AN ASSESSMENT OF THE BARRIERS TO ENTRY AND EXPANSION FOR SMALL, MEDIUM AND MICRO-ENTERPRISES IN THE CEMENT INDUSTRY IN SOUTH AFRICA

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by

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DECLARATION

Except for references specifically indicated in the text, and such help as has been acknowledged, this thesis is wholly my own work and has not been submitted to any other Tertiary Institution for degree purposes.

.................................................................
LERATO LENTSOANE
ABSTRACT

Two decades into the new democracy, South Africa has made significant progress; amongst other things, it has formalised its economy. The government of the day is making several attempts to boost human development and further the creation of sustainable economic opportunities through empowering its citizens with education and the transfer of skills through training. However, the historical concentration of South Africa’s economy in the hands of the minority has meant that further economic transformation is needed to make available the necessary opportunities for the citizens that are being up-skilled. This study analyses the barriers inherent in the cement industry, which constrain entry and growth of SMMEs in the cement industry. The focus on SMMEs is motivated by the fact that they play a significant role in job creation.

This is a deductive study and data was collected using structured questionnaires and interviews. Feedback from these has been compared and tested against the relevant theoretical literature on the lack of sustainable small and medium sized businesses in South Africa. Feedback from the questionnaire and interviews found that availability of capital is the main requirement for operating a cement manufacturing companies, where the main expense is due to high logistical costs from transporting raw material to factories, transporting partly finished products to intermediate factories, transporting finished products to depots and, transporting products from the most convenient depot to customers. Secondly, stringent legislation and the lack of the legislative requirements thereof were identified as another barrier. This entails the acquiring of mining rights, water licences, and compliance to environmental regulation. Finally, from this study it is evident that the challenge of skills shortage in the cement and lime production, and the entire construction industry is persisting. Across genders, a small percentage of the workers are categorised as professionals, senior management and top management.

In light of the recent global developments and the efforts towards adapting to a green economy, policy can be further focused on introducing and increasing opportunities for technical experts in environmental compliance. Therefore, where the barriers to producing cement are high, SMMEs could explore the avenue of specialising and contributing towards environmental compliance. Thus, it is recommended that policies be put in place and investment commitments be made towards the SMME market complementing the cement industry with the professional and specialised skills that they lack. It is further recommended
that policy be put in place to support emerging entrepreneurs towards providing the relevant equipment, parts of the machinery or upgrading the existing machinery of the cement manufacturers towards addressing the current environmental concerns. These efforts will contribute and complement the existing efforts by government such as the identification of critical skills for importing by the Department of Home Affairs.
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<th>Description</th>
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<tbody>
<tr>
<td>ASGISA</td>
<td>Accelerated and Shared Growth Initiative of South Africa</td>
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<td>BBBEE</td>
<td>Broad Based Black Economic Empowerment</td>
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<td>C&amp;CI</td>
<td>Cement and Concrete Institute of South Africa</td>
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<td>CIPRO</td>
<td>Companies and Intellectual Property Registration Office</td>
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<td>CSBP</td>
<td>Centre for Small Business Promotion</td>
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<td>DTI</td>
<td>Department of Trade and Industry</td>
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<td>DFIs</td>
<td>Development Finance Institutions</td>
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<td>GDP</td>
<td>Gross Domestic Product</td>
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<tr>
<td>GEAR</td>
<td>Growth, Employment and Redistribution</td>
</tr>
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<td>GEM</td>
<td>Global Entrepreneurship Monitor</td>
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<tr>
<td>HIV/AIDS</td>
<td>Human Immunodeficiency Virus infection / Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>IPAP</td>
<td>Industrial Public Action Plan</td>
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<td>MPRDA</td>
<td>Mineral and Petroleum Resources Development Act</td>
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<td>NEPAD</td>
<td>New Partnership for Africa’s Development</td>
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<td>NPC</td>
<td>Natal Portland Cement</td>
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<td>NRCS</td>
<td>National Regulator for Compulsory Specifications</td>
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<td>NSBC</td>
<td>National Small Business Council</td>
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<td>OCIPE</td>
<td>Office of Companies and Intellectual Property Enforcement</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<tr>
<td>PIC</td>
<td>Public Investment Corporation</td>
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<td>PICC</td>
<td>Presidential Infrastructure Coordinating Commission</td>
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<td>PPC</td>
<td>Pretoria Portland Cement</td>
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<td>RDP</td>
<td>Reconstruction and Development Program</td>
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<td>SACU</td>
<td>Southern African Customs Union</td>
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<td>SADC</td>
<td>Southern African Development Community</td>
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<td>South African National Standards</td>
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<td>SARS</td>
<td>South African Revenue Services</td>
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<td>SBP</td>
<td>Small Business Project</td>
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<td>SEDA</td>
<td>Small Enterprise Development Agency</td>
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<td>SETA</td>
<td>Skills Education Training Authority</td>
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<td>SIPs</td>
<td>Strategic Integrated Projects</td>
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<td>SMMEs</td>
<td>Small micro and medium-sized enterprises</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<td>TB</td>
<td>Tuberculosis</td>
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<td>TIPS</td>
<td>Trade and Industrial Policy Strategies</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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CHAPTER ONE
INTRODUCTION

1.1. CONTEXT OF THE RESEARCH

The cement industry in South Africa is dominated by four large cement producers, namely: Pretoria Portland Cement Company Ltd (PPC), Lafarge Industries South Africa (Pty) Ltd, AfriSam South Africa (Pty) Ltd and Natal Portland Cement-Cimpor (Pty) Ltd. The common characteristic amongst these firms is that they are well-established and have been in existence for decades. Recently, three new entrants, Sephaku Cement, Osho Cement and Wiphold, have expressed plans of entering the market and they are said to be the first entrants into the South African cement market since 1934 (Young, 2013).

South Africa’s cement industry is part of the construction industry which is a major player in the Southern African Development Community (SADC) region, contributing between 80 and 90 percent of total infrastructure spending. It is the major job creator in South Africa’s economy, and employs over one million people at various skills levels during 2009 (Snyman, 2010). Altogether, the South African cement manufacturing and lime industry is estimated to employ 8024 people (Young, 2013).

It follows that the strong growth in the construction industry has had many inferences on South Africa’s local cement industry. The growth in the construction industry has led to an increase in the demand for cement, and has exerted pressure on the suppliers. Such stimulus has led to an increase in the contribution made by the cement industry to the economy which has led to an increase in employment opportunities.

Similarly, the process of manufacturing Portland cement is classified as part of the primary and the secondary sectors of South Africa’s economy. Notwithstanding the significant contribution by the cement industry towards the country’s economy, little transformation has been seen in the structure and oligopolistic nature of this industry. The slow pace of change in this industry is similar to that seen in the transformation of South Africa’s economy in general.

Globally, the cement industry is oligopolistic in nature and cement cartels have been discovered in a number of countries. A cartel is agreement between firms not to compete with one another. Whish (2012) affirms these observations with the following, “The first thing for
any new competition regulator is to go out and find the cement cartel because my experience of this subject is, it is always there. The only countries in which I had been unable to find the cement cartel is where there is a national state-owned monopoly for cement”. South Africa’s case is no different. Madiba (2009) further observes that although the legally sanctioned cement cartel was disbanded in 1996, the four main cement producers are still found to operate interdependently and they control all of the sales in South Africa’s cement industry.

The study takes the form of an impact assessment of the structure of South Africa’s cement industry. The research assesses the barriers to entry and expansion, specifically for medium-sized enterprises. In doing so, the study discusses factors related to the structure of South Africa’s cement industry, regulation, availability of resources, start-up costs and knowledge of the industry (expertise). These barriers will be assessed with the aim of investigating means and options to increasing the number of medium-sized enterprises that enter and grow in South Africa’s cement industry. The degree of competition in the market is linked to the number of players in the market. Based on the realisation by the South African Competition Commission (2010) that competition issues have a bearing on development; amongst others, this study investigates the factors that inhibit entry and expansion of SMMEs into the cement industry. It findings may inform policy on ways to address such barriers thereby encouraging entry into the market and reducing anti-competitive behaviour in the market.

1.2. PROBLEM STATEMENT

This study contributes to the stock of knowledge by investigating barriers to entry and expansion for SMMEs in South Africa. Its findings would add policy direction towards efforts that are expended by government to grow South Africa’s economy faster. In addition, the findings would be useful for promoting competition in the cement industry, and increasing the labour-absorption capacity of the economy through development of small micro and medium-sized enterprises (SMMEs). More specifically, the study assesses the barriers to entry and expansion for SMMEs in South Africa’s cement industry. The focus on medium-sized enterprises is based on their potential towards economic growth. Abor and Quartey (2010) view SMMEs as efficient and prolific job creators, the seed of big business and the fuel of national economic engines.
One of the major challenges identified by investors as an inhibitor of growth and development is the absence or lack of infrastructure growth (McKinsey Global Institute, 2012). As a developing country, South Africa has embarked on a host of economic and financial development initiatives such as the Presidential Infrastructure Co-ordinating Commission (PICC); this body was set up to integrate and co-ordinate South Africa’s long term infrastructure building.

The PICC developed an Infrastructure Plan with 17 Strategic Integrated Projects (SIPs), covering more than 150 specific infrastructure interventions. It covered the following key platforms: rail, road and port, dams, irrigation systems and sanitation, new energy generation plants, transmission lines and distribution of electricity to households, communication and broadband infrastructure, social infrastructure in the form of hospitals, schools and universities as well as regional infrastructure. The PICC realises that infrastructure growth supports balanced and strong economic development (PICC, 2012).

The focus on infrastructure development has seen the construction sector being identified as one of the sectors with a huge potential for contributing to the long-term economic growth of various countries within Africa (McKinsey Global Institute, 2012). In the five regions in Africa, McKinsey (2012) cites the lack of infrastructure inter-linkages across the continent as one of the causes of slow growth. Bearing this realisation in mind, the New Partnership for Africa’s Development (NEPAD), under the African Union, developed the regional integration and infrastructure thematic group.

The African Union identified infrastructure projects in the following sectors: information and communication technologies, transport, energy, water and agriculture. The North-South infrastructure development corridor programme is a member of the NEPAD High Level Sub-Committee on infrastructure, which is intended to link the North and Southern parts of the continent through a good network of roads and railways.

This study is inspired by initiatives on infrastructure development because infrastructure development projects promise growth and development for the businesses that will directly supply inputs for such multi-million projects. Usually cement and concrete for projects of this magnitude is supplied by dominant players who can bear the costs of setting up large production factories or have the financial resources to export the necessary cement and
concrete. This study intends to show how the scope can be enlarged to be inclusive and ensure that SMMEs also benefit from development projects in South Africa.

The South African government and state-owned enterprises have put aside a budget of about R415.8 billion over a three-year period (Competition Commission, 2012) to increase electricity production to a level that meets the demand, as well as improve on the existing transport and logistics systems, telecommunications, and so forth (PICC, 2012). South Africa’s Competition Commission (2012) advises that as private investment grows, addressing competition problems in these areas will have beneficial implications for the costs of private fixed investment. Therefore, this study assesses the unrealised potential of SMMEs benefiting from such infrastructure developments.

The Global Entrepreneurship Monitor survey of 2010 reveals that compliance policies accompanied by long registration processes, and dominant monopolies with a bias towards large firms create barriers to entry for new businesses (Herrington et.al., 2010). The survey also identified access to finance, legislation and pricing mechanisms as the main barriers to SMMEs thriving and reaching their desired potential. This current study investigates whether there are barriers to entry and expansion that are unique to the cement industry. The study will answer the following research questions: What barriers make it difficult for SMMEs to enter the cement industry in South Africa? What barriers make it difficult for SMMEs in the cement industry in South Africa to grow?

1.3. OBJECTIVES OF THE STUDY

The main objective of this research is to assess the barriers which can be further addressed to ensure that the playing field in this sector is levelled and the necessary involvement of SMMEs is advanced, to contribute towards alleviating poverty and lowering inequality. This study will provide policy makers and regulators with information that will help in their efforts of increasing the number of SMMEs in South Africa’s cement industry, and improving the growth of those that are already players in the industry. This study will also achieve the following specific objectives:

- To investigate barriers to entry of SMMEs into the cement industry in South Africa; and,
• To investigate the barriers which may inhibit the growth of SMMEs in South Africa’s cement industry.

