract (Sishen)	2009	Kumba Resources	Agreeing on budget prices for the tender	Grinaker LTA Group 5 Tubular	Unknown
New Board Factory at Ugie PG Bison	2006	PG Bison	Cover price	Grinaker LTA Concor Trencon WBHO	Grinaker LTA/Concor/Trencon JV
PPRust North Expansion Infrastructure Project	2007	Anglo Platinum	Cover price	Grinaker LTA WBHO	WBHO
Anglo Platinum Housing (Thabazimbi/Burgersfort)	2007	Anglo Platinum	Cover price	Stefanutti Group 5	Thabazimbi package- Group 5 Burgersfort package: Stefanutti
PPRust North Phase 1 Civils	2007	Anglo Platinum	Cover price	Stefanutti Grinaker LTA Concor/Murray & Roberts Group 5 WBHO	WBHO
Nicol Apartments	2006	Precoated Metlas (Pty) Ltd	Cover price	Stefanutti Vlaming G Liviero Giuricich Bartlett Construction	Vlaming
Millwood Village Residential Project	2005	Finishing Touch Trading 55 (Pty) Ltd	Cover price	Giuricich Vlaming	Group 5, not party to cover

					pricing, won the tender
Tamboti at Simbiti Estates	2004	Bid Cedar Trading (Pty) Ltd	Loser's fee	G Liviero WBHO Grinaker LTA Group 5 Norvo Construction	G Liviero
Pansy Cove Block of Flats	2004	Leonpoint 279 Properties (Pty) Ltd	Cover price	WBHO Grinaker LTA	Grinaker LTA
Kempton Park City Mall	2008	City Property (Pty) Ltd	Cover price	Vlaming Giuricich	Trystar, not party to cover pricing, won the tender
BKM Processing Plant	2006	Assmang Iron Ore	Mark up agreed Exchange of cover prices	Concor Grinaker LTA	Concor
BKM Export Rail Line	2006	Assmang Iron Ore	Mark up agreed Exchange of cover prices	Concor Grinaker LTA	Concor
Hartebeesfontein Water Works	2004	East Rand Water Care Company	Loser's fee	Concor Grinaker LTA	
Kayelekera Uranium Contract	2007	Kayelekera mine in Malawi	Cover price	Wade Walker Group 5	Group 5
Perkoa Zinc Plant	2007	Perkoa Mine in Burkina Faso for AIM Resources	Cover price	Wade Walker Group 5	Wade Walker
Berg River Dam	2004	Trans Channel Authority	Loser's fee	Concor Hotchief Grinaker LTA Group 5 WBHO Western Cape Empowerment Basil Read Ceccon	Grinaker LTA/ Group 5/ WBHO/ Western Cape Empowerment JV

				Olderbrecht	
Gautrain Project (Midrand, Pretoria and OR Tambo Airport stations)	Unknown	Bombela Concession	Share budget prices	Wade Walker Concor	Wade Walker /Murray & Roberts
Z-Mill Civils and Structural Works	2007	Columbus Stainless Steel	Cover price	Stefanutti WBHO Group 5	Stefanutti
Ngazi Phase 1 Civil Works	2007	Zimplats, Zimbabwe	Cover price	Stefabutti Concor	Stefanutti
New Distribution Depot-BATSA	Unknown	British American Tobacco SA	Cover price	Stefanutti Giuricich GD Irons Edilcon Rainbow Construction	Giuricich
Goedgewonded Crushing Project	2007	Xstrata	Cover price	Stefanutti Grinaker LTA	Xstrata did not proceed with the project
Lanxess Groundwater Remediation Project	2006	Lanxess	Loser's fee	Esofranki Stefanutti	Esofranki
Overarching arrangements					
Road Contractors Meeting	2006	SANRAL	General collusive tendering	Concor/Murray & Roberts Aveng/Grinaker LTA WBHO Haw and Inglis Basil Read	Per tender affected
2010 FIFA World Cup Agreement	2006	Municipalities	General Collusive tendering	Concor/Murray & Roberts Aveng/Grinaker LTA WBHO Basil Read Stefanutti	Per affected tender
Wade List Meeting	2007	All sectors	General Collusive tendering	Wade Walker Murray & Roberts Group 5	Per affected tender

