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DETERMINANTS OF THE PERFORMANCE OF CONSTRUCTION SMEs IN SOUTH AFRICA

by

Nicholine Tubane: 1519789

Supervisor:

Dr. Diran Soumonni

To the Faculty of Commerce Law and Management, at the University of Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Management in the field of Entrepreneurship and New Venture Creation (MMENVC).



Wits Business School

17 November 2017

DECLARATION

I, the undersigned, Puleng Nicholine Tubane, hereby confirm that this thesis submitted for the degree of Master of Management in the field of Entrepreneurship and New Venture Creation (MMENVC) is independent of and is not related to any existing work by another scholar or any other university.

Signed:

……..

Date:

……..

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ABSTRACT

This research focuses on determinants that contribute to Small and Medium Enterprises' (SMEs) performance in the construction industry. The post-apartheid South African government continues to experience challenges of unemployment in general. A 2011 census revealed that South Africa faces a number of economic challenges including unemployment, a lack of capital investment and a lack of Skills Development. In order to address these challenges, the South African government introduced the Skills Development Act (No. 97 of 1998) with the aim of improving skilled workforce competency, as well as reducing unemployment in the country. SMEs in South Africa were identified as a major role in the economy and a critical source of job creation. In South Africa, SMEs account for about 91% of formal business entities, contributing between 51% and 57% of gross domestic product (GDP), and providing almost 60% of all employment (Kongolo, 2010).

The significance of SMEs in contributing to the economic growth of South Africa was recognised by the government and, as such, a framework for SME support and development was established. The National Small Business Act (No. 102 of 1996) regulates SMEs in South Africa and also serves to establish the National Small Business Council.

This study includes a review of specific literature with respect to regulatory compliance and the challenges faced by SMEs within the construction industry, as well as research methodology that includes research results from the construction industry.

The South African Register of Contractors (RoC) was established by the Construction Industry Development Board (CIDB) in terms of the CIDB Act (No. 38 of 2000). The register was designed as a tool to measure construction companies' performance in relation to growth, service delivery, and enterprise development, as well as to create sustainable enterprises.

The study focused on how the RoC may be used by the construction industry to measure performance amongst contractors that are graded from one to six.

Furthermore, the study demonstrated the correlation between the contractors' competency and their ability to be competitive in developing their value proposition within the built environment. The CIDB keeps records of construction companies that are active.

Qualitative methods were used in this study to understand determinants that contribute to SME performance within the construction industry. A conceptual model was drawn to measure the control variables against the independent variables.

The main findings of the study reveal that many construction SMEs have technical skills challenges which inhibit them from reaching their financial goals. Furthermore, there is a lack of technical skills training which affects their project management skills and use of technology. Sub-contracting is one of the elements that affect the performance of many of these SMEs and needs to be regulated by governing bodies to avoid their exploitation. Sub-contractors are found to be more reliant on main contractors when it comes to strategic management and organisation of projects (White & Marasini, 2014).

The study concludes that government should enforce the new B-BBEE Codes more effectively to ensure that big construction companies develop small contractors so that they can acquire the necessary skills and experience required to participate in the industry.

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LIST OF ACRONYMS

B-BBEE	Broad-Based Black Economic Empowerment
BCEA	Basic Conditions of Employment Act
CETA	Construction Education and Training Authority
CIDB	Construction Industry Development Board
CIPC	Companies and Intellectual Property Commission
DTI	Department of Trade and Industry
GBCSA	Green Building Council of South Africa
GEM	Global Entrepreneurship Monitor
HVAC	Heating, Ventilating/Ventilation, and Air Conditioning
LED	Light-Emitting Diode
LEED	Leadership in Energy and Environmental Design
LRA	Labour Relations Act
NDP	National Development Plan
NHBRC	National Homebuilders Registration Council
OECD	Organisation for Economic Co-operation and Development
PAYE	Pay As You Earn
RDP	Reconstruction and Development Programme
SABS	South African Bureau of Standards
SANS	South African National Standards
SAPOA	South African Property Owners Association
SBAT	Sustainable Building Assessment Tool
SDL	Skills Development Levy
SME	Small Medium Enterprise
VAT	Value Added Tax

1 CHAPTER 1: INTRODUCTION

1.1 The purpose of the study

The objective of the study is to examine the regulatory compliance, technological factors, funding and access to market that affect the performance of Gauteng Small Medium Enterprises (SMEs) in the construction industry, specifically those that are based in the seven regions of the Johannesburg Metropolitan.

The study will be guided by the following research questions

- What are the technological factors that influence SME performance in the construction industry?
- To what extent do these technological factors influence the performance of the SME?
- What are the compliance factors that influence SME performance in the construction industry?
- To what extent do these compliance factors influence the performance of the SME?

1.2 Background

In South Africa, SMEs account for over 90% of all enterprises in the country. It is for this reason that the government has identified performance of SMEs as essential (Senzile, 2013). As of March 2016, unemployment in South Africa was at 27.7% (StatsSA, 2017). Given the magnitude of local unemployment, SMEs have the potential to address unemployment challenges by providing employment. SMEs are currently struggling to survive and, as a result, unemployment remains a challenge in South Africa. Therefore, it is important that SMEs remain in good standing to ensure they are able to sustain employment (Kongolo, 2010).

The study focuses on the construction industry in the seven regions of the Johannesburg Metropolitan. It was feasible to conduct this type of study as it was possible to reach a sufficient number of SMEs in order to source the necessary information. One of the significant characteristics of a successful and developing

economy is to grow SMEs. SMEs play an important role in the development of a country (Feeney & Riding, 1997).

SMEs contribute to economic development in two ways: by creating employment for rural and urban growing labour force, and providing desirable sustainability and innovation in the economy as a whole. In addition, a large number of people rely on the SMEs directly or indirectly (Fida, 2008). The development of SMEs is seen as the way to accelerate the achievement of wider socio-economic goals, including poverty alleviation (Cook & Nixson, 2000). Economics play an important role in the development process of any country. A well supported and enhanced small business sector is likely to continue contributing to the economic development process in the same way as large business (Abraham, 2003).

The National Small Business Act (No. 102 of 1996), as amended in 2003, describes an SME as a separate and distinct entity, including cooperative enterprises and non-governmental organisations managed by one owner or more. This also includes its branches or subsidiaries if any is predominantly carried out in any sector or sub-sector of the economy mentioned in the schedule of size standards and can be classified as an SME by satisfying the criteria mentioned in this schedule (Government Gazette of the Republic of South Africa, 2003). Appendix A shows the schedule of size standards for the quantitative definition of SMEs in South Africa.

Small enterprises usually have between 20 and 50 employees, with an annual turnover of between R3 million and R6 million, and a gross asset value between R500 000 and R1 million (National Small Business Amendment Act, 2003). A medium enterprise has between 51 and 200 employees with a total annual turnover of between R6.1 million and R26 million, with a total gross asset value between R1.1 million and R5 million (National Small Business Amendment Act, 2003).

Nevertheless, despite the noted contributions of new SMEs, their failure rate in South Africa is one of the highest in the world. About 75% of new SMEs in South Africa are unable to become established firms. According to Von Broembsen, Wood, and Herrington (2005), the possibility of a new SME surviving beyond 42 months is less likely in South Africa than in any other Global Entrepreneurship Monitor (GEM)-

sampled country. This implies that new SMEs will not be able to fulfil their developmental roles in South Africa.

The focus of this study, therefore, is to investigate the obstacles to the growth of new SMEs in South Africa. Five variables emerged as the dominant factors that cause new SMEs to fail at their early stages (Olawale & Garwe, 2010).

Furthermore, there are many different definitions of business growth and ways of measuring this growth. Business growth is typically defined and measured using absolute or relative changes in sales, assets, employment, productivity, profits and profit margins. Sales data are usually readily available, and business owners themselves attach high importance to sales as an indicator of business performance. In addition, sales growth is also easier to measure compared with some other indices and is much more likely to be recorded. Sales are therefore a good indicator of size and growth. Sales may also be considered a precise indicator of how a firm is competing relative to their market (Barringer, Jones, & Neubaum, 2005).

Enterprises that operate in the construction industry vary according to size and comprise micro, small, medium and large enterprises, usually rated by the Construction Industry Development Board (CIDB). The CIDB grading system varies between one and six for small enterprises based on their turnover. Large enterprises go up to grade nine.

The purpose of this dissertation is to report on investigation into the factors that contribute to SME performance in construction. The most recent census results revealed and concluded that South Africa is faced with a number of challenges, including high levels of unemployment estimated to be at 27.7% of the population (StatsSA, 2017), low levels of investment, and inequalities in income distribution and skills development (Mahadea & Pillay, 2008).

As a result, the Skills Development Act (No. 97 of 1998) was promulgated. The main purpose of the Act is to address these challenges through the creation and improvement of a skilled workforce for the national economy (Skills Development Act, No. 97 of 1998). With the evolving economy status of South Africa and the

country's recently launched National Development Plan 2030, the construction industry has been identified as having a significant role to play in the achievement of South Africa's socio-economic development (CETA, 2011).

The construction industry is the main sector of the national economy responsible for the creation of the built environment. Several professionals, artisans and labour-intensive – including skilled, semi-skilled and unskilled – workers operate within the built environment (Lenfle & Loch, 2012). According to the CIDB, the nature of the construction industry structure in South Africa means that SMEs form more than 63% of construction firms operating within the industry (CIDB, 2004). Therefore it is important to understand the factors that contribute to SME performance in construction.

The South African construction industry faces unique challenges due to its history. The primary challenge faced is that an estimated half of the workforce is unemployed, the majority of which have no skills and minimal education (Kambuwa & Wallis, 2002). The South African government has identified and worked to address this challenge by determining the benefit of much-needed basic infrastructure, and the overall economic benefit has been identified as provision of construction jobs, improvements of work productivity, and the growth of small and medium construction enterprises (McCutheon, 2002).

This determination was documented in the Department of Public Works' White Paper (1999), aimed at "creating an environment for reconstruction, growth and development in the construction industry". The policies developed in this White Paper demonstrated the need for investment in the growth of SMEs that are primarily small-scale black contractors who have been targeted by the government to improve quality, competitiveness, and profitability, while meeting the client's needs and desires. Ngowi, Pienaar, Talukhaba, and Mbachu (2005) further stated that in developing countries most building is done by small and medium sized construction enterprises. Therefore, education and training in the small and medium sized construction firms has been recognised as a long term investment that is expected to reduce poverty in South Africa (Kambuwa & Wallis, 2002).

The basis of the need for skills development in South Africa accompanied the Skills Development Act (No. 97 of 1998), which came about in the midst of high levels of unemployment in South Africa (Erasmus & Van Dyk, 2003). The main aim of the Act is to address the need to improve skills through increased investment in education and training of labour. The Construction Education and Training Authority (CETA), based on the essence and principles of the Act, was also established in April 2000 to focus on the skills development, specifically in the construction industry (Erasmus & Van Dyk, 2003).

1.3 Research problem

SMEs in South Africa and in other countries are increasing their efforts to understand how they can improve their performance. To be competitive, some strategic management scholars and policymakers have advocated for more strategic planning practices. However, there is an unresolved debate amongst researchers about the effect of strategic planning on business performance. Whilst studies were conducted to establish the relationship between strategic planning and business performance, the evidence has been mixed (Andersen, 2000; Falshaw, Glaister, & Tatoglu, 2006). Consequently, conflicting views about the effect of strategic planning on business performance still exist.

How to measure business performance still remains an argumentative subject to business practitioners and academic communities (Tang & Zhang, 2005; Punn & White, 2005). However, several researchers tend to agree that organisations can generally use the objective rather than subjective measures to assess their success, provided that accurate information be provided (Chow & Van der Stede, 2006; Panigyrakis & Theodoridis, 2009). While objective measures include financial records – namely, actual profit, turnover, return on investment, return on capital employed, and inventory turnover – subjective measures tend to rely on managers' and key role players' (owners) perceptions of business performance (Phillips, Davies, & Moutinho, 1999).

SMEs in South Africa operate in a very challenging environment. A lack of business skills, failure to comply with regulatory bodies, as well as insufficient funding are

some of the factors that hinder the performance of SMEs. There are different categories or subsectors of SMEs (see Appendix A) in the country, including manufacturing, electricity, gas and water, mining and quarrying, construction, and agriculture, amongst others. However, this study is limited to SMEs in the construction industry, specifically, the seven regions of the Johannesburg Metropolitan. The problem identified is divided into two sub problems which are discussed below.

1.3.1 Sub-problem 1

To identify the sustainable practices that affect the performance of SMEs in the construction industry.

1.3.2 Sub-problem 2

To measure the factors that influence the performance of SMEs in the construction industry, and analyse the internal and external factors that constrain the continuous development/growth in the built environment in South Africa.

1.4 Significance of the study

SMEs, who still remain key drivers of the country's economy, were promulgated by the government through the National Small Business Act (No. 102 of 1996). The purpose of this Act was also to form an environment where SMEs could be supported and thrive, with a view to creating employment in South Africa. The government thus provides a platform whereby these enterprises can be supported by various programmes developed by the government, as well as by policies governing support from the private sector.

To address the imbalances of the past, the government additionally introduced a code of good practice called Broad-Based Black Economic Empowerment Act (Act 53 of 2003). B-BBEE encourages black people to participate in the South African economy (Tobergte & Curtis, 2013). For example, SMEs employing only black people will have a high score in terms of the B-BBEE Act, thus creating an opportunity for these SMEs to receive financial support from the government. In addition, if an SME has shareholders with disabilities and/or black women or youth,

this also increases the opportunity for the SME to receive financial support. (Table 5 in chapter 4 shows how B-BBEE level status is calculated and Table 6 shows how SME entities achieve a certain level.)

B-BBEE ratings have been developed in terms of the statutes, particularly the B-BBEE Codes of Good Practice in terms of which SMEs with high rating will qualify for different forms of support from government and from the private sector. Generally speaking, SMEs, once established, either remain SMEs for a very long time or go under. It is in very few instances that they grow into large enterprises (B-BBEE, 2003).

1.5 Delimitations of the study

The research scope of the study has been restricted to the construction industry in the seven regions of the Johannesburg Metropolitan. The relevant SMEs are registered with CIDB or National Home Builders Registration Council (NHBRC), and construction industry affiliations (SAPOA and GBCSA). The main reason for this selection is because a significant number of SMEs are based in Johannesburg, Gauteng, and can be easily traced and contacted for the purposes of data collection and any necessary follow-ups. It has already been explained that the main reason for focusing the study on SMEs is because the CIDB database indicates that they form a majority of construction firms.

Furthermore, the research limits itself to contractors registered with the CIDB in grades 1 to 6. Within these grades, the research investigates the assessment criteria of the SMEs when they apply to the CIDB to upgrade their status, and to what extent these criteria assist in improving the SMEs' turnover performance.

1.6 Chapter Conclusion

In conclusion, the study's objectives was outlined in this chapter which was to examine the factors that affect SMEs in the construction industry by specifically investigating factors like regulatory compliance, technological factors, funding and access to markets. The chapter went further to divide the reseach into two sub categories which sub divided the identified problem to simplify the study's

discussions. The context or background to the study was used to introduce some literature to guide the progress to the study. In particular, SME performance was outlined as the key outcome variables that need to be addressed within the construction industry, specifically in the Gauteng Province (Johannesburg Region), and its associated constructs. In addition the challenges faced by SMEs, the programmes designed to provide solutions; and the benefits to the construction industry were discussed. The chapter concluded with a short explanation of the delimitations and the significance of the study.

2 CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The aim of this chapter is to review existing literature relevant to the study. The first part of the chapter highlights some of the experiences faced by SMEs in the construction industry, with an analysis of the regulations with which SMEs are expected to comply. This includes compliance with policies and/or regulatory bodies, including Companies and Intellectual Property Commission (CIPC), taxation, labour laws (COIDA), CIDB, B-BBEE, and optional registration with NHBRC, SAPOA, and GBCSA. The last part of the literature examines challenges faced by SMEs in South Africa within the construction industry.

According to Adendorff, Appels, and Botha (2011), the construction industry is generally driven by projects. The success of an enterprise is inextricably tied to the success of the project (Barry & Sebone, 2009). Based on this, they concluded that SMEs that deliver poor quality and don't comply with building regulations often do not complete projects successfully. This may lead to a very low success rate of these SMEs.

Small and medium size businesses are most likely to fail because they don't manage costs or understand their financial statements well enough to track the financial position of the company and thereby manage cash flow (Waters, 2013). Furthermore, it was observed that SME owners are often more focused on their technical abilities and have a tendency to chase revenue, sending out numerous quotations without understanding the cost implications (Waters, 2013).

In the South African context, the lack of understanding regarding costing is underestimated by SMEs, especially when tendering for projects from the public sector. Consequently, SMEs underquote for tenders, leading to an inability to complete projects within the specified turnaround time and compromising on quality (Irani, Z et.al 1998). The difficulties encountered by SMEs insofar as the private sector is concerned include sub-contracting to main contractors, who in most instances prescribe the margins to be made from tenders or continuously request quotations to the detriment of the SME. In certain instances, the private sector

regulates its tariffs, meaning that margins are pre-set, and SMEs are unable to compete given their current costs which prohibit profitability.

2.2 Taxation

Compliance commences with registration for tax which in certain instances will include registration for VAT if the turnover meets the required threshold of R1 million. Insofar as public sector tenders are concerned, a tax clearance certificate is required and this is often true of the private sector as well. SMEs are expected to comply with tax regulations. Moreover,failure to comply with these will result in disqualification from the tender process.

Tran-Nam and Glover (2002) confirmed that taxation is a key element in the operation of a business. This research considered the tax issues affecting the small business sector, and recognised the key concerns communicated by SMEs. The industry was uncertain about the density and steadily changing nature of the tax system and the excessive problem of ‘red tape’ that it forces upon SMEs.

The basic decision process models demonstrated in this study suggest that further mapping of behavioural decision theory against compliance is warranted (Casey & Scholz, 1991). The study recognised numerous behavioural occurrences which are inconsistent with rational maximising models of limitation that are likely to affect compliance. The study suggest that taxpayers' decisions are sensitive to how risk information is presented and how preferences are expressed. When risks of noncompliance are known to the taxpayer, the preference reversal phenomenon suggests that the way preferences are expressed (e.g. whether a tax professional is used) can affect compliance decisions by altering the relative weight placed on the probability of detection versus the penalty if detected (Casey & Scholz, 1991).

The conjunction effect suggests that compliance can be enhanced by providing probability information for individual, high probability links in the enforcement chain. Ambiguity and vagueness effects suggest that compliance decisions are affected by the degree of imprecision in estimates of the probability of detection. Similar effects may occur for penalty estimates. However, boundary effects demonstrate that

whether vagueness about risks increases or decreases compliance may depend critically on where the risk estimates fall within the range of possible values (Casey & Scholz, 1991).

