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INVESTIGATING FACTORS ASSOCIATED WITH INSOLVENCIES AMONG CIVIL ENGINEERING CONTRACTORS IN KWAZULU-NATAL

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Investigating Factors Associated with Insolvencies Among Civil Engineering Contractors in KwaZulu-Natal

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DECLARATION

This dissertation, except where indicated in the text, is the candidate's own work and has not been submitted in part, or in whole, at any other University or University of Technology.

This research was conducted at the Durban University of Technology under the supervision of Prof Dhiren Allopi.

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ABSTRACT

Insolvency may be broadly defined as an inability of business entity to meet pending financial commitments. For a construction firm, such a situation creates conditions whereby a business entity is unable to fulfill its contractual obligations with regard to work in progress or creditors owing. There are indications to suggest that during periods of adverse conditions the occurrences of insolvencies are mutually exclusive and remain a subject of debate. The occurrence of these financial failures adversely affect business concerns operating within the civil engineering construction industry.

In South Africa, figures released by the South African Federation of Civil Engineering Contractors (SAFCEC) in 1992 suggested an expected general decline in workload handled by this sector. This was a result of scaling down of heavy infrastructure projects because of government shifting focus to housing and other related projects mainly towards meeting the needs of the previously disadvantaged communities. During that period large contractors suffered financially and some went through insolvency.

The government had also put emphasis on transformation of the sector to allow participation of emerging and small contractors, but this was not properly regulated, so most of these contractors did not have the experience and skills to operate sustainable construction firms. The Construction Industry Development Board (CIDB) was established in 2000 as a statutory body to provide leadership to stakeholders and to stimulate sustainable growth, reform and improvement of the construction public sector for effective delivery and the industry's enhanced role in the country's economy. The CIDB's regulations were implemented after 2003 and are continuously improving the construction public sector's growth.

This research study investigated and evaluated the factors associated with insolvencies amongst civil engineering contractors in KwaZulu-Natal. The study investigated the hypotheses that “the prominent factors associated with civil engineering contractors insolvencies are related to managerial/operational issues”, the prominent factors associated with civil engineering contractors insolvencies are related to financial issues”, “South African government initiatives create an environment for small to medium contractors to develop through their implementation”, and good management and operation of small to medium construction companies reduce insolvency in construction”.

Operational management and strategic factors were found to be amongst the leading causes of companies failures. The study also made some recommendations from the research findings.

The findings are relevant to the South African government infrastructure service delivery programs and the general issue of affordable infrastructure services.

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LIST OF ABBREVIATIONS

CIDB	– Construction Industry Development Board
CSIR	– The Council for Scientific and Industrial Research
KZN	– KwaZulu-Natal
SAFCEC	– South African Federation of Civil Engineering Contractors
SARS	– South African Revenue Service
SATC	– Southern African Transport Conference
SEDA	– Small Enterprise Development Agency
CE	– Civil Engineering

LIST OF SYMBOLS

%	- per cent

CHAPTER 1

GENERAL INTRODUCTION

CHAPTER 1 : GENERAL INTRODUCTION

1.1 Background

Insolvency may be broadly defined as an inability of a business entity to meet pending financial commitments. For a construction firm, such a situation creates conditions whereby a business entity is unable to fulfill its contractual obligations with regard to work in-progress or creditors owing. There are indications to suggest that during times of adverse conditions, the occurrence of insolvencies is mutually exclusive and remains a subject of debate. The occurrences of these financial failures seem to have adversely affected business concerns operating within the civil engineering construction industry.

The construction industry is very sensitive to economic cycles and the political environment, that is to say, the growth and failure of the construction industry can be greatly affected by those external factors (Enshassi, Al-Hallaq and Mohamed, 2006). Looking at the construction industry in South Africa, there has been much growth within this sector over the years caused by the amount of investment made by the private and public sectors in construction projects.

The increase in construction projects has given many people the opportunity to open their own construction companies within the range of small or medium categories. The reason for the increase in number construction companies is because South African does not have a regulating body that would normally screen people who want to open construction businesses which has made it easy for anyone to start a construction company.

Many of these people who open these companies do not have experience in the construction industry but may have the capital to start the company. The majority of these companies have few skills and resources to take up projects. Construction companies emerge on a daily basis which has pushed up competition and has resulted in some of the contractors reducing their profit margins greatly. Data from the Construction Industry Development Board (CIDB)

(2009) shows the increase in the number of construction companies over the years. The total numbers of construction companies registered between 2004 to 2015 are: 94 9487

1.2 Problem Statement and Aims

The increase in insolvency of companies in South Africa is of great concern to the South African economy. The high failure rate is mostly among the small and medium sized construction companies in South Africa. Statistics from the CIDB indicates that as of 24 June 2015 there were 94 987 companies registered whereby 17 453 were suspended, expired or deregistered (Table 1). About 90% of emerging black contractors do not survive the first five years in the construction industry (CIDB, 2004). Figures from the CIDB further indicated that within the past three years about 1 400 companies were liquidated leading to the insolvency of these companies. The causes of failures of these companies are one of the objectives of this research which will be explored specifically in KwaZulu-Natal (KZN).

Table 1: Number of Construction Companies Registered as of 24 June 2015

Grade	Number of Registered Companies	Active Companies	Expired / Suspended / Deregistered Companies
1	84 306	66 849	17 457
2	3 709	3 709	0
3	1 385	1 386	-1
4	1 831	1 833	-2
5	1 276	1 276	0
6	1 363	1 364	-1
7	724	724	0
8	279	279	0
9	114	114	0
Total	**94 987**	**77 534**	**17 453**

Table 2 (CIDB, 2015) shows statistics of companies registered as of April 2012 and June 2015 which indicates a drop of 57.93% in the number of companies registered; the drop may be caused by failures and other factors which will be explored in this research.

Table 2: Number of Construction Companies Registered as of April 2012 (CIDB, 2012) and June 2015 (CIDB, 2015)

Grade	Number of Registered Companies (2012)	Number of Registered Companies (2015)	Expired / Suspended / Deregistered Companies
1	134 127	84 306	49 821
2	17 532	3 709	13 823
3	4 916	1 385	3 531
4	2 509	1 831	678
5	2 232	1 276	956
6	1 709	1 363	346
7	613	724	-111
8	217	279	-62
9	126	114	12
Total	**163 981**	**94 987**	**68 994**

The aims of the study are:

- To investigate the principal causes of insolvencies among civil engineering firms in KwaZulu-Natal; and,
- To develop a strategy to promote growth and sustainability in the civil construction industry especially amongst emerging contractors.

1.3 Objectives

The overall aim of the study can be interpreted in terms of a number of supporting objectives:

- To undertake a review of literature and studies by others to identify the leading causes of and possible solutions to insolvencies of civil engineering contractors in KwaZulu-Natal.

- To undertake critical analysis of the South African government's initiatives to develop a sustainable environment for construction businesses.
- To make a comparison between the liquidator's reports and the responses from the surveyed companies, thereby providing a body of knowledge regarding the actual causes of insolvencies in the construction sector.

1.4 Research Questions

- What are the main factors causing construction companies to be insolvent in KwaZulu-Natal?
- How can insolvency of construction companies be reduced?
- How is the South African government assisting in developing a sustainable environment for construction business?

1.5 Hypotheses

- The prominent factors associated with civil engineering contractors insolvencies are related to managerial/operational issues.
- The prominent factors associated with civil engineering contractors insolvencies are related to financial issues.
- South African government initiatives create an environment for small to medium contractors to develop through their implementation.
- Good management and operation of small to medium construction companies reduce insolvency in construction.

1.6 Delimitations

The study investigates the causal factors of insolvency amongst the principal contractors in civil engineering and does not consider potential effects experienced by subcontractors as a result of insolvency by the main contractors.

1.7 Assumptions

The questionnaire was designed with the intention of eliciting a response(s) from the management of civil engineering construction firms, towards determining the principle reasons for the failure of civil engineering contracting firms. It was assumed that the members of management of the construction firms that responded to the questionnaire were sufficiently familiar with the range of failure reasons stated in the questionnaire and have a clear understanding of the civil engineering construction business sector.

It was also assumed that the documents obtained from the insolvency court of the Supreme Court had comprehensive details on insolvency causal factors so as to be able to draw conclusions and test these against the responses to the questionnaire.

1.8 Scope and limitation of Research

The study was conducted in KwaZulu-Natal Province, South Africa. The researcher to some extent engaged onsite observation with the management teams of different companies whilst distributing the questionnaires, the questionnaire was used as the primary source of data collection. This study was carried out on the public sector construction companies, mainly the small and medium construction companies (CIDB Level 2 – 6 Civil Engineering) in KwaZulu-Natal Province. These companies were randomly selected from the CIDB contractor database. The private sector companies were not included in this study.

1.9 Research Methodology

In order to obtain information to reach a conclusion regarding the research problem, the following methodological approach will be followed:

- A detailed literature review on factors associated with insolvencies in construction companies and possible solutions to reduce insolvency in the construction industry. In addition to this a detailed study will be conducted on the strategies that the government of South Africa has developed to assist small to medium construction companies.
- To understand some of the factors outlined in section 2.4, the impact of inadequate experience and skills on the construction sector will be discussed.
- The factors related to the insolvency of construction companies will be tested against analysis of liquidators' reports which will be obtained from the insolvency courts. This will involve making a comparison between the liquidator's reports and the responses from the surveyed companies, thereby providing a body of knowledge regarding the actual causes of insolvencies in the construction sector. The study will be conducted on companies situated in KwaZulu-Natal only.
- Furthermore, the study will use a quantitative approach where data will be gathered by means of a questionnaire. The questionnaires will be distributed to randomly selected civil engineering construction firms which are registered with the CIDB. Focus will be placed on contractors with a Grade of 2CE to 6CE.

1.10 Ethical Issues

The information obtained in this research will not be harmful in any way to the parties concerned. Ethical clearance has been obtained using an ethical checklist. (See Appendix 4)

1.11 Overview of the Chapters

This dissertation is structured as follows:

- Chapter 1 provides the background to the study, indicating the problem faced by small to medium construction companies. The outline of the research includes research questions, aims, objectives, and the

methodological approach.

- Chapter 2 provides a detailed literature review of the study, by looking at international countries faced with the problem of insolvency of construction companies. The following counties were selected: United States of America and South Africa.
- Chapter 3 discusses the liquidation reports and their findings.
- Chapter 4 discusses the impact of inadequate experience and skills on the construction sector.
- Chapter 5 gives an analysis of the questionnaires completed by the management of the construction firms
- Chapter 6 discusses the conclusions drawn from the study and includes recommendations.

CHAPTER 2

LITERATURE REVIEW OF THE TOPIC

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2.1 Introduction

Insolvency may be broadly defined as the inability of a business entity to meet pending financial commitments. For a construction firm such a situation creates conditions whereby a business entity is unable to fulfill its contractual obligation with regard to work-in-progress or creditors owing (De Valence, 1994). There are indications to suggest that during times of adverse conditions the occurrence of insolvent conditions increases. Whether such adverse conditions and mounting insolvencies are related remains a subject of debate. The occurrences of these financial failures seem to have adversely affected business concerns operating within the Civil Engineering construction industry.

According to Hindle (1991), the knowledge of trends in business cycles is paramount to the survival of construction firms. Furthermore, Lansley (1994) emphasized a need for firms to attune their strategies to the environment they operate in, thus enabling them to be in sync with market trends. He argued that adopting such strategies ensures that competing firms operate on the same level in varying market conditions.

Reviewing the world construction sector through the past decades, Lansley (1994) and Langford et al. (1993: 317-325) noted the following trends: 1960's – characterized by long term stability in construction market; 1970's – the market transformations during this period were phenomenal and could not be handled by tried and tested methods for competing and firms struggled to remain in business; 1980's and 1990's – the conditions of low levels of demand for construction work and the declining role of governments as key players in various economies. The South African construction sector has been subject to the wrath of these world-wide trends. This research study investigates the principle causes of insolvencies amongst KwaZulu-Natal civil engineering contractors.

2.1.1 Literature Review with Term Definition

According to Van Der Merwe (1992) there was a general decline in the workload handled by the South African Federation of Civil Engineering Contractors (SAFCEC) at that time, evident from the figures released by SAFCEC in 1992. There has been little growth within the civil engineering construction sector during that period as a result of the scaling down of heavy infrastructural projects, as government began diverting focus to housing and other related projects mainly towards meeting the needs of the previously disadvantaged communities. Looking at the trend in the Western Cape Province there was a drop in tender awards between 1994 and 1995 from R518 million to R120 million respectively (Symons,1995: 7-11). In October 1995, three well-established civil engineering contractors in the Western Cape went insolvent.

In studies conducted by Henry (1994) and Rwelamila and Lobelo (1996), several factors associated with the insolvency of general construction firms were identified. These factors were broadly classified into categories of operational management, environmental, strategic, personal, cost overruns and technological factors.

By law two forms of insolvency exist, namely commercial and factual insolvency. Commercial insolvency occurs where a business entity is unable to service its debts even though its assets may exceed its liabilities, whereas factual insolvency is where a firm's liability exceeds its assets.

The terms 'bankruptcy' and 'insolvency' are often deemed to be interchangeable; although they may represent the same situation their application differs. Holt (1998) refers to bankruptcy as a term pertaining to individuals, whereas insolvency is a broader term incorporating liquidation, receiverships and administration of the company by bankers, or others with a financial stake.

Liquidation is referred to also as ‘winding up’ and involves a process whereby the life of the company is brought to an end when it is unable to pay its debts. Receivership involves an appointment of a receiver liquidator whose main role is to protect the assets of the insolvent company, on behalf of the secured creditors (Allopi and Ntuli, 2013). Incumbent upon his or her appointment the liquidator may continue running the affairs of the insolvent firm for a while to sell off its assets or streamline its operations for it to be profitable again and sell the company as a going concern. However, given the uncertainty of recovery from loss by the firm, the process of winding up the firm usually follows. The process of winding up can be decreed by courts of law or may be voluntarily initiated by members of the firm or creditors (Burnett, 1991).

There are economic factors, which are worthy to note, but may be perceived as being external and not relevant to a firm’s survival. Although they may be external to a firm’s operations, failure of firms to recognize their effects may lead to the termination of their operations. Therefore, given that construction projects necessitates heavy capital investment which attracts interest from the borrowed capital portion, the need to study the way markets behaves is crucial for understanding the cash flow needs of a firm. The amount of investment available is governed by many economic factors such as the level of income, profit, taxation and market conditions (Allopi and Ntuli, 2013).

The role that management plays in controlling and providing vision in a firm’s activities can be to its detriment if not properly managed or strategized. Management needs amongst other things, to adapt their organization to deal with growth effectively, either by minimizing its growth to level off or face the risk of the business outgrowing its own organization (Schleifer, 1990). The nature of construction products is such that they are a one-off endeavour, meaning that labour, plant and materials have to be assembled separately for each job. This places a heavy burden on site management to coordinate and supervise the various trends (Ramachandra and Olabode Bamidele Rotimi, 2012).

2.2 Failure of Construction Companies in the United States of America (USA)

The construction industry is one of the largest industries in the United States of America (USA) and accounts for 9% of the nation's gross domestic product. In the USA the construction industry makes up about 700 000 large and small companies ranging from one employee to thousands of employees working on different disciplines of engineering (Paz, 2008).

The construction industry in the USA generates a total revenue of $1.2 trillion (Paz, 2008). According to the economic census of 2007 there were more than 171 000 residential construction companies in the USA employing about 878 000 people.

A study conducted by Yin (2006) found that most construction companies did not have sufficient capital to finance their undertakings and it is difficult for the construction companies to access loans from the banks because most banks do not accept moving assets as collateral. Most contractors generally do not have fixed assets because they usually own construction equipment rather than lands.

The failure of business is a global phenomenon and economic trends are used as indicators for business failures. A study conducted by Strischek and McIntyre (2008) indicated that there were a number of business failures in the construction industry in the USA during the period under review. In the period 2004 to 2006 there was a drop of construction companies from 850 029 in 2004 to 649 602 in 2006 which amounts to a 24% decrease. From 1989 to 2002 the average failure of business in the USA amounted to 12%.

2.3 Failure of Construction Companies in South Africa

In South Africa small businesses have been grouped into Small and Medium Enterprises (SME) and are also referred to as Small, Medium and Micro Enterprises (SMMEs) (Mahembe, 2011). An SME is defined as "a separate and distinct entity that cannot be part of a group of companies" (Republic of South

Africa, 1996). SMEs have an owner which can be in a form of sole proprietorship, partnership, a close corporation. In South Africa small contractors have a turnover of less than R5 million and a gross fixed asset value of less than R1 million while on the other hand medium contractors are companies with a turnover of less R20 million and a total gross fixed value of less than R4 million.

In the South African context a contractor is referred to as a person or persons, partnership, firm or company who tenders for certain construction work. In terms of CIDB Act 38 of 2000 all the contractors are supposed to be registered, no public sector client may be awarded a construction contract. In South Africa construction companies are graded based on the contractor's capability to carry out construction projects. The grade determines the maximum rand value of the project as well as the type of the construction work the contractor can perform. Table 3 shows the grade and rand value associated with each grade.

Table 3: Tender Value Ranges

Grade	Tender value less than or equal to (R)
1	R 200 000
2	R 650 000
3	R 2 000 000
4	R 4 000 000
5	R 6 500 000
6	R 13 000 000
7	R 40 000 000
8	R 130 000 000
9	No Limit

The construction sector accounts for 7% of the total employment with 75% of all construction workers found in developing countries (Mofokeng, 2012).

According to Khoza (2008) cited by Mofokeng (2012), SMMEs are faced with many challenges in South Africa such as high levels of competition due to the continuous flow of new entrants into the industry. The Quarterly Monitor report released by CIDB shows that contractors in Grade 2 to 4 which are medium scale

contractors, in four years the medium scale contractors will find it harder to win tenders, the failure of these contractors to win tenders will result in them failing to establish track records which are important for the growth of the company in terms of CIDB grading. In South Africa the failure of these companies is due to lack of effective management during their early stages (Thwala and Phaladi, 2009).

2.4 Factors Associated with Insolvencies in Construction Companies

The failures of small and medium construction companies are disruptive to the country's economy as a whole and can have a great impact. Many developing countries, including South Africa, are faced with several challenges. These challenges include the lack of training resources for contractors, lack of funds and poor management of the construction companies through the lack of management capacity (Ibid).

The failure of a business is a result of a complex process and it is not dependent on a single factor. According to Al-Sobiei, Arditi and Polat (2005) the main reasons for construction companies failing are related to budgetary and macroeconomic issues. Over 80% of failures are as a result of five factors, namely, insufficient profits (27%), industrial weakness (23%), high operation expenses (18%), lack of capital (8%) and high institutional debts (6%). All these factors are budgetary issues with the expectation of industry weakness. All these factors can be handled by companies that are mindful of the effects of these factors on their survivability.