Western Cape Building Market/Cape Club Meetings	Unknown	Building in Western Cape	General Collusive tendering	Group 5 Stefanutti Grinaker LTA	Per affected tender
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Source: Consent orders confirmed by the Competition Tribunal of South Africa in July 2013

Notes: (1) Wade Walker and Concor are subsidiaries of Murray and Roberts, (2) Grinaker LTA is a subsidiary of Aveng

Appendix B: Firms sanctioned by the CIDB, 2007-2012

No.	Firm	Contravention	Sanction
2007			
1	Sondile General Works CC (Polokwane)	Presenting forged documents to the CIDB in order to create fictitious record	Removed from the register of contractors. Suspended for 6 months.
2	Bobcon Builders & Renovators (Chatsworth)	Misrepresentation to the CIDB	Removed from the register of contractors, but may re-apply de novo
3	Young, Black & Gifted CC (Esikhawini, Richards Bay)	Presenting forged documents to the CIDB in order to create fictitious record	Suspended from the register of contractors for 6 months
4	Khazamula Investments CC (Esikhawini, Richards Bay)	Presenting forged documents to the CIDB in order to create fictitious record	Suspended from the register of contractors for 6 months
5	Tobie's Civil Construction CC (Richards Bay)	Presenting forged CIDB certificate to the City of Umhlatuze	Suspended from the register of contractors for 6 months Fined R50,000
6	Molimo Trading CC (Nelspruit)	Presenting forged CIDB certificate to the Department of Public Works, Mpumalanga Provincial Government	Removed from the register of contractors. Barred from applying to be registered for a period of 60 months Fined R30,000
7	Pedisha Construction CC (Polokwane)	Paying a CIDB employee to create a fictitious record	Suspended from the register of contractors for 6 months Barred from applying for an upgrade for 24 months Fined R50,000
8	Niloti Construction CC (Polokwane)	Paying a CIDB employee to create a fictitious record	Paying a CIDB employee to create Barred from applying for an upgrade for 24 months Fined R50,000 a fictitious record
9	Sebenzile Communications CC (Umzinto)	Presenting forged CIDB certificate to the Ugu District Municipality	Barred from applying for 6 months Suspended from the register of contractors for 6 months Fined R6,000
10	Mfundo's Electrical Contractors CC (Phoenix)	Misrepresentation to the CIDB	Removed from the register of contractors. Barred from reapplying for 12 months.

11	Tsenolelo Business Enterprise CC (Phutaditjaba)	Paying a CIDB employee to speed up application	Suspended from the register of contractors for 6 months Fined R15,000
12	Matilda Catering and Plumbing CC (Newcastle)	Paying a CIDB employee to assist with the application	Fined R10,000
13	Sam Sokolo Construction (Schoemansdaal)	Presenting forged documents to the CIDB in order to create fictitious record	Barred from applying for registration for 6 months Fined R10,000
2008			
14	Rema Electrical CC (Durban)	Presenting a fake SARS tax clearance certificate to the CIDB	Removed from the register of contractors Barred from reapplying for 12 months Fined R10,000
15	Milwa Construction CC (Nelspruit)	Paying a CIDB employee to assist in procuring fictitious financial statements in order to amend a category	Prohibited from construction works within the CIDB's ambit for 12 months Downgraded from 6GBPE to 4GBPE Fined R30,000
16	Holliday Housekeeping & Gardening Construction CC (Nelspruit)	Paying a CIDB employee to assist in procuring fictitious financial statements in order to amend a category	Barred from construction works within the CIDB's ambit for 12 months Fined R30,000
17	Ezekiel Moeti Construction CC (Makwassie)	Paying a CIDB employee to assist in procuring fictitious financial statements in order to amend a category	Barred from construction works within the CIDB's ambit for 12 months Downgraded from 6CEPE to 4CEPE Fined R30,000
18	Electrical Contractors of Today CC (Pretoria)	Presenting a fake SARS tax clearance certificate to the CIDB	Barred from applying for registration for 12 months Fined R10,000
19	Umzamo Civils CC (Eerste River)	Paying a CIDB employee	Barred from construction works within the CIDB's ambit for 3 months Fined R60,000
20	AJ Ramodike Projects CC (Pretoria)	Supplying falsified financial statements to the CIDB	Barred from construction works within the CIDB's ambit for 6 months Fined R20,000
21	Group Ywo Young Trading Enterprise CC (Phutaditjaba)	Paying a CIDB employee to assist in procuring fictitious financial statements in order to amend a category	Barred from construction works within the CIDB's ambit for 12 months Downgraded from 5CEPE to 4CEPE Fined R30,000
22	MM Moloto (Pty) Ltd	Presenting falsified financial statements	Barred from construction works within the CIDB's ambit for 3 months Fined R10,000