Evans, Carlon, and Massey (2005) report on the examination/investigation of the connection between record-keeping practices of SMEs, their likelihood of exposure to tax, and related business compliance issues. These issues could include tax audit reviews (consolidated with the prospect for objecting to tax audit results where record-keeping practices are poor), higher tax compliance, and more prominent liquidity, including cash-flow issues that may cause challenges to paying tax that is collected on behalf of the Australian Taxation Office (ATO), which in turn can lead to SME failure (Evans et al., 2005).

The paper analyses these issues and proposes that, despite the various connections between small business record-keeping and compliance issues relating to tax, these connections are neither as direct nor solid as the underlying theories may have maintained. The research used both qualitative and quantitative methods and included over 500 small business owners and senior managers, over 300 tax professionals, and a small number of ATO auditors (Evans et al., 2005).

Generally, the research demonstrated a discord between perceptions and reality. All the key participants – SME owners/managers, tax professionals, and ATO auditors – alleged direct relationships between poor SME record-keeping and negative tax compliance results. However, these observations were not generally affirmed by the confirmation of genuine conduct. Poor record-keeping did not, in itself, prompt a weakness to audit. However, once audited, SMEs with poor records would probably have negative audit results. Poor record-keeping will fundamentally mean higher compliance costs. Furthermore, poor record-keeping may lead to poor liquidity and cash-flow issues (Evans et al., 2005).

The research findings suggest that further study is required to investigate these intricate connections. The present study was goal-oriented in its extension and was eventually limited in its findings by its dependence on the self-appraisal of the quality of record-keeping by SMEs themselves. The research should focus on the three

compliance components (i.e. audit, compliance costs and liquidity) in relation to record-keeping practice. In addition, future researchers should pursue more impartial measures regarding the quality of SME record keeping practices, using evaluations from the professionals originally intended in this study and by the researchers themselves (Evans et al., 2005).

A study concentrating on the tax function in small and medium manufacturing concerns operating in the Gauteng Province in South Africa was recently undertaken (Abrie & Doussy, 2006). The SME industry in South Africa is acknowledged to be a key performance area, as was demonstrated by research done by Ntsika Enterprise Promotion Agency, which has highlighted the importance of SMEs and their contribution to employment (DTI, 2004).

The South African government has actively promoted small business by implementing several initiatives to streamline the business environment in which small enterprises operate. Some of the measures that were introduced were the restructuring of selected labour regulations and the provision of tax relief. Although these measures brought a welcome relief for tax payers and government seemed to be committed to easing the SME tax rate, the South African Revenue Service (SARS) Commissioner Pravin Gordhan acknowledged that compliance with the tax regime is still a considerable burden for small businesses (Mahabane, 2005).

There is a vast body of literature on tax compliance that details various attempts to describe tax resistance and to identify and explain the factors which influence compliance. Castro and Scartascini (2015) and Doerrenberg (2015) offer comprehensive reviews of some of the seminal studies in this regard.

Comparatively, few tax compliance studies have been conducted in South Africa since 1994. Alm and Martinez-Vazquez (2001) and Cummings, Martinez-Vazquez, McKee and Torgler (2004) analysed tax compliance in South Africa, using laboratory experiments conducted in 1999, and field data collected for the World Values Survey in 1996 and the Afrobarometer in 2000. Their findings confirm that tax compliance exceeds predictions using the conventional economic models and they indicate that

compliance is closely related to how tax institutions and government behaviour are perceived.

Alm and Martinez-Vazquez (2001) conclude that social norms play an important role in compliance decisions in South Africa. However, they indicate that these concerns are not fully understood. Lombard (2002) comments on the service delivery levels of SARS. Smith (2003) and Friedman (2003) identify the need to understand the taxpaying culture and taxpayers' behaviour. Hlophe and Friedman (2002) feel that there is some room for improvement in the transformation of taxpayer attitudes.

The main problem with economic models is that people pay more tax than these models predict. This awareness has led scholars to turn to sociology and psychology in an attempt to explain taxpayer behaviour. This type of research has encouraged the construction of interactive behavioural models that recognise the fact that taxpayers are individuals and that they do not make decisions in isolation. A taxpayer's inherent character and situation, as well as the behaviour of other taxpayers and the authorities, may have an impact on the compliance decisions of taxpayers.

Therefore, social psychological variables like stigma, reputation and social norms should also be taken into account when one tries to predict non-compliance (Abrie & Doussy, 2006). The literature also includes contributions regarding the importance of selected background factors (Torgler & Schneider, 2002), enforcement (Castro & Scartascini, 2015; Doerrenberg, 2015), and taxpayers' attitudes, beliefs and norms (Niemirowski, Baldwin & Wearing, 2003). Chattopadhyay and Das Gupta (2002) summarise some of the important determinants of compliance. They mention, inter alia, tax complexity and compliance costs.

2.3 Compliance with labour laws

SMEs are faced with a number of labour compliance requirements, including occupational health and safety, workers' compensation, licensing requirements, local council planning, and a host of other regulatory responsibilities (Evans et al., 2005). Employers are required to register their employees for what used to be known as

Workman's Compensation, compensation for occupational injuries and diseases in terms of the Compensation for Occupational Injuries and Diseases Act (No. 130 of 1993). Entrepreneurs are also required to ensure that the working conditions of workers are safe in terms of the Occupational Health and Safety (OHS) Act (No. 85 of 1993).

A safe working environment includes a first aid kit, protective clothing, machinery that is safe, firefighting equipment, ladders, appropriate lighting, ventilation and temperature, and offers noise and asbestos prevention (OHS Amendment Act, No. 181 of 1993; Labour Relations Act, No. 66 of 1995). Non-compliance with OHS requirements may result in the Department of Labour prohibiting the SME from continuing to operate in the construction industry. Furthermore, the Department of Labour may take punitive financial measures against the SME (e.g. impose fines in terms of the OHS Act).

The Labour Relations Act (LRA) (No. 66 of 1995) outlines the rights of workers within an organisation and has regulated the policies and procedures to be followed by companies when addressing the issues of human resources including dispute resolution procedures. However, many SMEs complain that bargaining councils are not designed to serve their interests when it comes to wage negotiations, including payouts for new staff members who are still on probation until the date of their hearing which is often postponed (LRA, No. 66 of 1995; Berry, Blottnitz, Cassim, Kesper, & Seventer, 2002).

The Basic Conditions of Employment Act (BCEA) (No. 75 of 1997) outlines employment conditions and regulates the following: ordinary working hours, overtime hours, annual leave, overtime rates, sick leave, maternity leave and compensation pay. These conditions are applicable to full-time employees working 40 hours per week (Basic Conditions of Employment Act, No. 75 of 1997).

SME owner-managers indicate that businesses are often discouraged by the minimum wage levels set by the Employment Conditions Commission (ECC) for employing unskilled labour, especially new entrants. The currently unpaid four-month' maternity leave also discourages them from employing young women.

Furthermore, average working hours are not allowed by individual agreement together with the restriction of maximum overtime, which reduces the labour flexibility often required by SMEs (Basic Conditions of Employment Act, No. 75 of 1997).

The Multi-Shift Scheme of the ECC is to encourage small firms to introduce a three-shift working day, while the antagonistic BCEA prohibits multi-shift work; in exceptions, a written approval is given by relevant trade unions. Discussions of the reduction in normal weekly working hours from 45 to 40 are unsettlling to most SMEs, particularly because the minimum overtime pay rate has been increased to 150% of the normal rate. SMEs thus view the expansion of their permanent labour force as restrained by the costs of three weeks' leave provision plus three days' family responsibility leave annually, which is often abused. The compensation pay and notice provision requirements cause SMEs to keep working in a compressed amount of time rather than decrease their labour contingent (Berry, Blottnitz, Cassim, Kasper, & Seventer, 2002).

The purpose of the Employment Equity Act (No. 55 of 1998) is to prevent unfair discrimination by employers on the basis of race, gender and/or health status. Companies with more than 50 employees are required to have an Employment Equity Plan ensuring the fair representation of Previously Disadvantaged Individuals (PDIs) in all employment categories and organisational levels. Many large businesses experience problems in relation to the assignment of dedicated senior personnel in terms of designing, evaluating and monitoring the required plans. In addition, exorbitant recruitment costs relating to the identification of candidate fit for PDI vacancies requiring highly skilled individuals, coupled with the high retrenchment costs, make it difficult for SMEs to comply with the Act (Berry et al., 2002).

A number of challenges encountered by SMEs involve the need to increase their labour force and to ensure effective allocation. The most important contributors to SME growth are the role of labour, labour markets and skill levels. The most prominent factor aggravating unemployment in South Africa is the presence of a large unskilled labour force, which coincides with the following challenges:

- Creating jobs in the short-term due to limited likelihood of the competitive tradeable sector;

- When achieving export and import competing, success in more labour-intensive tradable sectors would have been beneficial due to the process of globalisation. The entry of large yet very low-wage countries such as India and China creates difficulties when competing with the products they manufacture;
- South Africa's legacy of limited access to a labour force has created a large proportionate low-skilled component of the labour force at a time when demand for this skills level is falling rapidly;
- If the equilibrium wage is very low and should be accepted, trade unions would naturally be unwilling to accept this as they carry a significant influence. In this environment, the trade unions' challenge is to determine the best possible settlement between the needs and desires of workers, the capacity of SMEs to produce productive and remunerative employment, and the position of unions.

SMEs are generally associated with greater labour-intensive production and are therefore perceived to have a high labour-absorptive capacity. Many researchers observed that most employment produced in the SME sector does not result from the growth of more established and larger SMEs but from the establishment of new micro and survivalist enterprises.

2.4 Construction Industry Development Board (CIDB)

In terms of CIDB regulations, contractors are graded based on true methods, including track record and available capital (Advisory, 2014). Registration with the CIDB is a requirement in terms of the CIDB Act (Advisory, 2014). Since 2004, CIDB regulations have provided a structure for grading contractors in so far as their abilities and capabilities, and the volume of the tasks they can perform. Previously, the grading of contractors was based on two techniques, namely reputation and capital accessibility. The latter implied that a contractor could achieve a higher grading provided they could access capital, regardless of their reputation. This resulted in CIDB amendments to the regulation in 2013 to accommodate a positioning system in view of both reputation and accessible capital.

The CIDB has been effective in regulating misconduct in the construction industry for the period 2007 to 2012, and has prosecuted various infringements of the CIDB Act (CIDB, 2000). Based on this, firms and individual executives have been suspended for predetermined periods (mostly from 6 to 12 months and in a few cases up to 60 months), had to reapply for registration, had to pay a fine of not more than R100 000, and/or had to downsize. As such, the CIDB has been empowered by the Act to effectively manage the construction industry. In order to limit construction cartels, the CIDB also engaged different stakeholders in order to explore competitive ways for the industry to grow (CIDB, 2000).

The CIDB has also drawn on lessons from other countries including the UK, USA, South Korea and the Netherlands. It is believed that the CIDB could assume a more dynamic role in restricting segment cartels if it was allowed adequate resources to prosecute firms that may be involved in conniving practices. Other than penalising firms for up to R100 000 for every infringement, the most extreme measure the CIDB can take against a firm is to expel the organisation (and its executives) from the register of temporary workers such that they are prohibited from taking part in open division contracts. A combination of the proposed intercessions at the regulatory, procurement and firm levels could make the South African construction industry less prone to deceitful practices and, to a substantial degree, other procurement anomalies (Sohail & Cavill, 2008).

Notwithstanding, the CIDB has highlighted the need to unlock performance constraints, capacity building and ways to create sustainable enterprises (Bikitsha, Root, Nghona, & Venkatachalam, 2010). Stewart, Miller, Mohamed, and Packham (2003) discovered that SME contractors have challenges that impede on their performance. Martin (2010) believes that SME contractors' performance in South Africa is also prohibited by large contractors' exploitation due to sub-contracting conditions that limit their growth. In addition, it has also been shown that leadership characteristics have an impact on and advantage in the performance of an enterprise (Ratnaningsih, Anwar, Suwignjo, & Wiguna, 2010). Furthermore, Scheepers, Hough, and Bloom (2008) added that "SMEs with well-developed entrepreneurial skills are able to sustain growth and innovation which are critical competitive advantages in the 21st century". As a result, the CIDB should act to address the exploitation of small

contractors by ensuring that transformation, skills transfer, and capacity building, amongst others, are endorsed within the construction industry.

2.5 National Homebuilders Registration Council (NHBRC)

The National Homebuilders Registration Council (NHBRC) regulates the home building industry. SMEs, like all other enterprises in the building industry, are required to register with the NHBRC, in order for the latter to monitor and evaluate the quality of the projects undertaken by SMEs. Registration with NHBRC is formal in nature.

The NHBRC was established in 1998 in accordance with the provisions of the Housing Consumers Protection Measures Act (No. 95 of 1998). The NHBRC's responsibility is to protect the interests of housing consumers and to ensure that builders comply with the prescribed building industry standards as per the Home Building Manual (Housing Consumers Protection Measures Act, No. 95 of 1998). However, this is optional in the event that a business is involved in refurbishments that do not include the structural construction (e.g. tenant installation, maintenance work).

The NHBRC is governed by the Housing Consumers Protection Measures Act (No. 95 of 1998). The role of the NHBRC is to:

(a) Provide warranty protection against defects in new homes, representing the interests of housing consumers;

(b) Regulate the home building industry;

(c) Protect housing consumers against home builders' failure to comply with their obligations in terms of this Act;

(d) Create and encourage ethical and technical benchmarks in the home building industry;

(e) Upgrade structural quality in the interests of the home building industry and housing consumers;

(f) Provide housing consumer information and promote the rights of the housing consumers;

(g) Assist home builders with registering and communicating in terms of this Act;

(h) Train and inspect home builders to achieve and maintain satisfactory technical benchmarks of home building.

The Act requires that registered contractors enrol all new homes 15 days before the building project commences to ensure that consumers are protected against poor building practices. The NHBRC will then deploy their inspectors to ensure that construction is without structural defects (Housing Consumers Protection Measures Act, No. 95 of 1998). The housing consumer qualifies for a warranty cover for minor defects identified within the first three months of occupation, roof leaks identified within the first year of occupation, and cover against major structural defects identified within the first five years of occupation (Housing Consumers Protection Measures Act, No. 95 of 1998). It is therefore imperative for every contractor constructing houses to register with the NHBRC.

A study conducted by Lizarralde and Root (2007) shows that South Africa has challenges in delivering quality of new houses for its community. The country's housing policies depend on the formal construction industry to achieve government's target of subsidised housing delivery in both rural and urban areas. However, there seems to be an increase in the rise of prefabricated shacks in the informal sector. This 'solution' is problematic in that shacks don't comply with South African building regulations. They have, however, reduced the gap in demand for informal housing delivery in the country.

Lizarralde and Davidson (2006) identified similar gaps between formal and informal housing project strategies that allow the demand for informal sector shacks to increase significantly because shacks are affordable. Their study focused on informal settlement in Colombia, India, and South Africa to identify similarities. Despite the contextual differences, commonalities were found in shack building strategies (see Appendix D).

2.6 Broad-Based Black Economic Empowerment (B-BBEE)

In order to obtain a B-BBEE rating, SMEs are required to register in terms of the BBBEE Act. The main objective of this Act is to advance economic transformation

and enhance the economic participation of black people in the South African economy, with a view to eradicating the inequalities of our apartheid past. Key elements of the B-BBEE Act in businesses are ownership, management control, employment equity, preferential procurement, skills performance, enterprise performance, and corporate investment. The legislation requires that procurement processes, in both private and public sectors, take the B-BBEE credentials of the concerned firm into account. The B-BBEE Act applies to all sectors of the South African economy (B-BBEE Act 53 of 2003).

The revised BBBEE rating may possibly result in companies to be downgraded for their BBBEE status with effect from 1 May 2015. For example a company with 65 points would have an “old” BBBEE level 4 rating but a “new” BBBEE level 7 rating. This will results with a major implications for businesses especially for those companies whose customers require a minimum BBBEE status from suppliers. Companies with legally binding or other commitments to preserve a BBBEE status for ownership fulfilment and for companies with Government licenses or other authorisations requiring a BBBEE status. These companies will have to review their current BBBEE strategy to assess the impact of these changes and take steps to try and maintain their existing BBBEE ratings.

REVISED BBBEE ELEMENTS

Under the current “generic” Codes, the following seven elements are taken into account when

Calculating a company BBBEE rating:

1. Ownership
2. Management Control
3. Employment Equity
4. Skills Development
5. Preferential Procurement
6. Enterprise Development
7. Socio-Economic Development

The amendments to the “generic” Codes reduce the number of elements to five by fusing the enterprise development/preferential procurement and management control/employment equity elements.

2.7 Innovative Performance

Innovative performance is composed of three dimensions: inventive performance, technological performance, and commercialisation (Hagedoorn & Cloodt, 2003). Hagedoorn and Cloodt (2003, p. 1366) suggest that inventive performance can be characterised as “the achievements of companies in terms of ideas, sketches, models of new devices, products, processes and systems”. Inventive performance is often assessed by summing patents and patent citations. Hagedoorn and Cloodt (2003, p. 1367) define technological performance “as the accomplishment of companies with regard to the combination of their R&D input, as an indicator of their research capabilities, and their R&D output in terms of patents”. Commercialisation refers to the level of new product introduction. An all-encompassing comprehension of the innovative performance of firms incorporates “their research input, the size of their inventive activities, the quality of their inventive output and their level of new product introduction” (Hagedoorn & Cloodt, 2003, p. 1367).

Innovative performance is deemed crucial to organisational success. Kim and Maubourgne (2005) acknowledge that firms need to innovate in order to endure and flourish in 64 global markets that we researched. Schumpeter (1934) contended that innovative performance bestows monopoly rents and spawns enduring entrepreneurial success. The launch of new innovative products, services and/or markets distinguishes entrepreneurial firms from competitors (Porter, 1980). Innovative entrepreneurial firms differentiate themselves from competitors, enjoy higher customer loyalty, and can secure superior pricing for their products (Porter, 1980).

Further, through innovative performance, entry barriers for prospective challengers can be erected and the firm’s position in the industry strengthened leading to continual high profits (Porter, 1980). Nevertheless, other scholars question the supposed benefits of innovative performance since innovation necessitates

considerable means (Van de Ven, 1986), enhances uncertainty and threats (Eisenhardt & Martin, 2000), is laden with elevated failure rates (Berggren & Nacher, 2001), and implies short-term losses (Block & MacMillan, 1993).

Defining Performance

Organisational performance is an important dependant variable for strategy and entrepreneurship scholars. Entrepreneurship and strategy are assessed based on their contribution to organisational performance. Thus, measuring organisational performance is essential in enabling researchers, entrepreneurs and managers to appraise the strategies they use against the objectives they seek to attain. Venkataraman and Ramanujam (1986) distinguished between three different types of performance: financial performance, operational performance and organisational performance. Richard, Devinney, Yip and Johnson (2009) suggest that organisational performance covers three specific areas of firm outcomes: financial performance, product market performance and shareholder return.