1.4. HYPOTHESIS OF THE STUDY

The hypothesis for this research is as follows: stringent regulatory requirements and lack of access to resources inhibit entry and growth of SMMEs into the cement industry in South Africa.

1.5. JUSTIFICATION OF THE STUDY

Further to the work by the Competition Commission which mainly highlights the structural imbalances in South Africa’s economy, this study will uncover elements of the structural challenges and propose adjustments that ought to be made in the economy for SMME development. The contribution by this study is inspired by Hartzenberg’s (2006) observation that, in addition to promoting efficiency, adaptability and development of the economy, the Competition Act (1999) emphasises the promotion of small business development, greater participation in the economy and the promotion of a greater spread of ownership. Over and above the standard barriers to SMME development such as lack of access to finance and stringent regulations, the observations and recommendations by this study will advocate for further analysis of the structure of the economy in the pursuit of supporting SMME development, using South Africa’s cement industry as an illustration. This study will contribute to the notion of SMME and economic development which, in the medium to long term, is balanced and sustainable.

The focus on SMMEs is in the light of them being seen as an avenue to alleviating various development challenges. The potential, discussed in this study, of these businesses’ contribution to the country’s developmental challenges is based on the realisation that they often employ the least educated of a country’s population; the experience and training acquired by workers in such businesses opens up further opportunities for the workers and also contributes to a country’s social upliftment (Abor, 2012).
The construction sector, however, is more of a labour intensive than a capital-intensive sector. This sector is one of those that can be relied on for both economic growth and job creation in developing countries such as those in Africa, where there is an abundance of low-skilled workforce. With the billions of rands worth of commitments to infrastructure development, South Africa’s Competition Commission (2012) raises the concern that the market for inputs into the construction sector is generally highly concentrated. It is against this observation that the need for this research has been identified. This study will examine one of the construction sector’s input industries, namely, the cement industry. The research focuses on South Africa’s cement industry. SMMEs are identified as one of the change agents in the fight against high levels of poverty and unemployment. This research will study the history and evolution of South Africa’s cement industry, and uncover the barriers to entry and expansion for SMMEs in this industry.

The SMME sector is constantly evolving with the introduction of various packages and frameworks that are meant to facilitate development in this sector. For example, in addressing inequality, since the early 2000s, the South African government in conjunction with the Trade and Industrial Policy Strategies (TIPS) has done extensive work on frameworks towards the second economy strategy. This strategy was meant to bridge the divide between the first and second economies, which are the different ends on the continued spectrum of inequality, where wealth and resources are concentrated on the one end, and poverty and disadvantage at the other (Phillip, 2000). Further, this research will examine South Africa’s construction sector, which is traditionally known to be oligopolistic in nature.

1.6. ORGANISATION OF THE STUDY

The thesis is organised as follows: Chapter two discusses the overview of South Africa’s cement industry, including the history and development of the industry. This discussion entails a study of the four main companies that manufacture, supply and distribute cement and other related products in South Africa. Chapter Three entails the review of the theoretical literature on the role of the role of SMMEs in South Africa’s cement industry. This chapter also reviews literature on the barriers to entry and expansion for SMMEs in South Africa’s cement industry. These barriers are categorised as either strategic or structural. Chapter Four discusses the methodology which was utilised in this study. Chapter Five discusses the results while Chapter Six concludes the study.
CHAPTER TWO
OVERVIEW OF THE CEMENT INDUSTRY IN SOUTH AFRICA

2.1. EVOLUTION OF THE INDUSTRY

South African cement producers are believed to be cost efficient when compared to foreign producers of cement. According to the Cement Manufactures Association of South Africa (1984), about 85 percent of South African plants were new and built to maximise efficiency, therefore, fixed costs such as depreciation are likely to be low since the plants are efficient. According to factory price per ton, depreciation as a fixed cost represents a portion of the total production costs, therefore, plays a significant role in determining production costs of cement and therefore factory prices of cement De Wet (2003). Further, De Wet (2003) classifies depreciation as one of the costs to production since input costs do not influence profitability but rather increase average total cost of production.

In the production process, the cement industry supply chain begins with material suppliers - the mining industry. The main raw material that is used in manufacturing Portland cement, which is the basis for all common cements, is limestone which is processed at high temperature (1 450°C) together with other components to form Portland cement clinker (Young, 2013). The raw materials from the mining industry always determine the components of cement and this is based on available resources closest to the manufacturing plant. Lime, limestone, magnesite and dolomite are some of the minerals which can be inter-substituted as they compete and substitute each other in similar markets and applications. Other substitutes include barite, kaolin, mica, flour silica and synthetic silica (Young, 2013). The second material supplier is the waste recovery industry which entails blast furnace slag, spent foundry sand, and so forth. Since the disbanding of the cement cartel, cement manufacturers have evolved to dominating the cement inputs industry such as the limestone and dolomite industry, through purchasing the quarries and mines that produce these raw materials. Such investments have been an attempt to retain competitiveness, maintain their market share and improve on production efficiency.

According to Young (2013), South Africa’s share of the world’s lime output is approximately 0.8 percent and there are two major producers of lime for resale, namely: PPC Lime and Idwala Lime. Therefore, the investment and dominance in the lime industry seems to have been inevitable as approximately 1.5 tons of limestone is needed to produce one ton of cement and 75 percent of limestone manufactured in South Africa is used in the
manufacturing of cement (Young, 2013). Consequently, limestone production is largely dependent on the demand for cement.

Cement is best described according to strength classes and generally, the major producers produce the following: 32.5N strength class which is used for general building and masonry applications, house foundations and paths; 42.5N strength class which is for specialised applications requiring high early strength such as small scale brick and block making, concrete columns and slabs and concrete driveways; and, 52.5N strength class which is for high early strength specialist applications such as the precast concrete products, poles and spun concrete pipes, roof tiles manufacturing, structural concrete applications and automated precast manufacturing (AfriSam, 2013). Some of the products from the cement industry are Portland cement, Blended cements, Masonry cements, and White and coloured cements. These cement products are supply markets in the construction industry and consumer end-users.

In running cement operations, various producers pursue different strategies. Cements in the same strength category can serve as substitutes for one another and with the correct mix proportions, one can even substitute cement from one strength class with the next. Therefore, products from the different suppliers are close substitutes of competitor products. The following diagram is a simplified illustration of the process to manufacturing cement:
During the era of the legal cement cartel, there were only five types of cement produced by local manufacturers. However, the disbanding of the cartel increased competition in the industry and subsequently widened the variety of cement products to further including other manufacturers such as blending companies. In accordance with the South African National Standards (SANS) 50197-1, there are 27 different types of common cement in South Africa. SANS 50197-1 is an adoption of the European Standard, EN 197. The main types of cement are CEM I, II, III, IV and V. CEM I and II are traditionally higher strength materials so which are used in structural concrete; CEM III, IV and V cements are blends and as such are materials more for general purpose.

Further dilution in market share and competition in the industry has been from a small but increasing portion of cement imported from countries like Pakistan and Vietnam, into South Africa which competes with the local products. It is estimated that five hundred thousand
(500, 000) tons of cement were imported into South Africa in 2011 and they made up 6.5 percent of demand in 2012 (Young, 2013). According to Master Builders, a representative of KwaZulu-Natal based entrepreneurs in the building industry since 2009, three business enterprises have imported cement into South Africa, mainly from Lucky Cement, Pakistan's largest producer.

Lucky Cement is a major exporter to over 22 countries in South East Asia, the Middle East and the eastern coastal areas of Africa (Rautenbach, 2012). According to the Global Cement Directory, around 1.65Mt per year of the production of Lucky Cement of Pakistan is exported. The Cement & Concrete Institute estimates that about 1400t of cement from Lucky Cement was imported into South Africa during the first quarter of 2012.

In an attempt to regulate cement imports and protect local producers, government has responded by imposing tariffs on cement; however, the significantly lower costs of production in the import countries still makes it a viable business. Although the National Regulator for Compulsory Specifications (NRCS) investigated and found no evidence that the quality of imports by Lucky Cement were non-compliant to the set standards; the NCRS has embarked on several efforts to encourage fair competition, sustain tight control over the industry and protect consumers against inferior products.

For example, the NRCS is said to have classified cement as a higher risk product and signed a memorandum of agreement with the South African Revenue Services (SARS) and the South African Customs Administration to work with border police at South Africa’s entry points. Cement imports have put pressure on coastal markets, notably in KwaZulu-Natal and Mozambique, since they dock at the Durban harbour. According to Young (2013), the effects are also being felt in the Eastern and Western Cape. The pressure in the affected regions is due to the price of the imported cement as the product is being sold at margins less than the locally produced cement. The complaints of low quality imports by local cement producers are thus seen as the local producers’ market share being threatened by imports.
2.2. MARKET STRUCTURE OF THE INDUSTRY

After World War II, countries globally focused on a common goal of rebuilding their economies. In common with most developing countries, South Africa pursued an active industrial policy in order to create the basis for industrial development (OECD, 2009). The paths to economic development varied in accordance with the country-specific economic conditions. Similarly, in reconstructing South Africa the government of the day overtime prioritised a selected number of sectors that were believed to be strategic towards the country’s growth.

Government intentionally invested in the technological advancement of these sectors, with the aim of making them national champions and expanding their capacity. Building of defence equipment and manufacturing of cement were some of the activities that were identified as strategic. The establishment of firms such as Denel was intended at building capacity for the South Africa to be able to defend the country since the country was sanctioned by many global players and would not get defence assistance when needed. In light of the activities in reconstructing the country, South Africa realised that infrastructure development was ongoing, since the country’s first cement plant was established in 1892.

The firm PPC cement is associated with the establishment of the cement industry in South Africa as it was the first cement manufacturing company to be founded in the country. This was aimed at avoiding the high costs of cement imported from Europe. Overtime, other cement plants were established. To improve the efficiencies and competitiveness of the industry, co-operation developed between the firms with regard to the exchange of information, resulting in a cement cartel. It was supported and legalised by government laws. The nature of the cartel was such that markets were confined across the value chain, from cement inputs such as natural limestone, shale and clay deposits, slag and fly ash by-products, to marketing and distribution of cement, lime and concrete.

With the establishment of more cement firms and manufacturing plants in the early 1950s, South Africa’s cement industry remained a cartel and oligopolistic in nature, where a few firms which offer a standardised or homogenous product have had industry dominance, with little or no competition. Whether directly or indirectly, these firms are interdependent in price setting and they control a significant portion of the sales in South Africa’s cement industry. In the pursuit of retaining political power and remaining in governance, South Africa’s
apartheid government saw the cement industry as one of the strategic areas of focus, to exercise control and retain state power. Following this thinking, the cement industry was a cartel which was categorised by price fixing and market allocation (De Wet, 2003). Equally, the laws and policies developed were also personalised to favour this industry. During its establishment, South Africa’s cement industry was occupied by three dominant companies, namely: Blue Circle (now known as Lafarge), Pretoria Portland Cement (PPC) and AfriSam (which was formed by Holcim). The following figure summarises the structure of the cartel in South Africa’s cement industry as it currently exists:

Figure 2.2: Market structure of South Africa’s cement industry

Source: Author’s own illustration
The industry’s market leader is Lafarge, originating from France. Holcim (the founder of AfriSam) is a Swiss based cement producer and is the world’s second largest cement producer (Allix, 2012). Holcim formed AfriSam in 2006 by selling 39 percent of its South African business to black investors and retained a 15 percent stake (Allix, 2012). Due to the recession, there has since been a fall in government infrastructure spending and, retail and property developments. As a result of the recession, AfriSam had excess capacity and demand was also not responsive. Subsequently, AfriSam was restructured in January 2012 and the Public Investment Corporation (PIC) took over the debt-laden company to prevent a R12 billion default. Holcim still retains a two percent stake in AfriSam (Allix, 2012).