23	Henque 3645 CC (Polokwane)	Presenting a fake SARS tax clearance certificate to the CIDB	Barred from applying for a higher category for 12 months Barred from construction works within the CIDB's ambit for 6 months Fined R10,000
24	Vumani Consultants CC (Nelspruit)	Presenting forged CIDB certificate to the Department of Public Works, Mpumalanga Provincial Government	Barred from applying for registration for 12 months Fined R15,000
25	Vince Homes CC (Johannesburg)	Requesting CIDB employee to create fictitious financial statements	Barred from construction works within the CIDB's ambit for 12 months Downgraded from 6GBPE to 3GBPE Fined R60,000
26	PE Construction (KZN)	Paying CIDB employee to assist with application	Removed from the register Barred from applying for registration for 12 months Fined R50,000
27	Sebenzile Communications CC	Presenting a fake SARS tax clearance certificate to the CIDB	Removed from the register Barred from applying for registration for 60 months Fined R60,000
28	Nchamobu Moakeng Civil CC (Pretoria)	Presenting forged CIDB certificate to the Department of Public Transport, Roads and Work, Mogale City Municipality	Barred from applying for registration for 24 months Barred from construction works within the CIDB's ambit for 24 months Fined R25,000
29	Anomp Investments CC (Umtata)	Presenting falsified financial statements to the CIDB	Barred from construction works within the CIDB's ambit for 24 months Downgraded from 3GBPE to 2GBPE & 2CEPE cancelled Fined R50,000
30	Mahlodi Lerutla Business Enterprise CC (Mpudule)	Presenting falsified financial statements to the CIDB	Barred from construction works within the CIDB's ambit for 12 months Downgraded from 4CEPE to 1CEPE Fined R30,000
31	Irwing 623 CC (Mthatha)	Presenting forged CIDB certificate and forged SARS tax clearance certificate	Barred from applying for an upgrade for 12 months Barred from construction works within the CIDB's ambit Fined R15,000
32	Nompumelelo Services	Presenting forged SARS tax clearance certificate	Barred from applying for registration for 12 months Fined R8,000