Financial performance involves the use of outcome based financial indicators that reflect the attainment of economic goals. Indicators such as sales growth, profitability, and earnings per share are used to evaluate financial performance. Accounting and financial market measures are frequently used to assess organisational performance. Danielson and Press (2003) found that accounting and economic returns are associated with a correlation above 0.75. However, Venkataraman and Ramanujam (1986) argue that this approach assumes that firms prioritise financial goals. Richard et al. (2009) also caution researchers against these measures, arguing that accounting measures can be rendered unreliable by differing accounting policies, human error and deception.

Financial market measures, predominantly shareholder return, have also been employed in strategy and entrepreneurship literature to evaluate organisational performance. They represent the discounted present value of future cash flows and also reflect intangible assets more effectively than accounting data (Richard et al., 2009). However, Richard et al. (2009) warn that instead of reflecting future cash flows, stock market returns are often attributable to financial market volatility,

momentum and herding behaviour. Further, market returns are less useful for assessing the performance of a product, unlisted firms or a strategic business unit. Operational performance includes broader business performance measures. Measures such as market share, customer satisfaction, product quality and manufacturing efficiency are included in the definition of business performance.

Venkataraman and Ramanujam (1986) argue that the inclusion of operational performance measures is useful since it accounts for operational success factors that might lead to financial performance. Organisational effectiveness is a broader construct. It entails organisational performance in addition to numerous internal performance measures usually connected to efficient operations and other measures that include broader stakeholders such as corporate social responsibility (Richard et al., 2009). Figure 9 illustrates Venkataraman and Ramanujam's (1986) conceptual model of the three domains of business performance.

2.8 Challenges faced by SMEs in other countries

The study aims to examine the determinants that impede SME performance and economic growth in the construction industry in Saudi Arabia, Kenya and Ghana. Saudi Arabia is an oil-rich country and oil income has been included in the framework as a conditioning variable. Globally, the construction industry is recognised as a major source of employment generation that offers job opportunities to millions of unskilled, semi-skilled, and skilled workers. Saudi Arabia is the biggest and fastest growing market in the Gulf region. In 2010, construction projects in the Gulf region were valued at $1.9 trillion, a quarter of which were located in Saudi Arabia (US-SABC, 2011). Housing demand in Saudi Arabia also has an annual increase of 3.5% in demand both commercially and institutionally.

The Saudi Arabian government serves as a catalyst in the development of SMEs in the construction industry through its investments in sectors such as housing, health care, education and infrastructure construction, to diversify the country's economy away from oil and to support economic growth. Although SMEs comprise 90% of registered businesses and 60% of total employment, lending by banks to SMEs in

the oil-rich country is significantly low (US-SABC, 2011). (Oil income has been included in the framework as a conditioning variable).

In Kenya, SMEs play a major role in economic growth and their GDP contribution has increased from 14% in 1993 to 20% in 2007. The majority of SMEs have limited resources to grow their business into large enterprises. There are many constraints hindering SME growth in Kenya and one of them is access to funding. According to the SME Banking Report (2007), there are 2.2 million SMEs participating in the economy and 88% are not registered. Of the non-registered SMEs, 23% have bank accounts. None of them have received credit from formal institutions.

Due to the perception that SMEs are generally high risk, the information required by financial institutions for them to access credit funding and the compliance requirements for lenders are many, resulting in borrowing costs. As a result, SMEs opt to raise funding from external sources such as family and friends. Furthermore, access to credit through suppliers is constrained due to the lack of credit-worthiness of most SMEs. Consequently, the low growth of SMEs has been credited by some scholars to the lack of access to funding (Nkurunziza, 2005). The lending constraints experienced by SMEs in Kenya are similar to those experienced by SMEs in the construction industry in South Africa, as identified in this study.

According to Chileshe (2012), there is a lack of risk management processes found in SMEs participating in the construction industry. In Ghana, it has been recommended that construction entities should attend project management training programmes so that their employees can learn the necessary project management skills. Project management practitioners should also establish consulting entities that offer expert advice and assistance to SMEs in the construction industry in terms of the risk management processes for projects. Project management has been identified in this study as one of the critical elements constraining the development of SME construction companies in South Africa.

2.9 Challenges faced by SMEs in South Africa

A study by Senzile (2013) identified a lack of management skills, financial constraints, the recession and volatility in construction, sub-contracting arrangements, inadequate personnel, as well as a lack of innovation as some of the determinants that contribute to poor SME performance in the construction industry in South Africa (Senzile, 2013).

2.9.1 Lack of management skills and business capabilities

In the construction industry, managers and/or business owners often lack the management skills needed in terms of daily operations. It is recommended that managers and owners of these businesses attend training to enhance their managerial capabilities. This lack of management skills is usually further exacerbated by a lack of cash flow management, inadequate human resources, poor planning and risk management tools, and poor project management systems. In order for SMEs to survive in the industry, they also need to have qualified project managers with enormous experience in the construction sector (Senzile, 2013).

2.9.2 Technological capabilities

The majority of SMEs tend not to invest in training, resulting in a lack of technical personnel such as technicians and project managers, as well as skilled artisans. According to a World Bank report (1996), SMEs that have less than 50 personnel have fewer human resource constraints than medium-sized firms. This has been attributed to simpler business processes that small businesses use when identifying unskilled and skilled workers (World Bank, 1996).

The World Bank report states that medium-sized firms have a more serious human resource constraint. SMEs do not allocate adequate funds towards training their employees and their staff management techniques need to be reviewed and improved. A lack of training is one of the key factors hindering SMEs from improving their business processes, skills and developing competent workers. Small and medium sized contractors are often unregistered and unaffiliated with the 72 recognised professional bodies, hindering adequate training (Department of Public

Works, 1999). SMEs often have limited or no access to training programmes offered by training boards (Senzile, 2013).

Bougrain and Haudeville (2002) argued that SMEs' internal research capabilities assist them to explore external technological knowledge and they tend to be more innovative in growing their businesses by using the alternative business networks. In addition, Bougrain and Haudeville (2002) indicated that technology has become complex for small, medium and large entities. Fusfeld (1986) emphasised that an entity without technology would not be self-sufficient. SME owners tend to have the final decision when it comes to technological aspects of the entity. This may impede adoption of innovative processes to grow the company. However, innovation may impose a large financial risk for SMEs, meaning that they often only innovate under pressure because of the environment or competition (Organisation for Economic Co-operation and Development, 1993).

SMEs that use their interpersonal networking skills will remain up to date regarding industry information and stay informed about their competitors. SMEs are mostly disadvantaged in terms of collecting technological information due to financial constraints (Bougrain & Haudeville, 2002). Other scholars have indicated that tacit knowledge is imperative in innovation, making networking the main channel for an entity's growth (Gemünden, 2004).

Ahmad, Halin, and Zainal (2010) proposed a direct relationship between entrepreneurial competency and business success in SMEs by looking at the different management approaches in managing their entities. Furthermore, they established that SMEs should leverage different networks to acquire skills that may assist them to manage their entities effectively.

SME contractors generally rely on manual paper-based data, intuition, and experience that is not technology-aligned, leading to a lack of innovation in their business (Benjaoran, 2009). Information technology provides an opportunity for improvement for all businesses; however, SMEs struggle to adopt technology due to financial constraints. A lack of innovation within SMEs is pointed out by Yang et al. (2007), who note that most project managers in SMEs prefer to use Excel for

recording and processing different types of data, in place of specialised computer packages for managing construction projects. They concluded by stating that the larger the firm size, the more intensive the use of IT by contractors. “This is not surprising because application of ICT comes with a large amount of investment and that is a limitation of construction SMEs” (Senzile, 2013). As already mentioned, a lot of small and medium contractors’ limitations can be attributed to lack of funding.

2.9.3 Financial constraints

The construction industry is price-sensitive as completion to acquire business and continuously have projects is significant. For SMEs to improve their business processes, they need to invest in technology and research and improve their performance. The growth and sustainability of SMEs in comparison to large businesses is far more sensitive to finance. This is supported by findings of the Organisation for Economic Co-operation and Development (OECD) (2000) which show that SMEs generally tend to be subjected to higher interest rates due to their risky nature, as well as credit limitations due to a lack of security and poor or no track record (Senzile, 2013).

Although SMEs are very significant to the economy of South Africa, their failure rate is 75%, one of the highest in the world. Lack of finance is one of the primary reasons for the failure of emerging SMEs in South Africa. About 75% of all applications for bank credit by emerging SMEs are rejected (Senzile, 2013). The objective of the paper was to investigate the determinants of credit approval for SMEs. The survey method and self-administered questionnaires were used for data collection. 150 respondents took part in the survey and the data was analysed by logistic regression. The results indicate that managerial competencies, business information, networking, location, crime, business size and incorporation are significant determinants of credit approval.

SMEs are increasingly seen as playing an important role in the economies of many countries. Thus, governments throughout the world focus on the development of the SME sector to promote economic growth. In South Africa, SMEs contribute 91% of formalised businesses and provide employment to about 60% of the labour force and total economic output of 34% of GDP (Verwey & Du Toit, 2016).

2.9.4 Access to funding

South Africa suffers from high unemployment with an official estimate of approximately 26.6% of the economically active population being unemployed (StatsSA, 2016). One of the best ways to address unemployment is to leverage the employment creation potential of small businesses and to promote small business development (Fin Mark Trust, 2006). Gree and Thurnik (2003) argue that the contribution of the SME sector cannot be sustained without access to funding that will sustain the emerging SMEs.

According to Maas and Herrington (2006), emerging SMEs in South Africa can be described as having been in existence for less than 42 months. Wong et al. (2005) point out that Schumpeter in 1934 was one of the earliest economists to argue for new firm creation. According to Schumpeter (1934), new firms are the vital force behind the progress of capitalism. The innovative activity of entrepreneurs feeds a creative 'destruction process' by causing constant disturbances to an economic system in equilibrium, creating opportunities for economic rent.

According to Maas and Herrington (2006), emerging SMEs are seen as a significant component of the solution to South Africa's development issues which include poverty, income inequality and unemployment. However, the creation rate of new SMEs in South Africa is measured by the total early-stage entrepreneurial activity which is one of the lowest in the world (Herrington et al. 2009). In addition, 75% of new SMEs created in South Africa fail within the first two years of operation. The probability of an emerging SME surviving beyond 42 months and becoming an established firm is less possible in South Africa than in any other GEM participating country (Von Broembsen et al., 2005). Various challenges and impediments prevent the creation of new SMEs and cause the high failure rates of emerging SMEs in South Africa.

One of these is the non-availability of formal sector financing. According to Demirguc-Kunt et al. (2006), the two primary sources of external finance for emerging SMEs are equity and debt. External equity in the form of venture capital

and/or the stock exchange is usually not available for emerging SMEs. Venture capitalists often enter a firm at the middle or later stages of its life cycle. According to Fatoki and Odeyemi (2010), there are at least 65 venture capital funds in South Africa controlling a total of R29 billion with an average investment size of R15.4 million. However, investment with SME focus is approximately R1.1 billion which is only 3.8% of the funds. This indicates that the availability of venture capital is limited for emerging SMEs in South Africa.

The lack of venture capital funds makes many new SMEs dependent on bank loans, overdrafts and suppliers credit for early-stage financing. Despite the dependence of SMEs on debt finance, ironically access to debt finance is very limited for emerging SMEs, especially in developing countries. Commercial banks hesitate to lend to new SMEs. FinMark Trust (2006) provides evidence that only 2% of emerging SMEs in South Africa are able to access bank loans. In addition, Foxcroft et al. (2002) report that 75% of applications for bank credit by emerging SMEs in South Africa is rejected. Stiglitz and Weiss (1981) refer to this phenomenon as capital rationing.

The question, then, is ‘what are the determinants of access to debt from commercial banks by new SMEs in South Africa?’ Understanding the features of new SMEs that are able to access bank credit is significant to improving the approval rate of their credit applications. Improving access to finance is one of the ways to increase the creation rate and reduce the failure rate of new SMEs in South Africa.

According to Miller and Modigliani (1963), a firm should have 100% debt in its capital structure. This way the firm can take absolute advantage of the tax-shield. Scott (1972) and Kraus and Litzenberger (1973) point out that, theoretically, 100% tax shield does not exist in reality because of distress costs. Debt leads to a legal obligation to pay interests.

If a firm cannot meet its debt obligations, it is forced into bankruptcy and incurs associated costs. Sogorb Mira (2002) and Andree and Kallberg (2008) discovered that the fiscal advantage of debt cannot be applied in the emerging SME context

because emerging SMEs are less likely to be profitable and therefore may not be able to use debt in order to get tax shields.

In addition, Daniel et al. (2006) point out that, in the case of new SMEs, the expected costs of bankruptcy are quite high and the expected costs of financial distress may outweigh any potential benefits from the tax shield. However, new SMEs also have limited access to external equity capital such as venture capital and the stock market.

This implies that new SMEs will have to rely only on internal equity which is often inadequate as a source of capital. The limitations of static trade-off theory suggest the reliance on internal equity by new SMEs. Yet, the reality for growing emerging SMEs is a reliance on debt and external equity because of the inadequacy of internal equity (Frelinghaus et al., 2005).

Determinants of access to debt

Managerial competencies are sets of knowledge, skills, behaviours and attitudes that contribute to personal effectiveness (Hellriegel et al., 2008). Martin and Staines (2008) examined the importance of management competence in small firm success. The lack of managerial experience, skills and personal qualities, as well as other factors such as adverse economic conditions, poorly thought out business plans and resource starvation were found to be the main reasons why new firms fail. The distinguishing feature of high and low growth of small firms is education, training and experience of managers.

Lyles et al. (2004) found that managerial competencies as measured by the education of the founder, managerial experience, entrepreneurial experience, start-up experience and functional area experience positively impact on new venture performance. Other empirical studies such as Smallbone and Welter (2001) and Hisrich and Drnovsek (2002) found that managerial competencies as measured by education, managerial experience, start-up experience and knowledge of the industry positively impact on the performance of new SMEs. In South Africa, Herrington and Wood (2003) pointed out that lack of education and training has

reduced management capacity in SMEs in South Africa and is one of the reasons for their high failure rates. This suggests that managerial competency impacts on access to finance by new SMEs.

Collateral

Gitman (2003) defines collateral as assets that are pledged by a borrower to a lender as security for the payment of debt. Barbosa and Moraes (2004) argue that firms that invest heavily in tangible assets tend to have higher financial leverage since they can borrow at lower interest rates if their debt is secured with such assets. According to Coco (2000), collateral can solve problems derived from asymmetries in valuation of projects, uncertainty about the quality of projects and the riskiness of borrowers, and problems related to the cost of monitoring or supervising borrowers' behaviour.

Collateral requirements can reduce moral hazard problems by adding a potential cost to borrowers if they do not make their best effort. The borrower may be willing to divert funds towards private use or extract the whole surplus from the project. When collateral requirements are in place, this perverse incentive is diminished, since that action would increase the chance of losing the assets pledged as collateral (Barbosa & Moraes, 2004). This suggests that the availability of collateral will impact on access to debt finance to new SMEs.

Business information

Pretorius and Shaw (2004) argued that financial information is one of the primary measures of the capacity of a business to effect repayment of credit. Financial information and business information are usually contained in the business plan of the emerging SMEs. A good business plan is perceived as one of the most essential documents to be prepared by the entrepreneur or small venture owner when setting up a business. Entrepreneurs and small business owners are encouraged to prepare a business plan for bank presentation, financial institutions and venture capitalists in order to stand a chance of obtaining financial support. Kitindi et al (2007) discovered that creditors, banks and other lenders use financial information provided by firms to analyse their present performance and predict future performance.

The other scholars discovered that annual financial statements and audit reports are required by formal lenders in general. Information from the financial statements, together with other information obtained through discussions with prospective borrowers, is the main source of information to lenders. Information obtained from the financial statements acts as an indicator of a borrower's future prospects and ability to service a loan. Therefore, banks and other creditors prefer to use financial information.

Networking

Coulthard and Loos (2007) describe networking in a small firm context as an activity in which entrepreneurially-oriented SME owners build and manage personal relationships with particular individuals in their surroundings. Shane and Cable (2002) agreed that networking can be used to reduce information asymmetry in creditor/debtor relationships. Social obligations between connected parties, and information transfer through social relationships, influence venture finance decisions. Owualah (2002) found that a long-standing relationship between a bank and an emerging SME owner is an advantage in the case of bank loans.

In addition, networks and relationships increase a firm's legitimacy, which in turn positively influences the firm's access to external financing. Networks also help a firm learn appropriate behaviour and therefore obtain needed support from key stakeholders and the general public. In large part, networking substitutes for the lack of effective market institutions, and can be an effective way for SMEs to access external funding, including bank loans, in emerging economies. Networking could be expected to provide the banks with information on legitimacy, which in turn should give the SMEs advantages in accessing commercial bank loans (Ngoc et al., 2009).

SME owners should pursue an education higher than matric level in South Africa. Educational institutions should introduce and strengthen entrepreneurial education. When learners are oriented into entrepreneurship from an early age, it becomes easier to develop successful ventures. Peacock (2004) argued that a "small business management course delivered to students and apprentices via the education system is the most effective way to provide basic management training".

To improve the related experience of SME owners, a ‘learning-from-peers’ or mentorship approach can be instituted by government agencies to help new SMEs. SMEs should look at using non-executives at an early stage to bring external expertise and guide investment decisions (Desta, 2015). To improve networking, it is important for SME owners to open bank accounts before they commence business operations, and maintain good relationships with banks.

Access to funding is a fundamental constraint on the performance and growth of SMEs in South Africa. This is aggravated by the fact that South African banks tend to be risk averse and demand high levels of security and guarantees for business funding. Recognising that SMEs are responsible for high levels of employment, innovation, and productivity, it is imperative that government and financial institutions understand the factors impeding SME growth and address aspects with regard to the provision of funding to the SME sector (Becchetti & Trovato, 2002). Furthermore, Winborg and Landstrom (2001) maintained that there is a lack of funding for SMEs in that these entities do not have access to the same kind of growth funding that is available to large businesses.

With regard to external funding, SME owners prefer to use internal funding (own equity, family and friends’ contributions) before sourcing external funding from government agencies and financial institutions (Myers, 1984). According to Berger and Udell (1998), start-up entities with no or a limited track record would prefer to use internal funding compared to established businesses with an established track record. The South African government has established various funding agencies aimed at providing SMEs with access to funding (see Appendix E).

The objective of establishing these agencies was to empower SMEs to reduce the unemployment rate and high poverty levels in their respective communities. However, most of these agencies have subsequently merged with existing or larger organisations to improve their results.

The GEM report of 2014 emphasised the discrepancy between government agencies and financial institutions that provide SMEs with start-up funding based on the following aspects:

- A lack of start-up capital from the owner of the business,
- A lack of knowledge in terms of producing a variable business plan that will meet with approval from financial institutions;
- A lack of relevant market research that demonstrates a viable business idea in order to attract investors (Herrington & Kew, 2014).