Currently, South Africa’s cement industry has had four major players that make cement, aggregate and ready-mix, namely: Pretoria Portland Cement (PPC), Natal Portland Cement (NPC)-Cimpor, Lafarge South Africa and AfriSam. To date, PPC cement is the leading cement supplier in Southern Africa within eight cement manufacturing plants and three milling depots in South Africa, Botswana and Zimbabwe which collectively have a potential of producing about eight million tons of cement products per annum. The sizes of the four major companies in South Africa’s cement industry are illustrated in Table 2.1 below.
Table 2.1: Statistics on South Africa’s four main companies that manufacture cement and lime

<table>
<thead>
<tr>
<th>Company</th>
<th>Production facilities</th>
<th>Production Capacity Per Annum</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>AfriSam (South Africa)</td>
<td>6 cement production facilities 9 cement depots 40 ready-mix concrete plants</td>
<td>4.6 million tons (cement)</td>
<td>29.5 percent (cement)</td>
</tr>
<tr>
<td>Lafarge Industries South Africa (Lafarge Cement, Lafarge Ready-mix and Lafarge Gypsum)</td>
<td>2 plants 1 Gypsum mine 1 Plasterboard Factory 55 Ready-mix concrete plants</td>
<td>2.4 million tons per annum (cement clinkers) 1 million tons per annum (cement)</td>
<td>17 percent</td>
</tr>
<tr>
<td>NPC-Cimpor</td>
<td>3 quarries 6 Ready-mix plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPC</td>
<td>8 plants 3 milling depots</td>
<td>8 million tons (cement)</td>
<td>35 percent</td>
</tr>
</tbody>
</table>

*Source: Young, 2013*

Over and above the four main players in South Africa’s cement industry, the following diagram maps out the Southern African cement industry.
The spread in the plants and manufacturers mapped above is influenced by infrastructure spending announcements such as the South African government’s infrastructure spending that is envisaged to be about R845bn on various construction projects.

2.3. THE LEGAL FRAMEWORK

In the period prior to 1996, South Africa’s cement industry was not regulated. The Minister of Trade monitored the industry, and was the final decision maker. Previously, the Competition Board which was functioning based on the Maintenance and Promotion of the Competition Act of 1979 was an administrative body within the Department of Trade and Industry; the board only made recommendations to the Minister of Trade who would make the final decision on all competition matters including mergers and restrictive practices (Hartzenberg, 2006). The role by the Minister in this industry is an illustration of the legacy
of the Apartheid era on South Africa’s development where the state played a significant role both as producer and regulator. Further, competition legislation before 1998 did not address, instead encouraged, the high levels of concentration in the economy—both in terms of ownership and market share (Hartzenberg, 2006).

In line with government’s strong state intervention and the pursuit of retaining political power, South Africa’s Apartheid government saw the cement industry as one of the strategic areas of focus, to exercise control and retain state power. The cement industry was a cartel which was categorised by price fixing and market allocation. Similarly, the laws and policies developed were also personalised to favour this industry. The nature of the cartel was such that markets were confined across the value chain, from cement inputs such as limestone, slag and fly ash, to marketing and distribution of cement. The effects of strong state intervention and participation in markets were magnified by economic sanctions that limited the participation of South African firms in the international economy (Hartzenberg, 2006).

All policies of such nature and developments thereof, deterred the development of a competition culture in the South African economy. Further, government support to the cement industry was illustrated by the officiating of a price fixing agreement in 1956, followed by a market sharing agreement which was concluded in 1971. In 1982, the cement price control was lifted; despite this decision, adjustments to prices were made under the supervision of the Price Controller (De Wet, 1978:74). In 1986, price collusion was banned in South Africa and this led to cement producers being provided exemption, in 1988, through the Maintenance and Promotion of Competition Act.

In the initiation and transition to a democratic South Africa, the new administration disbanded the legal cartel in 1996. In practice, however, the cartel continued through the major players in the industry preserving the market share targets system on sales in the Southern African Customs Union (SACU) region. The continued price war ensued until 1998, where cement producers agreed to stabilise the industry by detailed sharing of sensitive information through the Cement and Concrete Industry Association.

Part of this information included the dividing of rents along the value chain and incumbents positions protected. This was witnessed in the steel, cement and concrete and fertilizer industry (das Nair et. al, 2012). Interestingly, the Competition Board existed until 1999;
therefore, although the legal cartel was disbanded in 1996, the continuing practices of cartelisation are not surprising as the Competition Board was still in existence.

The South African Competition Act, which came into force in 1999, includes a *per se* prohibition of cartels. The new competition policy and laws were drafted during the early years of South Africa’s new democracy, a period characterised by important policy and regulatory reform (Hartzenberg, 2006). The Act provided for the establishment of the Competition Commission, responsible for investigation, and the Competition Tribunal to adjudicate on complaints and mergers; there is also a specialist Competition Appeal Court (Roberts, 2012).

The Competition Commission has identified sectors and markets in which there are strong indications of anti-competitive outcomes, and initiated investigations. This was in line with the prioritisation framework adopted in 2007 as part of taking a more proactive approach to enforcement. The framework involved identifying sectors and cases based on the broad criteria of: impact on low-income consumers; likelihood of anti-competitive conduct; and, government’s economic development priorities (Ramburuth and Roberts, 2009).

The main priority of the new competition law was to attain economic efficiency. On this basis four priority sectors were identified by the Commission, as follows: food and agro-processing, construction and infrastructure products, intermediate industrial products, and, banking (Roberts, 2012). The major enforcement emphasis in the first three has been on cartel detection. The competition reforms played an important role in the process of political transformation and the integration of South Africa back into the global economy after years of isolation under the Apartheid government.

The South African economy is supportive of collusive behaviour, being highly concentrated and with a history of tight-knit industry groups often closely associated with past regulatory arrangements (Chabane et.al, 2006). During the period before 1998, the key criticism posed by the new democratic government to the competition legislation was that it failed to adequately address the high levels of concentration in the industry which were both in terms of ownership and market share (Department of Trade and Industry, 2007). For example, until around 1996 there were marketing boards in many agricultural products and a government-sanctioned cement cartel (Roberts, 2012).
A range of efforts have been pursued to rid the economy of the collusive behaviour. In addition to the competition law, various other supportive institutions are in place to ensure adherence to competition and the set industry standards. As an illustration, all cements produced in South Africa are regulated by the NRCS through Act number 5 of 2008 and have to meet a certain criteria to be certified as belonging to a certain strength class. In accordance with the requirements of the NRCS Act number 5 of 2008 and its Regulations, the following applies to cement:

- No person may trade a commodity, product or service to which a compulsory specification applies, unless it complies with the compulsory specification concerned;
- All types of cement that are sold, manufactured and supplied in, imported into and exported from the Republic of South Africa shall comply as from 6 September 2007 with the requirements of VC9085:2007;
- The manufacturer or importer shall keep accurate records in respect of the quantities of cement manufactured or imported;
- The manufacturer or importer shall pay the prescribed levies on the quantity of cement manufactured or imported for that levy period;
- Manufacturers and importers of cement are advised to inform their suppliers, distributors and retailers of the abovementioned requirements; and
- Manufacturers and importers who are established within the Republic of South Africa shall apply to the NRCS CMM Department for the approval of all types of cement and its factories.

Pursuant to all legislative efforts and more than ten years after the disbandment of the lawful cement cartel, one of the major cement producers (PPC Cement) reported uncompetitive behaviour in the cement industry and further, admitted market sharing. The Competition Commission opened the case in 2008 after raiding the premises of PPC, Lafarge, AfriSam and NPC-Cimpor. The raids proved to be a success, yielding valuable evidence and a confession from PPC of its involvement in market division (Competition Commission, 2012).

The collusion is recorded to have taken place through the exchange of detailed sales information by cement producers through the Cement and Concrete Institute (C&CI) of South Africa. After this, the remaining cement producers, with the exception of NPC-Cimpor, confessed to their involvement in collusion. Subsequently, two large fines were imposed on Lafarge and AfriSam for anti-competitive behaviour while PPC’s confession secured them
conditional immunity (Competition Commission, 2012). This case is a manifestation of the increasing competitiveness becoming evident in the South African cement market and illustrates the importance of having more entrepreneurs in the market.

2.4. THE ROLE OF SMMEs IN THE CEMENT INDUSTRY

One of the characteristics that define developing countries is that SMMEs represent a great portion of businesses since they largely create employment for the rural and growing urban labour force (Kongolo, 2010). Similarly, in South Africa, SMMEs are estimated to account for about 91 percent of the formal business sector; further, they have a contribution of about 55 percent to the economy and provide about 60 percent of employment (Kongolo, 2010).

As acknowledged and confirmed by researchers such as Berry (1997) and Davies (2001), medium-sized businesses form part of a sector that is crucial to an economy such as South Africa’s which is still focused on job creation as the main goal. South Africa’s history shows policies that led to high levels of the population being unskilled, high levels of unemployment and a large number of this section of the population is involved in survivalist and subsistence activities. Medium-sized businesses represent an important vehicle to address the challenges of job creation, economic growth and equity in our country (Department of Trade and Industry, 1995).

However, the status quo shows an absence of a thriving layer of SMMEs. In South Africa this is largely due to the 1950 Group Areas Act (Parliament of South Africa, 1950) which explicitly restricted ownership of firms by blacks to specified areas in cities and towns, and later regulations that prevented black entrepreneurs from owning more than one business, from establishing companies or partnerships, or owning business premises even in ‘black’ areas. Globally, research on barriers to the development of small businesses gained momentum after 1990, when countries in the former Eastern bloc in Europe opened up their economies and saw the small business sector as a viable option to economic growth and job creation (Roberts & Tholen, 1998). Further research by Almus and Nerliner (2000) and Farinas and Moreno (2000) confirmed this belief for Germany and Spain respectively. Gstraunthaler and Cramer (2012) summarise the barriers to SMME development by various researches to include: formal barriers such as high taxes (Bohata & Mladek, 1999; Bartlett & Bukvic, 2001; Hashi, 2001) and the regulatory environment (Hashi, 2001); secondly,
informal barriers including the implementation of regulations (Jancauskas, 2000; Bartlett & Bukvic, 2001) and corruption (Bohata & Mladek, 1999); thirdly, environmental barriers such as a lack of finance (Pissarides, 2000; Bartlett & Bukvic, 2001; Hashi, 2001); and, fourthly, a lack of skills on the part of entrepreneurs, key personnel or both (Roberts & Tholen, 1998).

Concern and the acknowledgement that these challenges need to be addressed is emphasised by the consensus, both globally and locally, that small businesses are the primary drivers of job growth and have a major contribution to a country’s economic growth (SBP, 2011). Small businesses are further described as efficient and prolific job creators, the seed of big business and the fuel of national economic engines (Abor and Quartey, 2010).

Since these businesses often employ the least educated of a country’s population, the experience and training acquired by workers in such businesses opens up further opportunities for the workers and also contributes to a country’s social upliftment (Abor, 2012). This sector of the economy helps to absorb productive resources at all levels of the economy and adds to the formation of flexible economic systems in which small and large firms are interlinked; such linkages are very crucial for the attraction of foreign investment (Kongolo, 2010).

The economic contribution from these businesses, however, is hardly realised as is seen with the high turnover of new small businesses. This is often said to be a result of lack of access to information, lack of access to funding and stringent regulation which SMMEs encounter when setting up their businesses. Through several initiatives in the form of small business incubators such as Khula Enterprise Finance, government and the private sector have tried to deal with these challenges. Despite such interventions, the high turnover of new businesses is still the case. According to Gstraunthaler and Cramer (2012), this is due to the observation that knowledge of the effects of policy initiatives on SMMEs is very limited, and few studies have analysed their impact.

To recap on these policy initiatives, we recall that in 1995, the new democratic government acknowledged that past policies such as the Bantu Education and the Group Areas Act meant that large sections of South Africa’s population, specifically the black population, were deprived of the relevant skills, access to capital and exposure to areas which would encourage entrepreneurship. In the attempt to correct and reverse these traits, the department of Trade
and Industry published and tabled in Parliament, on the 20 March 1995, the National Strategy for the Development and Promotion of Small Businesses in South Africa. Having transitioned into the new democracy, the government of national unity drafted this strategy as a reflector of the status quo of the SMME and survivalist sector, to reconcile initiatives that have been put in place to groom these two sectors, and set a new path for the short to medium term. The strategy outlines, clarifies and takes into account initiatives and interventions that have worked and also audits the reasons why others have failed. All this is to promote economic growth and job creation in South Africa. The strategy firmly acknowledges that this is one of the ways in which government creates an enabling environment for the private sector to get on with its business.