Kivrak and Arslan (2008) investigated the critical factors causing construction companies to fail in Turkey. This was accomplished through a survey of 40 small to medium sized construction companies. Lack of business experience and country's economic conditions were found to be the most influential factors. Sub-factors related to lack of business experience showed that such companies have difficulties with cash flow and poor client relationships.

The factors associated with insolvency in a construction company can be broadly classified into categories of Managerial / Operational Factors, Financial Factors, Expansion Factors and Economic Factors.

2.4.1 Managerial / Operational Factors

Experience is a crucial role in the success or failure of a business. Placing of less experienced individuals in management positions could factor the success of a business, in fact it could lead to its failure. Poor management can be assumed to be one of the main causes of failure of any business (Longenecker et al., 2006). Bad decisions which are as a result of lack of experience in the construction industry could make a company lose money and lead to its failure.

The smooth operation of a construction company is a result of experience which comes from the level of education and skills gained over the years. Most small to medium companies are run and owned by individuals who do not have the qualification and experience required in their relative field of business. Good management comes from experience and this is a key factor in the success of a business. Good management which leads to the success of a business includes good strategy, marketing, pricing and financial control. In a construction company poor pricing of a project could lead to the failure of the project thereby leading to collapse of the company. Mismanagement of funds due to incompetence of management can be considered a leading cause of construction company failures (Kangari, 1988, Wong and Ng, 2010).

2.4.1.1 The Role of Management in Construction Firms

Good management implies an awareness of all factors making up a successful business namely good strategy, marketing, pricing and financial control (Douglas, 1985). Financial mismanagement and management incompetence have been cited among the attributes that lead to the prominence of construction failures (Potgieter and Frank, 1990; Henry, 1994). Potgieter and Frank (1990) assert from their study that there needs to be training of entrepreneurs on matters relating to financial management such as bookkeeping, tax planning, budgeting and cash

flow management. Additionally, the lack of management information also contributes to the failure of businesses. The use of financial ratios and inter-firm comparatives have been cited as the most useful tools in providing management information as they measure the overall effectiveness of any business (Potgieter and Frank, 1990). Furthermore, management information permits management to monitor, measure and evaluate performance of the company at certain time intervals, with the attainment of an improvement of profitability in view.

2.4.1.2 Strategic Management in Construction Firms

Langford and Male (1991) perceive the function of a strategic planner in a construction company as being to synchronize the company's activities with those of the industry albeit being consistent with the resources of the firm.

The uncertain environment within which the construction industry operates, dictates that management adopt varying approaches to manage change based on their experience. The strategy adopted by management in construction firms is reflected in the quality of the service delivered in terms of the programmed budgetary control and conformance to specification (i.e. realization of the project objectives) (Winch and Scheider, 1993: 467-473). The nature of the construction environment has forced prudent firms to adopt a policy of subcontracting where the demand for construction services is less predictable (Langford and Male, 1991; Lansley 1997).

2.4.1.3 Financial Management in Construction Firms

Financial management is the key which determines business growth (Hall and Young, 1991). Proper financial management in a company ensures the resources are properly controlled and planned for. Tong (1990) affirms this view in that where a firm experiences uncontrolled growth, conditions may arise where financial needs are in excess of available resources thus increasing the vulnerability of the firms towards an insolvent state.

2.4.2 Financial Factors

Financial management is another key factor which determines the growth of a business (Hall and Young, 1991). Proper management of finances in a company ensures that the funds are available at the right time and that they are properly controlled. The uncontrolled growth of a company could increase the vulnerability of a firm as the financial needs rise above the available resources which could lead to a state of insolvency.

Inadequate cash resources through cash flow are the most prominent cause of failure in construction (Tong, 1990). Poor cash flow management can result in the collapse of a construction company as the construction industry payments are made for work done.

The lack of access to funding during the pre-construction period often disqualifies emerging contractors from meeting guarantees and during construction the lack of cash flow can result in the non-completion of work which could lead to liquidation (Thwala and Mvubu, 2008). Competition amongst emerging contractors has made several companies have low profit margins because small contractors would up prices in order to get the work, thereby not being able to complete the work.

2.4.2.1 Impact of Inflation and the Interest Rate on the Industry

Through the banking system, the government controls the credit and interest rates thus influencing the construction industry a great deal. Therefore the demand for construction products is largely influenced by government's monetary policy. Hence, any increase in the interest rate and mortgage rate can dramatically reduce investments and demand for the services from the industry. Ren (1992) and Kangari (1988: 172) support this view that government fiscal policy affects patterns in government expenditure and income, whilst the monetary policy on one hand affects the construction industry directly through the demand for the new buildings and works, on the other hand the monetary policy indirectly affects changes in interest rates (i.e. any increase reduces the demand for construction).

2.4.2.2 Cash Flow and its importance in the Construction Industry

The most prominent causes of insolvency result from inadequate cash resources and the failure to convince creditors of the availability of money (Hsing–Hui, 1989;Ren, 1992; Jach, 1985; Tong, 1990). Jach (1985) concurs with this view that even profitable firms could be forced into liquidation because the demand for payment of outstanding accounts could not be met at the critical time despite the fact that the assets are tied in long-term investments. Furthermore, the capital is often required to smooth out the strains on the cash flows resulting from the occurrence of costs and uncertainty (Ren, 1992).

Escalating materials prices coupled with high interest rates have forced the management of construction firms to focus on the control and flow of money as being critical to their survival (Jach, 1985). Moreover the terms of payment stipulated in the contractual conditions and the escalation formulae (on contracts with escalation) require a great deal of expertise to apply, coupled with the task of ensuring promptness in the submission and payment of bills to ensure that the cash flow situation is controlled and improved upon (i.e. preventing the erosion of profit).

2.4.2.3 Sources of Finance to Contractors

Growth in a firm necessitates the injection of capital, given that at a certain point in time its funding requirements will exceed its fund generation (Allopi and Ntuli, 2013). The financing of construction projects may be external and internal to an organization.

Internal sources include the contractor’s retained earnings from previous projects or investments; depreciation income obtained through depreciating assets and the sale of such assets. External source include finance through bank loans and other financing mechanisms. These may be short or long term.

2.4.2.3.1 Short-term Finance

Several short-term financing mechanisms have been identified as being available to contractors, such as bank loans, trade credit, factoring and invoice discounting, hire-purchase and leasing (Ntuli and Allopi, 2009).

2.4.2.3.2 Long-term Finance

When a business is looking at acquiring fixed and long term assets or looking into the expansion of their business, long term financing comes into effect. The following financing options could be adopted:

- Public issue, where a company offers the public a stake in its operations through the stock market.
- Offer for sale, where a financial institution purchases all shares in a company at a negotiated price and then add a mark-up to them when they are put on offer to the public.
- Placing, where shares are offered by financial institutions to their clients.
- Mergers, when a company cannot expand without incurring additional capital for resources, but cannot generate enough extra capital on its own mergers can provide the additional resources to make the company stronger and profitable. The synergy between the newly affiliated companies will be determined by their complementarity and the compatibility of their functions.

2.4.3 Expansion Factor

The government policy of Broad-Based Black Economic Empowerment Strategy (B-BBEE) has enabled some small and medium contractors to win more tenders than others which results in the number of projects increasing however they cannot always manage because of lack of capacity. Over-expansion can drive a company to high-risk investment thereby increasing their chances of failure (Enshassi, Al-Hallaq and Mohamed, 2006). Venturing into a new business area with the intension of expanding your business requires proper research; lack of proper has led to the failure of several businesses (Mofokeng, 2012).

Certain item needs to be placed in order when a contractor wants to expand.

- Equipment;
- Marketing;
- Understanding of the new territory;
- Management; and
- Accounting system.

2.4.4 Economic Environmental Factor

Ntuli and Allopi (2009) state that economic factors are perceived to be external to a firm's operations which may lead to the termination of a firm. There are several external factors which influence the performance of the construction industry one of which is the government's role in terms of legislation for both financial and human capital which affect the performance of the industry directly (Dlungwana and Rwelamila, 2003). Since 1994 about 30 Acts of legislation have been passed some of which have directly and indirectly impacted negatively and positively the operation of the construction environment in South Africa. Some of these Acts are related to the tender procedures and procurement employment practices, skills development and business practice.

The construction industry is controlled by the economic state of the nation which then determines the number of projects the government will invest in. The better the economy the more projects the government will invest in. The strategy of awarding projects to the lowest contract price has greatly affected the construction sector as the main players are not looking to getting the highest possible profit but to getting the job. Other relevant economic factors are interest rates, national economic growth rate, industrial growth rate and the rate of individual company expansion.

2.4.4.1 Macro-Economic Factors and their Effects

There exists a body of opinion that the advent of insolvencies follows the natural law of selection. A number of authors, Douglas (1985), Laing (1994) and Copper et al. (1994) concur with this opinion in that nature rationalizes by letting go of the weak to ease capacity. Douglas (1985) (cited by Allopi and Ntuli, 2013) indicates that the positive spin-off of such an effect lies in the removal of inefficient businesses from the industry whilst at the same time forcing existing firms to tighten up their operations, thus placing them in a better position when the situation improves. In addition, Copper et al. (1994) liken the effect to a culling process, whereby the resultant effects create a market with a super league of contractors who can achieve better margins through well managed resources with weaker companies left trailing. Economic factors such as the level of income, profit, taxation and market conditions govern the amount of investments available for capital investment (Allopi and Ntuli, 2013).

2.4.4.2 Nature and Characteristics of the Construction Industry

The civil engineering construction industry focuses on development infrastructural works. Davis (1991) identified four primary areas distinctive of the construction sector. The first area is the construction of roads, railways, bridges and tunnels. The second is the erection of harbours, docks, waterways, dams, reservoirs and sea defence and land reclamation works. The third area focuses on the energy industry and the construction of power stations, transmission lines and electricity substations. Finally, the fourth area focusses on construction of water treatment and waste management.

Ren (1992), Jach (1985), Kangari (1988: 172) and Davis (1991) identified characteristics which make the construction industry distinct from others and susceptible to failure. These are:

- Trading is within a highly uncertain environment e.g. uncertain ground conditions, unpredictable weather and variable labour availability.

- The necessity to price a product before it is produced. A contractor has to make assumptions relating to the likely duration of the project, the adequacy in design availability of labour, plant and materials, ground conditions, uncertain weather and other contingencies.
- Competitive tendering as a means of pricing: The main objective of this form of tendering is to obtain value for money by ensuring the greatest competition. However, this is not always achieved since cost, somehow, is always passed on to the client. In addition, the contractor with the lowest price may have insufficient financial, technical or managerial resources for the projects.
- The low fixed capital requirements for entry into the market results in a market being over capacitated. In addition, highly developed plant hiring facilities allows plant to be hired by the hour, day or longer thus minimizing initial starter capital.
- The tendency to operate with too minimal working capital.
- Increasing turnover too fast causing increased financial requirements for labour, material and an increase in general indebtedness.
- Ease of entry into the building industry given the lack of legislation, stating who may or may not build.

2.4.4.3 Effects of the Business Environment on the Industry

Close monitoring of the business environment is crucial in a construction firm's strategic planning, given the highly sensitive nature of the industry. Small shifts in the interest rate often dictate development intentions of important clients (Langford and Male, 1991). Monitoring market conditions allows construction organizations to synchronize their activities with environments thus enabling them to right size their resources (Ntuli and Allopi, 2013).

2.5 Government Initiative Support Programme For Small To Medium Enterprises

The South African Government has developed several support programmes that are targeted to the SMME sector as an economic empowerment vehicle for previously disadvantaged people. For this reason SMMEs have received significant attention and investment which range from state-initiated projects to supportive legislation, several funding instructions and lastly government incentive through the Department of Trade and Industry (Mofokeng, 2012).

In 1996 the National Small Business Act passed with the aim of helping small to medium businesses. This has resulted in certain supportive structures, such as government initiatives like the Centre for Small Business Promotion (CSBP), Ntsika Enterprise Promotion Agency, and Khula Enterprise Finance.

2.5.1 NTSIKA

In 1996 Ntsika was established under the National Small Business Act and its main focus is to support SMMEs in the sharing of information, marketing and procurement. Ntsika has over the eight years of existence successfully established an important niche nationally regarding support of small enterprise agencies. Ntsika provides non-financial support to small businesses through many programmes such as Local Business Services Centres (LBSCs). It tackles issues in management development, marketing and business development service. Above all it also helps with inter-business linkages (Mofokeng, 2012).

2.5.2 Khula Enterprise Finance

Khula Enterprise Finance was established in 1996 in terms of the White Paper on Small Businesses. It was established as a wholesale finance organisation under the Companies Act (Mofokeng, 2012). Khula's main mission is to make credit available for SMMEs and also assists by offering guarantees, loans and seed capital. Khula Enterprise Finance has launched Khula Technology to transfer funds to help SMMEs facilitate access to local and international technology.

2.5.3 National Contractor Development Programme (NCDP)

National Contractor Development Programme (NCDP) is a programme led by the Minister of Public Works and Provincial MECs to assist in accelerating growth of the contractors industry to meet the rising national demand. The NCDP seeks to address the capacity and ownership as well as improve the skills and performance of contractors (CIDB Status Quo Report, 2009).

2.5.4 NDPW Contractor Incubator Programme

The NDPW is a programme that runs over a three year cycle which focusses on the development of contractors having a CIDB Grade of 3 to 7 (CIDB Status Quo Report, 2009). This programme includes support through a structures mentorship centred enterprise development programme.

2.5.5 DPW KwaZulu-Natal Masakhe Emerging Contractor Development Programme

Masakhe Emerging Contractor Development Programme is under the custody of the KwaZulu-Natal Department of Public Works which implies that its operation is in KwaZulu-Natal. Its main focus is on the development of emerging contractors and companies whose aim is to create a conclusive environment in which emerging contractors can be assisted in the following areas:

- Marketing;
- Financial support;
- Training and mentoring;
- Skills transfer;
- Business management and technical mentoring; and
- On-going technical support through mentorship.

2.6 Additional Causes Of Insolvencies Within The Construction Industry

There exists no comprehensive study explaining the causes of insolvency amongst construction companies, moreover research covering the subject matter has tended to identify the symptoms rather than causes. A number of authors (Hall and Young, 1991; Henry, 1994; Davis, 1991; Schleifer, 1990; Kangari, 1988: 172; Bathory, 1984: 159) have attempted in their studies to ascertain the causes of insolvencies in the construction industry. Kangari (1988: 172) ascribes the failure rate amongst construction firms to the following:

- A highly fragmented industry;
- Industry highly sensitive to economic cycles;
- Fierce competition as a result of an over-capacitated market;
- Relative ease of entry;
- Management problems;
- Trading includes competitive quoting; outsize projects; high gearing, resistance to change or technological advance and deterioration of service;
- Accounting, where inconsistencies occur in the financial data generated for management;
- Increase in project size;
- Unfamiliarity with new geographic areas;
- Moving into a new type of construction; and
- Changes in key personnel.

2.6.1 Mechanisms Minimizing the Advent of Insolvent Situation

Given the highly uncertain environment of the construction industry, most contracts necessitate the use of guarantees which act as security in the event of a contractor/subcontractor defaulting on completing their contractual obligations, thus ensuring that the resulting defects are remedied. De Valence (1994) perceives surety/performance bonds to be the solution to matters which although separate are interrelated and are deemed to be problems areas in the construction industry. The problems relate to: performance guarantees for clients,

security for payment of subcontractors in the event of the principal contractor going insolvent, barriers to entry and improving the capital adequacy in construction by increasing their usable working capital. Such bonds are often packaged to carry the total risk besides those brought about by an ‘Act of God’, in the event of any default in the performance of the contract. The project covers the final cost of the project after adjustments for variations, extensions of time etc. The prominence of such surety bonds is common in the USA and Australia, whereby the public works departments of those countries require contractors to be covered by such bonds against non-performance. Surety bonds are currently under development in South Africa. The issuing of such bonds is handled by insurance companies, and eligibility for such bonds hinges on the risk rating of the contractors. By bringing third parties into such contractual arrangements clients are protected from the contractor going insolvent. Should the contractor default in performing, the insurance company may recover such loss from the defaulting party through the personal security given as a condition to having access to the surety bonds (De Valence, 1994). The insurance companies acting in the client’s interest carry out a regulatory function by evaluating the financial and technical ability of contractors through the use of quality assurance systems (QA). According to Blyth (1995), a well implemented quality assurance (QA) system of evaluating construction firms adds to client confidence and provides the practicing organizations with a benchmark by which to measure their performance.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

CHAPTER 3 : RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction: Importance of Research Design

This chapter explains the methodological approach which was adopted in carrying out this study. Dabholka et al. (2003) described a methodology as generally a set of guidelines for solving a problem, with specific components such as phases, tasks, methods, techniques and tools. There are two methods:

- Qualitative and Quantitative Design

Qualitative studies produce findings not arrived at by means of statistical procedures while quantitative research is all about quantifying relationships between variables (Strauss and Corbin, 1994; Tovar and Vasques, 2001). It is clear that these methods have specific designs used to collect and analyse data subsequently. These designs show all the major elements of research such as samples or groups and then the conditions under which data are arranged, collected and analysed. Consequently the designs chosen are used to obtain the data required to answer the research questions and or give meaning to inexplicable phenomena.

3.1.1 Research Design Chosen

The present study used various measures to test the reliability and validity of the findings:

- The theoretical part of the research entailed the perusal of mostly published works such as searching through archives of public libraries, court records and published academic journals.
- The practical approach consisted of the empirical study of the topic under research and mainly consisted of first hand research in the form of questionnaires, observations and discussion groups.

Court records and responses from questionnaires were the main data collection tools for the study.

3.1.1.1 Instruments

3.1.1.1.1 Court Records

The information relating to the reasons for the insolvency of civil engineering construction was accessed through the offices of the Supreme Court. A company which goes insolvent is assigned a case number e.g. KZN 944/98. KZN refers to the judicial district area, which in this case is the KwaZulu-Natal Region. The 944 refers to the case number and /98 to the year, in this case 1998. Gaining access to the files of insolvent civil engineering construction firms or those under judicial management was accomplished by looking through the documents available to the public at the insolvency courts of the Supreme Court. Within the documents available at the desk are companies which have registered as insolvent and are listed alphabetically or by the date the companies went insolvent. The case number was extracted from insolvent civil engineering contractors from 1998 to 2012. Once located, the notice of motion, statement of affairs and the liquidator's report was retrieved from the files.

3.1.1.1.2 Questionnaire

The questionnaire (Appendix 2) was designed and distributed to contractors with the intention of eliciting a response(s) from the management of those firms which could help determine the principle reasons for failure in civil engineering contracting. The questions were kept simple and straightforward, and the language employed was at the level commensurate with the survey population in an attempt to increase the response level. The perceived causes proposed by management arising from the questionnaires and those elicited from the liquidator's report were compared with those gleaned from the literature to establish a common ground or areas which were problematic in terms of the survival of engineering construction firms.

The style of the questionnaire allowed the manager completing it to indicate in an appropriate block with varying degrees of belief, his/her perceived cause of failure. This questionnaire was based on the survey conducted by Hall and Young (1991) and the preliminary study conducted by Henry (1994) on the subject matter. In addition to Hall and Young's questionnaire, the questionnaire for this study had more direct questions and made an allowance for commentary and the manager could cite reasons other than those provided in the questionnaire.