SMEs in the construction industry face a tough business environment due to a lack of job continuity and sustainable projects that last for longer periods. This means that even the operational side of the built industry faces challenges in accessing financing to meet operational expenses (Ofori, 2011).

Furthermore, SMEs in the construction industry are exposed to risks and difficulties, including:

- Stakeholders' preference for using more experienced entities;
- Greater emphasis on health and safety regulations to address environmental issues;
- Competition amongst each other based on all offering the same services (Ofori, 2011).

In conclusion, a good credit history must always be maintained. Agreements such as repayment of credit extended should always be met. In addition, entrepreneurs need to attend seminars, trade fairs and also join trade associations. SME owners should take greater responsibility for their own learning. Therefore, they need to create a positive attitude towards entrepreneurship and training. The present system, in which government agencies such as the Small Enterprise Development Agency (SEDA) use consultants to assist entrepreneurs to write business plans, could potentially be counterproductive. The personal involvement of the entrepreneur in gathering the relevant information and in the writing of the business plan is critical to learning about the industry and to the success of the new venture. Entrepreneurs also need

to acquire business and financial management skills if they want to get the required funding from investors.

2.9.5 Sub-contracting arrangements

The government has introduced sub-contracting as a measure to involve SMEs in the construction industry as a tool to support growth. Gounden (1997) argued that sub-contractors in South Africa tend to have very little negotiating power when it comes to the main contractor. SMEs are often put in a disadvantaged position when it comes to payments, with the main contractor taking more than 60 days to process their payments – thus impeding on the SME's cash flow. SMEs have little protection against the main contractor. It is for this reason that emerging contractors are very keen to get exposure to the industry and to generate revenue on their own. Sub-contractors also do not have bargaining power to demand fair risk distribution between sub-contractors and main contractors (Gounden, 1997). Transformation in the public sector has focused on promoting small and medium construction enterprises. This approach was presented at the first International Conference on Construction Industry Performance in Singapore (Gounden, 1997).

In light of the sub-contracting emphasis within the construction industry White and Marasini (2014) argued that construction projects have become more complex and require intensive technical experience for entities to operate successfully in the built environment. In addition, sub-contractors have become dominant in the construction industry or in projects under the leadership of a main contractor. The main contractor's objective in a project is to ensure that the client's needs are met while the sub-contractor focuses on a particular aspect to meet the needs of a main contractor (Jamieson, Thorpe, & Tyler, 1996). However, clients demand efficient methods or models to mitigate long turnaround times and cost overruns of construction projects to achieve the business goals (Okunlola & Johnson, 2013), while main contractors often take a less sophisticated approach in how the sub-contractor executes the works.

Latham (1994) and Egan (1998) both recommended a different approach to improving built environment performance. They emphasised a need to collaborate in

relation to construction processes and build strong relationships between the big construction giants and SMEs.

In conclusion, Wolstenholme et al. (2009) argued that the construction industry requires a major change in monitoring SME performance through sub-contracting. Furthermore, there is a general concern about the relationship between the main contractor and sub-contractor which plays a significant role in the success of the project delivery. However, the management of sub-contracting has been neglected and is not regulated by the construction bodies (Moody, Riley, & Hawkins, 2008), meaning that the key operational factors between the two parties are undermined (Humphreys, Matthews, & Kumaraswamy, 2003). As a result, SMEs remain small and do not grow.

2.9.6 Access to market

The construction industry, like most industries, depends on the state of the economy. If the South African economy experiences a recession, there is a cut back on infrastructure expenditure, thus affecting job opportunities. This is supported by Miles (1997), who stated that an estimated 35% of employees lost their jobs during the mid-1970s and at least a further 30% were laid off in the late 1980s and early 1990s because of recession. The increase in interest rates in 2002 also slowed down the construction industry as it became expensive to access loans. This is supported by the Department of Public Works (1999), which acknowledges that South African SME contractors are under pressure and often fail due to the volatility of demand.

The examination of market access issues for SMEs indicates that improvement in market access has shifted to focus on engagement with the corporate sector regarding procurement requirements to SMEs and to government public sector procurement through the tendering system (Rogerson, 2013).

In addition, Toomey (1998) and Herrington and Overmeyer (2006) contend that large South African businesses preferred to do business with large (mainly white) suppliers thus curtailing market access to SMEs (mainly black). Generally, business linkage performance in South Africa has mainly focused on large corporates purchasing a wide range of goods and services from SMEs, thus widening their

distribution or sub-contracting networks (Skae, 2006). The introduction of B-BBEE in South Africa subsequently resulted in many large corporates shifting their focus from SMEs in support of B-BBEE. According to Altman (2010), large corporates prioritise the objectives of B-BBEE over enterprise performance and very few place an emphasis on local content and local supplier performance. In order to improve access to the market, government concedes that a set of integrated interventions, including finance, regulatory change, and new initiatives to expand access, are necessary to enable (black-owned) SMEs to participate in the mainstream economy (Osiba Research, 2011).

2.9.7 Access to geographical location

Location has an impact on an SME's growth in terms of accessing new market opportunities. It is imperative for start-up businesses to choose the geographical positioning of their operation very well, in order to have easy access to their suppliers and clients (Olawale & Garwe, 2010). Consequently, geographical location is a limiting factor pertinent to the nature of SMEs.

In conclusion, small and medium sized contractors experience challenges accessing markets, especially international markets due to geographical location. In addition, SMEs tend to operate in their local areas, primarily due to inexperience, a lack of managerial ability, and financial constraints.

The above discussion based on the literature review highlights a number of determinants that contribute to the growth and performance of small and medium sized building contractors in South Africa.

2.10 Conceptual Framework

This section outlines the theoretical framework and its accompanying concepts. It also expands in detail the underpinning theory versus areas or fields of specialisation within which the study is located.

Torres (2004), citing Khan (1997), explains the purpose for establishing a theoretical framework as a process that research follows to arrive at a logical sense that could

be made between the relationships of the variables affecting the chosen study and the factors deemed relevant or important to the identified research problem. For the purpose of this study, it was necessary for a theoretical framework to be determined so that the relations between the dependent and independent variables would be defined and understood.

Formulating a theoretical framework for this study helped to clarify the independent variables of the study measured against dependent variables, and provided a general framework for data analysis. This proved essential when it came to preparing the thesis using descriptive methods. Khan (1997) argued that a theory makes generalisations about observations and consists of an interrelated, coherent set of ideas and models. In formulating a theoretical framework, it is necessary to appreciate that a framework of any study is a structure that can hold or support a theory of a research work. It presents the theory which explains why the problem under study exists. Thus, the theoretical framework is but a theory that serves as a basis for conducting research.

Based on the literature reviewed in the previous section, a conceptual framework was developed to explain the effect and relationship between regulatory compliance, construction compliance, technological capabilities, funding and access to market to analyse annual turnover effect on business performance.

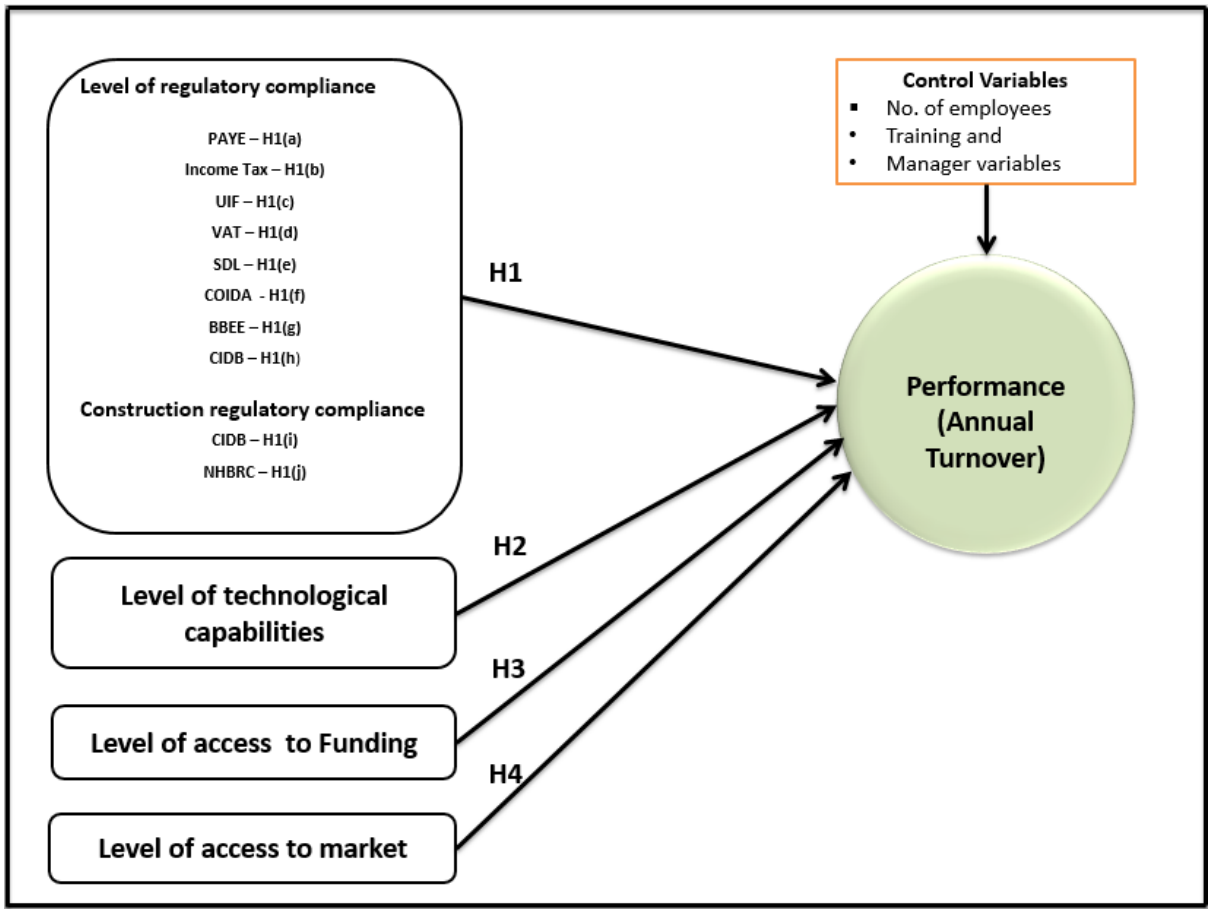


Figure 1: Conceptual framework

Figure 1 presents the relationship between four factors, which has several variables: (1) regulatory and construction compliance, (2) technological capabilities, (3) access to funding, (4) and access to market. All of these contribute to the general capability or skill of construction entities as reflected in Figure 1.

2.10.1 Hypotheses

Hypothesis 1: It explains the relationship and influence of regulatory compliance and construction compliance on annual turnover of SMEs using the CIDB Register of Contractors (RoC) instrument to measure the performance of SME contractors and further demonstrates how it was done. Hypothesis 1 was subdivided as follows:

***Hypothesis 1a*:** The greater the level of compliance with required regulatory compliance, the greater the increases in SME performance.

Hypothesis 1b: The greater the level of compliance with construction compliance, the greater the increases in SME performance.

Hypothesis 2: The higher the entrepreneurial technological capabilities of SMEs, the greater their performance.

Hypothesis 3: The greater the access to funding, the better the performance of SMEs.

Hypothesis 4: The greater the access to market information, the greater the access of SMEs to market opportunities in the construction industry.

2.11 Chapter Conclusion

A theoretical framework was defined and its theoretical location was given. The fields of expertise supporting this research were outlined. It concluded by providing connections to the literature reviewed for the study, looking especially at the dependent and independent variables in relation to hypothesis testing to determine the prohibiting factor in the performance of SMEs and forward linkages for the extraction of data.

3 CHAPTER 3: RESEARCH METHODOLOGY

The aim of this chapter is to discuss the research methodology that was employed to investigate the determinants that contribute to the performance of SMEs in the construction industry in Gauteng, specifically in the Johannesburg Metro. The introduction of this chapter covers the research philosophy (ontology and epistemology), and is followed by the study design, data collection methods and instruments that were used to collect the data.

Based on its purpose, related problems, sub-problems and all hypotheses identified and formulated, the research sought to validate evidence and test hypotheses and theory. This implies that it was necessary to gather relevant data and analyse related statistics in order to either accept or reject the hypotheses (Veal, 1997).

3.1 Research philosophy

The epistemology of this research study is positivist, explaining predicting causal relationships between variables and constructs (Coviello & Jones, 2004). The positivist approach is considered in instances where the intention is to predict reality in the social world through a set of predetermined variables and constructs. Additionally, it adopts traditional approaches of natural science to comprehend, evaluate and analyse the interrelationships amongst variables and constructs. Lastly, positivists assume that reality in a social world and its subsequent meaning may be identified, investigated, measured and analysed using various approaches of natural science (Vahidi, Ardalan, & Mohammad, 2009).

The ontological perspective of the study is an objectivist or realist standpoint which assumes that there is a single focus reality in the social world that is independent of the researcher's views and opinions (Vahidi et al., 2009). Consequently, the researcher will maintain independence from observations in the social world through sourcing of data from managers and owners of SMEs using a predetermined research instrument (Cooper, Schindler, & Irwin, 2006).

3.2 Research approach

The research approach adopted in this study is quantitative. This study will use a quantitative research methodology in order to gather the most appropriate data to answer the hypothesis. A positivist approach to primary data was employed to collect and analyse the data. The study focused on the seven regions of the Johannesburg Metro in Gauteng. The research focused on the industry segment of building contractors to provide a depth of knowledge within the resource constraint. The questionnaire was sent to 200 construction firms registered with the CIDB and was based on data collection from the CIDB. The questionnaires were distributed to owners and/or managers of each SME business via emails, as well as telephonically. The researcher shall assume that respondents were honest.

3.3 Research design

A web-based survey was used to collect data for this survey. In the following section, the reasons for using a web-based survey, sample selection, survey development and the measurement of constructs are explained. Furthermore, the sample characteristics, descriptive statistics results, correlations results, regression assumption testing results and regression analysis results will be discussed.

The SMEs in the construction industry were selected as the most appropriate unit of analysis. The SMEs represent an aggregate of different individuals and business activities within the built environment.

3.4 Population and sample

The SME population is defined as the total collection of elements about which inferences can be made (Cooper et al., 2006; Field, 2009). The population of this study will be SMEs as defined by the National Small Business Act (No. 102 of 1996). The CIDB has 4600 registered SMEs in the construction industry in Gauteng (CIDB Register of Contractors. 2016). The Johannesburg Metro has 1500 SMEs, meaning the response rate of 10% would be adequate for the research. The responses only included owners and/or managers of the business. General workers were excluded from completion of the semi-structured questionnaire because they were not in a

position to provide adequate, reliable and credible answers to questions posed thus compromising the validity of the research results and increasing measurement errors (Thindisa & Urban, 2013).

3.5 The research instrument

Data was collated using a structured questionnaire that was administered during gatherings and/or through the collection of information. The instrument was designed to collate a range of information. The instrument comprises introductory information, instructions, a confidentiality clause, and background and characteristics of the company, including constructs according to the literature review of the study. The study used the CIDB's instrument to measure the performance of SMEs in the construction industry. The instrument was previously used and tested in research studies by other scholars (Gasa, 2012) (see Table 7).

The questionnaire comprised five parts, namely: Demographic, Regulatory Compliance, Venture Performance, Technological Capabilities, and Access to Funding. To preserve the confidentiality of the respondent, no questions related to their name, address or other personal details were asked. Furthermore, in the framework of this research, the responses were examined as group data in order to avoid any possibility of identifying an individual.

3.6 Data collection

Questionnaires were distributed to 200 SMEs based in the Johannesburg Metro, Gauteng. Contact details of the SMEs were collected from the CIDB database. The database system listed 4600 SMEs, but when initial contact was made, it was discovered that most of the SMEs were not operating. A questionnaire was used to collect the data. Two methods of data collection were used to reach sufficient sample size, namely a Survey Monkey questionnaire and telephone interviews with SMEs.

Out of 200 questionnaires that were emailed, only 54 SMEs responded via email, 96 responses were collected through telephonic interviews and 50 did not respond. Both methods were adopted due to the poor response to the emailed questionnaire.

The usable response rate achieved was 18.8% (94 companies). Hair, Anderson, Babin, and Black (2010) suggest a minimum sample size of 50 when using multiple regression analysis. Further, Arrindel and Van der Ende (1985) argue that sample sizes of less than 100 can produce stable factors when using exploratory factor analysis. They used two large data sets to investigate the minimum sample sizes and ratios, and found stable factor structures with ratios as low as 1.3:1. Therefore, the sample size of 150 is sufficient to conduct research, maintain adequate power, and undertake statistical analyses and modelling.

3.7 Research Instrument

Data was collated via Survey Monkey and telephonic interviews, and was then captured on SPSS version 24 for data cleaning and analysis. The software was used to conduct descriptive statistics, correlational analysis and regression analysis ,of independent, dependent and control variables (Cooper et al., 2006; Field, 2009).

For example, variables related to regulatory compliance governing small business helped to answer hypotheses 1a and 1b, which stated that the greater the level of compliance with required regulatory compliance and the greater the level of compliance with optional regulation, the greater the increase in SME performance. These also helped to answer hypothesis 2, which was that the higher the technological capabilities of SMEs, the greater their capabilities. Again, variables relating to technical skills required by SMEs in construction have been analysed in order to see whether SMEs have sufficient technical skills as these have a direct impact on the performance of SMEs.

Independent variables on funding of SMEs were analysed to ascertain how each SME started doing business and how they deal with financial issues which are a key element of business performance. Hypothesis 3 is that the greater the access to finance, the better the performance of SMEs, and hypothesis 4 is that the greater the access to market information, the greater the access of SMEs to market opportunities in the construction industry. An analysis focusing on SME access to market opportunities was conducted to answer the stated hypothesis.

Regulatory compliance variables were analysed and showed that the majority (89%) of the SME contractors complied with the industry regulatory laws in respect of company taxation. Although 47% of contractors were in building construction and 13% in civil engineering, their annual turnover is still less than R1 million. Furthermore, 69% were registered with the CIDB as grade one, their annual turnover was less than R1 million, and they employed less than 20 people. However, SMEs in construction incurred huge costs in ensuring that they remain compliant and, as a result, this affected their cash flow.

As discussed in the literature review, the construction industry requires SMEs to fully comply with the various statutory laws and regulations, including taxation, labour laws, CIDB and CIPC, and optional registrations such as NHBRC, SAPOA and GBCSA. Based on the high cost incurred by SMEs, it is evident that compliance is one of the impeding factors to enhancing SME performance within the construction industry.

Evans et al. (2005), emphasised the issue of record-keeping practices in terms of taxation laws. Berry et al. (2002) argued for the labour policies and procedures to be followed when addressing human resources. Again, this has cost implications for SME performance in growing their businesses.