33	TBT SMK Construction CC	Presenting falsified financial statements to the CIDB	Barred from applying for registration for 18 months Fined R20,000
34	JJM & K Building and Civil Engineering CC	Presenting forged documents to the CIDB in order to create fictitious record	Barred from construction works within the CIDB's ambit for 6 months Fined R20,000
2009			
35	Elelyon CC	Presenting forged documents to the CIDB in order to create fictitious record	Removed from the CIDB register for 60 months Barred from construction works within the CIDB's ambit for 60 months
36	Elma Engineering Services	Presenting forged SARS tax clearance certificate	Fined R20,000 Can apply for re-registration
37	Brainwave Projects 1026 CC	Presenting forged SARS tax clearance certificate	Fined R50,000
38	Amaqungende Trading CC	Presenting a letter on a CIDB letterhead	Fined R40,000
39	Nkoananyana Trading Enterprise CC/Tsakelane Construction Enterprise	Presenting false track record to the CIDB	Fined R60,000
40	G-Square Construction	Presenting forged financial statements to the CIDB	Fined R50,000
41	Vhafhati Construction (Pty) Ltd	Presenting forged SARS tax clearance certificate	Fined R20,000
42	AC Industrial Sales and Services	Presenting false track record to the CIDB	Barred from construction works within the CIDB's ambit for 3 months Fined R75,000
43	Roots Civils	Paying CIDB employee to assist with application	Fined R60,000
44	Kedibone Construction CC	Presenting financial statements not compliant with the CIDB requirements	Fined R45,000 Can reapply for registration
45	Inkonjane Civil Works CC	Presenting financial statements not compliant with the CIDB requirements	Fined R25,000 Can reapply
46	Sha-Bash Quarry Services (Pty) Ltd t/a Mandlethu Civils	Presenting false information to the CIDB pertaining to professional staff	Fined R75,000
47	Makuya Construction CC	Presenting forged financial statements to the CIDB	Fined R80,000 Can apply for re-registration
48	Jesifa Business Enterprise	Presenting forged financial statements to the CIDB	Fined R20,000
49	Transnet/GA Civils	Transnet awarded a contract GA Civils not register with the CIDB	Fined R50,000
50	Msadile Trading Enterprise	Presenting financial statements not compliant with the CIDB requirements	Fined R30,000

51	Mameje Projects	Presenting financial statements not compliant with the CIDB requirements	Final warning to endure for 60 months Fined R60,000, but suspended for 60 months
2010			
52	JVZ Construction CC	Over-invoicing a municipality	Fined R20,000
53	Rirothe Construction CC	Presenting forged financial statements to the CIDB Forged tax clearance Forged track record	Barred from construction works within the CIDB's ambit Can apply for re-registration Fined R100,000
54	Fanang Diatla Business Enterprise & Construction CC	Presenting financial statements not compliant with the CIDB requirements	Barred from construction works within the CIDB's ambit Can apply for re-registration Fined R50,000
55	Kwawulezisa Civils CC	Tempered with the letter of tender award (from Izizwe) before submitting to the CIDB	Fined R10,000
56	Ntloanam Construction	Presenting forged track record to the CIDB	Fined R60,000
57	Amukelani Industrial Service and Supplies CC	Presenting an invalid tax clearance certificate to the CIDB	Barred from construction works within the CIDB's ambit for 6 months Fined R30,000
58	Fanie Minerals and Mining CC	Presenting financial statements not compliant with the CIDB requirements	Downgraded from 7GBPE to 5GBPE Fined R60,000
59	Goldfields Development (Pty) Ltd	Presenting false information to the CIDB pertaining to professional staff	Fined R60,000
60	SDK Building Construction CC	Presenting forged track record to the CIDB	Fined R60,000
61	Phagama Civils and Maintenance	Presenting forged track record to the CIDB	Fined R50,000
62	Mbuthumane Trading Enterprise CC	Presenting false financial documentation to the CIDB	Fined R30,000
63	Moshito Business Services	Presenting false financial documentation to the CIDB	Fined R30,000
64	Mnyandu Construction CC	Presenting forged track record to the CIDB	Fined R30,000
65	Camdon Investments CC	Presenting false information to the CIDB pertaining to professional staff	Grading withdrawn Fined R10,000
66	Maitekwenwa Trading CC	Presenting forged track record to the CIDB	No sanction, application only declared null and void
67	TJ Makabate Civil and Building Construction CC	Presenting and invalid tax clearance certificate to the CIDB	Fined R20,000