According to this strategy, the following have been identified as focus areas for economic development (Department of Trade and Industry, 1995): boosting consumer demand to generate employment; addressing high levels of inequality with the broader end goal of achieving more equitable income distribution; improving domestic competitiveness and efficiency by individual businesses to activate competition; improving South Africa’s global competitiveness to be well positioned to exploit niche markets (both internally and internationally); and, improving skills to enhance South Africa’s productivity and technical change.

In a further attempt to respond to these challenges, the South African government has put in place several economic and social measures and policies which call for dynamising employment and growth in the economy through focus on value-adding sectors that embody a combination of relatively high employment and growth multipliers. Some of the proposed solutions include: embarking on skills development initiatives, improved access to credit and capital for entrepreneurs and reducing regulatory barriers. According to the Economic Development Department (2010), the New Growth Path specifically aims to target South Africa’s limited capital and capacity, and focus on activities that maximise the creation of decent work opportunities. Despite all these initiatives it seems that SMMEs and the informal sector are still being choked out.

The SMME sector is constantly evolving with the introduction of various packages and frameworks that are meant to facilitate development in this sector. For example, in addressing inequality, since the early 2000s, the South African government in conjunction with the Trade and Industrial Policy Strategies (TIPS) has done extensive work on frameworks
towards the second economy strategy. This strategy was meant to bridge the divide between the first and second economies, which are the different ends on the continued spectrum of inequality, where wealth and resources are concentrated on the one end, and poverty and disadvantage at the other (Phillip, 2000).

The reality is that markets in marginal areas are quite thin, and small scale producers share their markets with firms that have the comparative and competitive advantage of being well-established in terms of product prices, quality and brand recognition. The trouble with the current public policy focus adopted through policies such as the Industrial Public Action Plan (2010) is that they solely focus on building the market through activities which create employment and growth; there is little commitment to dealing with socio-economic reforms that will in turn deal with structural challenges of the economy head on. It seems therefore, that it is not enough to speak on the surface about these factors as they are determinants of a sustainable growth, where the population’s incomes will be improved and their assets (including intellectual capital) where they now do not depend on markets to achieve their intended outcomes (Second Economy Strategy, 2010).

Most of the sector programmes which government subsidises do not entail skills transfer in the programmes. The focus is on creating jobs but workers leave the programmes non-empowered. There is a lack of skills in South Africa and the longer this challenge is not dealt with, the longer the firms with market power will continue dominating their industries.

Hence, the skills challenge has resulted in South Africa highlighting SMME development as one of the priority areas for government prioritisation and intervention almost two decades into the new democracy. One of the notable characteristics of South Africa is high concentration levels. Large monopolies were developed mainly due to anti-apartheid sanctions and capital flight as well as high tariff walls. The Apartheid government gave monopoly concessions, encouraging the “demise” of destructive competition or rationalisation when conditions were deemed as not suitable for competition.

Firms were allowed to allocate markets and to have legal cartels. Monopolies, both vertical and horizontal concentration, mean that entry along the value chains is difficult. Small firms find it difficult to compete with these giants in relation to finance, capacity, price, quality, brand recognition and established market and distribution channels. Further, Hartzenberg (2006) notes the development of SMMEs as important because of the structure of South
Africa’s economy; he goes on to acknowledge the promotion of a broader spread of ownership as necessary in addressing the skewed distribution of income and wealth in South Africa.

Some of this government’s work entails de-monopolising various sectors which the Apartheid government saw as strategic and hence made them cartels. Till the early 2000s, the fight against hardcore cartels has ranked high on the agenda of South Africa. This fight was mainly part of the effort to transforming the large inequalities in South Africa’s economy which were a result of the legacy of the Apartheid era, where government played a dual and significant role of being both a producer and regulator in the cement industry. According to Hartzenberg (2006), the effects from interventions by government and participation in markets were magnified by economic sanctions that limited the participation of South African companies in the global economy.

Despite these efforts, it seems that globally a substantial fraction of cartels remains undetected (Huschelrath et.al, 2011). Research undertaken by Combe, Monnier and Legal (2008) for the European Union and United States, concludes that annually the average probability of cartel detection lies between 12.9 percent and 15 percent. As a result of this growing challenge, competition bodies in partnership with individuals and various companies, have set in place incentives to improve their detection and intervention instruments (Huschelrath et.al, 2011).

A possibility for this improvement, according to Huschelrath and Veith (2011), is through acquiring insight on the behaviour of cartels in general and their pricing dynamics in particular, and to use these insights to improve public and private enforcement instruments (for example: screening tools, calculation of damages). Based on oligopoly theory, Huschelrath and Veith (2011) believe that the incentive for firms to form cartels is that their respective competitive activities lead to greater profits rather than if a firm were to act independently- the basic rationale for this behaviour resonates in the internalisation of a negative externality.

Contrary to the challenges of detecting cartels, South Africa has made significant strides in terms of levelling the playing field and providing the relevant support to conducting business in the country. The government of South Africa established in 1998, the Competition Commission. This Commission exists to investigate, control and evaluate restrictive business
practices, abuse of dominant positions and mergers in order to achieve equity and efficiency in the South African economy (Competition Commission, 2012).

During the policy discussion and crafting of the Competition Act of 1998, the challenges of unemployment and poverty comprised a major part of the discussions as was the promotion of the competition and economic efficiency (Hartzenberg, 2006). The mandate of the Competition Commission was quite different from the Competition Board, which performed under the Maintenance and Promotion of Competition Act of 1979 of the Apartheid government, which only made recommendations to the Minister of Trade who made the final decision on all competition matters (Hartzenberg, 2006).

The United Nations Conference on Trade and Development (2004) affirms the focus of this study, of analysing and encouraging competition in the cement industry by encouraging SMME involvement. According to the United Nations Conference on Trade and Development (2004), there is a link between measures of competition in developing countries and economic growth. The United Nations Conference on Trade and Development (UNCTAD) further states that competitive markets promise the following, which developing countries that do not engage or encourage competition law or policies stand to lose out on: welfare of the general community by fostering efficiency in production; promise of lower prices; improved choices for consumers; higher economic growth; and increased employment opportunities.

Since 2003, South Africa’s Competition Commission has conducted three investigations which the Competition Tribunal ruled on in the cement industry. The work of the Competition Commission is affirmed by United Nations Conference on Trade and Development (2004) which states that since South Africa has taken part in trade liberalisation, it is important, therefore, that benefits from such measures are not forfeited due to anti-competitive practices by firms.

On the contrary, a more concerning observation made by Madiba (2009) is that anti-competitive behaviour in some of the cement products and markets has the potential to increase the cost of the infrastructure programmes which facilitate trade, and other projects that rely on key inputs from the cement industry. This realisation came in a review of the search and seizure operation by the Competition Commission on the premises of South Africa’s four major players in the cement industry.
The review reveals that the cement cartel has led to participants that are in the downstream market to struggle in the process of procuring the necessary quantities of cement inputs and cement extenders (mineral additives). Madiba (2009) further concludes in his analysis that, even though the legally sanctioned cement cartel was disbanded in 1996, the four main cement producers are still operating in the same historic locations and still have low levels of competition between them.

From their experience as economists at the South African Competition Commission das Nair, Khumalo and Roberts (2012), give a narrative of the anatomy of South Africa’s cement industry. Their analysis dates as far back as the 1940s when South Africa’s cement producers were granted exemption in terms of legislation then in force to conduct the manufacture and distribution of cement under the aegis of a lawful cartel (Competition Tribunal, 2012). This analysis goes far to explain the set of institutional arrangements that were in place to manage the activities of the cartel. Through the work done when the Competition Commission investigated anti-competitive behaviour in various industries, these economists go on to expand their analysis by providing an independent discussion on corporate cartels in intermediate industrial products (namely: the cement and concrete, fertilisers, steel and plastic industries).

Further to the work by the Competition Commission which mainly highlights the structural imbalances in South Africa’s economy, this study will uncover elements of the structural challenges and propose adjustments that ought to be made in the economy for SMME development. The contribution by this study is inspired by Hartzenberg’s (2006) observation that in addition to promoting efficiency, adaptability and development of the economy, the Competition Act emphasises the promotion of small business development, greater participation in the economy and the promotion of a greater spread of ownership.

Over and above the standard barriers to SMME development such as lack of access to finance and stringent regulations, the observations and recommendations by this study will advocate for further analysis of the structure of the economy in the pursuit of supporting SMME development, using South Africa’s cement industry as an illustration. This study will contribute to the notion of SMME and economic development which, in the medium to long term, is balanced and sustainable.
CHAPTER THREE
LITERATURE REVIEW

3.1. BARRIERS TO ENTRY AND EXPANSION

The concept of barriers to entry is important in determining whether market power exists. Market power is the ability of firms to set price above marginal cost. Incumbent firms cannot exercise market power if any attempt to do so is prevented by the entry of new firms. The economic literature on entry barriers began with Bain (1956). Bain’s focus was on how firms could be profitable in the long run without attracting entry. Bain defined an entry barrier as a condition of market that allows incumbent firm to earn economic profits in the long run without attracting entry. Bain identified three sources of entry barriers; scale economies, product differentiation and cost disadvantages for entrants relative to incumbent firms. Stigler (1968) criticised Bain’s approach on what gives rise to entry barriers. Stigler argued that the only possible source of entry barriers could be the cost borne by an entrant that incumbents do not have to bear.

Bork (1978) proposed an even narrower definition than Stigler’s. He argued that defining barriers to entry as including anything that makes it difficult for a new firm to enter the market is too broad. In his opinion, economic and technical barriers merely represent the realities of doing business (e.g. sunk costs of entry) or the superior efficiency of the incumbent firm relative to rivals (e.g. due to economies of scale or scope or network effects).

Globally, the life of a cement plant varies; in South Africa cement plants have an average age of 33 years (Young, 2013). Players in the cement industry use this in explaining the industry’s intensity and to illustrate that all new industry entrants should understand that the nature of investments in this industry is long-term. The nature of the cement industry and the investments thereto serve as a deterrent and thus encourage further dominance by the current industry players. The United Brands relates to dominance as a position of economic strength enjoyed by an undertaking which enables it to prevent effective competition being maintained on the relevant market by giving it the power to behave to an appreciable extent independently of its competitors, customers and ultimately of its consumers (Chiquita, 1976). This is but one of the various definitions and notions which refer to dominance that exists; for
the purposes of this paper, dominance will be broadly referred to, and associated with market power just as is the case in economic theory.

The four major players in South Africa’s cement industry have significant market power and dominance. This chapter will assess both the intended and unintended factors, which result from the companies’ market power, and deter entrance of new players in the industry. This study is based on the fact that since 1934, there has not been any new entrant in South Africa’s cement industry until the recent establishment of Sephaku Cement, whose operations are envisaged to start in June 2014.

According to the OECD (2007), it is useful to analyse evidence of past entry or the lack of it as it may provide useful information about the likelihood and nature of entry in the future. Further, such information could indicate that the market is very competitive or that the market is becoming unprofitable and thus unappealing to investors. The said information may be used to draw inferences about the future of a given time period; however, its analysis should not be done in isolation and be seen as conclusive as there may be other externalities. Nonetheless, the OECD (2007) concurs that it is necessary to consider entry barriers when assessing market power and when determining whether unilateral conduct may deter new firms from taking advantage of infrastructure development opportunities through participating in the cement market.

In taking up the development opportunities, some investors choose to partner with Development Finance Institutions (DFIs) as general partners since these institutions have the relevant expertise, their legal framework is less of a concern, and the political risk is mitigated as they have good relationships with the government. According to Preqin (2011), there are about 51 DFIs which are actively investing in Africa-focused funds and they represent nine percent of limited partnerships investing in Africa. DFIs contribute more than fifty percent of limited partnerships in Africa. Some of these statistics underplay the current development in the country since other investors opt for partnering with local business entities and leverage on their operational expertise in the business of the investee company, rather than providing this themselves.