Bikitsha et al. (2010) emphasised the need to unlock performance constraints and capacity building, and create sustainable enterprises within the construction industry. The results indicated that small contractors are being exploited through sub-contracting due to lack of experience, capacity and transfer of skills. NHBRC is the construction body that protects housing consumers within the contruction industry. However, not all contractors are registered with the NHBRC as it is optional.

3.8 Validity and reliability of research

Internal validity is the extent to which the findings and results of the research study can be attributed to a measure of constructs considered for this study (Cooper et al., 2006). The validity of the entire research study refers to the quality of the research process and the accuracy of results.

3.8.1 External validity

External validity is intended to determine whether results of this study would hold true for other places and settings, should they be generalised. The ability and extent to which these research findings should be generalised across populations may be limited due to the expected sample size (150), resulting from the convenient sample method utilised. However, valid measurements of constructs were used in this study, resulting in its enhanced legitimacy (Slavec, 2012).

3.8.2 Internal validity

The validity of the measurement procedure refers to whether the procedure actually measures the variable it purports to measure. However, the validity of the entire research study examines the quality of the research process and the accuracy of results (Slavec, 2012). Adoption of valid and referenced measurements of constructs was used to enhance the validity of the research study.

3.8.3 Reliability

Reliability refers to the probability of repeating research and reaching the same results, as well as the consistency and stability of scores which are assumed to be the outcome of a hypothetical measurement process (Lee, 2012). The research was conducted in an organised and well presented manner whereby written questionnaires were used, notes taken, and information recorded, leaving minimal chance of information being lost during the process. Reliability was also increased as key informants accepted the findings. However, the research covered developing areas in enterprise performance strategies and so it would be difficult to repeat this study with exactly the same results. Reliability will be tested against the staffing of various SMEs in their positions as senior managers and owners.

3.9 Chapter conclusion

This chapter outlined the philosophical position of the researchers with the objective of determining the appropriate research design and method for this study. The population, sampling approaches and sizes were discussed and this was followed by the discussion on the research approach, operational measures, and limitations. The

data analysis techniques were broadly discussed in order to provide the detail of plans for analysis of the data obtained from the respondents of this study.

4 CHAPTER 4: DATA PRESENTATION AND INTERPRETATION

The objective of this chapter is to present and interpret the results from the descriptive statistics, and correlational and regression analysis. The chapter begins with the sample characteristics, followed by the regulatory compliance, technological capabilities, access to funding and information, and access to market. The statistical analysis was processed through SPSS 24. The interpretation of any calculated statistical indexes was based on relevant theory reviewed in the previous chapter.

4.1 Sample characteristics

In this study, data was collected from one group of respondents and each respondent provided a completely different set of information. The key participants were company owners. Section 4.1.1 of this chapter focuses on the first section of the questionnaire which was designed to establish the types of SMEs and to ensure that the data collected satisfy the criteria set out by CIDB of SMEs. Each respondent was then asked to answer questions pertaining to the company owners, field of business the company specialises in, qualifications, and whether or not they belong to a registered professional association. The purpose was to establish the caliber of SMEs practicing in the field.

4.1.1 Types of Businesses

Table 1 shows that the types of business surveyed were as follows: building construction (47%), civil engineering (13%), home improvement (10%) and other (30%). The results revealed that the majority of respondents were in the building construction field, followed by those in other trades not listed in the questionnaire, such as electrical and construction health and safety.

Table 1: Nature of business conducted by SMEs

Description	Number	Percentages
Building construction	70	47%
Civil engineering	20	13%
Home improvement	15	10%
Other	45	30%

4.1.2 Level of Education

Table 2 shows that only 7% of the respondents had no qualifications and 30% had matric, while the rest had different tertiary qualifications. The majority (32%) of the respondents indicated that they held a diploma, 22% of the respondents were degree holders, while 9% had a post graduate qualification.

It was noted that many of the projects were run by project managers with some degree of tertiary education and matric. This indicates that the respondents in high positions were both qualified and had a degree of work experience.

Table 2: Educational level of SMEs owners

Level of SMEs education	Number	Percentages
Matric	44	30%
Diploma	47	32%
Bachelor's degree	33	22%
Post-graduate degree or diploma	13	9%
None	12	7%

4.1.3 Compliance

CIPC Compliance

Table 3 shows that of the SMEs registered with CIPC, 37% had been registered for 1 to 5 years, 33% for 6 to 10 years, 17% for 11 to 15 years, and the remaining 12% for 16 or more years.

Table 3: Number of years registered with CIPC

Number of years in existence	Number of SMEs	Percentages
1-5	56	37%
6-10	50	33%
11-15	26	17%
16+	18	12%
Total	150	100%

Tax Compliance

Table 4 shows the different types of tax compliance that companies are expected to comply with. The results showed that 89% of the SMEs sampled were registered for company income, 43% for VAT, 7% for SDL, and 23% for both PAYE and UIF. The results indicated that the majority of the SMEs were registered with SARS and comply with South African tax legislation.

Table 4: SARS Compliance

Tax types	Number of SMEs	Percentage
Company Income Tax	133	89%
VAT	65	43%
SDL	10	7%
PAYE	35	23%
UIF	34	23%

Labour and COIDA Compliance

The results showed that 81% of SMEs were registered with COIDA and 19% were not registered. Contractors are required to have a safety file in terms of occupational health and safety regulations. 79% of the SMEs complied with the requirement and 21% were non-compliant.

B-BBEE Compliance

In 2003, the government of South Africa devised a strategy to uplift previously disadvantaged people to ensure they participated in the growth of the country's

economy through the National Small Business Act (No. 102 of 1996). This strategy was B-BBEE. In this research, SME owners were asked about their B-BBEE status. B-BBEE levels range from one to eight, as displayed in tables 5 and 6 below. The majority of SMEs were level one (78%), 8% were level two, 9% were level three, 3% were level eight, and less than 2% were levels four, five and six.

Table 5: B-BBEE Level Status

B-BBEE Level	Amended Codes	Current Codes
1	≥100 points	≥100
2	≥95 but <100 points	≥85 but <100
3	≥90 but <95 points	≥75 but <85
4	≥80 but <90 points	≥65 but <75
5	≥75 but <80 points	≥55 but <65
6	≥70 but <75 points	≥45 but <55
7	≥55 but <70 points	≥40 but <45
8	≥40 but <55 points	≥30 but <40
NON-COMPLIANT	**<40 points**	**<30**

Source: B-BBEE 2003

Table 6: B-BBEE scorecard

Level One Contributor (SME)		
Scorecard Information	**Actual Score**	**Target Score**
Ownership	25%	25%
Management	25%	25%
Employment Equity	25%	25%
Skills Development	N/A	N/A
Preferential Procurement	N/A	N/A
Enterprise Development	N/A	N/A
Socio-Economic Development	25%	25%
Total Score	**100%**	**100%**

Source: B-BBEE 2003

B-BBEE was introduced to address economic transformation and enhance the participation of black businesses in South Africa. The results indicated that the

majority (78%) were level one, 8% were level two, 9% were level three, 3% were level eight, and less than 2% were levels four, five and six. For contractors to participate fully in projects, they should achieve a level one B-BBEE status, which will result in increasing their performance and resolve the issue of financial constraints.

In terms of technical abilities, it was established that 55% of the contractors have a dedicated person responsible for project planning and implementation. Furthermore, most SMEs have a dual role in the execution of projects, which means that in some instances managing directors are project managers as well. Lack of training has an impact on the performance of SMEs in the construction industry due to a lack of experience. The results demonstrated that most SMEs (86%) are not registered with professional bodies which can increase their business exposure, as this is optional. This has an impact on their ability to develop their companies. The economy is driven by technology and, as a result, it is imperative for SMEs to align their businesses with the current construction technologies so that they can respond to the industry requirements.

The results also indicated that 62% of SME owners have matric plus a diploma which will contribute positively to business performance, especially as most of the business owners also act as project managers. 91% of SMEs derive their turnover from sub-contracting and thus are unable to reach turnover levels exceeding R1 million.

Bougrain and Haudeville (2002) argued that SMEs' internal research capabilities assist them to explore external technological knowledge and they tend to be more innovative in growing their businesses by using the alternative business networks. The results of this research study were contrary to the above-mentioned theory, even though the majority (55%) of the contractors have project managers but their annual turnovers are less than R1 million, which is not sufficient to increase their performance.

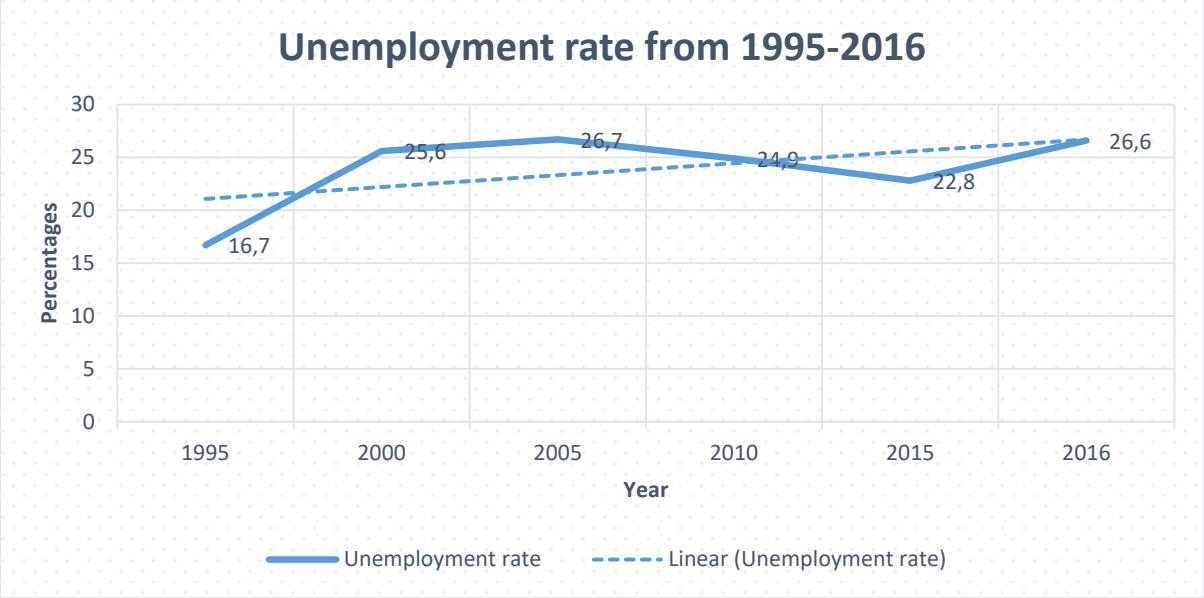
In conclusion, the lack of training is still an impeding factor for SMEs, with 68% of SMEs not offering any training to their technical staff, even though many SMEs have

project management (39%) and accounting (22%) systems. Taking into account that business is driven by technology, this is still below average.

Start-up funding is still a prohibiting factor for SMEs in generating more revenue for their business. Results have indicated that the majority received start-up capitals from family and friends or were self-funded.

Winborg and Landstrom (2001) maintained that there is a lack of funding for SMEs in that these entities do not have access to the same kind of growth funding that is available to large businesses. Furthermore, Berger and Udell (1998) emphasised that start-up entities with no or limited track record would prefer to use internal funding compared to established businesses with an established track record. Again, contractors do not have sufficient written track records to provide financial institutions to qualify for credit ratings or funding.

The results have indicated that unemployment still remains a challenge in the country. Since 1995, unemployment in South Africa has been increasing steadily. As of 2016, the country's unemployment was at 26.6%, up from 16.7% in 1995 (see Figure 2 for more detail). SMEs are expected to contribute to the reduction of unemployment in South Africa. SMEs have the potential to employ a high number of people and thus directly contribute to reducing unemployment. Although this study was based in Johannesburg, the researcher does not have the exact figures of unemployment rates in the Johannesburg, and thus it is difficult to compare the results of the study with the national statistics of unemployment.



Source: StatsSA 2016

Figure 2: Unemployment rate from 1995 to 2016

In the study, 86% (128) of the SMEs had less than 20 permanent employees, 13% (20) had between 20 and 200 employees, and only one SME had over 200 employees. This is a clear indication that some SMEs in Gauteng, specifically Johannesburg, are struggling to have a high number of employees due to the fact that their annual turnover is very low/small. This outcome indicated that 75% of the SMEs had an annual turnover of less than one million and only 3% of the SMEs had an annual turnover of between R6 million and R10 million or above.

Sub-contracting arrangements were also a prohibiting factor for SME growth within the construction industry. The government introduced sub-contracting as a measure to increase SME participation and support their growth. However, Gounden (1997) emphasised that sub-contractors in South Africa tend to have very little negotiating power when it comes to the main contractor. SMEs are often put in a disadvantaged position when it comes to payments, with the main contractor taking more than 60 days to process their payments, thus impeding on the SME's cash flow. In this regard, CIDB plays a major role in addressing the exploitation of small contractors and ensures that SMEs are protected through legislating the sub-contracting factor.

Access to market issues for SMEs indicates that improvement in market access has shifted to focus on engagement with the corporate sector regarding procurement requirements to SMEs and to government public sector procurement through the

tendering system (Rogerson, 2013). The results clearly indicate that the majority (44%) of the SMEs attend networking sessions in order to increase business performance for their entities. Furthermore, 38% indicated that they access the market through the tendering system with either the government or the private sector. 15% access the market information through newspapers and 3% use other means. In conclusion, it is evident that construction industry participants still prefer to operate with a manual system to access the market even though the economy is driven by technology.

In terms of geographical location, it is evident that most contractors bid for construction work in Gauteng and are situated in the townships. There is a clear indication that SMEs experience challenges in accessing the international markets due to lack of experience, lack of managerial abilities, financial constraints and access to markets (internationally and globally). According to Olawale and Garwe (2010), it is important for start-up businesses to choose the geographical positioning of their operations very well, in order to have easy access to their suppliers and clients. We can conclude that SMEs in construction have limitations to increasing their annual turnover.

4.1.4 CIDB Compliance

Contractors who wish to have their competencies accredited submit a completed application to the CIDB, providing full details of their qualifications and experience that is relevant to assessing the contractor's knowledge, skills and experience in the categories and sub-categories being applied for. The contractor accreditation is undertaken by a CIDB Accreditation Committee. Contractors are notified of the outcome of the assessment within 30 working days of submission of their compliance application forms. Where necessary, an applicant may need to attend an interview with the CIDB Accreditation Committee, and will be notified of such an interview within 30 working days of submission of compliance application forms.

The CIDB determines whether an interview takes place at the CIDB or on-site, and may include the following:

- The tabling of documentation, including: site plans or drawings and site induction plan;

- A business plan or financial plan;
- An on-site assessment, involving a visit to a current work site;
- Establishing the plant and equipment owned by the contractor;
- Establishing the human capital of the entity and verifying the competence;
- Investigating the membership of professional or industry associations with an enforceable Code of Ethics or Code of Practice.

Where contractors meet or exceed the minimum competence requirements as set out by the CIDB, the contractor will be entered into the CIDB Best Practice Contractor Recognition Scheme as a CIDB Accredited Contractor (Code I). Where a contractor does not hold the required minimum formal qualifications, the CIDB will accept a recognised external assessment verifying that the applicant has been assessed as having adequate knowledge, skills and experience that are deemed to be minimum standards necessary for running a construction business and for supervising building and construction works within the classes of works applied for. Such an assessment can be undertaken by a CIDB-recognised industry representative association or by a registered SACPMP Mentor, supported by an assessment based on a modified SACEM assessment.

Such assessments are usually limited to Grade 2 and 3 contractors applying for accreditation in the Limited categories, and Grade 1 to 3 contractors in the Trade Contractor categories. Construction clients are then encouraged to procure work from contractors with CIDB competence accreditation.

As mentioned previously, the competence of contractors is accredited within a CIDB Class of Construction Works and Construction category (and, where relevant, within a sub-category). Accreditation within a Construction category / sub-category satisfies the accreditation criteria for all lower construction categories within a Class of Construction Works. At present, competence accreditation can only be done in GB, CE and selected trade contractors within Special Works (SW), and is undertaken within the following Categories of the Class of Works:

- Limited (Grades 2 to 6): being a contractor who has adequate knowledge and experience to carry out work within the sub-categories described in the record of accreditation;
- Trade Contractors (Grades 1 to 5): being a contractor who has adequate knowledge and experience to carry out work within the trade categories described in the record of accreditation. Contractors graded in the RoC at Grades 7 and above in GB and CE and Grade 6 and above in Special Works are required to show evidence of built environment professionals in their employ for registration with the CIDB, and by implication they are assumed to have the necessary competence to undertake the relevant construction works contracts they are registered in.

Table 7 shows how SMEs in construction are graded by CIDB. The grading system ranges from 1 to 9. SMEs with grade 1 can only tender or receive tenders between R200 000 and R650 000. Those with a grade 2 can participate in tenders between R650 000 and R2 000 000. Figure 3 illustrates the CIDB grading system used amongst SMEs.

The majority of SMEs (79%) are grade 1, 7% are grade 2, 8% are grade 3, 3% are grade4, and 2% are grade 5. No SME was over grade 5. This means that none of the 150 SMEs qualified or could tender for work to the value of R13 000 000 or above.

In conclusion, CIDB accreditation of a contractor's competencies is required to be taken into account as a quality factor or functionality in construction procurement on all public sector contracts.