68	Gertrude & Shadrack Civil Construction CC	Presenting forged track record to the CIDB	Grading withdrawn
69	Safcrete Construction CC	Presenting false financial statements to the CIDB Forged track record	Fined R80,000
2011			
70	Ipintombi construction	Presenting and invalid tax clearance certificate to the CIDB	Fined R30,000
71	Mashery Trading Enterprise CC	Presenting false information to the Limpopo Provincial Government: Department of Roads and Transport	Fined R30,000
72	Kwagga Holdings	Presenting and invalid tax clearance certificates to the CIDB	Fined R25,000
73	Mapasi Business Enterprise CC	Presenting false financial statements to the CIDB Forged track record	Fined R40,000
74	Lenong General Road Maintenance CC	Presenting and invalid tax clearance certificates and information on professional staff to the CIDB	Fined R60,000
75	Mosama Building and Enterprises CC	Presenting false information to the CIDB pertaining to professional staff	Fined R50,000
76	Actisol CC and Riodol 36 CC	Presenting forged track record to the CIDB	Both firms fined R100,000 each Riodor be removed from the CIDB system
77	Dakoena Road Maintenance CC & Oos Frystaat Groundverskuiwing CC	Presenting false information to the CIDB	Oos Frystaat fined R100,000 Dakoena removed from the CIDB registration database
78	Ngaatendwe Trading CC	Presenting an electrical contractors licence that does not belong to it	Fined R20,000
79	Matjana Contractor	Presenting false information to the CIDB pertaining to professional staff	Fined R60,000
80	Letlapa Borwa Civils	Presenting false information to the CIDB	Fined R30,000
81	Tau Pele Construction	Presenting false information to the Free State Provincial Department of Police, Roads and Transport	Fined R100,000
82	Khovhogo Construction and Labour Hire CC	Presenting false financial statements to the CIDB	Fined R35,000
83	Real Naphf Trading Enterprise	Presenting false financial statements to the CIDB	Deregistered from the CIDB Prohibited from applying for registration for period of at least 10 years

84	Paul and Zane Technicians CC	Presenting and invalid tax clearance certificates and false financial statements to the CIDB	Fined R40,000
85	Sinamandla Trading	Presenting false financial statements to the CIDB Forged track record	Fined R100,000
2012			
86	Vhasane Cleaning Catering	Presenting forged track record to the CIDB	Fined R60,000
87	Siyahlobisa Projects (Pty) Ltd	Presenting forged track record to the CIDB	Fined R60,000
88	Kgorong Technical Services	Presenting false financial statements to the CIDB	Fined R20,000
89	Mpulele Difate and Projects CC	Presenting false financial statements and track record to the CIDB	Fined R10,000
90	NJC Construction	Presenting and invalid tax clearance certificate to the CIDB	Removed from the Register of Contractors
91	Letumo Trading	Presenting false financial statements to the CIDB	Fined R20,000
92	Morekuri Trading CC	Presenting and invalid tax clearance certificate and false/forged financial statements to the CIDB	Fined R20,000
93	Gauteng Department of Roads and Transport	Failure to register a tender on the CIDB and publishing it on the CIDB website	Fined R50,000
94	Mafikeng Local Municipality	Failure to register a tender on the CIDB and publishing it on the CIDB website	Fined R30,000
95	Mandles Africa Investments CC	Presenting forged track record to the CIDB	Severe reprimand
96	Lebjoe Business Enterprise CC	Presenting false financial statements to the CIDB	Removed from the Register of Contractors
97	Roswika Civils and Construction CC	Presenting false financial statements to the CIDB	Fined R80,000
98	Khumbula Property Services (Pty) Ltd	Presenting false financial statements and track record to the CIDB	Fined R100,000

Appendix C: Interviews report

Stakeholder contacted	Interviewee(s)/ Contact person	Date of interview	Summary of views on the role of CIDB in limiting construction collusion and how competition can work	Comments
Regulatory				
CIDB	Ms. Kabelo Ntiisa (Acting Procurement Manager), e-mail: kabelon@cidb.org.za Ms. Bongwiwe George (Manager: Legal and Compliance), email: bongiweg@cidb.org.za	04/11/2013	-Contractor development is critical to empower new and emerging construction firms. -Enhance the sanctions of the CIDB. -Requirements for contractors to implement integrity management system. -Procurement integrity management system to improve transparency. -Avoid concentration of projects.	Interview took place as scheduled
SALGA	Mr. Xolile George: CEO e-mail : esther.uclga@salga.org.za	Interview did not take place	N/A	Requested meeting through the CEO's PA (Esther Ucgla) on 28/10/2013. After numerous telephone and e-mail follow-ups meeting could not be secured.
National Treasury	Mr. Kenneth Brown: Chief Procurement Officer e-mail: kenneth.brown@treasury.gov.za	Interview did not take place	N/A	Meeting request on 11/11/2013 after referral by CIDB.