3.1.1.2 Sampling and Data Collection

The process of sampling refers to the technique used to select representative members of a population to participate in a study. Sampling is important as it is impossible to examine the entire population. A combination of purposive and convenience sampling was used to recruit contractors and owners of construction firms to get insight information about the phenomena under investigation. The population of the study was situated in KwaZulu-Natal Province, South Africa, it was selected for the following reasons:

1) It guaranteed inclusion of active and inactive contractors from the CIDB register.
2) It allowed the study to gather information that they would not normally have access to if probability sampling technique was used.
3) Convenience and purposive sampling take into account the practicalities of what is feasible to meet the outlined objective.

In order to meet the objectives outlined in Section 1.3, this study adopted KZN construction companies as the focus of the study. However the focus was on civil engineering contractors which are denoted as "CE" in the CIDB grading.

3.1.1.3 Sample Size

Accordingly purposive and convenience sampling was used to ensure that all relevant contractors were on hand. According to the CIDB the number of small to medium active companies (CIDB Level 2 – 6 Civil Engineering) are 2 786. Based

on this population a sample size of 25 was needed based on a confidence level of 95% and a confidence interval of 20% (five from each contractor category) but 21 suitable respondents were used as the ultimate sample.

3.1.2 Data collection technique

Questionnaires were sent out to contractors / owners by hand and e-mail for completion. It was felt that honest responses would be easier to solicit from contractors and suppliers in a face-to-face situation.

A physical search was undertaken file by file from the Master of the Court Library in Pietermaritzburg. The factors under consideration were:

- Scope of works;
- Contract start date;
- Scheduled completion date;
- Reasons for project overruns; and
- Reasons for insolvency.

3.1.3 Treatment of bias

As far as possible, the research attempted to eliminate bias in the following ways:

- Survey of the population of District Municipalities;
- Random selection of contractor respondents after determining the sample sizes; and
- The questionnaire responses to be as discreet as possible to minimize subjective opinions.

In order to test the reliability and validity of the sample size Cronbach's Alpha test was used. A commonly accepted rule of thumb for describing internal consistency using Cronbach Alpha is presented in Table 4 below. The focus for testing the reliability and validity was on question 10 (refer to questionnaire) which highlights the causes of insolvency.

Table 4: Cronbach Alpha Test Calculation

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Using Cronbach Alpha test, $\alpha = 0.787$ (Cronbach Alpha Test Calculation in Appendix 3), the level of reliability and validity obtained falls within the acceptable range as indicated in the Table above. Therefore the sample size and response are acceptable.

3.2 Summary

Research design is fundamental for each study. The present study's focal point is identification of factors which cause insolvencies amongst civil engineering contractors, thus the design chosen was appropriate for the study.

CHAPTER 4

ANALYZING THE LIQUIDATOR REPORTS/CASES

CHAPTER 4 : ANALYZING THE LIQUIDATOR REPORTS/CASES

4.1 Introduction

Liquidator reports detail the financial position and the state of a company's activities at the time of insolvency and include the opinions of liquidators as to the causes which may have led to its failure. This section will take a qualitative approach where data is analyzed through interpretation rather than a quantitative approach where data is analyzed through statistics.

4.2 Liquidation Reports

The information relating to reasons for insolvency of civil engineering construction firms was accessed through the office of the Supreme Court. A company which goes insolvent is assigned a case number (e.g. KZN543/02), where "KZN" refers to the judicial district area which in this case is the KwaZulu-Natal region. The "543" refers to the case number for the year 2002 (indicated by the "02" after the forward slash).

Gaining access to the files of insolvent civil engineering construction firms or firms under judicial management was accomplished by looking through the documents made available to the public at the insolvency court of the Supreme Court. These documents are of companies which have been registered as insolvent and are listed alphabetically or by the date on which the companies went insolvent. The material obtained from the case files varied in detail, with some of the cases having more detailed content than others.

A total of 14 cases where investigated. Each case was individually assessed to determine causes for its insolvency, and the activities which led to this. The cases assessed were from firms having gone insolvent from years 1998 to 2012.

4.3 Case 1: Master Reference KZN543/02

The contractor had his assets valued at R1 435 640,05 whilst his liabilities were R20 743 528,40. The South African Revenue Services (SARS) made an application for the company to wind up after it had numerous disputes with the company over payment of VAT, PAYE and Company Tax. The long dispute resulted in penalties and interest being added to the substantial amount. The contractor claimed to have given his accountants an instruction to attend to SARS queries but they failed to comply.

The liquidation report indicates that the cause of the company's failure appears to have been the lack of financial management in the company. Thus the failure to monitor financial needs of the company affected its operations.

4.4 Case 2: Master Reference: KZN64/03

The contractor/supplier went insolvent at the initiation of its members. The company's activities did not concentrate on the civil engineering construction but had an interest in the building industry sector where the market seemed relatively better. The company supplied a housing development project with a substantial amount of stock but was unable to recover the amount, which led to large cash flow problems. The company's assets were valued at R32 155,00 as opposed to its liabilities of R253 660,03. The company had anticipated good business with housing projects taking off. However, this was a bad judgment call.

4.5 Case 3: Master Reference: KZN108/01

The company had subsidiaries who were separate companies. The subsidiaries were fairly successful in sourcing work. The directors of the group company remained committed as the group was suitably placed to take advantage of Government and capital projects but the economy declined against all expectations resulting in a prolonged depression in the construction industry. In addition, financial institutions unexpectedly downgraded the credit rating on empowerment companies, which led directly to the group company's credit facilities being revoked. The government's spending on capital projects declined making the situation worse for the company's cash flow.

The short-term insurer applied for the company's liquidation, but since the group company owned all the assets used by the subsidiary, only the subsidiary was liquidated. The reason given in the liquidator reports indicates that the main cause of failure was adverse economic conditions. In recession, work and capital are scarce. Therefore, good marketing of construction services becomes important.

4.6 Case 4: Master Reference: KZN310/98

The company was owned by a trust and it went insolvent after an application for liquidation by its members. This was as a result of many disputes amongst the trustees regarding the operations of this company.

The insolvency causes of the company were not easy to determine as books and records had not been brought up to date.

If the members of the company do not have the same goals and vision regarding the company's growth, the results will be negative.

4.7 Case 5: Master Reference: KZN350/01

The insolvency of the company was initiated by one of its suppliers in 2001. The business had been manufacturing and erecting structural steel frames. The contracts were obtained by way of tender and negotiations.

During the insolvency proceedings the member failed to submit a statement of affairs but income statement recovered highlighted that the company had been operating with losses from 1998 to 2000. The liquidators could not find all necessary information relating to company books and records but the income statement for 1999 suggested that current assets were valued at R544 121,00, whilst liabilities were R1 056 654,00. At the time the company was winding up the supplier was owed R121 600,63. Although the monies owed seem minimal, the income statement showed a loan of R512 533,00. It is unknown whether SARS had any claims as no records were available.

Poor accounting and debt management seem to have led the company to insolvency. Management failed to constantly monitor the financial needs of the company.

4.8 Case 6: Master Reference: KZN380/00

One of the reasons for the demise of the main contractor was a result of the sub-contractor abandoning their work on contract number 12507 Slangspruit developments. The sub-contractors abandoned the contract during 1999 claiming the main contractor had defaulted. The matter went to mediation where it was agreed that the main contractor had a valid counter claim against the claim of the sub-contractor. The outcome of the mediation was not accepted by the sub-contractor, thereafter the matter proceeded to arbitration. However the subsequent liquidation of the main contractor brought a halt in proceedings. As a direct result of the above the contract on the Slangspruit had to cease, resulting in no further work being completed.

4.9 Case 7: Master Reference: KZN4707/05

The members applied for insolvency. These close corporation only conducted business in joinery, aluminum and glass manufacturing and installation sectors. Initially the company had a sole owner who died in 1999 leaving it to his wife who had limited construction experience. She invited a family member who had eight years of experience in the construction sector from another firm to join the company. They continued to trade and resolved to extend the business operations in the construction sector. The company found it difficult to recover monies from debtors as many denied liability, alleging that they either paid the deceased owner in cash, alternatively that they never received services from the company. It turned out that the company's debtors were more or less equal to its outstanding liabilities at the time. As aforementioned, the company became involved in the construction industry in 2002, the first major project for the company was in La Lucia in Durban, KwaZulu-Natal. The client, upon completion of the contract appeared to be unable to pay the full contract price to the close corporation (cc), leaving an outstanding balance of approximately R270 000,00.

Although this amount was eventually (after approximately eighteen months) recovered, it had serious cash flow repercussions on the business, necessitating the company to incur loans so as to finance its operating costs.

In March 2003 the company undertook a project in the Central Drakensberg, KwaZulu-Natal. Completion of this contract was for various reasons delayed. However, at the end the company was owed an amount of approximately R700 000,00 on the total contract price which the client refused to pay. That gave rise to legal proceedings between the parties. These proceeding were still not solved at the time of the company winding up. This caused a major setback to the company and once more had drastic consequences on the company's financial position and more particular its cash flow situation.

In October 2003, the company started a contract for KwaZulu-Natal Wildlife at Cathedral Peak, KwaZulu-Natal and it suffered severe losses on the project due to factors beyond its control, which once again effected its financial position. During August 2004 the company was subjected to an audit by the South African Revenue Services as a consequence of which the company was advised that its liability to South African Revenue Service amounted to approximately R1 600 000,00. This assessment became the subject of a dispute between the company and the South African Revenue Services. This alleged liability was inclusive of penalties of 200% with interest in respect of an alleged historical tax liability, the origin of which predated the involvement of the current members of the company. The aforementioned alleged liability was grossly overstated; the company conceded being liable to the South African Revenue Services for the amount of R279 054,93. As a consequence of the company's dispute with the South African Revenue Services, many of its suppliers became nervous about further dealing with the company (especially in a small town like Estcourt). Many of the suppliers closed the company's accounts in their books and insisted on cash transactions and the company's cash flow simply did not allow it to trade on this basis. In August 2005 the company was found to be commercially insolvent.
The company's failure appears to have been due to a lack of strategic management and having to deal with the nonpaying debtors which affected its cash flow.

4.10 Case 8: Master Reference: KZN4876/06

The sole member of the business, a female businessperson applied for liquidation. The principal business of the company was that of building construction. The company was registered in 2001 and commenced trading in March 2001. The owner employed her husband who had a competent experience in building construction. He prepared and submitted the tenders for Government building projects and furthermore was actively involved in the actual construction on site. The business was in a healthy state and it was involved in various projects throughout KwaZulu-Natal. Towards 2005 the company was not regarded as a so-called broad based black economic empowered corporation (since its sole member was a white female) and hence was not awarded further government projects. This situation caused a drastic and substantial decline in business and turnover, such that towards the beginning of 2006, its cash flow position had depleted to such an extent that it could no longer service its monthly obligations. In April 2006 the business could not trade, as a consequence of which the business was closed down.

The business had completed all of its contracts successfully, apart from one contract to construct a school awarded by Department of Public Works, KwaZulu-Natal. The project was approximately 95% complete and once complete an amount of approximately R334 743,80 was due by the Department of Works to the business. Penalties were accruing at a rate of approximately R800,00 per day on this contract and the business had no funds to complete the contract. As a result, it was of utmost importance that the company be liquidated and a liquidator appointed who could negotiate with the Department of Works as to how this particular contract could be finalized without unnecessary penalties accruing. The company's financial position when declared de facto and commercially insolvent had liabilities of R1 808 521,00 and assets (including debtors) of R1 064 758,30.

The owner of the company did not have experience in construction and had to rely on an employee to source and manage the work, therefore operational experience was lacking and there was no strategy on how to source work considering government Black empowerment policies. The company was trading

in a competitive environment due to Black Economic Empowerment policies and as a result the contracts that it was awarded had a small profit margin and exposed the company's lack of operation and construction management skills. When working with tight profit margins the construction management must be efficient to avoid penalties.

4.11 Case 9: Master Reference: KZN10297/10

4.11.1 The Liquidation of the Company

Prior to its liquidation, the company conducted business as a civil engineering contractor, with its registered office at 30 Old Main Road, Hillcrest, KwaZulu-Natal. It was one of the few engineering contractors in KwaZulu-Natal which had an 8CE rating from the Construction Industry Development Board. The directors of the company at all the times were Clement Bheki Mthembu ("Mthembu"), Malcolm Glen Shimwell ("Malcolm") and Grant Robert Shimwell ("Grant").

The directors as well as the company secretary declare and acknowledge the company's indebtedness to the various creditors, both secured and unsecured, in a total amount of R29 971 711,70, comprising:

- Unsecured creditors (consisting of trade and sundry creditors) totaling R17 594 354,70; and
- Secured and preferment creditors totaling R10 377 357,00 (consisting of financial institutions Nedbank Limited, Standard Bank, and the South African Revenue Services).

The "assets" recorded "property" to the value of R14 276 258,46 as well as book debts of R8 148 779,34, totaling R22 425 037,80 available for realization to the benefit of creditors of the company.

Thus, according to the directors' version, the total deficiency, excluding the costs of liquidation, amounted to R5 546 673,90.

4.11.2 The Nature of the Contracts with Mhlatuze Water

On or about the 29 October 2008 the company entered into two written agreements with Mhlathuze Water, acting on behalf of uMkhanyakude District Municipality ("the municipality") for the construction of bulk water pipelines and reservoirs in Hlabisa under contract MW/828/2A and MW/828/2B. These will be referred to as contract 2A and 2B respectively.

The terms of the contracts material to the application were that:

- The general Conditions of Contract for Construction Works, 1st Edition (2004) were applicable to the contracts;
- The company undertook to complete the construction works for a total contract price of R32 810 793,31 (in respect of contract 2A) and R22 608 067,47 (in respect of contract 2B). The company was only awarded a portion, which was approximately R4 500 000,00 of the total contract price of R22 608 067,47;
- A 10% retention and a 365 day defects period applied;
- Payments to the company in respect of the works would be effected by way of the payment by the municipality of the amounts certified due to the company in terms of monthly payment certificates issued by the principal agent on the contract, the engineers, Bigen Africa Consulting Engineers;
- The practical completion dates in respect of the works was 15 December 2010;
- In the event of the company failing to complete the works by the stipulated practical completion date (or any extension thereof) in accordance with an adjudication undertaken in terms thereof, penalties at a rate stipulated in the penalty schedule would be imposed upon the company at the rate of R3 000,00 per day;
- The company was obliged to procure payment guarantees in favour of the employer for the due and punctual performance of its obligations in terms of the contract; and
- In the event of the company failing to bring the works to a state of practical completion of the contract otherwise terminating in accordance with the

provisions of the agreement, the employer was entitled, inter alia, to claim damages against the company which damages would not be limited to the additional costs for the completion of the works occasioned by the engagement of an alternative contractor.

The company procured the guarantees required in terms of the building contract. As was apparent from the foregoing the guarantees were furnished by Standard Bank in the sum of R3 591 000,00 in respect of contract 2A and R3 374 463,73 in respect of contract 2B.

In terms of the arrangement between Standard Bank and the company, which lead to the issuing of the guarantees, the company was obliged to repay Standard Bank in the event of the latter having to make payment on the guarantee.

The contracts were at an advanced stage and the vast majority of the work had already been completed. The stipulated practical completion date was 15 December 2010. If the company did not bring the project to completion timeously then:

- Penalties could be imposed at the rate of R3 000,00 per day; and
- The employer would have in due course be at liberty to cancel the agreement and not only claim for damages from the company but call upon Standard Bank to make payment in terms of the guarantees in which event Standard Bank will have a right of recourse against the company.

Since the company was placed in liquidation, payment certificate 18 had been paid to the provisional liquidators of the company in the sum of R1 306 9897,21 plus VAT.

An outstanding amount of R695 642,92 was due and payable to the company on payment certificate 19. Payment certificate 19 had been measured and issued for all work completed subsequently to certificate 18 and up to and including 29 November 2010. Payment certificate 20, the subsequent certificate, was for

payment of all work completed and not included in certificate 19. In other words, all work done after 29 November 2010 up to and including the effective date would be reflected in terms of payment certificate 20.

In addition to the above-mentioned and upon investigation, it was discovered that an amount of R120 513,20 was still owing to the company in terms of payment certificate 16. This amount was paid to the company after the company was placed in liquidation.

In summary, as a result of the continuation of the Mhlathuze contracts, a total amount of R2 123 052,32 was recovered for the benefit of the creditors of the company. The aforementioned amount would not have been obtained had the course the Applicant chosen not been followed.

The retention monies on the contract total R1 480 058,23. In terms of the proposed agreement of cession Amanzi would pay an amount of R400 000,00 to the company from the retention funds payable to it from Mhlathuze Water.

By virtue of the nature of the company's business, work on the contracts presently awarded to it had continued despite its winding-up. This had been, the best way to preserve the goodwill of the business of the company for the ultimate advantage to creditors in due course.

The applicants were approached by James & Fynn Joint Ventures cc, a close corporation carrying on business in the civil engineering field with a proposal that a joint venture agreement be concluded for the completion of the Mhlathuze Water contracts.

The effect of the joint venture agreement was:

- Certain of the company's employees who were engaged on the contracts would continue with and complete the works.

- The amount of R1 340 840,20 certified in terms of payment certificate 18, together with any amount to be certified in terms of a further payment certificate for work done up to the effective date would be paid to the applicants;
- With effect from the effective date the close corporation would pay for all the actual expenditure necessary to complete the works, including the payment of salaries and wages of the personnel engaged in connection with the project as well as payment for materials;
- The close corporation would be entitled to all contract revenue from the effective date; and
- At the end of March 2011 the close corporation would pay the applicants the sum of R400 000,00.

The provisional liquidator of the company had engaged in talks with Mhlathuze Water and the municipality with regards to the joint venture agreement and they had indicated that, provided work continued uninterrupted, they expressed no opposition to the conclusion of the joint venture agreement as it is still the company which would be performing the works. As the project involved the construction of reservoirs and other such infrastructure, the municipality was anxious to have the project completed to comply with its constitutional obligations relating to service delivery.

With a view to implementing the joint venture agreement and complying with the municipality's requirement that the work continue uninterrupted, the work on the Mhlathuze contracts continued after the winding-up of the company. The work completed during this period was carried out at a time whilst the applicants were only appointed as joint provisional liquidators and without the express authority of the Master, the court and directions from a general meeting of creditors. It did however result in the payment reflected in certificate 18, which is a substantial benefit to creditors. Had the applicants not continued with the contracts in the interim the employer would have invoked its remedies in terms of the agreement for a breach thereof and there would have been no prospect of implementing the proposed joint venture.

The work performed during this period was an essential step in the winding-up of the affairs of the company and resulted in a substantial advantage to the creditors.

Had the work ceased the employer would have had recourse against the payment guarantees, for the cost engaging alternate contractors to complete the works and for the recovery of penalties which would then have been due. This would have had an effect on the position of concurrent creditors since the Standard Bank would have had a concurrent claim against the company's estate for the amount paid out to the employer in terms of the payment guarantees.