Table 7: CIDB grading system for different categories

Grade	Upper limit of tender value range	Best annual turnover	Largest contract	Available capital
1	R 200 000	-	-	-
2	R 650 000	-	R 130 000	-
3	R2 000 000	R1 000 000	R 450 000	R 100 000
4	R 4 000 000	R2 000 000	R 900 000	R 200 000
5	R 6 500 00	R 3 250 000	R 1 500 000	R 650 000
6	R 13 000 000	R 6 500 000	R 3 000 000	R 1 300 000
7	R 40 000 000	R 20 000 000	R 9 000 000	R 4 000 000
8	R 130 000 000	R 65 000 000	R 30 000 000	R 13 000 000
9	No Limit	R 200 000 000	R 90 000 000	R 40 000 000

Source: CIDB 2013

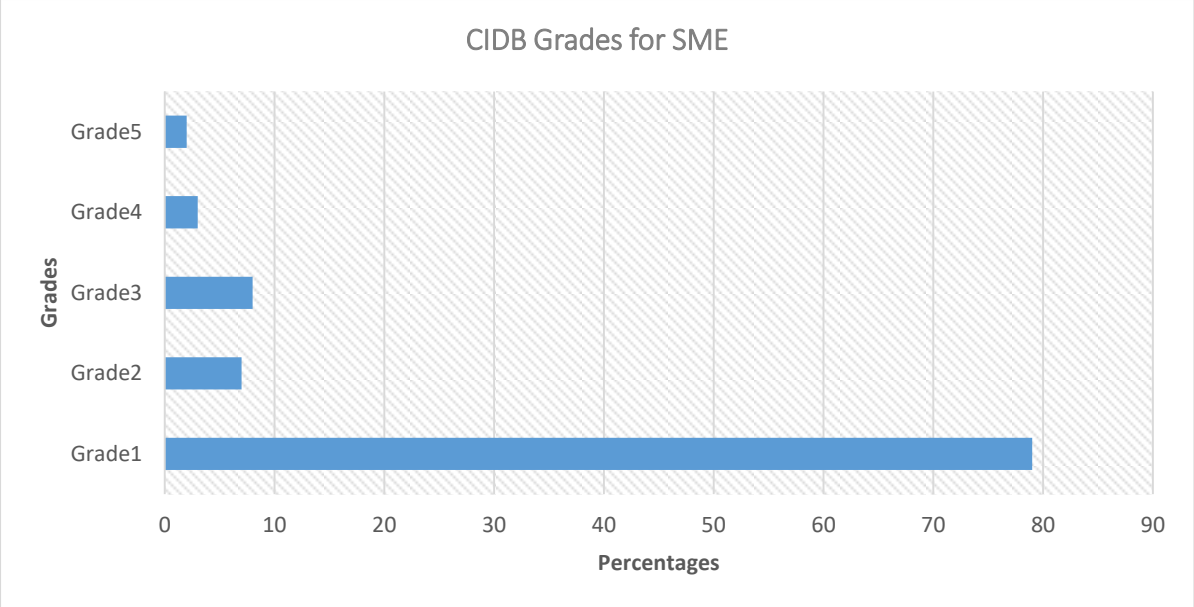


Figure 3: CIDB grading system for SMEs

4.1.5 Sub-contracting

Table 8 indicated that the majority of the SMEs are sub-contractors (91%) and their turnover is less than R1 million. In light of the sub-contracting emphasis within the construction industry, White and Marasini (2014) argued that construction projects

have become more complex and require intensive technical experience for entities to operate successfully in the built environment. In addition, rules for sub-contractors have become dominant in the construction industry or in projects under the leadership of a main contractor.

Table 8: Sub-contracting, non-sub-contracting and turnover of SMEs per annum

Turnovers per SMEs	Non-sub-contracting	Sub-contracting
Between R2 million and R5 million	3	25
Between R6 million and R10 million	1	3
Less than R1m	8	105
R10 million and above	1	4
Total	13	137
	9%	91%

4.1.6 Annual Turnover

The annual turnover of SMEs plays a role in terms of sustainability of the business. In this study, the majority of SMEs had annual turnovers of less than R1 million (75%), followed by those between R2 million and R5 million (19%). Just 3% turned-over between R6 million and R10 million as well as R10 million. Another 3% achieved R10 million, while only five of the SMEs that responded had an annual turnover of above R10 million. According to the definition of SMEs by the National Small Business Act (No. 102 of 1996), based on this category alone, the majority (75%) of the contractors are small sized construction enterprises and 19% are medium sized construction enterprises.

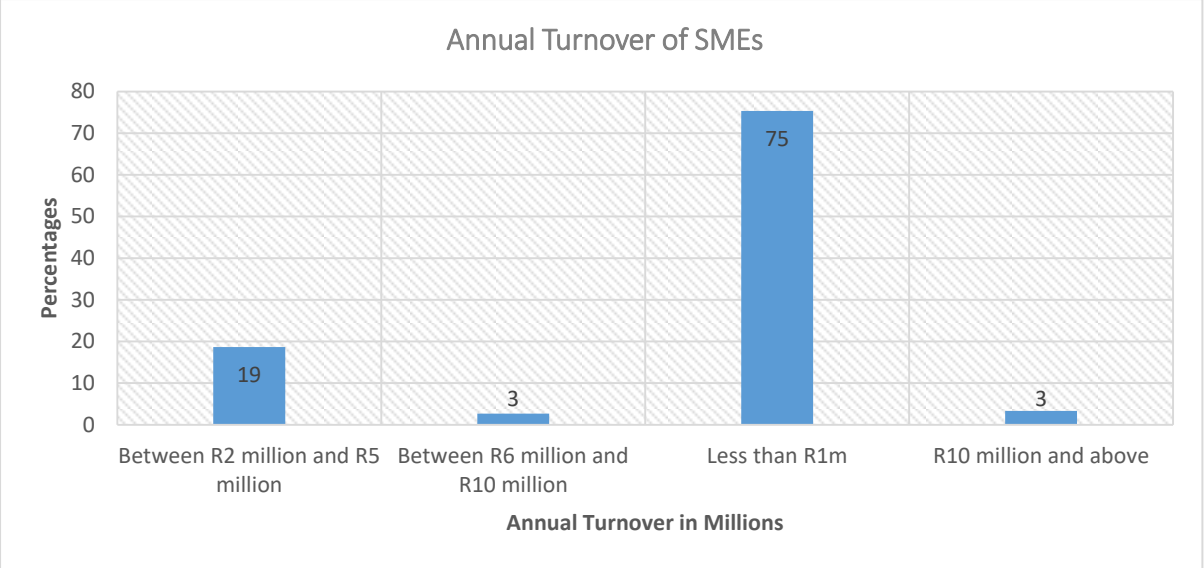


Figure 4: Annual turnover of SMEs

4.1.7 Number of Employees

The National Small Business Act (No. 102 of 1996) defines small contractors as having between 5 and 50 employees, and medium sized contractors as having between 50 and 200 employees. This concurs with the SMEs in this study as all the firms have up to 200 employees. Table 9 shows that 86% (128) of SMEs had less than 20 permanent staff members, 20 SMEs (13%) had between 20 and 200, and 2% of the SMEs over 200. This might be attributable to the amount of work being undertaken by the contractors currently.

Table 9: Number of employees

Permanent Employees	Number	Percentages
Between 20 and 200	20	13%
Less than 20	128	86%
More than 200	2	2%
Total	**150**	**100%**

4.1.8 Project Planning

Table 10 shows that the majority of the contractors had project managers (55%), and of the SMEs that recorded an annual turnover above R10 million, almost all of them had a technical person responsible for project planning and management on all

projects. These designated people were contract managers or managing directors. Every decision taken on planning for projects is usually run by the managing director, which attests to the fact that many SMEs are managed by a single source, usually the owner of the firm, as indicated by Yang et al. (2007).

According to Crawford, Morris, Thomas, and Winter (2006), in order to execute successful project management practices, there is a need to align the project management theory to practice. The project management tools and techniques highlighted above are necessary as they are needed to ensure planning, control and successful execution (Ashleigh, Ojiako, Chipulu, & Kai Wang, 2011).

Table 10: Project Managers

Turnover per annum	No Project Manager	With Project Manager
Between R2 million and R5 million	5	23
Between R6 million and R10 million	1	3
Less than R1m	62	51
R10 million and above	0	5
Total	**68**	**82**
	45%	55%

4.1.9 Staff Training

Table 11 shows that the majority (68%) of the contractors do not attend technical training and therefore lack technical expertise. Despite this and other technical challenges that SME contractors face, only 21% attend training every six months and 11% attend training once a year.

Barry and Sebone (2009) argued that SMEs do not efficiently invest in business management skills as there is no formal training. This short fall is confirmed by Benjoaran (2009), who states that a lack of resources has restricted investment in training by SMEs, which is primarily attributable to the constricted development of SMEs' technical skills in the South African construction industry.

In summary, qualifications and training are very important as an entrepreneur. Inkpen and Currall (2004) have stated that there are two types of training, namely formal training that ends in a qualification and informal training. Formal training is explained as structured, short- term education aimed at promoting correct practice, while informal training is more socially oriented, unstructured and occurs in good work relationships. Both types of training are necessary for the development of required skills in the built environment to improve SME performance.

Table 11: Staff technical training

Frequency of Training	Number	Percentages
Every one year	17	11%
Every six months	31	21%
Not Applicable	102	68%
Total	**150**	**100%**

4.1.10 Company Affiliation

In terms of company affiliations, results indicated that SMEs in construction have the option to affiliate with one or more of the professional bodies governed by the construction industry, namely SAPOA, NHBRC and GBCSA. Two SMEs (1%) registered with SAPOA and/or GBCSA and 40 (27%) registered with NHBRC. The overall, 14% of SMEs are affiliated.

4.1.11 Technical Control

Table 12 shows that SMEs used various systems to record projects. The majority of the contractors (39%) used a project management system, 22% used an accounting system, 18% used a quality control system, 7% used an operational plan system, 5% used an outsourced accounting system and risk management system, and 4% used a costing and pricing system. All the techniques are used by the respondents regularly and respondents seemed to have understood these technical controls systems. However, the techniques are not used extensively.

Table 12: Technical control system

Technical control systems	Number	Percentages
Accounting system	33	22%
Costing and pricing system	6	4%
Operational plan system	10	7%
Outsourced accounting system	7	5%
Project management system	59	39%
Quality control system	27	18%
Risk management system	8	5%
Total	**150**	**100%**

4.1.12 Geographic Characteristics

Figure 5 shows that most entities are bidding for tenders within a certain geographical area. 60% of SMEs indicated that they bid for tenders in Gauteng and 40% bid outside Gauteng. However, these companies are located in areas that are not at the same level of development; some are in the townships while others in the city. Of the 150 SMEs interviewed, 52% were located in townships while 48% were located in the city.

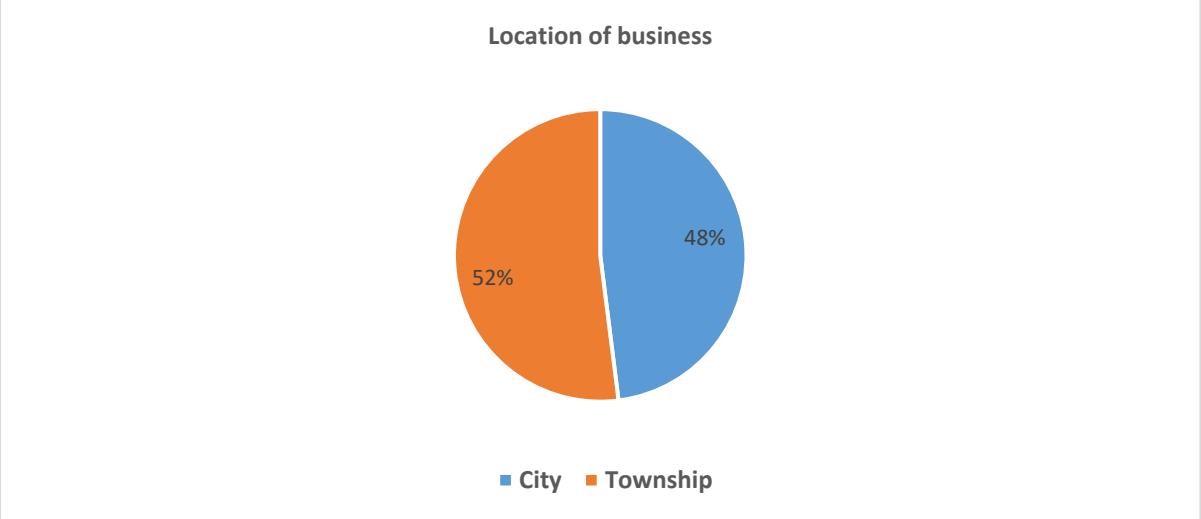


Figure 5: Business location

4.1.13 Access to funding

Figure 6 shows that starting up a business or company is challenging in most instances. SME owners were asked how they obtained start-up funding. A total of 42% indicated that they received funding from family and friends, 32% were self-funded, 11% had received funding from government agencies, 8% had obtained loans from financial institutions, and 7%had used an alternative source of funding.

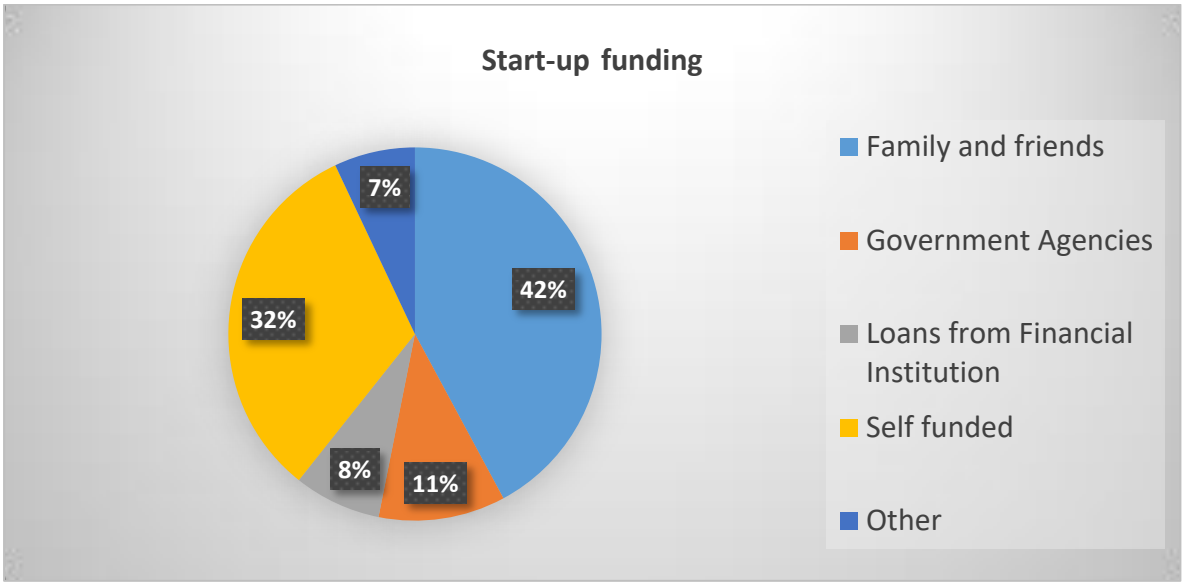


Figure 6: How the company obtained start-up funding

79% of SMEs indicated that they qualify for credit facilities with financial institutions, while 21% do not qualify.

4.2 Descriptive Statistics

$$Z_{\text{skewness}} = \frac{S - 0}{\text{SE}_{\text{skewness}}} \qquad Z_{\text{kurtosis}} = \frac{K - 0}{SE_{\text{kurtosis}}}$$

Figure 7: Descriptive statistics (Dependent and independent variables)

The above equations, the values of S (skewness) and K (kurtosis), and their respective standard errors are produced by SPSS 24. These z-scores are compared against independent and dependent values (known values for ordinal distribution

shown in Figure 7). Therefore, an absolute value greater than 1.96 is significant at p<.05, above 2.58 is significant at p<.01, and absolute values above about 3.29 are significant at p<.001. The dependent variable, Z-skewness (0.662/0.199=3.33), is significant at p<.001, and Z-kurtosis (0.660/0.395=1.67) is not significant. The independent variable (sub-contractor) (0.282/0.198=1.42 and 0.282/0.394=0.71) is not significant.

Table 13 shows that kurtosis is negative for the following construction independent variables: REGT_PAYE, REGL_UIF, and REGT_VAT. MARKET_ Opportunities, FUN_Funding Project Manager, and Training_Freq indicate the negative and skewness is negative. However, they represent a major departure from normality since they vary from zero. Further, the Shapiro-Wilks test (p=.12), which calculates the levels of significance for the departure from normality, also indicates that the actual degree of departure from normality is not significant. Means and medians are close to each other thus suggesting normality of data.

Table 13: Descriptive Statistics

Descriptive Statistics

		REGT_ PAYE	REGL _UIF	REGT _VAT	REGL_ SDL	REGC _CIDB Grade	MARKET_ Opportunities	FUN_F unding	Employees	Project_ Manager	Training _Freq
N	Valid	150	150	150	150	150	150	150	150	150	150
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		1.77	1.77	1.57	1.93	1.47	1.43	2.50	1.15	1.45	2.46
Std. Error of Mean		0.035	0.034	0.041	0.020	0.102	0.041	0.112	0.030	0.041	0.068
Median		2.00	2.00	2.00	2.00	1.00	1.00	3.00	1.00	1.00	3.00
Mode		2	2	2	2	1	1	1	1	1	3
Std. Deviation		0.424	0.420	0.497	0.250	1.251	0.497	1.375	0.373	0.499	0.832
Variance		0.180	0.176	0.247	0.063	1.566	0.247	1.889	0.139	0.249	0.693
Skewness		-1.274	-1.319	-0.272	-3.510	3.659	0.272	-0.016	2.402	0.189	-1.039
Std. Error of		0.198	0.198	0.198	0.198	0.198	0.198	0.198	0.198	0.198	0.198
Kurtosis		-0.383	-0.264	-1.952	10.456	15.511	-1.952	-1.849	5.013	-1.991	-0.744
Std. Error of Kurtosis		0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394	0.394
Range		1	1	1	1	8	1	3	2	1	2
Minimum		1	1	1	1	1	1	1	1	1	1
Maximum		2	2	2	2	9	2	4	3	2	3
Sum		265	266	235	290	220	215	375	172	218	369

Table 14: Hypothesis 1b

Descriptive Statistics												
	N	Range	Minimum	Maximum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Turnover	149	3	1	4	1.33	0.054	0.662	0.438	2.352	0.199	5.798	0.395
Sub_Contr	150	1	1	2	1.09	0.023	0.282	0.080	2.968	0.198	6.901	0.394
CIDB_Category	150	2	1	3	1.91	0.037	0.448	0.200	-0.389	0.198	1.782	0.394
Employees	150	2	1	3	1.15	0.030	0.373	0.139	2.402	0.198	5.013	0.394
Valid N (listwise)	149											

4.2.1 Access to information

SMEs were explicitly asked how they access information for business opportunities. This was to assess how they get information related to a particular tender so they can participate.

Figure 8 shows access to information for SMEs on how to obtain business for their entities. 44% of SMEs indicated that they accessed information related to their businesses through network sessions, which could be workshops facilitated by various institutions that might require small businesses to tender for particular work. Furthermore, 38% of SMEs accessed the information through public and private tendering processes, 15% through newspapers, and 3% through other unspecified means.