Monitor Company Group (2011) gives the following examples of some of these partners: a local private equity firm, a high-net-worth individual (otherwise known as an angel investor) or a financial institution, sometimes even a blue-chip trade or strategic player. Both the
approach of partnering with DFIs or a local business entity are used as a means of gaining entrance into the region, allowing them to gain experience rather than immediately seeking controlling stakes from a distance in the more heavily competed geographies (Monitor Company Group, 2011).

Over and above the excitement and interest in Africa-investments, inflow of capital has trickled in very slowly, at almost insignificant levels and high economies of scale have also been witnessed. The main reason cited for this is the challenging African markets which are characterised by high cost to serve, execute deals and deploy capital due to the fragmented and largely unsophisticated market with huge infrastructure and talent backlogs (KPMG, 2010).

Therefore, in the quest for development and sustainability, all relevant projects need careful attention. Although the availability of funding is a priority for sustainability, a stable investment environment to boost investment confidence, encourage investment and build value in investments is much more of a priority. Some characteristics of a stable investment environment are functioning ecosystems, made up of legal, financial, intermediaries, stable political environment, hope or certainty of economic development focused policy making, certainty of stable governance (Monitor Company Group, 2011).

The barriers to be discussed will be categorised as either structural or strategic. Structural barriers are more related to the basic industry conditions such as cost and demand than with tactical actions taken by incumbent firms, while strategic barriers are created intentionally or enhanced by firms in the market with the aim of deterring entrance (OECD, 2007). The group of enterprises that will be focused on are SMMEs. Different countries define and categorise small businesses according to various concepts, from the number of employees, the business’s annual turnover, to the value of the business’s fixed assets. For the purposes of this paper, SMMEs will be defined according to categories stated in South Africa’s Small Business Act (1996); this Act gave South Africa’s first comprehensive definition of SMMEs. According to the Act, the various groupings within SMMEs is summarised in Table 3.1.
### Table 3.1: Categorisation of enterprises in South Africa

<table>
<thead>
<tr>
<th>Enterprise size</th>
<th>Number of employees</th>
<th>Annual turnover (in South African Rands)</th>
<th>Gross Assets excluding fixed property</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>Fewer than 100 to 200, depending on the industry</td>
<td>Less than R4 million to R50 million, depending upon industry</td>
<td>Less than R2 million to R18 million, depending upon industry</td>
</tr>
<tr>
<td>Small</td>
<td>Fewer than 50</td>
<td>Less than R2 million to R25 million, depending upon industry</td>
<td>Less than R2 million to R4.5 million, depending upon industry</td>
</tr>
<tr>
<td>Very small</td>
<td>Fewer than 10 to 20, depending on the industry</td>
<td>Less than R200 000 to R500 000, depending upon industry</td>
<td>Less than R150 000 to R500 000, depending upon industry</td>
</tr>
<tr>
<td>Micro</td>
<td>Fewer than 5</td>
<td>Less than R150 000</td>
<td>Less than R100 000</td>
</tr>
</tbody>
</table>

*Source: South African Small Business Act (1996)*

Prior to 1996, the cement industry was categorised by strategic barriers since it was categorised by an organised cartel which entailed price fixing or targeting. De Wet (2003) explains South Africa’s cement market on a structural, conduct and performance basis and concludes that, prior to 1994, cement price trends and cement price levels were unacceptably high. He further concludes that cement manufacturers abused their market power by setting prices above marginal cost, resulting in misallocation of resources. Further, this collusion allowed firms to exert market power and thereby, restrict competition artificially. For many years, economists believed that inferred collusion was an inevitable outcome in industries that were concentrated (Chamberlain, 1933). Research confirms this observation and cites a range of factors that can be said to be contributing to inferred collusion; the most common are discussed in what follows.
3.2. STRUCTURAL BARRIERS

3.2.1. AVAILABILITY OF CAPITAL

The cement industry makes a significant contribution in activities of the primary and secondary sectors in South Africa’s economy. Players in these sectors require a large amount of capital which is often not affordable to emerging enterprises (Berry et.al, 2002). This amount of capital is classified as necessary for purchasing land in the primary sector and, machinery and equipment for secondary activities. According to Ntsika (1997, 1999 and 2001) the primary and secondary sectors which are SIC 1, 2 and 4, (mainly companies in mining and quarrying, and electricity and water supply) have the least number of entrepreneurs while the majority of the SMMEs in South Africa are active in the tertiary sector.

The statistics from the Global Enterprise Monitor (2001) confirm that the construction sector had 3.7 percent firms that were start-ups and five percent new firms compared to the total distribution of South Africa’s enterprises. This affirms the issue of access to capital being cited as the leading hindrance by entrepreneurs to establishing their businesses. Access to finance is critical for the survival of any entrepreneurial venture. Table 3.2. below outlines the various stages involved in setting up an entrepreneur and the required funding:

Table 3.2: Stages of financing entrepreneurs

<table>
<thead>
<tr>
<th>Stage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed financing</td>
<td>for exploration of a concept;</td>
</tr>
<tr>
<td>Start-up financing</td>
<td>to cover activities from later research and development to initiation of sales;</td>
</tr>
<tr>
<td>First-stage financing</td>
<td>for a firm that has initiated production and is generating revenue but normally has not yet achieved profitability;</td>
</tr>
<tr>
<td>Second-stage financing</td>
<td>to support continuing growth of a venture that is operating around the breakeven point of profitability;</td>
</tr>
<tr>
<td>Third stage financing</td>
<td>which is mainly for funding growth and expansion of the business;</td>
</tr>
<tr>
<td>Mezzanine financing</td>
<td>frequently debt financing to support major expansion of profitable businesses, and bridge financing for temporary financing between later-stage financing and harvesting.</td>
</tr>
</tbody>
</table>

Source: Abor (2013)
The needs highlighted in table 3.2 are some of the reasons that have led to the thriving micro-entrepreneurial finance as many of the emerging entrepreneurs do not have the means to production or the necessary collateral to serve as security in return for funding. In this case, capital is defined as any form of wealth employed to produce more wealth for a firm (Abor, 2013). This capital is further categorised into three types, namely: fixed capital which is used to purchase the fixed assets of the assets of the business; working capital which is used to support the enterprise’s normal short-term operations; and, growth capital that is used to assist in the expansion of the enterprise or to effect change in its original direction or focus. The necessary capital can be sourced from equity capital through personal investments by the business owner(s) (i.e. personal savings, business partners, private placements, public share offering of capital, and so forth); debt finance (i.e. bank finance, factoring, leasing, and so forth); and hybrid finance (i.e. mezzanine finance, preference shares, and so forth).

The range within entrepreneurial finance responds to the necessity of funding as it deals with financial decision making by entrepreneurs and managers of SMMEs. The lack of access to credit or venture capital is more severe the higher the necessary capital is. As illustrated above, to construct and maintain a cement-manufacturing plant with the mentioned average lifespan requires a large amount of capital. Further, the capacity of the manufacturing plant is also a determinant to the cost of operations; for example, according to PPC (2012), the company has the ability to produce seven million tons of cement per annum while Afrisam’s production capacity, in 2012, was 4.6 million tons per annum.

The new entrant, Sephaku Cement, estimates that the cost of setting up their first cement manufacturing plant, which will come into operation in June 2014, as R 3.2 billion. On average, to construct a plant that produces 1 million tons of cement costs about R2 billion. In the case of Sephaku Cement, the main shareholder and provider of equity is Nigeria’s Dangote Cement. According to Young (2013) Sephaku Cement is 64 percent owned by Dangote. This company has invested over $124 million in Sephaku’s first clinker plant; this makes the cement venture the largest foreign debt investment in South Africa by a company also from Africa. What happens then to businesses that do not have access to such equity funders or the high levels of capital required?
There is a range of financing institutions that the government has established which constitute the financial and non-financial support network for entrepreneurial activity. According to Gstraunthaler and Cramer (2012), the support system for SMMEs in South Africa is vast and includes different levels of government involvement, private business initiatives and not-for-profit organisations. For example, following the release of the 1995 White Paper on National Strategy for the Development and Promotion of Small Businesses in South Africa, government set in place the following institutions which were meant to facilitate SMME growth: the Centre for Small Business Promotion (CSBP) of the Department of Trade and Industry (DTI) and the National Small Business Council (NSBC), as well as the Ntsika Enterprise Promotion Agency and Khula Enterprise Finance.

Further, the DTI and the IDC have introduced a number of specific programmes aimed at increasing the competitiveness of formal SMME manufacturers (Berry, 2002). Recently, the Small Enterprise Finance Agency (SEFA) and Small Enterprise Development Agency (SEDA) were also established with the intention of availing more resources to the SMME sector. SEDA is an agency of the DTI and was established in December 2004, through the National Small Business Amendment Act, Act 29 of 2004.

SEFA was established in April 2012 as a result of the merger of South African Micro Apex Fund, Khula Enterprise Finance Ltd and the small business activities of IDC. However, the effectiveness of all these initiatives has been subjected to severe criticism. These organisations all have clear mandates regarding the contribution towards developing the SMME sector. For example, SEDA is mandated to implement government’s small business strategy; design and implement a standard and common national delivery network for small enterprise development; and integrate government-funded small enterprise support agencies across all tiers of government. However, there is still poor co-ordination amongst the organisations, resulting in the replication of the services provided. A further challenge is that many of the institutions are based in urban areas which are mainly far from the majority of South Africans in need of such services, who are largely based in rural areas, informal settlements and locations.

For large scale entrepreneurial activities, DFIs may be preferred private equity in investment since they mainly provide finance to sectors that are riskier but are often aligned to
government’s priority action plans (Monitor Company Group, 2011). DFIs act as catalysts to development since they contribute to a country’s socio-economic development and balanced, sustainable economic growth. As private equity investors, DFIs provide working capital to different project sizes, from small scale to large scale projects, which may not be seen as profitable by the general project financing market. The South African government has invested in many enterprises through the Industrial Development Corporation, an industrial development finance institution established in the 1940s (OECD, 2009). Examples of DFIs’ investment strategies are growth capital, distressed investment and mezzanine financing. The underlying factor in the selection process of private equity fund investments by DFIs is the correlation of the investment with the principles and guidelines of the individual DFI (Preqin, 2011).

For example, in the case of a cement manufacturing plant with total start-up fixed costs being estimated at about R2 billion, a DFI would offer the entrepreneur a 90:10 funding plan (i.e. the DFI would provide 90 percent of funding and the business would have to fund the remaining ten percent). It follows then that the entrepreneur will face the frustration of not being able to raise the R20 million to get the business off the ground.

Further, one should bear in mind that the request for funding is only for start-up and no consideration has yet been given for running the business for a further five years to ensure its sustainability. If a venture capitalist offers the entrepreneur funding, the DFI would change the funding model to 70:30 since the business would no longer be black-owned. This is an example from a small business which has potential not only to grow South Africa’s economy but also contribute to the long term sustainability of the country’s infrastructure.

The DFI may not see this project as a “must fund” as it may not directly be linked to South Africa’s current government action plans, however, the contribution of this small business is far reaching in terms of social upliftment through providing jobs. Globally there is a consensus that small businesses are primary drivers of job growth and have a major contribution to a country’s economic growth (SBP, 2011). Abor and Quartey (2010) go further to describe small businesses as efficient and prolific job creators, the seed of big business and the fuel of national economic engines.

Since these businesses often employ the least educated of a country’s population, the experience and training acquired by workers in such businesses opens up further
opportunities for the workers and also contributes to a country’s social upliftment (Abor, 2012).

The economic contribution from these businesses, however, is hardly realised due to challenges such as lack of access to funding like in this case. Dalberg (2011) elaborates on this point by stating that small businesses, particularly in developing countries, face significant barriers to finance, he further observes that financial constraints in developing countries are generally higher. This case is an illustration of a small business in the formal sector, however, there is also an uncaptured market represented by the informal economy. It is acknowledged that there will always be unlimited wants; however, there should be an efficient use of the economy’s limited resources, with revised development priorities.

Focusing on Africa, Monitor Company Group undertook research on investors and some fund managers, some trends for investment decision making are summarised in Table 3.3.