				No response.
State-Owned Enterprises				
SANRAL	Mr. Koos Smit (Engineering Executive), email: smitk@nra.co.za Mr. Connie van der Walt (Group: Engineering), e-mail: VdWaltC@nra.co.za	19/11/2013	-Review of the CIDB grading system to take into account the ability of a contractor to execute the work as well as past performance. -Shift from the lowest bid principle to a benchmarking model. -Transparent and solid tender evaluation processes. -Blacklisting of firms involved in collusion.	Interview took place as scheduled
Municipalities				
City of Johannesburg	Trevor Fowler: City Manager e-mail: trevorf@joburg.org.za	Interview did not take place	N/A	Meeting request sent on 28/10/13. Numerous telephone follow-ups.
City of Cape Town	Mr. Mike Marsden (Deputy City Manager), email: mike.marsden@capetown.co.za	08/11/2013	-Government should plan roll-out of projects. - Break the large projects down into packages that enable small and medium size companies to participate -Stage the programme to avoid bottlenecks and capacity constraints -National database for standard prices. -Code of conduct for CEOs. -Communication on best practice. -Training and development emerging and small contractors on tendering procedure, good governance and ethical behavior.	Interview took place as scheduled

			-Blacklisting of firms involved in bid rigging/collusion for a specified period.	
Ethekwini Municipality	Mr. Sbu Sithole: City Manager e-mail: SitholeSbu@durban.gov.za	Interview did not take place	N/A	Meeting request sent on 28/10/13. Numerous telephone follow-ups.
Companies				
PPC	Mr. Ketso Gordhan: CEO e-mail: ketso.gordhan@ppc.co.za	Interview did not take place	N/A	Left a message on 28/10/13 Meeting request sent on 29/10/13 Mr. Gordhan was on leave until 05/11/13. Numerous telephone follow-ups.
G. Liviero Civils	Mr. Neil Cloete (Group CEO), e-mail: neilc@liviero.com	05/11/2013	-Spreading out of construction projects (level out spending) - projects should not be allocated in a cyclical way like it is now. -Splitting the work into packages, for example, SANRAL's model for bidding the GFIP project. -Proactive role on protecting the rights of contractors – right to a fair contract, right to payment, right to award the lowest bid. -Government planning on procurement for large infrastructure projects. -Incentives in the construction sector.	Interview took place as scheduled

Group Five	Mike Upton: CEO e-mail: nkutumela@groupfive.co.za	Interview did not take place	N/A	Meeting request sent on 28/10/13. No response.
Fikile Construction	Mr. Gregory Mofokeng (Business Development Executive & Secretary General: Black Business Council in the Built Environment), e-mail: gmofokeng@fikile.co.za	7 November 2013	<p>-Client bodies should be capacitated. For instance, there was run away cost escalation for major projects like the Gautrain, which could be attributed to the lack of appropriate skills in the public sector.</p> <p>-Remedies in competition law not adequate. Criminal charges for individuals involved in bid rigging as administrative penalties are not adequate. Encourage private enforcement for damages claims</p> <p>-There are gaps in competition law as firms like consultants that would have contributed to the bid rigging cannot be charged for such as they are not in a horizontal relationship with the implicated firms.</p> <p>-Breaking up projects into packages to increase participation by emerging contractors.</p>	Interview took place as scheduled
Giuricich Bros Construction	Mr. Leonard P. Giuricich e-mail: leonard@giuricich.co.za	Interview did not take place	N/A	Meeting request sent on 28/10/13 Per 29/10/13 e-mail, Mr. Giuricich will not be available until the end of the year.