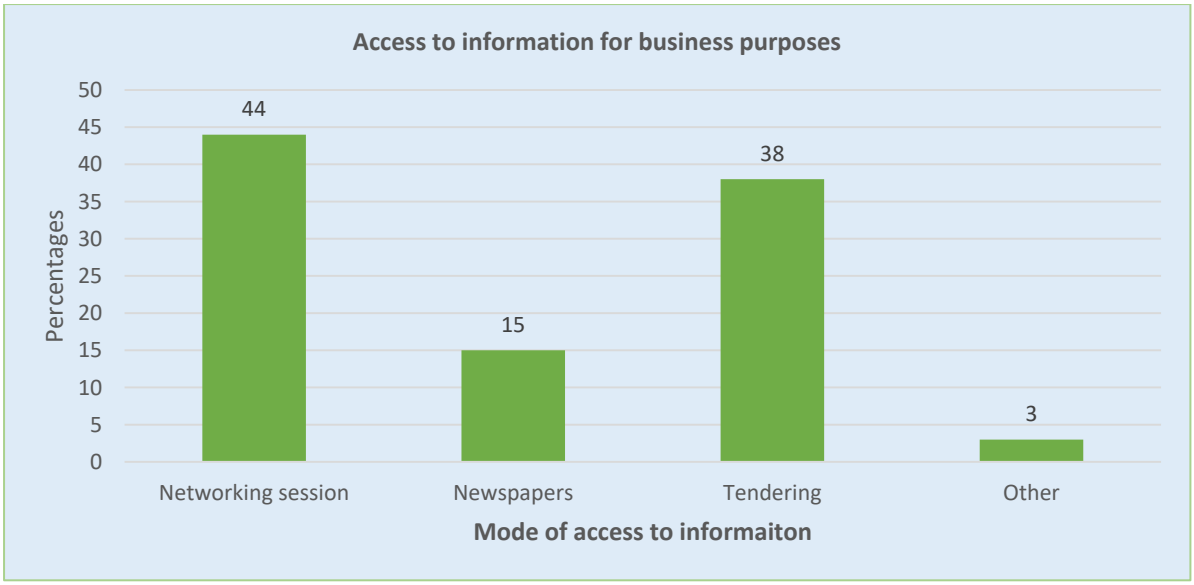


Figure 8: Access to information

4.3 Correlations results

This section discusses the correlation between the independent and dependent variables. The relationship between the different variables was tested and the strength, direction and significance of these relationships was then analysed and interpreted. The results show that income tax (-0.009), UIF (-.347), VAT (-.225), COIDA (-0.108) and SDL (-.476) all have a negative relationship with the dependent variable (turnover). The relationship is small, even though there is a relationship between compliance variables and turnover. UIF, VAT and SDL correlation is significant at $p<0.01$ for a two-tailed test based on 150 completed observations. Therefore, the results do not support **hypothesis 1a**: The greater the level of compliance with required regulatory compliance, the greater the increase in SME performance.

There is a positive correlation between the construction compliance variables (independent) + B-BBEE (0.111), NHBRC (0.000), CIDB (.0115), CIDB REG_GRADE (.358**) and the dependent variable (turnover). The size of the relationship is small. Therefore there is a relationship between the independent and dependent variable. B-BBEE, NHBRC and CIDB correlation is not significant. CIDB REG_GRADE correlation is significant at $p<0.01$. Therefore the results do support **hypothesis 1b:** The greater the level of compliance with construction compliance, the greater the increase in SME performance.

Technological competency (-0.089) has a negative correlation with the dependent variable (turnover). The size of the relationship is very small, even though there is a relationship between the independent and dependent variable and the correlation is not significant. Therefore, the results do not support **hypothesis 2:** The higher the entrepreneurial technological capabilities of SMEs, the greater their capabilities.

Funding (-.253**) has a negative correlation between the dependent variable (turnover). The size of the relationship is very small, even though there is a relationship between the independent and dependent variable and the correlation is significant at $p<0.01$. The results support **hypothesis 3:** The greater the access to funding, the better the performance of SMEs.

Access to market opportunities (-.213**) and access to information (-0.142) have a negative correlation to the turnover. The size of the relationship is very small, even though there is a relationship between the independent and dependent variable. Market opportunities is significant at $p<0.01$. The results do not support **hypothesis 4:** The greater the access to market information, the greater the access of SMEs to market opportunities in the construction industry.

Table 15: Correlations

Correlations																	
	TURNOVER	REGT_INCOMETAX	REGT_PAYE	REGL_UIF	REGT_VAT	REGL_SDL	REGL_COIDA	REGO_BEE	REGC_NHBRC	REGC_CIDB	REGC_CIDBGrade	MARKET_Access_Info	MARKET_Opportunities	TEC_Technological	FUN_Funding	FUN_Credit	CIDB_Category
TURNOVER	1																
REGT_INCOMETAX	-0.009	1															
	-.408**	0.098	1														
REGL_UIF	-.347**	0.093	.906**	1													
REGT_VAT	-.225**	-.239**	.440**	.426**	1												
REGL_SDL	-.476**	0.011	.421**	.430**	.198*	1											
REGL_COIDA	-0.108	0.122	-0.007	-0.014	0.102	-0.024	1										
REGO_BEE	0.111	.396**	-0.087	-0.082	-0.051	-0.019	.281**	1									
REGC_NHBRC	0.000	-0.044	0.049	0.067	.317**	-0.014	.400**	0.128	1								
REGC_CIDB	0.115	0.137	-0.158	-0.127	0.000	-0.134	.402**	.358**	.294**	1							
REGC_CIDBGrade	.358**	0.018	-.375**	-.372**	-0.126	-.179*	0.076	.395**	-0.055	0.094	1						
MARKET_Access_Info	-0.142	.324**	.289**	.236**	0.024	.182*	0.015	0.134	-0.108	0.008	-.216**	1					
MARKET_Opportunities	-.213**	0.027	.228**	.184*	0.032	0.072	0.042	-0.122	0.033	0.034	-.209*	0.141	1				
TEC_Technological	-0.089	0.092	0.070	0.057	.201*	0.041	.478**	.172*	.312**	.350**	0.040	0.076	.250**	1			
FUN_Funding	-.253**	0.038	.201*	.186*	0.093	0.156	-0.007	0.045	-0.093	-0.024	-0.066	0.126	0.123	-0.032	1		
FUN_Credit	-0.036	0.101	0.155	0.148	0.069	0.021	.261**	0.102	0.077	0.118	0.008	0.041	0.154	.218**	-0.052	1	
CIDB_Category	0.052	-.166*	-0.142	-0.141	-0.049	0.008	0.087	-0.039	0.035	0.134	0.025	-0.127	-0.011	0.061	-.169*	0.001	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

4.4 Regression Analysis

This section focuses on hypothesis testing of the different variables. The influence of several independent variables on performance (dependent variable) was tested using regression. The results are analysed and interpreted below. Table 16 below, provided by SPSS, is a summary of the model that gives the value of R and R2 for the model. For this data, R is 0.620, and because there is more than one predictor, this value represents the simple correlation between Training, SDL, Funding, Registration CIDB Grade, Market Opportunities, Registration VAT, Project Manager, Employees, UIF, PAYE and Turnover. The value of R2 is 0.385, which tells us that predictors can account for 38.5% of the variation in the turnover. There may be many factors that can explain the variation but our model, which includes various predictors, explains 38.5%; 24% of the variation SMEs is unexplained. Correlation is significant at the $p<0.05$ level (2-tailed).

Table 16: Model Summary

Model Summary[b]					
Model	R	**R Square**	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.620[a]	**0.385**	0.340	0.538	2.240
a. Predictors: (Constant), Training_Freq, REGL_SDL, FUN_Funding, REGC_CIDBGrade, MARKET_Opportunities, REGT_VAT, Project_Manager, Employees, REGL_UIF, REGT_PAYE					
b. Dependent Variable: TURNOVER					

Table 17 shows the result for this data F is 8.63, which is significant at $p<0.05$, F(10,8.632) because the value in the column labelled Sig. is less than 001. This result tells us that there is less than 1% chance that an F-ratio being large would happen if there were no effect. Therefore, we can conclude that our regression model results in significantly better prediction of turnover than if we use the mean value of turnover.

Table 17: ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.969	10	2.497	8.632	**.000[b]**
	Residual	39.917	138	0.289		
	Total	64.886	148			

a. Dependent Variable: TURNOVER

b. Predictors: (Constant), Training_Freq, REGL_SDL, FUN_Funding, REGC_CIDBGrade,

The ANOVA tells us whether the model results overall in a significantly good degree of prediction of the outcome variable. However, it does not tell us about individual contribution of variables in the model and so we can infer that these variables are good predictors. Table 18 provides the details of the model parameters and significance of these values. REGT_PAYE and REGL_UIF are significant predictors of turnover at $p<0.1$. REGL_SDL, REGC_CIDBGrade and FUN_Funding are significant predictors of turnover at $p<0.05$. From the table, we can say that b_0 is 3.380 and it can be interpreted as meaning no registration on SDL (X=0). We can also read off the value of b_1 from the table and this value represents the gradient of the regression line.

Table 18: Coefficients

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.380	0.493		6.852	0.000
	REGT_PAYE	-0.473	0.255	-0.301	-1.851	0.066
	REGL_UIF	0.487	0.255	0.307	1.909	0.058
	REGT_VAT	-0.047	0.107	-0.035	-0.436	0.663
	REGL_SDL	-0.960	0.198	-0.364	-4.852	0.000
	REGC_CIDBGrade	0.111	0.040	0.210	2.795	0.006
	MARKET_Opportunities	-0.058	0.105	-0.043	-0.551	0.583
	FUN_Funding	-0.073	0.034	-0.151	-2.123	0.036
	Project_Manager	-0.081	0.105	-0.061	-0.770	0.443
	Employees	0.169	0.147	0.095	1.144	0.254
	Training_Freq	-0.051	0.070	-0.064	-0.736	0.463

a. Dependent Variable: TURNOVER

4.5 Chapter Conclusion

This chapter has outlined the findings of the research done with the 150 respondents. The results have been summarised in this chapter in order to track and trace different responses. The questionnaire was summarised in table format in order to reveal the most popular responses, and captured on Excel through SPSS 24 to provide the research outcome.

The questionnaire addressed the research questions, including the testing of hypotheses aimed at uncovering the following:

- The nature and characteristics of small and medium sized construction enterprises in Johannesburg, Gauteng;
- How adequately SMEs in Gauteng employ and implement compliance, technical controls, and access to market opportunities, funding and information to improve performance that will yield positive turnover results;
- The internal and external factors constraining the development of SMEs in the construction industry.

Different statistical tests were conducted and analysed to test the research hypotheses. Correlation testing revealed that hypotheses ***Hypothesis 1a*****:** The greater the level of compliance with required regulatory compliance, the greater the increases in SME performance; ***Hypothesis 2:*** The higher the entrepreneurial technological capabilities of SMEs, the greater their performance and ***Hypothesis 4:*** The greater the access to market information, the greater the access of SMEs to market opportunities in the construction industry indicated a negative result which did not support the hypothesis, while ***Hypothesis 1b:*** The greater the level of compliance with construction compliance, the greater the increases in SME performance and ***Hypothesis 3:*** The greater the access to funding, the better the performance of SMEs indicated a positive result, supporting the hypothesis.

5 CHAPTER 5: DISCUSSION OF RESULTS

5.1 Summary of key findings

The purpose of this chapter is to establish and summarise the main findings and conclusions in relation to the research questions. The order of the research objectives and questions has been maintained. The sub-questions have been addressed to help answer the main research question of the constraints to the development of construction SMEs in South Africa.

All the construction SMEs which participated in this study complied with the requirements of being an SME, including the registering of a business within the South African confined statutory laws, which improves their annual turnover and reduce unemployment. It can be concluded that SMEs in South Africa face very similar challenges. The challenges discovered during this research that coincide with the reviewed literature include a lack of technical/technological skills. This is the most common challenge cited by the respondents, and there is therefore a need to encourage and improve training and development. Lack of managerial/technical skills is the basis of poor cash flow management, inadequate human resource management, poor risk management, and ineffective planning and execution of projects, resulting in low turnover for SMEs.

5.2 Discussion of Results

Hypothesis 1a: The greater the level of compliance with required regulatory compliance, the greater the increase in SME performance.

Compliance is a key element in the construction industry (Tran-Nam & Glover, 2002). The results revealed a negative impact in relation to SME performance, which is not significant. Furthermore, SMEs are generally associated with greater labour-intensive production and are therefore perceived to have a high labour-absorptive capacity. Many researchers observed that most employment produced in the SME sector does not result from the growth of more established and larger SMEs but from the establishment of new micro and survivalist enterprises.

Hypothesis 1b: The greater the level of compliance with construction compliance, the greater the increase in SME performance.

Construction compliance (CIDB, NHBRC, B-BBEE) is a key element in the construction industry. CIDB has highlighted the need to unlock performance constraints, capacity building and ways to create sustainable enterprises (Bikitsha et al., 2010). The NHBRC regulates the home building industry, and SMEs, like all other enterprises in the building industry, are required to register with the NHBRC, for the latter to monitor and evaluate the quality of the projects undertaken by SMEs. Registration with NHBRC is formal in nature. B-BBEE was introduced in 2003, the main objective of which is to advance economic transformation and enhance the economic participation of black people in the South African economy, with a view to eradicating the inequalities of our apartheid past (B-BBEE, 2003). Therefore, the results revealed a positive impact in relation to SME performance and that is significant.

Sub-problem 2 of the research aimed to measure the factors that influence the performance of SMEs in the construction industry, and analyse the internal and external factors that constrain the continuous development/growth in the built environment in South Africa. The findings highlight that there is a positive impact between CIDB, NHBRC, B-BBEE and turnover in relation to SME performance which are statistically significant.

Hypothesis 2: The higher the entrepreneurial technological capabilities of SMEs, the greater their capabilities.

SME contractors generally rely on manual, paper-based data, intuition, and experience that is not technology-aligned, leading to a lack of innovation in their business (Benjaoran, 2009). A lack of innovation within SMEs is pointed out by Yang et.al (2007), who note that most project managers in SMEs prefer to use Excel for recording and processing different types of data, in place of specialised computer packages for managing construction projects. They concluded by stating that the larger the firm size, the more intensive the use of IT by contractors. The results

revealed a negative impact in relation to SMEs performance and that is not significant.

According to Van Mook (2009), it is important for project managers in construction to acquire formal education and training, and to continuously engage in educational activities that can keep them up to date with the industry and improve their profession. Twinn (2013) agreed with this definition of professionals and added that there is a gap between the theory and practice of project management. It was identified that the use of built environment professional bodies, mandated to govern and improve the profession, are necessary (see Table 18 in chapter 4).

Senzile (2013) argued that the majority of practicing professional project managers in South Africa have not gone through the necessary project management training and lack sufficient knowledge, skills, and experience to manage projects successfully. This is supported by a report produced by the World Bank (1996), which states that small firms tend to invest less in training, and thus it is a general human resource problem (see Table 18).

It is noticeable that SMEs with strategic techniques in place could escape the negative influence that may emanate from the external factors. Venter et al. (2007) emphasised that changes in government and changes in the economy, which seem to be typical, regular events over time, can unsettle some SMEs from their stable businesses. Factors like competitiveness, customer relationships, sub-contracting, and project pricing are factors that influence the business development/growth but do not control it. All these factors discussed are not to be taken lightly by construction SMEs as this environment deals with all the aspects that affect performance to make reasonable turnover, which is important for SMEs survival (Clements & Gido, 2005).

Hypothesis 3: The greater the access to funding, the better the performance of SMEs.

Gree and Thurnik (2003) argue that the contribution of the SME sector cannot be sustained without access to funding that will sustain emerging SMEs. According to

Demirguc-Kunt et al. (2006), the two primary sources of external finance for emerging SMEs are equity and debt.

According to a World Bank Report in the South African Business Environment for Industrial Small and Medium Enterprises (1996), South African banks, in comparison to other developing countries, are relatively more flexible, although there are problems with a lack of funding for SMEs in the country. The South African banking system allows for collateral that is not strictly immovable. This is different from other developing countries, where 100% collateral is demanded from small firms in the form of immovable property. It was stated that the South African Banking System accepts equipment, debtors' books, and insurance policies as collateral.

Usually banks evaluate loan requests based on the contractor's level of risk of default. As a result, banks tend to be cautious about loaning to emerging contractors and small firms. However, according to Senzile (2013), the World Bank Report (1996) stated that medium sized firms are "moderately constrained" in their access to finance. The South Africa Finance Institutions take into consideration the size and age of the firms. This is supported by the World Bank Report (1996), which states that firms that had more than 20 employees and that had been in business for more than four years were reported to have access to finance.

Figure 6 shows that starting up a business or company is challenging in most instances. SME owners were asked how they obtained start-up funding. The majority (42%) indicated that they received funding from family and friends, 32% were self-funded, 11% had received funding from government agencies, 8% had obtained loans from financial institutions, and 7%had used an alternative source of funding. Therefore, in testing hypothesis 3, the results revealed a negative impact between the independent and dependent variables in relation to SME performance and that is not statistically significant.

Hypothesis 4: The greater the access to market information, the greater the access of SMEs to market opportunities in the construction industry.

The examination of access to market and information for SMEs indicates that improvement in market access has shifted to focus on engagement with the corporate sector regarding procurement requirements to SMEs and to government public sector procurement through the tendering system (Rogerson, 2013). The results revealed a negative impact in relation to SME performance and that is not significant.

Research design focuses on the end-product: determining what kind of study is being planned and what kind of results are aimed at. Research design also highlights the point of departure, whether it be the research problem itself or a research question (Babbie & Mouton, 2010).

In the context of this study, the point of departure was the research problem as articulated in Chapter 1: From the hypothesis tested it is evident that there is a general lack of competitiveness within construction SMEs. Most construction SMEs can hardly demonstrate technical competencies and educational capability which could enable them to compete in a growing construction economy.

5.3 Conclusion

The factors impeding SME performance have been acknowledged in previous similar studies. The present study has given further insight into this valuable information by examining the relationship between the independent variables (regulatory compliance, technological factors, funding and access to market) and dependent variable (performance/ annual turnover), and whether the independent variables appear to significantly influence SME performance.

With particular emphasis on the factors impeding SME performance, within the framework of the testing of hypotheses H_{1a}, H_2, and H_4, it has been confirmed that statistically the results are not significant, even though there is a relationship between the independent and dependant variables. Furthermore, hypothesis 1b plays an important role in the performance of the SMEs.

The public sector has identified sub-contracting as an effective measure to involving SMEs in the construction industry. Gouden (1997) has argued that sub-contractors in South Africa tend to have very little negotiating power with the main contractor. They are often put at a disadvantage as there is little formalised protection against late payments to SMEs as well as protection against the main contractor going insolvent. It is for this reason that emerging contractors are very keen to get exposure in the industry and to generate revenue. Sub-contractors do not have the bargaining power to demand risk distribution accordingly between sub-contractors and main contractors (Gouden, 1997). Table 9 showed that the majority of SMEs subcontract their work, which indicates that they do not qualify to be main contractors because their turnover is less than R1million, their CIDB grading is low, and they have less than 20 employees.

6 CHAPTER 6: RECOMMENDATIONS AND CONCLUSIONS

The purpose of this chapter is to summarise the main findings and conclusions in relation to the research questions. The structure of the order of the research objectives and questions has been maintained. The sub-questions have been addressed to help answer the main research question, which is to examine the regulatory compliance, technological factors, funding and access to market that affect the performance of Gauteng SMEs in the construction industry, specifically those that are based in the seven regions of the Johannesburg Metropolitan.

The selected SMEs are aligned with the definitions of what SMEs are in South Africa and globally. The CIDB's mandate to monitor and regulate all contractors within South Africa ensures that contractors with the same characteristics are compared to each other. It can be drawn from the results and the literature review that SMEs make up a very large portion of the construction industry as there are over 4600 SMEs in Gauteng registered and operating within South Africa.