Of further significance is that the company would have forfeited its right to claim any payment due to it under certificates 18, 19 and 20.

A further highly relevant consideration in making the decision to continue with the works after the winding-up of the company was the fact that a section 311 compromise with creditors had been mooted by the proposed joint venture partner. The essential underlying requirement for such compromise was that the company retained its rating of 8CE issued by the Construction Industry Development Board. The rating means that the company was qualified to bid and had successfully completed civil engineering projects with a value in excess of R135 000 000,00. This rating is a significant factor in securing tenders and is highly regarded by employers in the construction industry, coming as it does from an independent body.

The rating would be prejudiced if substantial contracts in which the company was involved were not completed. It was in the interest of the company and its creditors to keep the rating intact as far as that was possible by continuing with the works in the interim.

What was envisaged by the offer of compromise and what was discussed with the joint venture partner was that, once the Mhlathuze contracts were completed and if the company's rating was maintained the joint venture partner would make an offer of compromise early in 2011 on the basis that the joint venture partner

take over the company's assets in exchange for a payment to creditors. In addition the joint venture partner would take over the majority of the company's staff and thus avoid a large number of the company's present employees losing their employment. If the company's rating could not be maintained during the completion of the contracts, there would be no benefit to the joint venture partner in acquiring the assets of the company and no offer compromise would be forthcoming.

Unfortunately, negotiations regarding the conclusion of the joint venture broke down and no final agreement was concluded with the joint venture partner. However, the joint venture partner indicated that they were still interested in pursuing an offer of compromise as referred to above.

On 1 December 2010 the liquidators were approached by Amanzi with a view to them taking cession and assignment of the company's rights and obligations in terms of the Mhlathuze contracts, on the following terms and conditions, namely:

- All work would be undertaken at current rates;
- All staff contracts would be transferred to Amanzi and would only be restructured once the work decreases;
- All subcontractors currently employed would remain on site and would only be released on completion of their work; and
- Amanzi would provide a fresh performance guarantee for the balance of the work outstanding and the current performance guarantees would be released; and
- The work would be measured at the handover date and the amount due at the date would be paid to the applicants.

The proposed cession and assignment required the consent of the uMkhanyakude District Municipality or Mhlathuze Water. On 8 December 2010, the liquidator addressed a letter to Mhlathuze Water detailing the basic outline of the cession and assignment proposed by Amanzi. Mhlathuze Water was represented by Shepstone and Wylie Attorneys.

On 13 December 2010 an e-mail was sent to Shepstone and Wylie regarding Mhlathuze Waters' stance on the proposed cession and assignment by Amanzi. Mhlathuze Water expressed its consent to the cession and assignment or the joint venture in a letter dated 14 December 2010 on the following terms and conditions:

- The current core staff complement of the company be retained, as far as possible, in order to ensure continuity;
- The current employment of local labourers be maintained and Mhlathuze Water's prior approval be obtained should circumstances require such levels of employment to be reduced in number;
- An extension of time was granted to the contractor from 27 December 2010 to 31 March 2011 for the completion of the Mhlathuze contracts, subject to the following conditions, namely:
    - Pro-rata preliminary and general costs being applicable for the period 3 January 2011 to 28 January 2011 only;
    - The extension of time granted above covering all outstanding extension of time claims to date; and
    - The ruling in respect of the adjoining services continuing to be measured as per the schedule of quantities remaining in place;
- The terms and conditions of such joint venture agreement or cession agreement be provided to Mhlathuze Water for review and be approved by Mhlathuze prior to signature; and
- The existing performance guarantee was transferred to the cessionary or a new performance guarantee was issued on terms and conditions acceptable to Mhlathuze Water and subject to the new guarantor being approved by Mhlathuze Water.

Upon the provisional liquidators' acceptance of the abovementioned conditions and Mhlathuze Water's approval of the joint venture agreement or the cession and assignment agreement, Mhlathuze Water would then withdraw the termination notice.

Therefore, the company would avoid any payment of penalties and claims for damages arising from the cancellation of the contract. In this regard, Mhlathuze Water was prepared to waive the contractual penalties as expressed in an electronic mail dated 14 December 2010. Penalties would only apply if completion of the contracts took place after 31 March 2011. Penalties would then be calculated in accordance with the contract, for each day completion was delayed after 31 March 2011.

Both Mhlathuze Water and the municipality have consented to the proposed cession and assignment of the company's rights and obligations in terms of contracts.

The proposed written agreement had to be concluded with Amanzi, which made provision for the municipality and Mhlathuze Water, to give their written consent.

The final conclusion of the proposed cession and assignment had, to an extent, the effect of protecting the interests of the creditors of the company. The project continued to be executed by Amanzi who provided guarantees in substitution of those provided by Standard Bank on behalf of the company. Claims against the guarantees, for penalties and damages arising from a cancellation of the agreement would be averted. In addition, the company would benefit from payments made in respect of work measured at the handover date.

4.11.3 The Power to Determine the Contract with the Restoration of Hope Ministries

On or about 21 April 2010, the company concluded a written agreement with the Restoration of Hope Ministries for the work to be conducted at Clifton Farm in the sum of R2 620 860,00.

The applicant sought leave to determine this contract as the completion of the work was not financially viable. The company had already been paid for the works completed thus far on the project and it was to cost a further R1 million to complete the works. There was consequently no profit in the contract. A

computation of the anticipated maximum profit if the balance of the contract was to be completed, amounted to a paltry R33 000,00.

In terms thereof, and if the company was to withdraw from the contract, it would receive an amount of R87 259,10 (exclusive of VAT) immediately. In addition, the contractor who had agreed to complete the balance of the contract, had agreed to pay the amount of R71 195,91 (exclusive of VAT) to the company upon the release of the retention 12 months after the completion of the contract.

If one takes into account the inherent risk in maintaining the contract until completion thereof the maximum profit of R33 000,00 is not worth the additional obligations in terms of inevitable maintenance and snags that the company would be responsible for.

If the applicants were to wait, the three months it would take to get directions from creditors, the applicants would no longer be in a position to complete the contract by the due date and substantial penalties would have accrued to the detriment of creditors.

The applicants were put on terms on 1 December 2010 to remedy the breach of the agreements within 14 days of the notice, the breach being the fact that the company was wound up. The breach could be remedied and the real prospect was that the agreements would be cancelled on expiry of the notice period.

A letter dated 14 December 2010 setting out the terms and conditions upon which the municipality and Mhlatuze Water would consider extending the date for practical completion from 15 December 2010 to 31 March 2011 was issued. Central to this extension was the conclusion of the cession and assignment proposed and the continuation of the works without interruption and undue delay. Amanzi would not take up their obligations unless the cession and the assignment was authorized and any delay in obtaining such authorization could have jeopardized the entire transfer with consequential prejudice to creditors.

4.12 Case 10: Master Reference: KZN15055/08

The applicant was Prodigal Properties (Pty) Ltd, a private company duly registered and incorporated in accordance with the Company Laws of the Republic of South Africa with its principal place of business at 7 Stranack Street, Pietermaritzburg, KwaZulu-Natal.

The Respondent was Caine Da Costa & Butler Construction cc, a Close Corporation duly registered and incorporated in accordance with the Close Corporations Laws of the Republic of South Africa with its principal place of business at 77 Pentrich Road, Pietermaritzburg and its registered office at 295A Greyling Street, Pietermaritzburg, KwaZulu-Natal.

The applicant was a creditor of the respondent and was owed the amount of R2 772 839,35, together with interest thereon at the rate of 19,2% per annum from the 23 July 2008 to date of final payment. The applicant held no security for the amount owed.

The abovementioned amount was due, owing and payable by the Respondent to the Applicant in terms of a Judgment of the Court which Judgment was entered against the Respondent on 9 October 2008 under Case Number 12169/08.

Subsequent to the obtaining of the aforesaid Judgment, the Applicant through its attorneys caused a Warrant of Execution to be issued, the Warrant was duly served by the Sheriff of the Court who entered a Nulla Bona Return.

The Respondent was unable to pay its debts in terms of the Provisions of Sections 68 (c) of the Close Corporations Act N° 69 of 1984 read with the Provisions of Sections 344 and 345 of the Companies Act 61 of 1973.

The Respondent did not own either encumbered or unencumbered immovable property. In substitution of this allegation, Windeed confirmed that according to the records of the Registrar of Deeds the Respondent owned no immovable property.

The Applicant was entitled to an Order provisionally winding up the affairs of the Respondents' Close Corporation.

The Respondent Close Corporation had ceased trading and had no employees. Accordingly, service upon the employees or any trade union representing the employees was not possible.

4.13 Case 11: Master Reference: KZN5925/09

The applicant was Colenbrander Incorporated, a chartered accountant company duly registered in terms of the Companies Act 61 of 1973.

The Respondent was Model Contracting (Pty) Ltd, a company duly registered in terms of the Companies Act 61 of 1973 with its main place of business at 105 Stockville Road, Mahogany Ridge, Pinetown, KwaZulu-Natal.

The Respondent's chartered accountant had done auditing and accounting work for the Respondent for the past five years and his last invoice for work done for the Respondent was dated 31 March 2009. It was for an amount of R22 800,00 (excluding VAT). The invoice had been sent to the Respondent, but had received no payment. The Respondent was still indebted to the Applicant in the sum of R22 000,00, the amount was due and there was no security for the claim.

On 8 July 2009 an e-mail was sent to one of the directors of the Respondent, Mr Justin Grant Ross, also known as Bud Ross. In the e-mail the Applicant demanded payment of outstanding audit fees of R20 000,00 plus VAT and requested that the payment should be made within 24 hours.

On 9 July 2009 at 09:12 an e-mail was received from the other directors of the Respondent, Anthony William Bezuidenhout (also known as Tony Bezuidenhout) referring to an e-mail dated 8 July 2009 and in which the Applicant was advised that the Respondent was " currently experiencing a serious cash flow problem. At this point in time we do not have sufficient funds to settle your account." It was evident from the Company's status report, that the said Ross and Bezuidenhout were the directors of Model Contracting (Pty) Ltd.

The Respondent had therefore failed to pay the amount due to the Applicant, had not made any attempt to secure or compromise for it to the Applicant's satisfaction. It was clear that the Respondent was unable to pay its debts as described in section 345 of the Companies Act 61 of 1973. The Respondent was in the construction business and had many employees.

As the Respondent's chartered accountant the Applicant had in-depth knowledge of the Respondent's financial situation. The Respondent was in its current financial dire straits because of the fact that the debtors of the Respondent were not paying, and the Respondent could not meet its obligations as a result thereof. The Respondent had to pay wages to its employees on Wednesday, 14 July 2009 and again on Friday, 16 July 2009 and it did not have the money to do so. To make matters worse, salaries in the total sum of R67 465,25 were not paid by the Respondent to any of its employees at the end of June 2009.

The Respondent had debtors whom they had done building work for, but the payment of the amounts due to the Respondent was in dispute. It was unlikely therefore that they would receive payment in the next two years because there would probably be High Court litigation about it.

The Respondent was busy with construction contracts which were near completion, but it had no cash flow to complete those projects as a result of debtors not paying them.

The Respondent had an overdraft facility with Standard Bank in the amount of R400 000,00, but had reached its credit limit. The shareholders also exhausted all their cash flow resources and could not subsidize the Respondent any longer.

The day to day work, or "in the pipeline work" that the Respondent normally got from time to time which obviously helped with cash flow, also dried up.

The Respondent had already not met certain deadlines for paying their subcontractors.

The Respondent's contingent and prospective liabilities was an amount of R7 339 282,07. This amount was calculated as follows:

- The monthly debit orders of the Respondent was an amount of R108 030,96. The Applicant made a list of the Respondent's debit orders.
- As mentioned before, the Respondent short paid salaries at the end of June 2009 in the amount of R67 465,25.
- The Respondent had to pay subcontractors at the end of June 2009 a total amount of R2 822 678,55 but did not pay the subcontractors and did not have the funds to do so.
- The Respondent also had to pay its various suppliers a total amount of R3 276 107,31 at the end of June 2009 but was unable to do so.
- Other creditors of the Respondent to which monies were due, totalled an amount of R1 064 000,00.
- Summary of all the payments as set out above that is due by the Respondent totals an amount of R7 338 282,07.

The Respondent's debtors were Africon Construction (Pty) Ltd and the amount due to the Respondent was R4 million. Another debtor was Anvicon Property Development (Pty) Ltd and the amount due to the Respondent was R2 800 000,00. The total of these two debtors was R6,8 million, but both of these debtors disputed that the money was due to the Respondent and refused to pay. It was therefore probable that the claim would be subject to High Court litigation, which could only be finalized in not less than two years in the future.

Two further debtors namely Cashmere Trading 39 (Pty) Ltd (the Rivers End project) would have been indebted to the Respondent in the amount of R2 277 943,13 and I-Merge Holdings (Pty) Ltd (the Woolworths project) had been indebted to the Respondent in the amount of R257 880,32. However, these amounts would not be paid in time for the Respondent to meet its obligations.

The Respondent was therefore in a hopeless position to honour its financial liabilities and the Applicant submitted with respect that it was abundantly clear that the Respondent was unable to pay its debts as described in section 345 of the Companies Act 61 of 1973.

It was to the advantage of the creditors of the Respondent if the Respondent was wound up because the liquidator could forthwith after its appointment negotiate with Cashmere Trading 39 (Pty) Ltd (Rivers End Project) and I-Merge Holdings (Pty) Ltd (Woolworths Project) to complete the projects and to ensure the payment was made.

The outstanding amount due to the Respondent was an amount of R9 335 824,40. However, as mentioned before, the first two debtors due a total amount of R6 800 000,00 were disputing liability and that amount would probably result in High Court litigation. The balance of the amounts due to the Respondent namely the amount of R2 277 943,13 and R257 880,32 would only become due to the Respondent on completion of those projects but as mentioned before the Respondent did not have the cash flow to finalize those projects and those amounts could not be paid timeously.

4.14 Case 12: Master Reference: KZN671/12

The Applicant was Ndumu Trading (Pty) Ltd t/a Ndumu Security; with registration number 1969/017585/07; a Company incorporated in terms of the Company Laws of the Republic of South Africa; with its registered address at 71–75 Columbine Place, Ring Road, Industrial Park, Avoca; with its principal place of business at 711-75 Columbine Place, Ring Road, Industrial Park, Avoca.

The Respondent was Tedsons Construction and Plant Hire cc registration number 2007/251226/23. The Company's registered office address was Shop 1, Dollar Drive, Alton, Richards Bay; KwaZulu-Natal. It was a Close Corporation registered as such according to the Close Corporation Act, Act 69 of 1984. Mr Perumal Munsami Chetty was the sole member of the Respondent.

The Respondent was deemed to be unable to pay its debt within the meaning of that term in Section 68 (c) read with Section 69 (1) (a) of the Close Corporations Act (Act 69 of 1984).

The Respondent was commercially insolvent and unable to pay its debts in terms of the Act.

The Applicant was a creditor of the Respondent and the Respondent was indebted to the Applicant in the amount of R75 356,00 in respect of security services rendered to the Respondent at a construction site at the Jozini Primary School from August 2010 to June 2011. The said amount was due owing and payable.

The Applicant rendered security services for the Respondent at a construction site where the Respondent was a contractor from August 2010 to June 2011 and supplied 1 night guard and 1 day guard. The Respondent had been trading in insolvent circumstances. As a result of the Respondent's conduct and failure to pay the Applicant, the Applicant approached Duvenhage Incorporate Attorneys, 2nd Floor, Old Mutual Building, 1 Kruger Road, Richards Bay. A letter was served at the registered office of the Respondent by registered post on 21 September 2011.

The Respondent was in a state of commercial insolvency for a considerable period and was unable to pay its debts within the meaning of that term in Section 69 of Act 19984 and was accordingly liable to be wound up in terms of the Act. The Respondent was unable for a considerable period to pay the Applicant, despite various promises to pay. The Respondent had not paid any of the amounts claimed by the Applicant.

The Respondent had knowledge of the said claim and had responded through its attorneys acknowledging receipt of the notice and requesting details of the claim. The attorneys of the Applicant responded to their letter on 27 September 2011 with full details and supplied them with all the invoices. As a consequence of the above it was clear that the Respondent was not in a position to pay its creditors.

A liquidator tried to prevent other creditors from obtaining preferential treatment over those who had not taken action against the Respondent including piecemeal payments by the Respondent in order to stave off or meet the actions of particular creditors.

In the above circumstances it was respectfully submitted that it would be just and equitable that the Respondent be wound up.

4.15 Case 13: Master Reference: KZN11430/11

The Applicant was Capx Finance (Pty) Ltd, a company duly registered and incorporated in terms of the company laws of South Africa with a registration number 1999/024208/07 and with its principal place of business at La Fontaine, Westerdale Road, Durbanville, Western Cape. The Applicant was a supplier of structured asset finance, bridging finance and invoice finance.

The Respondent was VDS Construction cc, a close corporation duly registered and incorporated in terms of the company laws of South Africa with registration number 2010/039508/23 with its principal place of business and registered address at 20 Convent Road, Ladysmith, KwaZulu-Natal.

On 03 May 2011, the applicant entered into an Invoicing Discounting Agreement ('the 1st Agreement") with Respondent in terms of where the Applicant purchased all the right, title and interest in Invoice PF01 due to the Respondent by Penny Farthing Engineering SA ("Penny Farthing").

In terms of the 1st Agreement, the Applicant would pay the Respondent the purchase price for the invoice for an amount of R200 000,00 on 04 May 2011, which the Applicant duly made on the same date,

In terms of Clause 2 of the 1st Agreement, the Respondent guaranteed that it would pay the Applicant in full within 35 days of the invoice date and irrevocably and unconditionally instruct Penny Farthing to pay the invoice amount to the Applicant.

Further, in terms of clause 2 of the 1st Agreement should the invoice amount for whatever reason not be paid by Penny Farthing, the Respondent undertook to immediately pay the invoice amount to the Applicant upon demand.

The payment date of the invoice was 31 May 2011, but no payment was made by Penny Farthing to the Applicant as undertaken. Penny Farthing made the payment directly to the Respondent.

In light of the above, on 11 July 2011, the Applicant forwarded a telefax of demand to the Respondent demanding payment of the amount of R208 570,83 in terms of clause 2 of the 1st Agreement. The Respondent failed to make payment as demanded and to date failed and/or refused to settle same.

On 30 May 2011, the Applicant entered into a second Invoice Discounting Agreement ("The 2nd Agreement") with the Respondent in terms of where of the Applicant purchased all the right, title and interest in Invoice PFRRM002 due to the Respondent by Penny Farthing Engineering SA. In terms of the 2nd Agreement, the Applicant would pay the Respondent the purchase price of R400 000,00, which the Applicant duly made on the same date.

In terms of clause 2 of the 2nd Agreement, the Respondent guaranteed that it would pay the Applicant in full within 35 days of the invoice date and irrevocably and unconditionally instruct Penny Farthing to pay the invoice amount to the Applicant.