Table 3.3: Investment decision making trends

<table>
<thead>
<tr>
<th>Growth story</th>
<th>Summary of growth story</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer-led growth</td>
<td>Increasing consumer demand as disposable income in sub-Saharan Africa increases and the middle class grows</td>
</tr>
<tr>
<td>Commodity-led growth</td>
<td>Classic energy and mineral extraction players, and more recently, food security driven agri-food processing</td>
</tr>
<tr>
<td>Infrastructure backlog</td>
<td>This is present in both physical infrastructure (roads, ports, energy, telecoms, water and sanitation), as well as financial services, education, and healthcare facilities</td>
</tr>
</tbody>
</table>


These growth stories are solution plans to the current development challenges facing Africa, identified earlier in this paper. Results from this research show that the private equity investors preferred investments in consumer goods or consumer packaged goods (i.e. consumer-led growth) where the intention is to create sizable regional players, with the
potential to sell these to multi-national companies. Further observations of concern from the research show that most of the investor respondents felt that both commodities and infrastructure (i.e. commodity-led growth and infrastructure backlog respectively) need highly specialised knowledge and a variety of skills base which they do not have.

It is important to keep in mind that investors prioritise investment opportunities that promise a return and a challenge for financial assisters is the need to balance positive social and environmental impact alongside financial returns. Therefore, there needs to be an emphasis on a shared vision between policy makers and financial institutions, to ensure that there are firm policies in place which will assist easier provision to ensure success of investment projects. Such co-ordination needs to be across all spheres of government (i.e. local, provincial and national).

Going forward, all African countries should not overlook the importance of focusing support on existing clusters rather than creating new ones from scratch. All parties involved in developing the SMME sector, from individuals, policy makers, the private sector, to financial institutions should start by supporting existing clusters by helping them to build strong business associations which will drive these clusters and construct effective monitoring mechanisms to ensure cluster support delivers optimal business support to small businesses.

### 3.2.2. CAPITAL AND PRODUCTION COSTS

A large portion of the funding which an SMME would need in order to become a player in the cement industry is to cover capital and production costs. The cement industry’s capital costs are categorised as high since they extend to funding clinker production facilities, silos and investments in quarries. Capital costs for purchasing imported equipment are a significant expenditure in the cement market. Machines are essential at all stages of the manufacturing process, from the quarrying of the raw material, the equipment necessary for the manufacture of the cement and ceramics, and the transportation of raw material to the finished products (Young, 2013).

Further to establishing a plant, the production of cement products involves purchasing diesel for operating the machinery, coal to heat the kilns, paying for the rising electricity costs, salaries for workers and maintenance costs. Further, the prices of some of the raw materials
that are used in cement production are dependent on demand by other industries. For example, the price of lime is dependent on demand from the steel and alloys industry; where the demand for lime is weak, there are high volumes and the price of lime is high (Young, 2013). To maintain efficiency and competitiveness, the high costs incurred by producers are often recovered by passing on the costs to consumers through increased product prices. The investigation into high cement prices was one of the initial areas of work which the Competition Commission focused on upon disbanding the legal cement cartel.

Research by De Wet (2003) on the cement market under price control was under embargo by the Cement Manufacturers’ Association and was made available in 2001 (i.e. after 15 years). The research cites depreciation as a fixed cost and railage as a variable cost; these were the cost factors peculiar to the cement industry during the late 1970s and early 1980s that were identified as causing the higher prices (De Wet, 2003). On analysing South Africa’s cement industry according to the structure, conduct and performance (SCP) paradigm, Fourie and Smith (1994) came to the conclusion that cement price trends and cement price levels were unacceptably high. They accused cement manufacturers of abusing their market power by setting prices above marginal cost, with the resultant misallocation of resources (Fourie and Smith, 1994).

However, due to a lack of in-depth information, they could not determine the reason for the high prices and were uncertain as to whether the higher prices were the result of the cartel members abusing their market power and/or various factors peculiar to the cement industry. They, therefore, foresaw the cost peculiar to the cement industry as having contributed to the unacceptably high price trends and the unacceptable high price levels of cement (Fourie and Smith, 1994).

On the contrary, Leach (1994) believes that since the cement industry has free entry, collusion cannot create a permanent monopoly rent. Leach therefore dismisses the conclusion drawn by Fourie and Smith that the cement industry cartel formed a monopoly. Demsetz (1974) takes the debate further and argues a competitive view of the structure of the cement industry. According to Demsetz (1974), the most efficient firms in an industry will gain market share and industry concentration will therefore increase. This is in support of his efficiency theory and rejects the SCP monopoly hypothesis by Fourie and Smith (Leach, 1994).
In 2003, De Wet further analysed the depreciation and railage costs which he cited by as peculiar to the cement industry and the major cause of higher prices, alongside the work by Fourie and Smith in their 1994 research. Railage costs are an aspect to the high costs that a cement producer incurs in transporting raw materials for cement and the final product. Railage costs are but a portion of the logistical costs which are cited as significant in the cement industry. Since cement manufacturing plants are based at the main raw material sources, logistical costs are significant and include: costs to transport other raw materials to the main factories; costs to transport partially finished products to intermediate factories; costs to transport finished products to depots; and costs to transport to customers from the most convenient depot, factory or plant. Another factor for consideration is that the raw materials and the final cement products are heavy requiring big trucks which consume high amounts of fuel, contributing to the high transport costs.

The issue of high transport costs therefore exacerbates the issue of lack of access to funding by SMMEs. These are but one of the costs that will determine the sustainability of a business; therefore, the survival rate of the business is dependent on the ability to cover such elementary costs. Transport costs in the cement industry are said to equate to up to 30 percent of the product price; current players are able to navigate around these costs since they have extensive distribution networks (Young, 2013). In attempting to curb the transport costs, Young (2013) states that new entrants would have a trade-off between establishing their plant close the source of the raw materials or close to the markets.

3.2.3. LEGISLATION

Apart from the issue of owning the necessary level of collateral to access funding, legislation is another structural “red tape” which plays a significant role in the survival rate and sustainability of emerging entrepreneurs. A range of efforts and options have been investigated and pursued with the intention of easing the legislative processes that small businesses have to overcome when setting up an enterprise.

For example, on 1 May 2011, the Companies and Intellectual Property Commission (CIPC) was established. This Commission was a result of a merger between the Office of Companies and Intellectual Property Enforcement (OCIPE) and the Companies and Intellectual Property Registration Office (CIPRO). The merger was a result of the introduction of the Companies
Act number 71 of 2008, and centralised the registration of companies and intellectual property which was previously a long and tedious process.

Licensing in sectors where means of capital are still largely owned by a few has additional transformation requirements. South Africa’s economy is dominated by such and these sectors are generally characterised by the following: their operations are well established; they generate high levels of revenue and make significant contributions to GDP. The mining industry is an example of such a sector where the economic transformation agenda is pursued since ownership is largely skewed to the hands of a few. The production of cement encompasses mining for some of the raw materials; therefore, all companies have to apply for and be granted mineral rights before mining can commence or continue. The granting of rights by the Department of Minerals Resources is dependent on each company’s compliance with the Broad-Based Black Economic Empowerment (BBBEE) and other governmental regulations. One of the avenues to compliance, according to the Mining Charter is that 26 percent of equity in the mining sector is transferred by 2014, with 26 percent immediately required for any new investor.

Another mining legislation which cement manufacturing plants are to comply with is the Mineral and Petroleum Resources Development Act (MPRDA) number 28 of 2002. Section 4 of the MPRDA requires that all mining companies make financial provision during the mine’s operations towards ensuring that sufficient funds are available to rehabilitate the mine when operations have ceased and it is exhausted.

Apart from the MPRDA financial contributions, mining companies are to demonstrate mine rehabilitation programmes when reporting on the Department’s Environmental Management Plan. In terms of safeguarding the safety and health of employees and communities surrounding the operations, the Mine Health and Safety Inspectorate was established, through the Mine Health and Safety Act number 29 of 1996. The mandate of this inspectorate is to execute the statutory mandate of the Department of Mineral Resources towards mining employees and communities.

There is a growing need to comply with the Mining Health and Safety legislations since HIV/AIDS and Tuberculosis (TB) are the two main diseases that have become widespread in the South African mining industry. Further to the employees’ well-being, the cement industry is an active participant in the mining Skills Education Training Authority (SETA) which is
focused on building employee capacity. The mining SETA develops competency standards for the cement and mining processing industry with which employees in the cement industry have to comply.

Parallel to efforts of transformation in South Africa as a developmental state, is the concern of sustainable development. Brundlandt (1987) summarises sustainable development as the ability of the current generation to meet their needs without compromising the needs of future generations. Brundlandt describes sustainable development as bringing harmony between human beings and nature. Guyatt (2005) affirms this school of thought in introducing long term responsible investment which deals with the current systemic failures that are characterized by strong short termism and are contrary to the actual liabilities of a wide range of investors (Giamporcaro, 2012). Similarly, in South Africa’s mining operation, there are prescribed mining regulations focused on balancing the benefits to the advancement of the economy while also protecting nature. According to the Department of Mineral Resources, the mining company is to apply for a water licence to the Department of Water Affairs and comply with environmental regulations by getting the necessary licensing from the Department of Environmental Affairs.

Cement, lime and plaster manufacturers in South Africa are adapted towards ISO 14001 which are environmental management standards that look at the process of producing a product rather than the product itself (Rukato, 1999). According to the prescriptions of ISO 14001, these manufacturers ought to reinvest capital on manufacturing systems that deal with water effluent, reduce dust emissions and the upgrading of kilns and milling plants to reduce energy consumption.

All mining and manufacturing operations are also governed by the National Air Quality Act (Young, 2013). In light of the globally high levels of carbon emissions which have led to threats of global warming, and recent commitments to global initiatives such as the Coppenhagen targets, environmental regulations are an increasing concern in South Africa. For entrepreneurs in mining and manufacturing operations such as cement this is of concern and has an impact on operations. The manufacturing of cement largely depends on coal to heat the kilns; this process is energy intensive and not environmentally friendly. Government’s policy decisions in this regard indicate that environmental considerations in operations will have financial implications.
In the 2012 budget speech, the Minister of Finance announced that a carbon tax of R120 per ton of carbon-dioxide emitted was proposed. He further re-iterated this proposal in the 2013 budget speech with a commencement date of 1 January 2015. According to the basis of this proposal, the 2012 speech suggested that the cement industry could be potentially exempt initially for between 70 percent and 85 percent of carbon-dioxide. A tax-free exemption threshold of 60 percent will be set with allowances for emission intensive and trade-exposed industries. An updated carbon tax policy paper was published for further consultation at the end of March 2013. Many players in the manufacturing industry are concerned that the magnitude of the tax is out of line with other emerging markets and therefore, puts them at a further disadvantage.

This is but one of the illustrations of the regulatory requirements that a cement manufacturer has to undergo to gain access to some of the necessary raw materials. Overall, there are increasing legislative requirements, with over 120 pieces of legislation that govern only the construction industry. A common thread amongst these legislative requirements is their role in ensuring that the efforts of entrepreneurs are founded on solid policies and frameworks which will assist in sustainable operations, advancement in the economy, and preserving South Africa’s environment for the needs of future generations. Similarly, a new entrant would have to take into consideration the economic, ecological, and social needs of their location. The firm would have to constantly engage environmental authorities, nature conservation organisations and local communities.

A second leg to the notion of a developmental state is the policies that are meant to actively promote economic development. Since the advent of democracy, South Africa has seen an array of policy frameworks that have been aimed at development which is based on the free-market ideology. These are in response to the Apartheid era where South Africa was sanctioned and excluded from various global interactions and trade. During this period, investment options were severely limited and led to investment patterns by firms which supported the development of a conglomerate structure of ownership in the economy (Hartzenberg, 2006).

The democratic government attempted to correct this through the de-concentration of markets that were centralised, whose ownership was with a few White individuals and institutions.
Laws such as the Competition Law, which is based on the Competition Act number 89 of 1998, and public policy have been used as tools to transform the economy. Thus far, South Africa is the only member in SACU that has a policy, law and a competition authority to enforce the law; other members are at various stages of developing policy, drafting laws and regulations, and establishing authorities (Hartzenberg, 2006).