GD Irons Construction	Mr. Pieter Rude: MD e-mail: pieter@gdirons.co.za	Interview did not take place	N/A	Meeting request sent on 28/10/13. No response.
Construction industry expert				
Roger Jardine	Mr. Roger Jardine (former Aveng CEO) Cell: 083 286 8345	Interview did not take place	N/A	Meeting request sent on 29/10/13. Numerous follow-ups.

Note: All the interviews that took place were conducted face-to-face by Mr. Hardin Ratshisusu

Appendix D: Questionnaire

CASE STUDY: ROLE OF CIDB IN LIMITING CONSTRUCTION COLLUSION

(Please note the key questions under section C below)

A. Interviewer

- Director at Hekima Advisory, a competition and regulatory advisory firm.
- Worked at the Competition Commission of South Africa as Adviser to the Deputy Commissioner, Senior Merger Analyst and Acting Divisional Manager- Mergers and Acquisitions, for over 9 years.
- Worked on key investigations such as those in construction, supermarkets and furniture removal.

B. Broad parameters

- The Economic Development Department (EDD) has entered into a Memorandum of Agreement (MoA) with the University of Johannesburg (UJ) to undertake a research and development capacity building project for economic regulators in South Africa.
- Consider the co-operation that is required for the successful implementation of large infrastructure projects and how these can be organized in a way that ensures rivalry while enabling co-operation.
- Consider barriers to entry, and the complementary measures that can be taken to ensure greater effective rivalry and participation.
- Consider the role of the Competition Commission and the CIDB in limiting cartel formation in the construction industry, and promoting increased participation.

C. Key questions

1 Interviewee

- a. Name of the person and designation:
- b. Company name:
- c. Key projects in large infrastructure projects in South Africa in the past 10 year:

2 Unpacking regulatory barriers to entry in the construction industry and how the market could be open for more participation.

- a. What are the regulatory barriers in the construction sector?
- b. What is the impact of the CIDB ranking system on the ability of small and medium sized entities to compete for large contracts?
- c. What measures could be introduced to open the construction sector for more participation by small and emerging firms, particularly on large infrastructure projects?

3 Structural/regulatory factors that may contribute to bid rigging.

- a. What are the factors, in the procurement processes, that could be contributing to bid rigging in public sector construction projects?
- b. What are the factors, in the procurement processes, that could be contributing to bid rigging in private sector construction projects?
- c. What lessons can be learnt from the construction collusion particularly on the road construction (Gauteng Freeway Improvement) and stadium construction (FIFA World Cup Stadia) projects?
- d. How can the procurement process be improved from a regulatory perspective?

4 How can competition work?

- a. How can the bidding process for large infrastructure projects be made competitive such that there is rivalry between construction firms?
- b. How can the bidding process be structured such that there is limited scope for collusion (i.e. cover pricing, price fixing and allocation of territories/customers) between construction firms.

5 What are the interventions that could contribute to a transparent, but competitive, bidding process?

- a. How can bids, particularly for large infrastructure projects, be designed to ensure a transparent and competitive bidding process?
- b. How can clients (government and private sector) design their processes to ensure a competitive bidding process?
- c. What role can CIDB play to ensure the procurement processes for large infrastructure projects are competitive?
- d. What role can the Competition Commission play to ensure the procurement processes for large infrastructure projects are competitive?
- e. Are there any interventions (regulatory or otherwise) that could contribute to a transparent, but competitive, bidding process for large infrastructure projects?

- f. Any general comments on the role of the CIDB in limiting collusion in the construction sector.

D. Intended outcome

- a. Case study prepared for UJ and EDD on the role of the CIDB in limiting construction sector cartels, with recommendations on the optimal procurement process for large infrastructure projects.
- b. Academic paper to be presented at the SA Regulators Conference in March 2013 at UJ.