All the small and medium sized construction companies that participated in this study complied with the requirements of being an SME, which include the regulatory compliance, technological competencies, access to funding, access to market and information, the type of business they engage in, annual turnover, and total number of employees. It can be concluded that the SMEs in South Africa face very similar characteristics and thus challenges. The challenges discovered during this research coincide with the literature that has been reviewed.

There is a need to encourage staff training to enhance technical competences of the staff members as well as to increase managerial skills in cash flow management, human resource management, risk management, and ineffective planning and execution of projects, resulting in low turnover for SMEs. Another significant challenge faced by most SMEs is financial constraints. The SMEs have to be competitive to remain relevant in the industry, resulting in low profit margins. However, for businesses to improve their practice they have to invest in new technologies and training for their labour force.

In conclusion, SMEs face similar challenges, in South Africa as well as globally. They experience challenges accessing the markets primarily due to inexperience, lack of technical capabilities and financial constraints. These challenges are all linked with the financial inability of SMEs to train their staff members or encourage them to register with professional bodies.

6.1 Contribution and Implications

Funding is another significant challenge faced by most SMEs in construction. The SMEs have to be competitive to remain relevant in the industry, resulting in low profit margins. However, for businesses to improve their practice, they have to invest in new technologies and training for their employees. SMEs are further faced with the challenge of high interest rates by lending institutions as they are a higher risk, therefore further crippling their financial ability to invest in their human resources to yield more successful projects and thus grow.

It can be concluded that most SMEs do not have the resources to invest in their technical staff training. This has been identified by the respondents as well as in existing literature, stating that training is expensive for the SMEs. It involves a lot of costs ranging from the opportunity cost of being away from the office during training to the direct costs of training and education. It is primarily for this reason that most of the respondents indicated they went for training only once every six months or a year, and others had no training.

6.2 Areas of future research

The following areas need further exploration and research:

- The comparison of SMEs with larger construction companies in order to further explore the challenges faced and to map a way forward to overcome challenges that have been specified in section 1.1. A conclusion could be outlined on the business environment and characteristics of SMEs, and how these affect SME development within the construction industry.
- The exploration of the conception and initiation of a project, to further breakdown the project life cycle and the techniques implemented by project managers.

6.3 Concluding remarks

The results of the study will contribute to the body of knowledge around understanding of how SMEs function in South Africa, particularly in the construction industry. It will provide information on factors that hinder performance in the construction industry and how these factors can be overcome to ensure SMEs remain sustainable.

This study is aimed at entrepreneurs, researchers and policymakers with a view to implementing the suggestions in order to improve the present support provided by the government and the private sector for the performance of SMEs. Government has to continuously enforce the preferred procurement policy to empower youth, women-owned companies and people with disabilities. This will enable the policymakers in government to regulate factors that impede on SME performance to avoid exploitation and create sustainable jobs that will contribute to the economy.

Summary of recommendations drawn

The Skills Development Act (No. 97 of 1998) should be fully implemented in SMEs. This can be done by creating an incentive for SMEs to invest in the training and education of their technical staff to ensure that they remain competent. By encouraging training and education of SMEs, project managers can learn and understand the principles of project management and implement them in the execution of projects to overcome the cost overruns, time delays and compromised quality of the end products. The government should also regulate sub-contracting through the Labour Relations Act to protect SMEs from exploitation by the main contractor.

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8 APPENDICES

8.1 Appendix A: Classification of SMMEs

Sector or subsector according to the Standard Industrial Classification	Sizes of class	The total full-time equivalent of paid employees	Total turnover	Total gross asset value (fixed property excluded)
Agriculture	Medium	100	R5.00	R5.00
	Small	50	R3.00	R3.00
	Very Small	10	R0.50	R0.50
	Micro	5	R0.20	R0.10
Mining and Quarrying	Medium	200	R39.00	R23.00
	Small	50	R10.00	R6.00
	Very Small	20	R4.00	R2.00
	Micro	5	R0.20	R0.10
Manufacturing	Medium	200	R51.00	R19.00
	Small	50	R13.00	R5.00
	Very Small	20	R5.00	R2.00
	Micro	5	R0.20	R0.10
Electricity, Gas and Water	Medium	200	R51.00	R19.00
	Small	50	R13.00	R5.00
	Very Small	20	R5.10	R1.90
	Micro	5	0.20	R0.10
Construction	Medium	200	R26.00	R5.00
	Small	50	R6.00	R1.00
	Very Small	20	R3.00	R0.50
	Micro	5	0.20	R0.10
Retail and Motor Trade and Repair Services	Medium	200	R39.00	R6.00
	Small	50	R19.00	R3.00
	Very Small	20	R4.00	R0.60
	Micro	5	R0.20	R0.10
Wholesale Trade, Commercial Agents and Allied Services	Medium	200	R64.00	R10.00
	Small	50	R32.00	R5.00
	Very Small	20	R6.00	R0.60
	Micro	5	R0.20	R0.10
Catering, Accommodation, and other Trade	Medium	200	R13.00	R3.00
	Small	50	R6.00	R1.00
	Very Small	20	5.10	R1.90
	Micro	5	R0.20	R0.10
Transport, Storage, and Communications	Medium	200	R26.00	R6.00
	Small	50	R13.00	R3.00
	Very Small	20	R3.00	R0.60
	Micro	5	R0.20	R0.10
Finance and Business Services	Medium	200	R26.00	R5.00
	Small	50	R13.00	R3.00
	Very Small	20	R3.00	R0.50
	Micro	5	R0.20	R0.10
Community, Social and Personal Services	Medium	200	R13.00	R6.00
	Small	50	R6.00	R3.00
	Very Small	20	R1.00	R0.60
	Micro	5	R0.20	R0.10

Source: National Small Business Act, 102 of 1996

8.2 Appendix B: SME questionnaire

STUDY NO…….. **Appendix B**

Questionnaire for SMEs in Gauteng Province, Johannesburg Region 2016

	Questions and response	**Responses and Skipping Instructions**
	Demographic	
001	What field of business does your company specialise in? **(Circle the appropriate number)**	1=Building Construction 2=Home Improvement 3=Civil Engineering Construction 4=Other (Specify) ……
002	What is your current position in the company? **(Circle the appropriate number)**	1= Construction manager 2= Project manager 3= Managing Director / Partner 4= Other (Specify) ……..
015	How many of your employees are: **(Write the total number)**	Males= Females=
016	How many of your employees fall into the following population group? **(Write the total number next to the corresponding population group)**	Black (African)= White= Coloured= Indian=
003	What is your highest education qualification? **(Circle the appropriate number)**	1=Matric 2=Diploma 3=Bachelor's degree 4=Post=graduate degree or Diploma 5=None 6= Other (Specify) ……
006	Is your company registered with the following taxation compliance?	1=Company income tax 2=PAYE 3=UIF 4=VAT 5=SDL 6 = None 7=Other (Specify)……
	REGULATORY COMPLIANCE	
005	Is your company registered for Taxation with SARS?	1=Yes 0=No
007	Is your company registered for Labour compliance including COIDA?	1=Yes 0=No
008	What is the BBBEE status of your company (Indicate level from 1 to 8)	Level =
009	Is your company registered with NHBRC?	1=Yes 0=No
010	Is your company actively registered with CIDB?	1=Yes 0=No
	VENTURE PERFORMANCE	
012	Does your company do sub-contracting work for other companies? **(Circle the appropriate number)**	0=No 1=Yes
011	In which category is your company registered with the CIDB? **(Circle the appropriate number)**	1= CE 6=SB 11=SG 16=SL 2= EB 7=SC 12=SH 17=SM 3= EP 8=SD 13=SI 18=SN 4= GB 9=SE 14=SJ 19=SO 5= ME 10=SF 15=SK 20=SQ

		21=Other (Specify)……
013	What is your company's estimated annual turnover? **(Circle the appropriate number)**	1=Less than R1m 2=Between R2 million and R5 million 3=Between R6 million and R10 million 4=R10 million and above
014	How many permanent employees does your company employed? **(Circle the appropriate number)**	1=Less than 20 2=Between 20 and 200 3=More than 200
TECHNOLOGICAL CAPABILITIES		
017	Does your company have a person responsible for project planning on given projects? e.g. project manager **(Circle the appropriate number)**	0=No 1=Yes
018	How often does your company provide training to its staff? **(Circle the appropriate number)**	1=Every 6 months 2=Every 1 year 3=Not Applicable
020	What is your CIDB grade? **(Circle the appropriate number)**	1= 1 2=2 3=3 4=4 5=5 6=6 7=7 8=8 9=9
026	Do you think your technical staff has the capability to identify market opportunities and skills to implement any project in construction industry? **(Circle the appropriate number)**	0=No 1=Yes
022	What technical controls does your company have? **(Circle the appropriate number) N**	1= Project management system 2= Accounting system 3= Quality control system 4= Operation plan system 5= Risk management system 6= Costing / pricing system (WinQS) 7= Nothing 8= Other (Specify)……
ACCESS TO FUNDING		
027	How did the company obtain start-up funding?	1= Family & Friends 2= Loans from Financial institution (Banks) 3= Government Agencies (IDC, GEP, DBSA, Khula Enterprise) 4= Other (Specify)……
028	Does your business qualify for a credit with financial institution? (Circle the appropriate number)	0=No 1=Yes
029	How do you access information for business purposes? **(Circle the appropriate number)**	1= Tendering 2= Networking session 3= Newspapers 4= Other (Specify)……

8.3 Appendix C: Consent form letter

The Graduate School of Business Administration
2 St David's Place, Parktown,
Johannesburg, 2193,
South Africa
PO Box 98, WITS, 2050
Website: www.wbs.ac.za

REQUEST FOR PERMISSION TO CONDUCT A RESEARCH OF DETERMINANTS THAT CONTRIBUTE TO SMALL AND MEDIUM ENTERPRISES' (SMEs) PERFORMANCE IN THE CONSTRUCTION INDUSTRY

Dear Sir/Madam

My name is **Nicholine Tubane student number 1519789**, and I am a Master of Management in Entrepreneurship and New Venture Creation ("MMENVC") student at the University of Witwatersrand (Wits Business School) in Johannesburg. The research I wish to conduct for my Master's dissertation is in respect of **DETERMINANTS THAT CONTRIBUTE TO SMALL AND MEDIUM ENTERPRISES' (SMEs) PERFORMANCE IN THE CONSTRUCTION INDUSTRY.** This project will be conducted under the supervision of Dr. Diran Soumonni (WBS, South Africa).

I humbly request your permission to allow me to conduct a questionnaire survey with you.

I have provided you with a copy of the approval letter which I received from the University of Witwatersrand Research Ethics Committee.

Upon completion of the study, I undertake to provide the participants with a bound copy of the full research report. If you require any further information, please do not hesitate to contact me on 082 490 1391 or 011 717 3629 or via email 1519789@student.wits.ac.za

Please understand that your participation is voluntary and you are not forced to take part in this study. The choice of whether to participate or not, is yours alone. If you choose not take part, you will not be affected in any way whatsoever. If you agree to participate, you may stop participating in the research at any time and can advise that you don't wish to continue. If you do this there will also be no penalties and you will NOT be prejudiced in ANY way whatsoever.

Confidentiality
Any study records that identify you will be kept confidential to the extent possible by law. The records from your participation may be reviewed by people responsible for making sure that research is done properly, including my academic supervisor.

All study records will be destroyed after the completion and marking of my thesis. I will refer to you by a code number or pseudonym (another name) in the thesis and any further publication.

Risks/discomforts
At the present time, I do not see any risks in your participation. The risks associated with participation in this study are no greater than those encountered in daily life.

Benefits
There are no immediate benefits to you from participating in this study. However, this study will be extremely helpful to us in understanding **DETERMINANTS THAT CONTRIBUTE TO SMALL AND MEDIUM ENTERPRISES' (SMEs) PERFORMANCE IN THE CONSTRUCTION INDUSTRY.**

Should you like to receive feedback on this study, the results may be emailed to you on request upon completion in December 2017.

Who to contact if you have any concerns
This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been offended in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. Mmabatho.leeuw@wits.ac.za

If you have any enquiries about the research you may call my academic research supervisor Dr. Diran Soumonni at (011)717-3646, Email: diran.saumonni@wits.ac.za

CONSENT

I hereby agree to participate in research on **Determinants that Contribute to SME Performance in the Construction Industry in the Gauteng Province**, **JHB Metro**. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not wish to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project with a purpose not necessarily to benefit me personally in the immediate or short term but for research purposes only.

I understand that my participation will remain confidential.

……..
Signature of participant
Date:……..

8.4 Appendix D: Informal and formal sector comparison

Informal construction Sector	**Formal construction Sector**
Flexible use of enclosed and open space and activities conducted in the them	Drastic difference between open and closed spaces and activities
Variety of layouts and forms	Repetition and uniformity and use of same finishes, textures, material etc.
No uniformity in the façade. Increased variety of materials, colours and textures	Façade uniformity and use of the same finishes, texture, and materials
Based on growth and progressive construction. The unit is constantly improved and enlarged	Little care for growth and progressive construction of the basic unit
Integration of domestic and income generation activities (both occur in the same unit)	Domestic and income generation activities are not integrated (differentiation of uses)
Incentive use of recycled material and components	Little use of recycled materials and components
The combination of technologies (wood, metals, bricks, concrete blocks). Progression from light to “solid” technologies	Use of one technology and uniformity between the units. No progression of technologies
Delimitation of land and fencing is a priority and a constant feature in all settlements	Delimitation of land and fencing is not a priority
Units create clusters around open spaces	Row distribution of units
Hierarchy of streets paths	Uniformity of open spaces (same dimensions and forms)
Variety of plot sizes and forms	Uniformity of plot sizes and forms
One plot occupied by more than one unit	One unit occupied by one house
Mix of home ownership and rental	Separation of home ownership and rental

Source : Lizarralde & Davidson, 2006

8.5 Appendix E: State-owned performance agencies

Institution	Service
SEDA	Its mandate is to implement the national SMME strategy. The agency is the amalgamation of three previous entities: Ntsika Enterprise Promotion, the Community Public Private Partnership Programme (CPPP) and the National Manufacturing Advice Centres (Namac). It provides nonfinancial support and has the mandate of integrating support agencies across the country. It is establishing itself in 9 provincial offices, 53 district branches and 284 Enterprise Information Centres in Municipalities. The primary difference with the earlier Ntsika and Namac is that 80% of the focus of the agency will be on micro and small enterprises with the remaining 20% dedicated to medium enterprises. This is accompanied by a vision of future 'one-stop shops' at the branch-level where other state initiatives such as Khula and the NEF will also be housed.
Khula	Khula's mandate is to facilitate loan and equity capital to the small, medium and micro-enterprise through the medium of Retail Financial Intermediaries by offering a range of financial resources and information to the public. Khula's Operations are divided into two divisions: Loans and Credit guarantees.
National Empowerment Fund (NEF)	The NEF promotes investment and transformation solutions to advance black economic participation. It promotes and supports business ventures pioneered and run by HDPs. Through its subsidiary NEF Ventures, it disburses start-up capital with allocation to be biased in favour of investments where PDI, especially women, are actively involved.
Industrial Performance Corporation (IDC)	The immediate objectives of the IDC are to create employment, to develop SMEs and to accelerate BEE. Part of its strategy is to promote entrepreneurship through the performance of competitive industries and to identify unrecognized business opportunities.
The SA Micro-Finance Apex Fund (Samaf)	Samaf has been established as a company to address poverty, unemployment and to provide affordable access to financial services for the poor. Its vision is to become an effective facilitator of micro financial services and to build a vibrant microfinance industry in SA. It now has pro-poor finance institutions in all nine provinces. The Fund is to provide small loans of up to R100, 000.

Source: Sanchez, D. (2006).

8.6 Appendix F: Consistency Matrix

Aim of Research	Literature Review	Hypothesis	Source of Data	Type of Data	Analysis
This study is aimed at entrepreneurs, researchers and policy makers with the view of implementing the suggestions or proposals in order to improve the present support provided by the government and the private sector in the development of the SMEs	The aim of this chapter is to review the existing literature relevant to the study.	1 a: The greater the compliance with required regulatory compliance increases SME performance. Hypothesis 1b: The greater the compliance with optional regulation increases SME performance.	SME entities are able to comply with regulatory bodies that govern SMEs.	The study will adopt a quantitative method through administering a semi-structured questionnaires using a cross-sectional method based on positivists that will be adopted to test the hypothesis.	All questionnaires received from the SMEs were captured on MS Excel and were later exported to STATA version 12 for data cleaning and analysis.
This study is aimed at entrepreneurs, researchers and policy makers with the view of implementing the suggestions or proposals in order to improve the present support provided by the government and the private sector in the development of the SMEs.	The first part of this chapter highlights some of the experiences faced by SME's in construction industries in South Africa. This is followed by the regulatory bodies in which SME's or Small Business are expected to function within. These regulatory bodies include the following institutions. Taxation, CIPC, labour laws, CIDB, NHBRC, and BBBEE.	Hypothesis 2: The higher the technological capabilities of SMEs the greater their capabilities.	The CIDB has 4600 registered SMEs in the construction industry in Gauteng. The Johannesburg Metro has a population of 1500 meaning the response rate of 10% would be adequate for the research.	Research Philosophy	Data was collated via Survey Monkey and telephonic interviews, and was then captured on MS Excel and exported to STATA version 12 for data cleaning and analysis. The software analysed the descriptive statistics, correlations between the constructs, and dependent and control variables (Cooper and Schindler, 2006; Field, 2009).
The results of the study will contribute to the body of knowledge in terms of understanding how SMEs functions in South Africa particularly in the Construction Sector.	**Level of technological capabilities**: technical and related business competency **Level of access to funding:** government agencies and financial institution	Hypothesis 3: The greater the access to finance the better the performance of SMEs.	The JHB Metro has 1500 population, responded rate would give 10% which is adequate for the research.	The epistemology of this research study will be positivist whose focus is to explain and predict casual relationships between variables and constructs (Coviello and Jones, 2004).	´Descriptive statistics will depict mean, mode, percentages, standard deviation and variance of numerical variables related to SMEs demographic variables such as age, gender, and level of experience with the built environment will also be analysed.
This will provide the policy makers in government to regulate factors that impeding SMEs development to avoid business exploitations and create sustainable jobs that will contribute to the economy.	**Level of access to Market:** access to information about business opportunities, business database, networks	Hypothesis 4: The greater the access to market information, the greater the access	The study will interview owners and managers of the business. General workers will be excluded from completion of the semi-structured questionnaire because they might not be able to provide adequate, reliable and credible answers	The ontological perspective of the study is an objectivist or realist standpoint which assumes that there is a single focus reality in the social world that is independent of the researcher's views and opinions (Ardalan, 2009). This study has adopted the epistemology	The software will analyse the descriptive statistics, correlations between the constructs, dependent and control variables and Multiple regression of variables will be tested (Cooper and Schindler, 2006; Field, 2009).