In pursuing development, Qobo (2013) observes that in the past five years, South African state intervention has shifted towards government increasingly assuming a market failure approach. In this approach, government intervenes when market mechanisms are deemed to have failed in producing socially optimal outcomes through policies that restructure or distort markets towards attaining a particular public policy objective (Qobo, 2013). The shift in democratic government’s focus is the transition from the Reconstruction and Development Programme (RDP) of 1996 that was aimed at creating employment and a better life for South Africans; to the Growth, Employment and Redistribution (GEAR) of 2001 which was the country’s macro-economic strategy to achieving the objectives of the RDP, to the Accelerated and Shared Growth Initiative of South Africa (ASGISA) of 2004 and the current series of annual Industrial Public Action Plan (IPAP).

The existing levels of government intervention have been brought about by means of industrial policy and aimed at creating national champions. UNCTAD (2009) summarises industrial policy as the conscious efforts by government to encourage and promote a specific industry or sector with a range of policy tools. Such policy is said to have a potential of contradicting the competition policy’s objectives of maintaining and encouraging competition towards promoting the efficient use of resources while protecting the freedom of economic action of various markets players (WTO, 1999).

The existence of industrial policy is common amongst developing countries where national champions are engineered and they are supported towards having a competitive advantage, with the end goal of these enterprises becoming global players. South Africa, therefore, is no different; the country’s current IPAP 5 identifies strategic sectors for policy intervention in order to create a foundation for industrial development. The eight sectors identified in IPAP 5 are consistent with the sectors identified and supported since IPAP 1 of 2007, amongst these sectors are: clothing, textiles, leather and footwear, agro-processing, automotive, medium and
heavy commercial sector. IPAP 5 goes on to propose four new sectors, namely: Green & Energy-saving industries, Downstream Mineral Beneficiation, Upstream oil and gas services and equipment, and Boatbuilding (Qobo, 2013).

The exercise of sector identification is in common with that which the Commission refers to as “prioritisation” where the Commission scopes sectors through their interactions with government, civil society and business. The Commission’s objective is to identify areas where there may be competition concerns and further to conduct focused and targeted investigations in high-impact sectors of South Africa’s economy alongside managing their limited resources (Qobo, 2013). Support for industrial policy is manifested in certain of the provisions of the Competition Act; hence the provision of employment, competitiveness and small and medium-sized enterprises feature alongside more orthodox consumer welfare objectives as explicitly stated in the section highlighting the purpose of the Competition Act (OECD, 2009). Some of the mergers and acquisitions applications that have been successful with the Competition Tribunal, have taken into account the industrial policy’s objective of developing and supporting small and medium-sized enterprises and promoting international competitiveness. Therefore, competition policy shares a common purpose with the objectives of industrial policy and the two are in fact complementary.

In light of South Africa’s history of cartelisation and abuse of dominance, industrial policy may conflict with competition policy. This may be through the industrial policy favouring the creation, protection or merging of firms with the aim of grooming national champions, and harming competition. For example, the industrial policy tool of subsidisation changes firms’ incentives where the recipient firms expand in the market at the expense of their competitors; this displaces lower-cost competitors and the expansion reduces economic welfare (UNCTAD, 2009).

This conflicts with the objectives as stated in competition policy. On the contrary, however, national champions that grow into global players benefit their country through the transfer of technology, job creation and capital inflow. Therefore, these benefits are pursued at the expense of emerging entrepreneurs and economic welfare. Further, industrial policy may advocate for mergers amongst infant industries with the intention of increasing international
competitiveness. The co-operation amongst industries promotes cartels and these mergers conflict with competition policy.

With regard to the promotion of more SMME involvement in the cement industry, industrial policy may be to the advantage of SMMEs as the industry has high input costs and is highly competitive. The focus on supporting SMMEs through industrial policy measures favours infant industry protection or specific firms through instruments such as protectionism, subsidies and procurement policies. On the contrary, UNCTAD (2009) observes that industrial policy is effective while a country is in the early stages of industrialisation and has few domestic resources. As the economy develops, efforts towards promoting national champions may deepen oligopolistic market structures, create inefficiencies and have other adverse effects (UNCTAD, 2009). This, therefore, highlights the industrial policy as another barrier for SMMEs as it develops further the existing oligopolistic nature in the cement industry. In the early 1990s, Brazil’s industrial policy was evaluated and researchers found that protected industries remained infants for long periods and a few matured to be competitive. Therefore, the industrial policy may stifle the growth of SMMEs by not achieving the intended outcome of grooming national champions with a national competitive advantage.

3.3. STRATEGIC BARRIERS
3.3.1. KNOWLEDGE AND EXPERTISE OF THE INDUSTRY

In the quest for development and sustainability, all relevant projects need careful attention. An important area for attention is sustainability; this notion stretches to cover having the relevantly skilled people as foot soldiers, to carry the vision and dream forward and also possess the ability to identify opportunities and have the ability to navigate new territories. The cement industry is infamous for having personnel that have been in the industry for decades, with knowledge of the industry that significantly contributes to the industry’s competitive advantage. Therefore, personnel in the cement industry is characterised by a high level of industry knowledge and technical know-how. An additional bias to the industry is the requirement to have a technical educational qualification.

The knowledge of the industry is to be complemented with the technical expertise derived from engineering, concrete technology and financial qualifications. To improve on
efficiencies, remain profitable and on the forefront of product development, cement firms also have in-house research and development expertise while others contract out their research initiatives. For example, Lafarge’s research and development team constitutes 1300 experts in science and engineering (Young, 2013). In light of the low-skilled labour force that South Africa possesses, entrepreneurs with low levels of education are excluded from establishing enterprises in this industry. Automatically the 88.2 percent of South Africa’s population that has no higher education qualification is excluded from setting up enterprises in this industry (StatsSA, 2011).

Studies by the Global Entrepreneurship Monitor (GEM) reaffirm this barrier as they show a consistent link between education and entrepreneurial activity. Individuals with a matric and more specifically those with a tertiary education are significantly more likely than those without matric to own and manage a start-up business. Higher levels of education are also strongly linked to the likelihood that the business will survive beyond the initial start-up phase. Entrepreneurial interest and activity is enhanced when individuals believe in their own entrepreneurial ability. Unfortunately only a minority of South African adults believe that they have the knowledge, skills and experience required to start a business. Young people, in particular, lack the necessary skills, experience and expertise to start and successfully sustain an enterprise.

The quality of basic education is severely lacking in South Africa. Much can be attributed to the effects of Apartheid which undoubtedly damaged people’s confidence and self-esteem. This could have had an adverse impact on their ability to think creatively and dampened initiative although there is no proof that this is the case. However, the levels of both basic and higher education remain extremely poor in spite of receiving a large proportion of government budget.

The Global Competitiveness Index report by the World Economic Forum in 2009 ranked South Africa a 107th out of 133 countries reviewed in terms of the quality of primary education and 119th for the quality of higher (secondary and tertiary level) education. The current school system is certainly not an enabling factor that is able to encourage SMME development. The situation becomes even more dire for capital intense industries such as the cement industry where, apart from having the relevant level of education, many operators have been part of the cement industry for a long time.
Therefore, there is no level playing field since these people have an added advantage of industry knowledge when compared to an entrepreneur who possesses the relevant skills. In line with employees complying to mining standards set by the mining SETA, 829 unit standards have been registered with the Mining Qualifications Authority where learning material for a range of skills has been developed which includes rock breaking, explosives for mines and quarries, making mines safe, mobile mechanical equipment operations, mining processing, crushing and screening, milling and supervisory and managerial functions (Young, 2013). These standards assist in reducing the skills mismatch challenge by contributing to the up-skilling of a majority of South Africa’s labour force.

Equipping the labour force with a range of technical skills solves the short term problem of a skills gap and unemployment, however, the industry remains concentrated with just a wider pool of labour resources from which to choose. The intervention of the Mining Qualifications Authority is in line with the National Development Plan’s proposals that about 90 percent of the 11 million employment growth by 2030, should occur in labour-intensive service firms that are largely oriented to the domestic market. According to the National Development Plan (2012), these are not high-technology firms, but are composed largely of semi-skilled and low-skilled workers.

However, the current reality is that the cement industry competes with global players, therefore, the educational background, skills and expertise required should be comparative with those of global competitors. For example, although Sephaku Cement has sufficient access to funding to source the most qualified professionals in South Africa to assist in constructing and setting up their operations, the firm instead has partnered with a Chinese company called Sinoma. This company is said to have cement building experience and Sephaku has contracted 800 experts from Sinoma to assist the 400 South African workers who have been contracted to build their first plant (Young, 2013). According to Sephaku Cement’s Chief Executive Officer, initially South African contractors were tendered for but none of them agreed to take the turnkey risk on the plant; further, Sinoma gave Sephaku fixed prices which saved them five percent on total development (Young, 2013). This illustrates the labour resources that a new entrant requires. In light of the discussion earlier of the challenges encountered by emerging entrepreneurs in accessing funding, new players with no independent funding would not survive the stiff competition for knowledge and skills resources.
3.3.2. STRUCTURE

In the developmental priorities, South Africa’s cement industry is seen as one of the industries that are drivers of growth in the construction sector. There is a store of value which is yet to be unlocked in cement manufacturing as one of the country’s productive sectors (Department of Trade and Industry, 2013). The dominant players in the industry have overtime, created value chains which are intended at maintaining competitiveness and their reputation for competency and quality. This value chain spreads along the cement, concrete, midstream and other downstream activities. The core activities of these firms include the production and distribution of cement and aggregates, the two essential raw materials for concrete.

South Africa is endowed with raw materials and this has resulted in the these firms dominating the upstream industry which includes the searching, exploration, extraction of the raw materials and production of cement. The dominance in the upstream industry has been seen by the growing number of mergers, acquisitions and divestiture cases that the Competition Commission has dealt with. More recently, these players have supplemented their product range with downstream activities which involves the processing of the materials which are extracted during the upstream operations into a finished product. Examples of these activities are ready-mixed concrete, concrete products and concrete elements, as well as other related products and services. A case that is currently subject to approval by the regulatory authorities is the intent expressed by PPC to purchase a controlling equity stake in a cement blending company called Safika Cement Holdings (Business Day Live, 2013). Safika is said to produce 20 million bags of cement per annum, owns five blending facilities, one milling operation and produces blended cement under three brands (PPC, 2013). In the event that this transaction is approved by the regulatory authorities, PPC will have greater dominance in the downstream stage of the cement industry which includes the actual sale of cement products to other businesses, governments or private individuals. The structure of the dominant players further involves midstream activities which include the processing, storing, transporting and marketing of cement. Infact, midstream activities are commonly included as part of downstream operations.

Therefore, the structure and operations in South Africa’s cement industry can be summarised as being integrated since they combine upstream activities with midstream and downstream operations where the latter two operations take place after the production phase through to the
point of sale. In the case where a player is issued a fine by the Competition Commission or incurs an increase in one of the inputs, the integrated structure allows for the insulation of the profits of the firm as there are a variety of options of where the cost may be passed on to.

The forward and backward linkage in the cement production value chain has defined the structure of a typical cement company, where all the four main cement manufacturers have followed suit by having partial or total ownership of the mines which provide the raw materials, owning the manufacturing process, and extending the chain across to the distribution and marketing of finished products. In nurturing national champions and advancing competitiveness, the Competition Commission approves the linkages between the cement industry’s upstream and downstream activities on the basis that these possess a potential of having multiplier effects and positive spillovers to other sectors. This economic view is consistent with Kaldor’s law which makes a positive link between the industry’s growth, GDP growth and the growth of related sectors (Qobo, 2013).

With the introduction of new players, this structure makes it virtually impossible for a new player to enter the cement industry since the firm would have to purchase raw materials from one of its competitors. The existing player is at liberty to sell the raw materials at a high price which will keep the new player out of the market.
CHAPTER FOUR:

METHODOLOGY

The purpose of this study is to assess the barriers to entry and expansion that SMMEs face when they choose to establish themselves in South Africa’s cement industry. The information includes regulations, access to capital, brand loyalty, industry knowledge and other obstacles that may be useful insights for SMMEs that are looking to establish themselves in this industry. To achieve this, the study utilised descriptions that are specific to the study’s theoretical synthesis when designing the sampling techniques. This chapter will discuss the techniques that were used to gather data for this study, the sample size and sampling techniques, and the analytical tools. The study will review the main research problem: barriers to entry and expansion for SMMEs in South Africa’s cement industry, and the sub problems:

(i) Examine opportunities available for funding SMMEs:
(ii) Assess the efforts to easing stringent regulatory requirements;
(iii)Assess the levels of growth and profitability which players in the sector have achieved; and
(iv)Explore the anticipated level of contribution and growth that SMMEs expect in the next ten years (i.e. both those that are in the process of entering the sector and those that are already players).