Further, in terms of clause 2 of the 2nd Agreement, should the invoice amount for whatever reason not be paid by Penny Farthing, the Respondent undertook to immediately pay the invoice amount to the Applicant upon demand.

The payment date of the invoice was 30 June 2011, but no payment was made by Penny Farthing to the Applicant as undertaken. Penny Farthing made payments directly to the Respondent.

In light of the above, on 11 July 2011 the Applicant forwarded a telefax of demand to the Respondent demanding payment of R510 000,00 in terms of clause 2 of the agreement within 10 days in terms of clause 2 of the 2nd Agreement.

On 13 July 2011, the Applicant received a letter from the Respondents Attorney, Balden, Vogel & Vennote Incorporated confirming that payment of the outstanding amounts in terms of the 1st and the 2nd Agreement would be made by means of two installments, the first to be made before 01 August 2011 and the second before or on 15 August 2011.

On 27 July 2011, the Applicant forwarded a telefax to the Respondent confirming that it would accept the repayment plan only if the first installment for an amount of R331 573,51 being half the amount outstanding, is made on 31 July 2011. The Respondent failed to make any payments to the Applicant as undertaken above and to date failed to make any payments.

In light of the above the Applicant instructed its attorneys of record, Jaques Viljoen Attorneys, to forward a telefax of demand to the Respondent. The Applicant's attorney duly forwarded this telefax on 08 November 2011 via e-mail. In this telefax the Applicant's attorney:

- Summarized the background to this matter, as set out hereinabove.
- Demanded payment of the amount outstanding on or before the close of business on 11 November 2011, failing which an application for the liquidation of the Respondent would be brought.

The Applicant failed to make payment as demanded on 11 November 2011 and to date failed to make any payment to the Applicant as agreed. The Applicant's claim against the Respondent was for payment of the sum of R670 190,27 being in respect of the 1st and 2nd Agreements as set out above. Despite various demands by the Applicant, the Respondent failed and/or refused to pay the abovementioned amount.

The Applicant held no security for its claim against the Respondent, or any part thereof.

The Respondent was commercially insolvent in that it is unable to pay its debts as envisaged in Section 344 (f) as read with Section 345 of the Companies Act N° 61 of 1973 (as amended), read with Section 68 of The Close Corporations Act.

The Respondent's Financial Position

The Respondent was commercially insolvent in that it is unable to pay its debts as and when they fell due. He respectfully submitted that it would be just and equitable for the Respondent to be wound up in that:

- It would enable an impartial liquidator to gain control of the Respondent's assets, realize same and distribute the proceeds thereof to the Respondent's creditors in the legal order preference.
- Prevent certain of the Respondent's creditors from incurring unnecessary legal expenses in attempting to procure payment from the Respondent.
- It would ensure that none of the Respondent's creditors will receive payment from the Respondent to the prejudice of other creditors of the Respondent.
- It would enable a duly appointed liquidator to properly investigate the affairs of the Respondent.

4.16 Case 14: Master Reference: KZN15057/08

The Applicant was Debtsure cc, a Close Corporation duly incorporated in accordance with the Close Corporation Laws of the Republic of South Africa and whose principal place of business is situated at 12 Sir Percy Spender Road, Montrose, Pietermaritzburg, KwaZulu-Natal.

The Respondent was Buffalo Civils and Services cc, Close Corporation duly incorporated in accordance with the Close Corporation Laws of the Republic of South Africa and whose principal place of business is situated at N° 19 Bazarato, Meerensee, Richards Bay, KwaZulu-Natal.

4.16.1 Indebtedness

On 15 November 2007, the Applicant entered into a written agreement with the Respondent. The material terms of the agreement were, inter alia.

- The Applicant advanced to the Respondent the sum of R500 000,00 as a bridging finance facility;
- The sum advanced would attract interest at the rate of 0,133% per day from the date of payment for the first 90 days and thereafter interest at a rate of 0,25% per day;
- The sum advanced, together with interest and the raising fee would be repayable at the discretion of the Applicant within 90 days of the date of the agreement.

On 13 February 2008, the Applicant advanced a further sum of R100 000,00 to the Respondent in terms of a written agreement. The terms of this agreement were exactly the same as the terms relating to above.

The sums of R500 000,00 were advanced to the Respondent on 15 November 2007 and 13 February 2008 respectively. Accordingly, these amounts together with interest became payable on 15 February 2008 and 13 May 2008 respectively.

The Respondent had been appointed principal subcontractors by Spirit of Africa Developments (Pty) Ltd to erect 1 512 residential units in an affordable housing development at Windmill Park, Gauteng. The value of the contract was R99 886 681,84 as will appear from the costing summary provided to the Applicant by the Respondent.

The Respondent required a short term bridging finance facility to assist it with its cash flow requirements during the initial phase of the contract. It was anticipated that the Applicant would be repaid from the initial progress payments arising from the contract.

As security for the 2 loans, the Applicant registered a Notarial Bond over certain movable assets of the Respondent. The bond was registered in the Natal Deeds Registry on 05 June 2008 in respect of assets to the value of R4 480 000,00.

The loans were “large agreements: in terms of Section 4(1)(d) of the National Credit Act N° 34 of 2005 in that the Respondent is a juristic person whose asset value/annual turnover was in excess of the threshold prescribed in terms of the Act namely R1 000 000,00. Accordingly, the provisions of the National Credit Act N° 34 of 2005 were not applicable.

A period of more than 90 days had lapsed since the money was advanced in respect of both loans and to date the Applicant had received no payment.

On 4 June 2008, the Applicant met with Deon Meiring, one of the members of the Respondent in Pretoria to discuss the question of repayment of the loans. At the meeting Meiring undertook to settle the loans as follows:

- Payment of R100 000,00 by 13 June 2008;
- Payment of R300 000,00 by 18 June 2008;
- The balance was to be paid in weekly installments of R50 000,00 commencing on 1 July 2008.
- Should the Respondent default in the payment agreement, the Applicant was entitled to call up the loan in full and institute proceedings to have the Respondent placed under liquidation.

The Respondent failed to make any payments to the Applicant and the full amount advanced together with interest became due, owing and payable.

The Applicant had established from Meiring that the agreement that the Respondent had with Spirit of Africa Development (Pty) Ltd to construct the units at Windmill Park had been cancelled and that the Respondent was no longer trading. Accordingly, the anticipated source of funds from which payment of the Applicant’s loan would be made had dried up.

The Respondent was unable to pay its debts and thus it was just and equitable that it was wound up.

4.17 Summary

A summary of the liquidators report (Case 1 – 14) is presented in Table 4 below. Each case was measured against the key factors that lead a construction company to insolvency. The liquidators' report which is summarized in Table 4 indicated that both managerial / operational factors and financial factors are the primary causes of insolvency. Failure to take cognizance and proper planning for these will inevitably lead to failure by contracting firms.

Table 5: Summary of Liquidators Report for Fourteen (14) Selected Cases Measured Against the Key Factors that Leads to Insolvency

Factors Causing Insolvency		1	2	3	4
Case No		Managerial / Operational	Financial	Expansion	Economic Environmental
1	KZN543/02	1	1	0	0
2	KZN64/03	1	1	1	0
3	KZN108/01	0	1	0	1
4	KZN310/98	1	0	0	0
5	KZN350/01	1	0	0	0
6	KZN380/00	1	1	0	0
7	KZN4707/05	1	1	1	0
8	KZN4876/06	1	0	0	1
9	KZN10297/10	1	1	0	1
10	KZN15055/08	1	1	0	0
11	KZN5925/09	1	1	1	0
12	KZN671/12	1	1	0	0
13	KZN11430/11	0	1	0	0
14	KZN15057/08	1	1	0	0
Total		12	11	3	3

*1: did contribute

*0: did not contribute

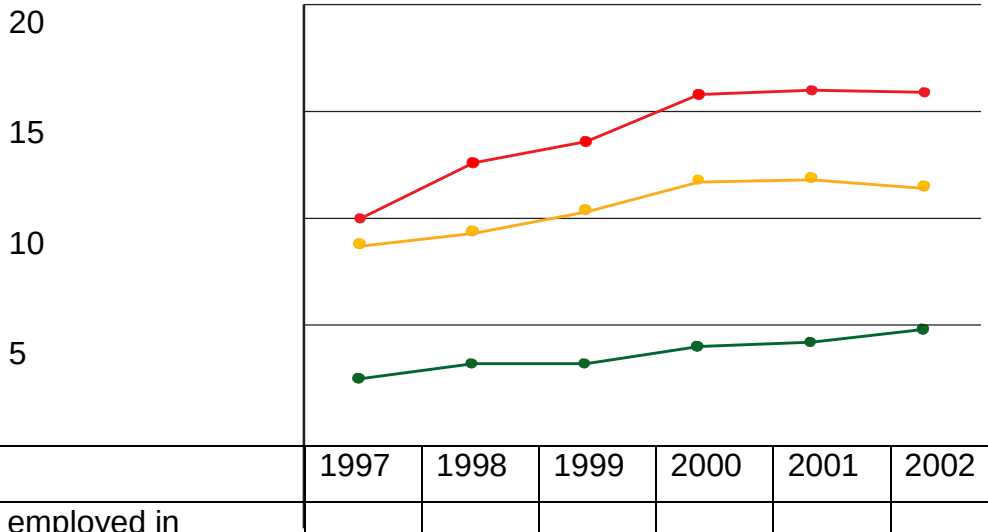
CHAPTER 5

IMPACT OF INADEQUATE EXPERIENCE AND SKILLS IN THE CONSTRUCTION SECTOR

CHAPTER 5 : IMPACT OF INADEQUATE EXPERIENCE AND SKILLS IN THE CONSTRUCTION SECTOR

5.1 Introduction

According to the state of skills document compiled by the Department of Labour, South African government (Department of Labour, 2003), there was growth in the size of the country's economically active population from 10 million in 1997 to 15.9 million in 2002. This represented a growth rate of over 50%. During the same period the number of employed people increased, from 8.7 million to 11.4 million. The most striking feature over this period has been the increase in the number of unemployed – from 2.5 million in 1997 to 4.8 million in 2002 (see Figure 1).



	1997	1998	1999	2000	2001	2002
Total employed in millions	8,7	9,3	10,3	11,7	11,8	11,4
Total unemployed in millions	2,5	3,2	3,2	4,0	4,2	4,8
Total economically active population	10,0	12,6	13,6	15,8	16,0	15,9

Figure 1: Economically active, employed and unemployed in South Africa 1997-2002

Source: September 2002 Household Surveys and Labour Force Surveys.

The unemployed represent an important target group for the National Skills Development Strategy. It is vital that their skills be upgraded in order to facilitate their transition into active employment and lifelong learning and to grow the skills pool from which employers can recruit.

Figures on the characteristics of the unemployed by educational level and population group are shown in Table 4. The table illustrates the on-going legacy of apartheid in that Africans are nearly seven times more likely to be unemployed than any other population group. Africans also constitute the largest number of those who have less than a Grade 12 or matric qualification, with African women exceeding men slightly in this category. But there are over 1 million people who are unemployed and who do have a Grade 12 /matric or equivalent qualification. This represents an under-utilized human potential and is likely to be associated with high social costs that go with this exclusion.

Table 6: Educational Profile of the Unemployed by Population Group and Gender

	African			Other			Total Male	Total Female	Total
	Male	Female	Total	Male	Female	Total			
Total*	1 965	2 248	4 213	194	329	623	2 259	2 577	4 836
None	80	88	168	–	–	–	83	94	77
<Grade 12/matric	1 312	1 417	2 729	165	177	342	1 490	1 618	3 108
Grade 12/matric or equivalent	494	608	1 102	93	104	197	591	715	1 306
>Grade 12/matric	70	122	192	–	–	–	81	136	217

* Figures in 000's and may not add up to total due to rounding and other statistical manipulations.

Source: Labour Force Survey, September 2002.

It is important to note that youth unemployment continues to be a striking feature of the South African labour market. Those in the 15 to 34 year age group make up the vast majority of the unemployed – the chances of being unemployed are three times higher in this age group, as reflected in Figure 2 . Moreover, most unemployed youth are African, with over 3 million in the 15 to 34 year age group compared to 411 000 for White, Indian and Coloured youth.

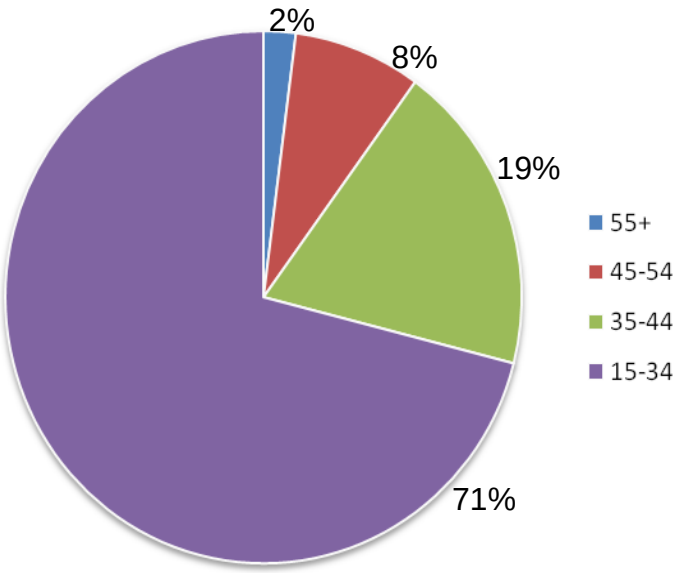


Figure 2: Unemployment by age group

Source: Statistics SA, Labour Force Survey September 2002.

The employed are an equally important target group for skills development, particularly through the work of the Sector Education and Training Authorities (SETAs). A significant labour market indicator for skills development is the current and changing skill levels of those in employment. Of the 11.03 million workers employed in the South African economy:

- 6,7% had no educational qualifications;
- 51,9% had an educational attainment below Grade 12/matric;
- 25,1% had a Grade 12/matric; and
- The remaining 15,2% had achieved a qualification level above Grade 12/matric.

If these figures are examined by gender, they reveal that qualification differences between men and women are small (see Table 5):

- 7% of employed women have no qualifications, compared to a figure of 6% for men;
- Employed men with Grade 12/matric make up 26% of the total employed men, compared with 24% for women; and
- There are slightly more women in employment with a qualification higher than a Grade 12/matric, a 17% share, compared to 14% for men.

Table 7: Educational Qualifications of the Workforce by Population Group and Gender

	African			Other			Total Male	Total Female	Total
	Male	Female	Total	Male	Female	Total			
Total*	4 028	3 208	7 236	2 156	1 632	3 788	6 184	4 840	11 024
None	343	337	680	41	20	61	384	357	741
<Grade 12/matric	2 521	1 932	4 453	745	528	1 273	3 266	2460	5 726
Grade 12/matric or equivalent	785	512	1 297	808	657	1 465	1 593	1 169	2 762
>Grade 12/matric	326	404	730	539	412	951	865	816	1 681

* Figures in 000's and may not add up to total due to rounding and other statistical manipulations.
Source: Statistics SA, Labour Force Survey, September 2002.

When examined by population group, some important issues emerge from Table 5:

- 9% of employed Africans have no qualification compared with 1% of Whites, Indians and Coloureds.
- 29% of African workers have achieved a Grade 12/matric level qualification or higher compared with 64% for White, Indian and Coloured workers.

These differences in the qualification level for Africans compared to other workers pose an important challenge for linking of skills development to equity considerations in the workplace. It is encouraging to note, however, that the number of Africans with Grade 12/matric and higher qualifications has been growing between 1997 and 2002 (see Table 6).

Table 8: Changes in the Qualification of the Workforce by Population Group

	None		Less than Matric		Matric		Post Matric	
	African	Other	African	Other	African	Other	African	Other
1997	642	66	3 310	1 195	880	1 121	536	828
1998	762	66	3 683	1 127	887	1 251	578	952
1999	667	75	4 105	1 299	1 061	1 274	667	1 008
2000	803	55	5 172	1 288	1 184	1 057	729	1 233
2001	801	52	5 120	1 240	1 260	1 240	763	2 394
2002	680	61	4 394	1 194	1 250	1 368	837	2 493

Source: Statistics SA, Household Surveys and Labour Force Surveys, September 2002

Clearly, past historical imbalances are being addressed through education and training, although significantly more progress needs to be made before parity of qualification levels is achieved between the different population groups in the workforce.

The South African government has put emphasis on transformation of the construction sector to allow participation of emerging and small contractor but this was not properly regulated as most of these contractors did not have the experience and skills to operate sustainable construction firms. Exacerbating this problem is the inadequate investment skills development across all levels in the sector, despite sufficient funding available from the Construction Education and Training Authority (CETA) and specific deficiencies include inadequate recognition of prior learning and workplace training.

The Construction Industry Development Board (CIDB) was established in 2000 as a statutory body to provide leadership to stakeholders and to stimulate sustainable growth, reform and improvement of the construction sector for effective delivery and the industry's enhanced role in the country's economy. CIDB's regulations were implemented after 2003 and are continuously improving the sector's growth. The CIDB has realized that a vibrant and successful construction industry is only possible if those employed within it have the required skills and competency to function effectively in their roles. Investing in appropriate and suitable training is vital and can lead to improvements in productivity and in

the long term produce cost savings. Training should lead to qualification/s recognized by industry and enable employees to demonstrate the level of attainment and competence reached.

The establishment of the Construction Industry Development Board (CIDB) is the start of a long process. In order to realize tangible results in terms of improvement in the performance of and prospects for the construction industry, several issues need attention. The Construction Industry Development Board (CIDB) should formulate long term plans for developing the industry (Caldo, 2007). There should be support by means of comprehensive reviews of the state of the industry and its concerns and imperatives (Franck, 2013).

Skill shortage and development remains a pressing concern in most South African economic sectors and the construction sector is no exception (CIDB, 2011a). The low barriers of entry into the construction sector have not been raised for a long time and make it easy for anyone to start a small time enterprise even though they may be without construction skills. It becomes increasingly challenging for the authorities to regulate the level of skills and training of the community's construction force (Caldo, 2007).

Added to this is a lack of management level personnel where a shortage of skilled project managers often has significant consequences for projects and businesses. While management skills are important areas of focus, the industry needs to invest in training from the bottom all the way to the top. Naturally, the quality of the company's employees is also reflected in the quality of the service they provide. This proves partially challenging for the small, micro and medium enterprises (SMMEs) which comprise a significant part of the construction sector Skills development is integral to the sustainable growth and development of the smaller companies within the industry but often they lack the required resources to provide employees with the development and training opportunities they need (Franck, 2013).

5.2 Conclusion

A new breed of contractors is flooding the market with the hope of making “it big”. Many of the new entrants into the construction sector have little construction related education or experience; this exacerbates insolvency rates in the sector.

Through better collaboration with all stakeholders some of the challenges can be overcome to create a sustainable construction industry. While lack of finance opportunities is seen as a major challenge in building up a sustainable business, problems encountered through cash flow can be resolved through regular payment by clients. Main contractors must realize that smaller contractors are critical to the survival of the sector and all stakeholders should be treated with fairness.

The industry needs to develop a well-researched development programme in conjunction with Academia. Unfortunately, everyone is trying to come up with their contractor development programmes which does not relate to the needs of this evolving industry.

CHAPTER 6

QUESTIONNAIRE SURVEY WITH MANAGEMENT OF CONSTRUCTION FIRMS

CHAPTER 6 : QUESTIONNAIRE SURVEY WITH MANAGEMENT OF CONSTRUCTION FIRMS

6.1 Analysis

The questionnaire (see Appendix 2) was designed with the intention of eliciting a response(s) from the management of civil engineering construction firms, towards determining the principle reasons for the failure of civil engineering such firms. It was assumed that the respondents would be sufficiently familiar with the reasons listed as answer options in the questionnaire. The questions were kept simple and straight forward. The language employed was at a level commensurate with the survey population in attempting to increase the response level. The questionnaire was designed to reveal perceived causes of failure in civil engineering construction firms and provide a body of material constituting opinions as to the cause of failure of construction companies.

6.2 Methodology

This summary data analysis is based on randomly selected respondents around KwaZulu-Natal. It needs to be noted that no detailed statistical inference could be conducted. For instance, to conduct tests of association using chi-square would require at least 5 expected observations per category, which is not feasible in this case. The only option remaining is to reduce these categories to only two categories. The data do not allow for any statistical influence according to the various categories. However, discussion is possible using the percentages based on the sample size, N. The number of respondents per category can be re-computed by multiplying the percentage with the respective sample size. The information presented below will enable the scientist to discuss and compare some of the categories in respect of the study objectives.

6.3 Analysis of the Questionnaire

The approached followed, was to find out from the respondents the nature of their business and their perceptions of the construction industry. The questionnaires were answered mainly by the owners or managers of civil engineering contractors, which gave us a clear view of the challenges in their day-to-day running of the business. The questionnaire made allowance for commentary where the manager could cite additional reasons for the failure of civil engineering firms. The choice option totals were expressed as a percentage of the total number of respondents. The results are shown in the tables and figures below.

The demographic characteristics of respondents are evident from Table 8 and Figure 3.

Table 9: Demographic Characteristics of Respondents

Demographic Factor	Sample (N)	Category	Percentage (%)
Sex	21	Male	81,0
		Female	19,0
Race	21	African	71,4
		White	23,8
		Indian	4,8
Company Size		Large	71,4
		Medium	28,6
		Small	0,0
Position Held	21	Director	23,8
		Managing Director	9,5
		Manager	14,3
		Managing Member	9,5
		Member	28,6
		Owner	14,3

Demographic Factor	Sample (N)	Category	Percentage (%)
Highest Educational Qualification	21	No Schooling	0,0
		Up to Std 1/Gr3/ABET 1	0,0
		Std 2-Std 3/Gr 4-Gr 5/ABET2	0,0
		Std 4-Std 5/Gr 6-Gr 7/ABET3	4,8
		Std 6-Std 7/Gr 8-Gr 9/ABET4	0,0
		Std 8/Gr 10/NTC 1	9,5
		Std 9/Gr 11/NTC 2	9,5
		Std 10/Gr 12/NTC 3	19,0
		Certificate/Diploma with Gr 12	38,1
		Bachelor's Degree	14,3
		Post-graduate degree	4,8

Remarks:

All respondents had at least a Standard 4 (Grade 6) level of education with the majority having a certificate/diploma after Grade 12. The majority of the respondents were members of the company.

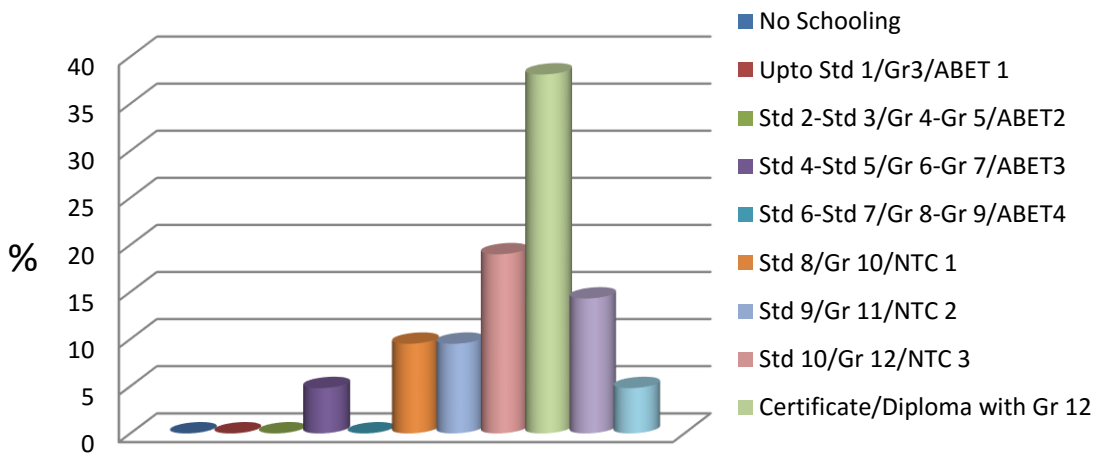


Figure 3: Highest Educational Qualification

Table 10: Problems Known to Hinder the Development/Growth of Construction Companies

Problems known to hinder the development/growth of construction companies	Sample (N)	Percentage of participants ranking problem as					
		1st Main (N=21)	2nd Main (N=21)	3rd Main (N=20)	4th Main (N=21)	5th Main (N=19)	6th Main (N=7)
Lack of financial discipline	21	38,1	28,6	23,8	4,8	4,8	-
Lack of continuity – how to get next tender	21	57,1	23,8	-	9,5	9,5	-
Maintain procurement and suitable order books	20	35,0	20,0	15,0	15,0	15,0	-
No management experience	21	52,4	23,8	4,8	-	19,0	-
No technical / operation experience	19	47,4	21,1	5,3	21,1	5,3	-
Other, please specify:	7	28,6	-	-	-	14,3	57,1

Remarks:

As can be seen from Table 9, lack of continuity – how to get next tender (57.1%) received the highest response from the participants as being the main problem that hinders their growth and development. Lack of management experience (52.4%) and lack of technical experience (47.4%) are second and third respectively. Tendering for work requires management and operational experience to acquire work at competitive pricing. Without these skills it is difficult to sustain the business with new projects. Other problems indicated were inexperience with pricing and corruption inside client bodies.

Table 11: Critical Skills Required to Run a Sustainable Construction Company

Critical skills required to run a sustainable construction company	Sample (N)	Percentage of participants ranking critical skills as					
		1st Most important	2nd Most	3rd Most	4th Most	5th Most	6th Most
Financial Skills	21	47,6	19,0	19,0	9,5	-	4,8
Project Management	21	57,1	4,8	9,5	14,3	4,8	9,5
Business Development	21	38,1	9,5	4,8	4,8	14,3	28,6
Pricing Tenders	21	47,6	23,8	-	19,0	9,5	-
Administration	21	22,2	14,3	9,5	19,0	19,0	4,8
Technical Skills	21	47,6	14,3	19,0	9,5	9,5	-

Remarks:

As can be seen from Table 10, the three most important skills as ranked by the participants are project management skills (57.1%) and financial and pricing tenders skills (both 47.2%). All of these skills may require some education or experience in construction to perfect them. Since contracting is a business it is important that the directors are able to be competitive with their pricing, be able to do the work once it's awarded to them and manage their cash flow to sustain their business.

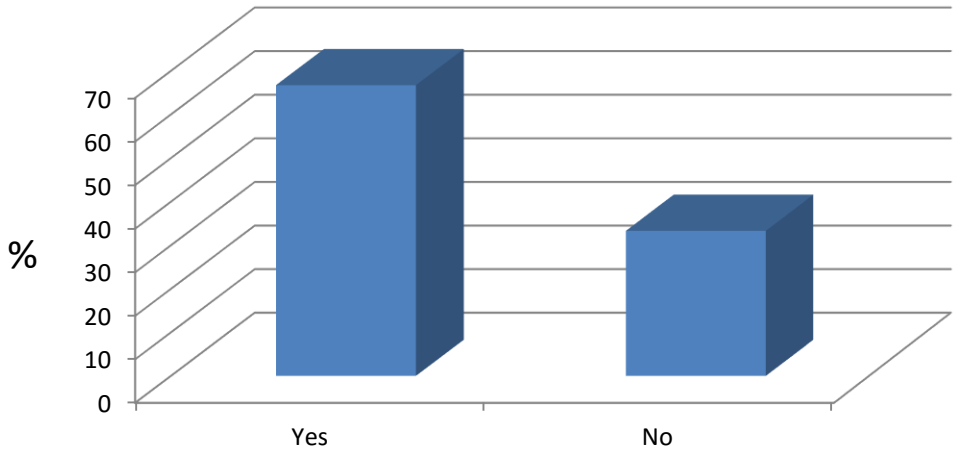


Figure 4: CIDB Improved Construction Industry

Remarks:

Figure 4 shows that the majority of the respondents (66,7%) felt that since the industry has been regulated by CIDB, it has improved the construction sector, while 33% disagree which may highlight the need for CIDB to continuously improve its initiatives to address the needs of contractors and all other stakeholders.

Table 12: Causes of Delays in Construction Projects

Causes of delays in construction	Sample (N)	Percentage of Participants Ranking Causes of Delays as							
		1st Major	2nd Major	3rd Major	4th Major	5th Major	6th Major	7th Major	8th Major
Inclement Weather	21	33,3	14,3	14,3	19,0	4,8	9,5	4,8	-
Late Delivery from Suppliers	21	28,6	9,5	14,3	23,8	4,8	19,0	-	-
Subcontractors	21	4,8	9,5	19,0	4,8	33,3	4,8	23,8	-
Late Payment from Clients	21	23,8	9,5	28,6	14,3	4,8	19,0	-	-
Staff Disputes	21	9,5	14,3	23,8	4,8	9,5	9,5	14,3	14,3
Poor Planning	21	28,6	28,6	9,5	19,0	9,5	-	-	4,8
Scope Creep	21	14,3	19,0	4,8	14,3	9,5	4,8	19,0	14,3
Obtaining sureties and Insurance	20	33,3	4,8	-	9,5	4,8	4,8	9,5	28,6

Remarks:

As can be seen from Table 11, the cause of delay in most projects is inclement weather (33.1%), a factor which is beyond the control of contractors. Obtaining sureties and insurances are critical before the commencement of construction. The bigger the project the bigger the sureties and insurances required. This could be a challenge if cash is tied up on other payments due to non-payment by clients or if the contractor does not have a startup loan. Suppliers received the third highest ranking from respondents. This could be attributed to various reasons including those related to the responsibility of the contractor, i.e. purchase of materials and payment of suppliers in time before delivery is done. Poor planning received 28,6%, which could be emanating from contractors' poor planning or the clients indecisiveness on the project.

Table 13: Importance of Advance Loans in the Success of Businesses

Importance of advance loan (N=21)	Percentage (%)
Very important	38,1
Important	38,1
Fairly important	23,8

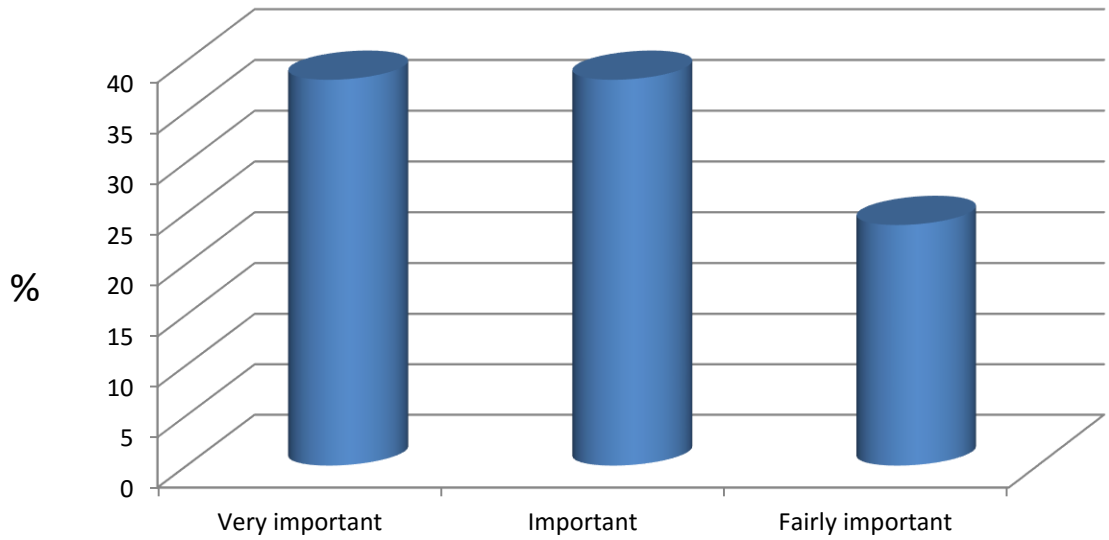


Figure 5: Importance of Advance Loan

Table 14: Applying for an Advance Loan to Win a Tender

How often do you apply for an advance loan when you win a tender? (N=21)	Percent (%)
Always (100%)	9,5
Often (51-99%)	14,3
Sometimes (25-50%)	19,1
Rarely (1-24%)	38,1
Never (0%)	19

Remarks:

Tables 12-13 and Figure 5 are related to advance loans. As can be seen from Table 8, advance loans as being a factor in the success of a business were rated as very important by 38.1% of respondents and important by 38.1% of respondents. This could be due to inconsistency in payment of invoices by the client. A loan can assist in payment of suppliers who could apply for liquidation if clients do not pay contractors within a reasonable time frame.

Table 15: Company's Strengths and Capabilities

Code	Your Company's Strengths and Capabilities	Sample (N)	*Percentage of participants considering the company's strength to be						
			(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)	Specialist Expertise	21	9,5	4,8	4,8	14,3	19,0	19,0	28,6
(2)	Project Management Capability	21	14,3	9,5	28,6	19,0	9,5	14,3	4,8
(3)	Technical Ability	21	33,3	23,8	9,5	14,3	9,5	4,8	4,8
(4)	Network	21	14,3	9,5	14,3	4,8	14,3	14,3	28,6
(5)	Financial Strength/Access to Finance	21	19,0	33,3	9,5	19,0	14,3	-	4,8
(6)	Knowledgeable on qualified Employees	21	9,5	14,3	28,6	4,8	23,8	14,3	4,8
(7)	Possession of vital Plant and Equipment	21	-	4,8	4,8	23,8	9,5	33,3	23,8

*Percentage of participants who choose a particular strength relative to the other strengths.

Remarks:

One of the questions in the questionnaire asked participants to choose a particular strength relative to the other strengths. Table 14 shows that respondents ranked technical ability as first (33%). Financial strengths and qualified staff ranked second and third respectively. This is expected since the nature of construction business requires that, you have technically capable staff to complete projects successfully and have the financial capabilities to acquire resources without delay.

Table 16: Two Most Common Threats to Company's Survival at Inception

In your opinion, which are the two most common threats to a company's survival at inception	Sample (N)	Percentage of participants ranking most common threats as				
		1st	2nd	3rd	4th	5th
Lack of adequate financial resources	21	42,9	19,0	19,0	4,8	14,3
Inflation	21	4,8	14,3	38,1	14,3	28,6
Interest rate increase	21	4,8	23,8	38,1	28,6	4,8
Competitors	21	19,0	47,6	23,8	4,8	4,8
Bribery and corruption	21	42,9	23,8	14,3	9,5	5,0

Remarks:

As can be seen from Table 15 and Figure 6, the lack of adequate financial resources to start or finish projects was perceived by respondents to be the most critical threat for company survival at inception (42.9%). Of equal perceived threat was bribery and corruption (42.9%). CIDB and the government need to have measures in place to counteract bribery and corruption in the industry with other stakeholders playing their roles reporting such activities. Considering Table 15 in conjunction with Figure 6 most of the small to medium contractors consider lack of adequate financial resources as a common threat, this may be as a result that most of them are subject to bribery and corruption in order to acquire projects. This can be seen in the percentage of those having financial challenges are the same with those who consider bribery and corruption as common threat.

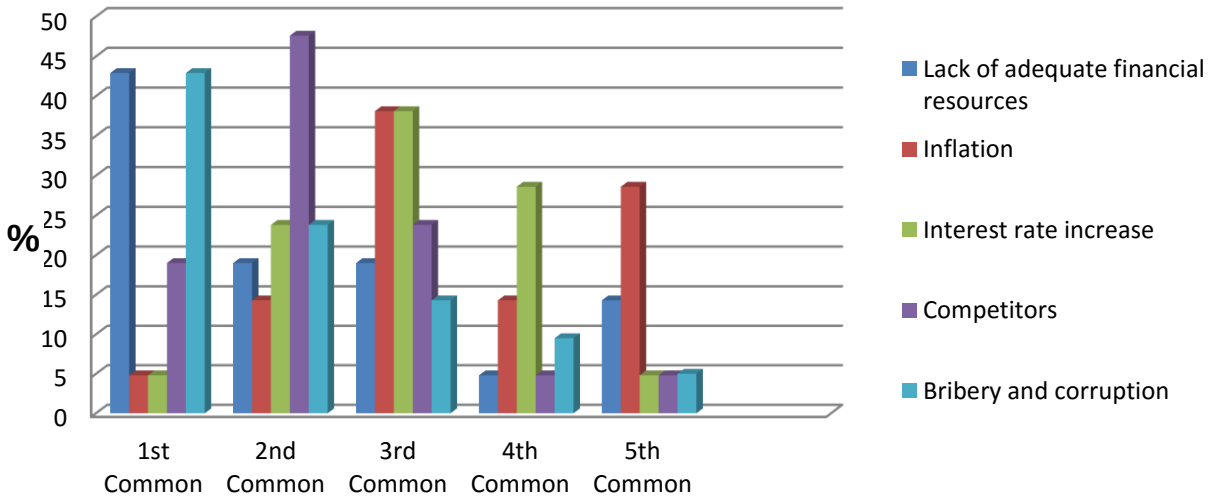


Figure 6: Most Common Threads

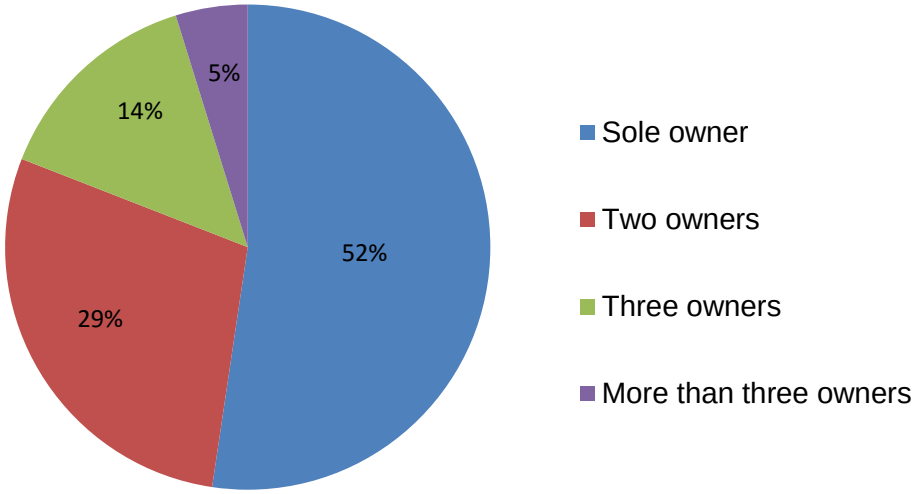


Figure 7: Owners

Remarks:

Figure 7 indicates that the majority of respondents (52,4%) were sole owners. Construction businesses require a set of skills and it is difficult for one person to possess all of them. There is a huge risk to the sustainability of the business and the company to rely on one person to make decisions without checks and balances in the business. The health (and possible ill health) of a sole owner can also be a major risk.

Table 17: One Key Factor that Aided Growth and Success of the Construction Company

One key factor that aided growth and success of your construction company	Frequency	Percent (%)	Ranking
Quality products	7	35,0	1
Network	5	25,0	2
Financial Strengths	2	10,0	3
Make the least mistakes	2	10,0	3
Diversity Matrix (Spreading risk)	1	5,0	4
Developing a strong workforce	1	5,0	4
Small overheads	1	5,0	4
Subcontracting / outsourcing	1	5,0	4
Total	**20**	**100,0**	

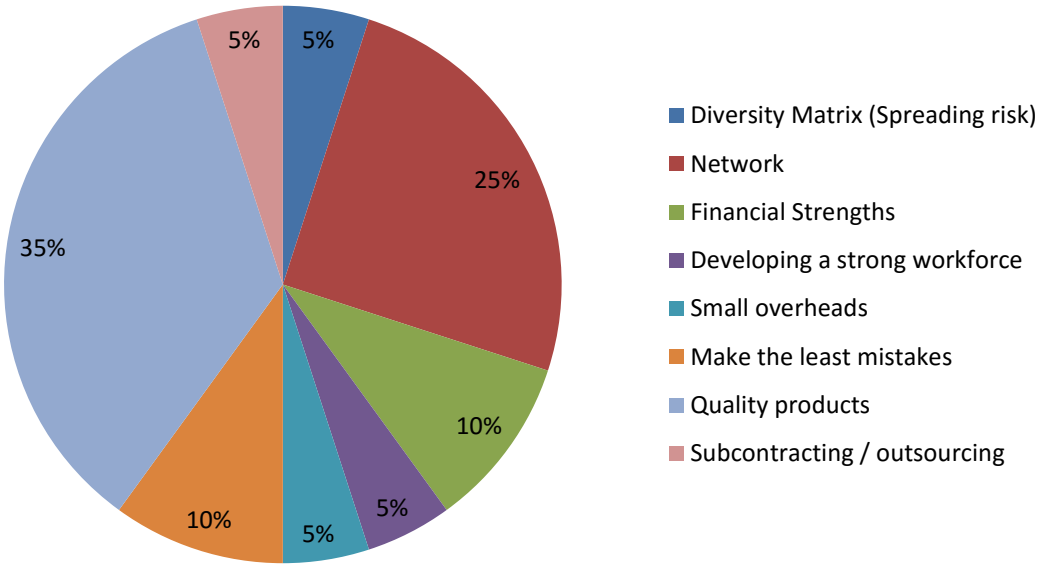


Figure 8: Factors Aided Growth

Remarks:

Table 16 shows the results of the question relating respondents' perception of the one key factor that aided growth and success of their company. Quality products (35%) were rated as the most important key factor. In all construction projects, quality control is critical. The contractor invoices are approved by the engineer if their materials and workmanship meet specific quality requirements.

The second most important factor according to respondents was networking (25%). Networking facilitates meeting other people who might have better experience in dealing with your weakness. Since most of the businesses are solely owned (see Figure 7), sharing of knowledge amongst business owners can assist in closing the weaknesses in business operations. This could aid growth in any business.

Table 18: Number of Permanent Employees During 2007 to 2011

N° of employees	Frequency				
	2007	2008	2009	2010	2011
None	6	6	4	3	0
1-10	9	9	11	10	15
11-20	1	0	0	2	2
21-30	1	2	1	1	0
31 and more	2	2	3	3	4
Total	**19**	**19**	**19**	**19**	**21**
Medium	2	2	3	3	2
Mean	2.96	2.96	2.96	2.48	4.32
Standard deviation	3.564	3.633	4.324	3.564	6.261

Remarks:

Table 17 shows that the majority of companies had 1 to 10 permanent employees in the period 2007-2011.

Table 19: Causes of Insolvencies

Causes of Insolvencies	Sample (N)	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	Ranking
Operational Management (A)							
Poor Management of Debt	21	7	10	4	-	-	
Inaccurate Estimating	21	9	10	1	1	-	
Poor Supervision of Staff	21	10	2	4	3	2	1
No Previous Experience	21	10	8	-	3	-	
Use of Inferior Materials	21	2	6	9	4	-	
Skill Shortages	21	6	3	6	2	4	
Strategic Factors (B)							
Reliance on Few Clients	21	2	13	3	3	-	2
Reliance on Few Suppliers	21	2	7	5	4	3	
Personal (C)							
Disagreement with Partners	21	4	6	4	3	4	3
Ill Health	21	3	6	4	5	3	
Mean	21	5.50	7.10	4.44	3.11	3.20	
Median	21	5.00	6.50	4.00	3.00	3.00	
Standard Deviation	0	3.34	3.31	2.19	1.17	0.84	

Remarks:

It is apparent from Table 18 that operational and strategic factors are considered by respondents to be the most prominent cause of insolvency.

Most companies are started by people who are technically sound but lack operational and strategic skills to run their businesses. This is supported by Table 14 where it is evident that the majority of the respondents say that their company's strengths lies in technical ability. Some companies require operational assistance from better qualified accounting professionals to manage finances and from quantity surveyors to offer pricing services.

Table 18 shows that reliance on fewer clients has over 70% of respondents either strongly agree or agree that reliance on few clients is a cause of insolvency. Reliance on a few clients could be a result of a company being solely owned and the owner is then responsible for everything from tendering to commissioning projects, thus not focusing on business development and diversity of their client base. Relationships and networking are critical to all business growth. If business owners do not give clients attention, they are running a risk of stagnation.

Most respondents are sole owners (Figure 7), which may support the perception that disagreement with partners can affect the running of a successful business.

76% of the respondents strongly agree or agree that no previous experience within the construction industry causes insolvencies. It is very difficult to be competitive if an owner is a novice in construction. Pricing of tenders is critical in getting projects and it influences how projects are executed in order to make a healthy margin at the end of the project. The risks of running a construction firm are higher if the owner lacks construction experience.

Table 20: Number of Years Company Existed and Age of Respondent

Variable	Sample (N)	Minimum	Maximum	Mean	Median	Standard Deviation	Variance
Age of the respondent	21	25	60	41,52	41.0	8,98	80,66
Number of years the company had been in operation	21	1	26	7,2	6.0	5,59	33,26

Remarks:

Table 19 shows that the average age of respondents was 42 years and the average length most companies have been operating was 7 years.

CHAPTER 7

CONCLUSION AND RECOMMENDATIONS

CHAPTER 7 : CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The findings of this study concur with the issues identified in the survey by Marx (2011) in 2010 covering 2307 projects regarding satisfaction levels of key stakeholders, contractors, clients, suppliers and consultants. Key findings of that survey included the following:

- Only 52% of all contractors were paid on time, within 30 days, with the metropolitan and regional/district being the worst performers. This 52% is an improvement on the result of the previous survey (42%).
- Higher financially graded contractors (7-9) were less satisfied with their material suppliers.
- There was no relationship between project and financial grade of contractors as small contractors made just as good a project as the higher graded contractors.
- Contractors incurred a loss of 4% on all projects completed.
- There is a strong indication of political intervention in tender adjudication practices of many employer bodies, e.g. the provincial department of Limpopo and Mpumalanga overruled tender recommendations in 54% and 56% of their tenders awarded. In KwaZulu-Natal 68% of tender recommendations were overruled. This warrants that adjudication practices must be reviewed.

7.2 Major Problems Facing CIDB

One of the key measures of success for the CIDB is to have more smaller contractors move up the grades to handle bigger complex projects and create jobs in the process. Unfortunately the rapid expansion of the sector has not yet yielded as rapid a conversion rate of small contractors into larger entities according to Khoza (2007). Of the registered contractors, grade one has 79% of

the total, which poses many challenges within the industry. In March 2005, the CIDB had 1295 contractors registered but the number has increased to 47 000 and a more than 10 000 of these contractors have been suspended as they did not submit tax clearance certificates, financials and other required documentation.

The government does not have many projects to facilitate grade one contractors obtaining work and improving their grading. There is a realization that due to the high unemployment rate in the country most of the grade one contractors are job seekers.

Unfortunately the South African Government hasn't implemented a national contractor development program to be adopted by all government departments of provinces. There are different kinds of programmes which have varied objectives. An effective "Contractor Development Programme" supported by the Government is urgently required to address most of the factors which cause unsustainable practices that lead to insolvencies.

7.3 Prequalification of contractors

Prequalification is the process where a selection of tenderer that meet the minimum criteria is done before the issuing of the invitation to tenderers. Prequalification process is of advantage to both the tenderers and clients alike. Advantages such as:

To Tenderers:

- Tenderers who may be insufficiently qualified on their own could avoid the expense of tendering or to enter into a joint venture.
- The well-qualified firms may price their tenders with the knowing that they will be competing with other qualified tenderers.

To Clients:

- Potential contractors who meet contract specific qualification criteria and are selected and invited to tender.

- The amount of work and time evaluating tenders from unqualified contractors is reduced.
- The problem of lowing prices is eliminated or significantly reduced.

This process of prequalification would minimize corruption in the tendering process as strict procedures will be followed in inviting tenderers to tender for the project.

7.4 Conclusion

The study focused on the causes of insolvency which were managerial, financial, expansion and economic environment. The study showed that managerial factors are very crucial in ensuring the success or failure of a business. Lack of managerial experience can cause a manager to make wrong business decisions which can result in the failure of a business.

Secondly the study showed that level of education and business performance are essential in the operation of a business.

Thirdly the study proved that financial factors are crucial in the success or failure of a company. If finance is not managed or controlled well the company could enter into debts which can make the business fail.

The study also showed that the construction industry activity is dependent on the state of the economy which includes the government's monetary policies. Furthermore the marketing strategy utilized by contractors in tendering for business has been unfavourable especially for the small to medium contractors because firms have been undercutting each other by tendering their services with reduced mark-ups. This undercutting has created a situation whereby any delays in the completion of the contract adversely affects the cash flow of contractors.

Finally the questionnaire answers from the contractors highlighted the perception that operational and strategic factors are the major cause of insolvencies in civil engineering construction, which is consistent with the hypothesis of this study. Moreover, late payments from employers (tender granting bodies) cause much undetermined cash flow strain in the running of a sustainable business. It is in the interest of all stakeholders to play their roles in making sure that the construction industry is sustainable and grows everyone involved.

7.4.1 Conclusion relative to the hypotheses

First hypothesis

Operational and financial factors were found to be the major causes of insolvencies in civil engineering contracting firms and were thus consistent with the hypothesis. Moreover, under-pricing as marketing factors was considered to be the most prominent cause, which often led to deterioration in the quality of service offered.

Second hypothesis

From the detailed review it was discovered that South African government has initiated different programmes to create an environment for small to medium contractor. This programme includes Centre for small business promotion, Ntsika Enterprise Promotion Agency and Khula Enterprise Finance. As much as these programmes are there, it was discovered that the small and medium contractors are not exposed to these programmes due to lack of information. The emerging contractors' development programmes are not used to award projects but rather to provide opportunities for emerging contractors to participate and for them to grow.

Third hypothesis

The researcher draws a conclusion that the growth and reduction of insolvency of construction companies can be achieved through proper managerial skills and financial management. Management needs to heed the importance of understanding the operational management aspects of their companies; to enable them to plan their resource needs well. This needs to concurrently occur with proper strategic planning so that risk can be highlighted and planned for.

7.5 Recommendations

From the chapters of this dissertation the following recommendations are made:

- The CIDB should make it mandatory that owners or members of construction firms attend regular training events on management of finance, projects and equipment, provided by an institution recognized by all stakeholders.
- The Government as the biggest employer should persuade financial institutions to relax lending conditions to contractors and accept contract documents as suitable collateral for government funded projects.
- Government must strive to improve the percentage of all clean audits in all its departments as this may improve payment to service providers.
- Contractors must use the services of professionals (engineers, accountants, quantity surveyors and lawyers) in managing their businesses and contracts, if they don’t have such skills, to minimize risks of liquidation.
- Corporate governance education and training for small and medium enterprises should be mandatory to improve accountability, transparency and sustainability of the business, especially for businesses with sole owners.
- Contracts should lean towards being awarded based on quality rather than price.

- CIDB must conduct annual workshops to serve three purposes:
    - Provide a forum for contractors and other stakeholders to discuss common problems affecting the performance of contractors;
    - Enable contractors to interact with each other and share experiences; and
    - Assist in continuously formulating / improving of contractor development programmes.
- Due to the low entry barrier in the construction sector, it is necessary for the CIDB to monitor and assess the performance of construction firms. This will increase competency levels and ensure that future projects are awarded to companies that meet the minimum standards to execute projects. It will also highlight future research areas to improve the construction sector. CIDB should make it compulsory for contractors to be assessed by their performance on completed and current projects if the project duration is longer than 12 months before their CIDB grading certificate is renewed or upgraded. The assessment should be conducted by a registered professional person who was a Principal Agent on the project. The assessment form should indicate the specific nature of the construction project i.e. the value of the work, the contract period and the nature of the work. The assessor should rate the contractor's performance on 10 different criteria, namely:
    - Contract management and administrative support;
    - Relationship with employer;
    - Activity financial management;
    - Responsiveness to employer's representative;
    - Risk management;
    - Attention to laws and regulations;
    - Performance of team leader;
    - Managing underperformance, where appropriate;
    - Quality and timeliness of activity milestones/ deliverables; and
    - Quality of work.

The ratings in each of the criteria will range from 1 (very weak) to 6 (outstanding). The assessor should only consider the assessment criteria that are relevant to that specific project. A consistent record of a less than satisfactory rating of the contractor's performance on various projects should be taken into account by CIDB when deciding to renew, demote or promote the contractor's CIDB certificate.

This research study has highlighted that contractor performance assessment is one of the necessary interventions to alleviate the failure rate of construction companies and to identify areas that need improvement in order to assist in developing a suitable civil construction industry. Arising from this study, a proposed contract performance assessment form has been developed (Appendix 1).

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APPENDICES

APPENDIX 1

Proposal for a Contractor Performance Assessment Form

PROPOSAL FOR A CONTRACTOR PERFORMANCE ASSESSMENT FORM

NOTE TO USER: Contractor Performance Assessments are mandatory for all Construction Industry Development Board (CIDB) registered companies with a grading above level 4 or more (work to the value of R4 million and above) and must be completed either annually (for contracts longer than one year) or on completion (for shorter contracts). This form is intended to assist and record the assessment of a contractor firm.

- The Assessor must be professionally registered with a relevant council.

The completed Contractor Assessment must be provided to the Contractor and the Contractor must be provided at least 28 days in which to make written comment and sign the form. Where a Contractor disputes any part of the assessment, an independent professional will be assigned by CIDB to resolve the dispute before an assessment is finalized.

There are 10 questions in the assessment sheet. Only answer questions that are relevant for the contract under assessment. To obtain an average score in the final question, add all scores together and divide by the number of questions answered. If a score for all 10 questions is entered, the entry for Overall Rating is the total divided by 10. Answers of "N/A" are not counted – for example, if a score was entered for six questions and "N/A" for four, the Overall Rating would be the total divided by 6.

NOTE AND PRIVACY STATEMENT FOR CONTRACTOR: You are required to sign this assessment within 28 days of receipt, and are entitled to respond to any issues raised in it. Any responses must be in writing and returned to the CIDB within 28 days together with the signed copy of the assessment. Failure to respond within 28 days is deemed to indicate your acceptance of the assessment.

CIDB may seek the views of Employer involved in the activity in making this assessment.

A copy of this assessment and your response (if you choose to make one) will be provided to the relevant section of CIDB for placement on your performance file and on a performance register available to CIDB staff. Information from the assessment, including your response, can be used by CIDB as part of any future contractor evaluation process including consideration by Tender Assessment Panels convened by Treasury or any government entity to evaluate tender proposals. The assessment is considered current for a period of five (5) years from the date of signature and may be referred to within that period.

- A consistent record of Very Good to Outstanding performance will be considered highly in future CIDB adviser selections, to promote your company to the higher CIDB grading.

A record of underperformance (defined as an overall rating of "Less than Satisfactory" or below in any activity over the past five (5) years or equivalent assessments from other referees/clients) will be taken into account if you are considered for future contracts issued by the South African Government.

PROPOSED CONTRACTOR PERFORMANCE ASSESSMENT FORM

Contractor:		
Contract N°:	Employer:	
Value of Work:	CIDB Grading:	Country:
Contract Period from:	Until:	Date of Assessment:
Nature of Contract:		

Contractor Performance Ratings

1	Very Weak	Serious underperformance, not meeting most contract/terms of reference deliverables
2	Weak	Major effort needed to improve delivery of core responsibilities identified in the contract/ter reference; Employer Representative very hands on in managing areas where contractor delivering
3	Less than satisfactory	Effort needed to improve delivery of one or more core responsibilities identified in the contract/terms of reference
4	Satisfactory	Minor effort needed to improve delivery of some areas of responsibility identified in the contract/terms of reference
5	Very Good	All responsibilities identified in the contract/terms of reference delivered efficiently and effectively
6	Outstanding	All responsibilities identified in the contract/terms of reference delivered with a high degree of efficiency and effectiveness, efficiently, and proactive steps taken to achieve outcomes above and beyond identified responsibilities

	Assessment Criteria	Performance Rating	Comments
1	**Contract management and administrative support** – includes: Ability to plan and administer activities in accordance with the contract, Support services provided to the in-country team; Regular monitoring and engagement with the in-country team		
2	**Relationship with Employer** – includes: Cooperation in all matters relating to the contract; Open and honest in addressing problems; Regular communication and updates		
3	**Activity financial management** – includes: Responsiveness to Employer requests for financial information; Ability to deliver services within budget; Accuracy of financial information, including invoices, acquittals and forward estimates		
4	**Responsiveness to Employer's Representative** – includes: Timely response to Employer requests and instructions; Ability to respond to unexpected requests; Acceptance of Employer's decisions		
5	**Risk management** – includes: Proactively and promptly identifies and informs Employer of substantive issues likely to adversely affect timing, Cost or quality of services; Provides recommendations for actions to manage risks		
6	**Attention to Laws and Regulations** – includes Monitor and control, Health and Safety, Labour Act and Report all illegal activities at construction site		

	Assessment Criteria	Performance Rating	Comments
7	**Performance of team leader** – includes Effective communication and leadership; Achieves results against contracted responsibilities; Relationship with stakeholders; Management of team		
8	**Managing underperformance, where appropriate** – includes: Quality of management control of personnel performance; Timely identification of issues with personnel and proactively proposing solutions; Willingness to replace personnel where necessary		
9	**Quality and timeliness of activity milestones/ deliverables** – includes: Achieves milestones/ deliverables within the set timeframe; Strategies for managing delays; Documentation supplied (e.g. milestone reports,) and meets quality standards set by Employer		
10	**Quality of work** – includes: Effectively measures and reports on activity progress; Programing objectives; and Effective quantitative and qualitative indicators		
	Overall Rating (average of all scores)		Round to nearest figure

Name of Assessor: ……	**COMPANY STAMP**
Role in the Project:……..……	
Professional Registration N°:……..……..	
Signature:……..	

APPENDIX 2

Questionnaire

CONSENT TO PARTICIPATE IN RESEARCH

INVESTIGATION OF FACTORS ASSOCIATED WITH INSOLVENCIES AMONGST CIVIL ENGINEERING CONTRACTORS IN KWAZULU-NATAL

You are invited to participate in a research study conducted by Bongumusa Ntuli. Your participation in this study is entirely voluntary. You should read the information below and ask questions about anything you do not understand, before deciding whether or not to participate. You are being asked to participate in this study because you are/were involved in a construction project in KwaZulu-Natal.

- **PURPOSE OF THE STUDY**

The purpose of this study is to:

- Investigate factors that cause insolvencies amongst Contractors in KwaZulu-Natal.
- Develop strategies to promote growth and sustainability in civil construction industry especially amongst emerging contractors.

- **PROCEDURES**

If you volunteer to participate in this study, we will ask you to answer all the relevant questions in the questionnaire.

- **POTENTIAL RISKS AND DISCOMFORTS**

We expect that any risks, discomforts, or inconveniences will be very minor and we believe that they are not likely to happen. If discomforts become a problem, you may discontinue your participation.

- **POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY**

It is not likely that you will benefit directly from participation in this study.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of a code number. Your name will not be used in any of the information we get from this study or in any of the research reports. When the study is finished; information that shows which code number goes with your name will be destroyed.

Information obtained from this study may be used in any way we think is best for publication or education. Any information we use for publication will not identify you individually.

- **PARTICIPATION AND WITHDRAWAL**

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you do not want to answer.

- **RIGHTS OF RESEARCH SUBJECTS**

The Durban University of Technology (DUT) has reviewed my request to conduct this project. If you have any concerns about your rights in this study, please contact Dr Dhiren Allopi of DUT at 031- 373 2310.

I understand the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. I have been given a copy of this form.

_____

Printed Name of Subject

_____ _____

Signature of Subject Date

QUESTION 1: INSTITUTIONAL PROFILE DATA

1.1 Name of the company _____

1.2	The size of the company is well described as (Tick the appropriate answer)	Small	Medium	Large

1.3	Give the number of years the company had been in operation (in years)	years

QUESTION 2 : RESPONDENT'S BIOGRAPHICAL DATA

2.1 How old were you at your last birthday? (Age of the respondent)

years

2.2 Sex of the respondent (Do not ask; record sex)

Male	Female
1	2

2.3 What is your race group (Record and ask when it is not obvious)

African	**White**	**Coloured**	**Indian**	**Other (specify)**
1	2	3	4	5

2.4 What position do you hold in the company?

2.5 What is your highest educational qualification? (Circle one answer only)

a	No schooling	01
b	Up to Std 1/Gr 3 / ABET 1	02
c	Std 2 - Std 3/ Gr 4 - Gr 5 / ABET 2	03
d	Std 4 - Std 5/ Gr 6 - Gr 7 / ABET 3	04
e	Std 6 - Std 7/ Gr 8 - Gr 9 / ABET 4	05
f	Std 8/ Gr 10 / NTC 1	06
g	Std 9/ Gr 11 / NTC 2	07
h	Std 10/ Gr 12/ Matric/ NTC 3	08
i	Certificate or Diploma with Gr 12	09
j	Bachelors Degree	10
k	Post-graduate degree (Hons/Masters/PhD)	11

QUESTION 3: HINDRANCE TO THE GROWTH OF THE COMPANY

Rank the following problems known to hinder the development / growth of construction companies (1=main problem, 2=second main problem, and so on).

3.1	Problems	Rank
a	Lack of financial discipline	
b	Lack of continuity – how to get next tender	
c	Maintain procurement and suitable order book	
d	No management experience	
e	No technical / operation experience	
f	Other, please specify:	

Comments:.....

.....

QUESTION 4: CRITICAL SKILLS

Rank the following critical skills required to run a sustainable construction company? (Please rank in terms of importance beginning with 1= most important, 2=second most important, and so on)

4.1	Skills	Rank
a	Financial Skills	
b	Project Management	
c	Business Development	
d	Pricing Tenders	
e	Administration	
f	Technical Skills	

4.2 Has CIDB's initiatives improved the construction industry?	Yes	No
	1	2

4.3	If response to question 4.2 is NO, state at most four reasons why?
a	
b	
c	
d	

QUESTION 5: CAUSES OF DELAY

Rank the following causes of delays in construction projects starting with the major cause (rank=1) to the least (rank=8)

5.1	**Causes of delay**	**Rank**
a	Inclement Weather	
b	Late Delivery from Suppliers	
c	Subcontractors	
d	Late Payment from Clients	
e	Staff Disputes	
f	Poor Planning	
G	Scope Creep	
h	Obtaining Sureties and Insurances	

QUESTION 6: LOANS

6.1 How important is the advance loan in the success of your business? (Circle)

a	Very Important	1
b	Important	2
c	Fairly Important	3
d	Not Important	4
e	Not Sure	5

6.2 How often do you apply for an advance loan when you win a tender? (Circle)

a	Always (100%)	1
b	Often (51-99%	2
c	Sometimes (25-51%)	3
d	Rarely (1-24%)	4
e	Never (0%)	5

6.3	Is accessibility to financial loans contributing to the success of the company?	Yes	No
		1	2

6.4	Do you have credit facilities with your supplier?	Yes	No
		1	2

7.1	Did you have prior construction experience before starting your own company?	Yes	No
		1	2

QUESTION 8: ASSESSMENT OF YOUR COMPANY

8.1 Indicate below what you consider to be your Company's Strengths and Capabilities (**Multiple responses are possible**)

a	Specialist Expertise	1
b	Project Management Capability	2
c	Technical Ability	3
d	Network	4
e	Financial Strength/Access to Finance	5
f	Knowledgeable on qualified Employees	6
g	Possession of vital Plant and Equipment	7

8.2 In your opinion, please rank the following threats to your company's survival at inception, starting with the most common threat (rank=1) to the least common (rank=5)

8.2	**Threats**	**Rank**
a	Lack of adequate financial resources	
b	Inflation	
c	Interest rate increase	
d	Competitors	
e	Bribery and corruption	

8.3 How many owners does your company have? (Tick the appropriate)

Sole owner	2 owners	3 owners	More than 3 owners
1	2	3	4

QUESTION 9: MEASURE OF SUCCESS

9.1 Indicate one key factor that aided growth and success of your construction company

a	Diversity Matrix (Spreading risk)	1
b	Network	2
c	Financial Strengths	3
d	Developing a strong workforce	4
e	Small overheads	5
f	Make the least mistakes	6
g	Quality products	7
h	Good dividends – zero bad debt	8
i	Healthy Credit Rating and easy access to finance	9
j	Subcontracting / outsourcing	10

9.2 Give an indication of the number of permanent employees available in your company in each of the following year.

	Year	**Number of permanent employees**
a	2007	
b	2008	
c	2009	
d	2010	
e	2011	

QUESTION 10: CAUSES OF INSOLVENCIES

10.1 In your own opinion indicate in each of the causes of Insolvencies whether you (Strongly Agree, Agree, Unsure, Disagree or Strongly Disagree) (Circle)

10.1	Causes of Insolvencies	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree
a	Poor Management of Debt	1	2	3	4	5
b	Inaccurate Estimating	1	2	3	4	5
c	Poor Supervision of Staff	1	2	3	4	5
d	Skill Shortages	1	2	3	4	5
e	Reliance on Few Clients	1	2	3	4	5
f	Reliance on Few Suppliers	1	2	3	4	5
g	Disagreement with Partners	1	2	3	4	5
h	Ill Health	1	2	3	4	5
i	No Previous Experience	1	2	3	4	5
j	Use of Inferior Materials	1	2	3	4	5

Please record your details to facilitate contacting you, in the event that a query should arise. (The data provided in this questionnaire will be treated in strict confidence.)

Company ……

Company's CIDB Grading……

Address ……..……..

……..…

Phone ……..…….……

Fax ……...

Cell ……..……..

Email ……..…

Name ……

Designation……..…

APPENDIX 3

Cronbach Alpha Test Calculation

Topic : Investigation of Factors Associated with Insolvencies Amongst Civil Engineering Contractors in KwaZulu-Natal

Investigator: Bonga Ntuli
Year: 2012

Questionnaire No.	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Total
1	3	2	1	3	1	1	1	4	1	3	20
2	1	2	4	3	4	4	5	4	4	4	35
3	1	2	4	3	2	4	3	4	4	3	30
4	3	2	5	5	4	5	5	5	1	4	39
5	2	3	3	2	3	2	4	2	2	2	25
6	3	1	4	5	2	2	2	2	2	3	26
7	2	2	1	1	2	1	3	3	2	3	20
8	2	1	3	1	2	3	2	3	1	2	20
9	2	2	1	1	1	2	1	1	1	2	14
10	3	1	5	5	3	5	5	5	1	4	37
11	1	1	2	1	2	3	2	3	1	3	19
12	1	2	3	2	2	3	2	3	1	2	21
13	2	1	1	3	2	4	3	4	2	3	25
14	1	1	1	3	3	3	3	2	1	1	19
15	1	2	2	2	2	2	4	2	2	2	21
16	2	1	1	1	4	4	2	2	1	1	19
17	2	2	1	1	2	2	2	2	4	4	22
18	2	1	1	3	2	3	4	4	1	2	23
19	2	2	1	4	2	2	1	1	2	3	20
20	2	1	1	4	2	2	1	1	2	3	19
21	1	4	3	5	2	5	5	5	2	3	35
Total	**39**	**36**	**48**	**58**	**49**	**62**	**60**	**62**	**38**	**57**	**509**
Var	0.529	0.614	2.114	2.19	0.733	1.548	2.029	1.748	1.062	0.814	13.38

k	10
∑var	13.38
var	45.9
α	0.787
	Acceptable

APPENDIX 4

Ethical Checklist

ETHICAL ISSUES CHECKLIST FOR RESEARCH APPROVAL

To be completed by all people wishing to conduct research under the auspices of Durban University of Technology.

1. Use the Durban University of Technology's Research Ethics Policy and Guidelines to ensure that ethical issues have been identified and addressed in the most appropriate manner, before finalising and submitting your research proposal.

2. Please indicate [by an X as appropriate] which of the following ethical issues could impact on your research.

3. Please type the motivations/further explanations where required in the cell headed COMMENTS.

4. The highlighted response cells indicate those responses which are of particular interest to the Ethics Committee

NO.	QUESTION	YES	NO	N/A
	DECEPTION			
1.	Is deception of any kind to be used? and if so provide a motivation for acceptability.		x	
	COMMENTS:			
2.	Will the research involve the use of no-treatment or placebo control conditions? If yes, explain how subject's interests will be protected.		x	
	COMMENTS			
	CONFIDENTIALITY			
3.	Does the data collection process involve access to confidential personal data (including access to data for purposes other than this particular research project) without prior consent of subjects? If yes, motivate the necessity		x	
	COMMENTS			
4.	Will the data be collected and disseminated in a manner that will ensure confidentiality of the data and the identity of the participants? Explain your answer	x		
	COMMENTS: Refer to consent form			
5.	Will the materials obtained be stored and ultimately disposed of in a manner that will ensure confidentiality of the participants? If no, explain. If yes specify how long the confidential data will be retained after the study and how it will be disposed of.			x
	COMMENTS			

NO.	QUESTION	YES	NO	N/A
6.	Will the research involve access to data banks that are subject to privacy legislation? If yes, specify and explain the necessity.			x
	COMMENTS			
	RECRUITMENT			
7	Does recruitment involve direct personal approach from the researchers to the potential subjects? Explain the recruitment process			x
	COMMENTS			
8	Are participants linked to the researcher in a particular relationship, for example employees, students, family? If yes, specify how.		x	
	COMMENTS			
9	If yes to 8, is there any pressure from researchers or others that might influence the potential subjects to enrol? Elaborate.			x
	COMMENTS			
10	Does recruitment involve the circulation/publication of an advertisement, circular, letter etc.? Specify			x
	COMMENTS			
11	Will subjects receive any financial or other benefits as a result of participation? If yes, explain the nature of the reward, and safeguards		x	
	COMMENTS			
12	Is the research targeting any particular ethnic or community group? If yes, motivate why it is necessary/acceptable. If you have not consulted a representative of this group, give a reason. In addition explain any consultative processes, identifying participants. Should consultation not take place, give a motivation.		x	
	COMMENTS			
	INFORMED CONSENT			
13	Does the research fulfill the criteria for informed consent? [See guidelines]. If yes, no further answer is needed. If no, please specify how and why.	x		
	COMMENTS			
14	Does consent need to be obtained from special and vulnerable groups (see guidelines). If yes, describe the nature of the group and the procedures used to obtain permission.		x	
	COMMENTS			
15	Will a Subject Information Letter be provided and a written consent be obtained? If no, explain. If yes, attach copies to proposal. In the case of subjects who are not familiar with English (e.g. it is a second language), explain what arrangements will be made to ensure comprehension of the Subject Information Letter, Informed Consent Form and other questionnaires/documents.	x		
	COMMENTS : Attached			

NO.	QUESTION	YES	NO	N/A
16	Will results of the study be made available to those interested? If no, explain why. If yes, explain how	x		
	COMMENTS: Dissertation, journal publication, conference proceedings			
	RISKS TO SUBJECTS			
17	Will participants be asked to perform any acts or make statements which might be expected to cause discomfort, compromise them, diminish self-esteem or cause them to experience embarrassment or regret? If yes, explain.		x	
	COMMENTS			
18	Might any aspect of your study reasonably be expected to place the participant at risk of criminal or civil liability? If yes, explain.		x	
	COMMENTS			
19	Might any aspect of your study reasonably be expected to place the participant at risk of damage to their financial standing or social standing or employability? If yes, explain.		x	
	COMMENTS			
20	Does the protocol require any physically invasive, or potentially harmful procedures [e.g. drug administration, needle insertion, rectal probe, pharyngeal foreign body, electrical or electromagnetic stimulation, etc.?] If yes, please outline below the procedures and what safety precautions will be used.			x
	COMMENTS			
21	Will any treatment be used with potentially unpleasant or harmful side effects? If yes, explain the nature of the side-effects and how they will be minimised.			x
	COMMENTS			
22	Does the research involve any questions, stimuli, tasks, investigations or procedures which may be experienced by participants as stressful, anxiety producing, noxious, aversive or unpleasant during or after the research procedures? If yes, explain.		x	
	COMMENTS			
23	Will any samples of body fluid or body tissues be required specifically for the research which would not be required in the case of ordinary treatment? If yes, explain and list such procedures and techniques.			x
	COMMENTS			
24	Are any drugs/devices to be administered? If yes, list any drugs/devices to be used and their approved status.			x
	COMMENTS			

NO.	QUESTION	YES	NO	N/A
	GENETIC CONSIDERATIONS			
25	Will participants be fingerprinted or DNA "fingerprinted"? If yes, motivate why necessary and state how such is to be managed and controlled.			x
	COMMENTS			
26	Does the project involve genetic research e.g. somatic cell gene therapy, DNA techniques etc.? If yes, list the procedures involved			x
	COMMENTS			
	BENEFITS			
27	Is this research expected to benefit the subjects directly or indirectly? Explain any such benefits.			x
	COMMENTS			
28	Does the researcher expect to obtain any direct or indirect financial or other benefits from conducting the research? If yes, explain.		x	
	COMMENTS			
	SPONSORS: INTERESTS AND INDEMNITY			
29	Will this research be undertaken on the behalf of or at the request of a pharmaceutical company, or other commercial entity or any other sponsor? If yes, identify the entity.			x
	COMMENTS			
30	If yes to 29, will that entity undertake in writing to abide by Durban University of Technology's Research Committees Research Ethics Policy and Guidelines? If yes, do not explain further. If no, explain.			x
	COMMENTS			
31	If yes to 30, will that entity undertake in writing to indemnify the institution and the researchers? If yes, do not explain further. If no, explain.			x
	COMMENTS			
32	Does permission need to be obtained in terms of the location of the study? If yes indicate how permission is to be obtained.		x	
	COMMENTS			
33	Does the researcher have indemnity cover relating to research activities? If yes, specify. If no, explain why not.			x
	COMMENTS			
34	Does the researcher have any affiliation with, or financial involvement in, any organisation or entity with direct or indirect interests in the subject matter or materials of this research? If yes, specify.		x	
	COMMENTS			

The undersigned declare that the above questions have been answered truthfully and accurately

STUDENT NAME……

SIGNATURE……. **DATE…….**

SUPERVISOR NAME……

SIGNATURE……. **DATE…….**

NB. Completed and signed at proposal stage

APPENDIX 5

List of Publications and Conference Presentations

PUBLICATIONS

Publication of paper in Engineering, Technology and Applied Science Research (ETASR). Ntuli, B. and Allopi, D. Volume 4, N° 1, 2014, 570-575. Impact of Inadequate Experience and Skills on the Construction Sector in KwaZulu-Natal, South Africa*,* ISSN 1792 – 8036.

Publication of paper in the International Journal of Engineering and Innovative Technology (IJEIT) Conference 2013. Ntuli, B. and Allopi, D. Volume 2, Issue 11, May 2011. Capacity Challenges Facing Civil Engineering Contractors in KwaZulu-Natal, South Africa*,* ISSN 2277 – 3754

CONFERENCE PRESENTATIONS

7th Annual Symposium – Transportation Research: The Eastern Centre of Transport Development (Ecotd). Ntuli, B. and Allopi, D. 2007. Factors Associated with Insolvencies Amongst Civil Engineering Contractors in KwaZulu-Natal. Paper delivered at the 7th Annual Symposium – Transport Research: The Eastern Centre of Transport Development (Ecotd), Assagay (Shongweni), South Africa, October 2007.

28th Southern African Transport Conference (SATC 2009). Ntuli, B. and Allopi, D. 2009. Factors Associated with Insolvencies Amongst Civil Engineering Contractors in KwaZulu-Natal. Proceedings of the 28th Southern African Transport Conference (SATC 2009), Pretoria, South Africa, July 2009.