4.1. TYPE OF STUDY

The approach used in conducting research may either be inductive or deductive. Inductive research entails the process of inferring theory or hypothesis from a set of facts or data gathered through observation while the deductive research approach is the utilization of theory to explain observations (Korutaro, 2013). Therefore, the study at hand can be said to be deductive since the data collected from the questionnaire, structured interviews and written sources has been compared and tested against the existing theory on the lack of sustainable small and medium-sized businesses in South Africa.

The purpose for this research is evaluative since the main focus was on assessing the challenges and barriers encountered by new entrants into the cement industry.
4.2. DATA TYPE AND SOURCES

The two documentation sources that were used in this study were primary and secondary sources. Secondary data reviewed existing research reports and this was to gather an understanding of how South Africa’s cement industry will look if SMMEs would play a bigger role in this industry. Some of the secondary sources included data from annual reports, financial reports, statistical reports, journals, newspapers, government policy and reviews. Additional to the review of this secondary data, primary data were collected using a quantitative research approach. The primary data were gathered from various individuals as the original source. This data was collected through questionnaires and interviews. A questionnaire was drafted and tested on five individuals. This questionnaire assessment entailed the time it took to complete questions, and whether the questions on the questionnaire were clear and understandable. Feedback received from this group was considered and a final questionnaire was distributed to the four main players in South Africa’s cement industry, namely: PPC Cement, AfriSam, Lafarge and NPC-Cimpor and the new entrant, Sephaku Cement. Structured interviews were also conducted with the cement manufacturing companies, one of the new entrants, one of regulators and legislators. The questionnaire is attached as annexure 1. The response rate was 80 percent as all respondents but NPC-Cimpor provided adequate responses. Inputs received were based on the respondents’ 2012 financial year-end results.

During the research harvesting process, it was found that, apart from the financial results published by cement companies, limited information was available publicly on the operations of the cement industry participants. Therefore, the two methods of collecting data (i.e. questionnaire and interviews) were combined with the aim of capturing the experiences, factual perceptions and opinions of both the existing players and prospective entrants in South Africa’s cement industry.

4.3. SAMPLE SIZE AND SAMPLING TECHNIQUE

The sampling technique used for this research was the Stratified Sampling approach. This technique appropriate for this study as it divided the population of the cement industry into sub-groups based on their level of involvement or contribution to South Africa’s cement
industry. The population of respondents was divided into the following four strata: cement manufacturing companies; new entrants in cement manufacturing; industry regulators and legislators (government). This method of sampling was chosen with the intention of highlighting and uncovering issues that the “new entrants” subgroup within the population should consider in entering the cement industry. The four strata comprised of the following industry players, the four main players in South Africa’s cement industry: PPC Cement, Lafarge South Africa, AfriSam South Africa and NPC-Cimpor; the two new entrants Sephaku and Wiphold; the industry’s regulators and legislators- the Competition Commission, the Department of Trade and Industry, the cement association; and two industry experts. In total, the sample size comprised of eleven industry participants.

The exploratory research design of this study gathered primary data through three techniques, namely: using a measurement tool in the form of a written questionnaire which was sent to cement companies, industry experts and regulators of South Africa’s cement industry; secondary data analysis where the relevant literature was reviewed and analysed; and, electronic interviews that were conducted through open-ended questions which were sent to respondents. These sampling techniques were appropriate for the nature of the industry under study since it has a sensitive history of operating under a cartel. The interviews were useful in getting in-depth information on the sensitive issues. Further, the questionnaire allowed for uniformity by asking respondents the same questions in light of the limited sample size due to the few industry players.

The questionnaire aimed at the industry participants’ findings which highlight the focus areas in the cement manufacturing and distribution value chain where SMMEs need to direct their energy and resources. The results are discussed in Chapter Five.

4.4. ANALYTICAL TOOLS

The main results for this study were drawn from the feedback of written questionnaires and electronic interviews. Data from the questionnaires and interviews were both categorical and nominal. The analysis of data from questionnaires and interviews was based on the notion that the following major criteria need to be honoured when analysing primary data from a measure tool: validity which refers to the extent to which the test measures what was the intended measure; reliability which is about the accuracy and precision of the measurement
procedure; and, practicality which is concerned with a wide range of factors of economy, convenience and interpretability.

Results from these interactions were analysed and reviewed by means of descriptive statistical tools. These tools were used for data exploration through descriptive summaries, frequencies and cross-tabulation tables. The descriptive statistics approach is appropriate for this study since this technique has the ability to summarise and describe characteristics of a group or make comparisons of characteristics between groups. Similarly, this study attempts to summarise the barriers to entry and expansion in South Africa’s cement industry. These barriers may be inherent and thus be the characteristics of the four main cement producers in South Africa. In addition, the study will make use of these to recommend characteristics that a new entrant would have to possess to be able to enter and grow in the industry.

Finally, the analysis of feedback from the questionnaire and interviews was done using the qualitative narrative approach.
CHAPTER FIVE:
EMPIRICAL RESULTS

5.1. INTRODUCTION

This chapter presents the results from the structured interviews and written questionnaire which was administered on South Africa’s cement participants. The analysis of the results follows the methodology outlined in the previous chapter. The analysis is aimed at addressing the research objectives presented in Section 1.3, draw conclusions and also make recommendations which will follow in the next chapter. The chapter is divided into five sections including this introduction. Section 5.2 discusses the results from all four major players in South Africa’s cement industry. Section 5.3, 5.4 and 5.5 discusses results from interviews with three of the four major cement producers.

5.2. CASE STUDY ANALYSIS OF FOUR PLAYERS IN SOUTH AFRICA’S CEMENT INDUSTRY

With the oligopolistic nature of the industry under review, there are a number of issues which are still highly sensitive, and some of the industry players were hesitant to share on various aspects of their company information. The advantage, therefore, of using a written questionnaire as the measurement tool for this study was that participants were more willing to be truthful as their anonymity is guaranteed. A further challenge encountered during this study was the limited availability of data, particularly for the pricing information. To compensate for the limited information, the explorative research technique was the appropriate technique to use as it allowed for the gathering of in-depth data on the study, concepts and improving the research design of the study. Feedback from the respondents may be analysed and summarised as follows.
Figure 5.1: Production capacity of South Africa’s four major players in the cement industry as at the end of 2012

Source: Survey Data

Figure 5.1 above summarises the four main players’ production capacity. The varying levels of production capacities are directly correlated with the market shares of the respective companies. Therefore, from figure 5.1 we conclude that the size of the market share for all the companies in ascending order is ranked as PPC Cement having the highest market share, followed by AfriSam South Africa, third highest market share is Lafarge South Africa’s and, finally NPC-Cimpor with the lowest market share. Figure 5.1 was used to conclude on the various market shares as two of the cement manufacturing companies were not willing to disclose their respective market shares and this information was not publicly available.

From figure 5.1 it is evident that the current players in South Africa’s industry have significant dominance, leaving little room for new entrants. Further, in the case where a gap opens up in the industry as a result of capacity constraints and production problems on the part of the firms, a large and established cement company such as PPC Cement is likely to take up the opportunity with the aim of increasing its market share. This behaviour may be motivated by companies wanting to gain a higher market share especially after the focus of the disbanded legal cartel were companies where bound to an equal share of the market and fixing prices.
Opportunities for new entrants and markets are also being taken up by imports which are estimated to supply about eight percent of the country’s current cement demand, equating to one million tons of cement per annum. Therefore, entrepreneurs that are looking into entering and being competitive in South Africa’s cement industry ought to innovative and come up with a new product that would set them apart otherwise they would struggle to compete with the current dominant players on factors such as price and so forth.

5.3. CASE STUDY I: PPC CEMENT (PTY) LTD

According to PPC Cement, the firm’s strategy is to maintain and enhance local market presence as well as expanding into the rest of African continent. Currently, PPC Cement produces seven million tons of cement per annum inside South Africa and about one million tons of cement per annum outside South Africa. This company’s production capacity represents about 30 percent of the total production of cement in South Africa. The production is from assets which are estimated to have been worth R6.9 billion at the 2012 financial year-end. The company strategy, therefore, confirms that PPC Cement is working towards increasing its size which is currently estimated to have a turnover of R7.3 billion. For competitors and potential entrants, this confirms the high capital required to enter the cement industry. Therefore, to compete with a company of this nature a new entrant would have to ensure certainty with regard to access to capital.

Prior to finding capital to participate in the industry, one may be interested in finding out whether the industry is not saturated by the same cement products since the main players have large market shares. The saturation by the same products may serve as another barrier to increasing, where existing firms have established their presence in all provinces of South Africa. However, information collected from PPC Cement suggests that there is room to accommodate more cement firms as table 5.1 shows.
Table 5.1: Distribution of PPC Cement’s production units in South Africa

<table>
<thead>
<tr>
<th>Province</th>
<th>Urban</th>
<th>Rural</th>
<th>% Presence in:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Urban Areas</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rural Areas</td>
</tr>
<tr>
<td>Gauteng</td>
<td>2</td>
<td>0</td>
<td>40%</td>
</tr>
<tr>
<td>Western Cape</td>
<td>2</td>
<td>0</td>
<td>40%</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>1</td>
<td>0</td>
<td>20%</td>
</tr>
<tr>
<td>Limpopo</td>
<td>0</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>North-West</td>
<td>0</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>Free State</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Northern Cape</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*Source: Survey Data*

Table 5.1 above indicates that there is space for upcoming firms as PPC Cement does not have production units in most rural and urban centres in various provinces. All of South Africa’s provinces have adopted a provincial developmental strategy that is in line with the National Development Plan. To this end, many of the provinces have implemented the Provincial Spatial Development Strategies which are aimed at developing provinces, starting at the established towns and cities which are the nodes, moving along the corridors which are the centres and routes’ growth potential. This growth can be realised if infrastructure can be improved in rural areas and cement companies take advantage of this opportunity.

Who would benefit from these opportunities? Since PPC Cement is the industry leader in terms of production and revenue, the company’s labour participation by gender and race will be analysed to get an understanding of who the provincial new entrants may benefit. This would illustrate the economic impact that the new entrant could have as this research assesses barriers to entry and expansion towards including SMMEs for lowering unemployment, inequality and poverty. The following Pie-Chart illustrates PPC Cement’s labour participation by race:
According to the above diagram, the staff complement shows that there is a greater representation by blacks with a commanding percentage of 53 percent. The greater part of the 1,213 black workers in PPC Cement (South Africa) maybe composed of lower level workers and probably an insignificant fraction in management. On the surface it would appear that PPC Cement complies with the requirements of the BBBEE conditions but a closer look is necessary to ascertain that the representation of previously disadvantaged groups is included in top management of the firm. The two percent Indian representation is equally worrying. One would expect a reasonable two-digit representation of any group of people in the cement industry otherwise the minority by race of staff would mirror an image of concern with regard to past racial discrimination.
From the Pie-Chart it is clear that women in general are heavily under-represented in PPC Cement. Out of the total of 2 277 workers only 471 are women. This represents 21 percent of the workers at the firm. More information on the labour participation rate is given in table 5.2 below. On table 5.2, further labour participation disparities emerge within race or gender. The implications for under-representation by certain groups are dire given the fact that there is a need to inculcate knowledge equally among races and across genders since the lack of knowledge in the cement industry is identified as one of the barriers to entry for entrepreneurs.
Table 5.2: Cross-Tabulation of gender and race of PPC Cement’s employees

<table>
<thead>
<tr>
<th></th>
<th>African</th>
<th>White</th>
<th>Coloured</th>
<th>Indian</th>
<th>Totals</th>
<th>Marginal Probabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>218</td>
<td>129</td>
<td>100</td>
<td>24</td>
<td>471</td>
<td>20.7%</td>
</tr>
<tr>
<td>% within Gender</td>
<td>(46.3%)</td>
<td>(27.4%)</td>
<td>(21.2%)</td>
<td>(5.1%)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>% within Race</td>
<td>(18.0%)</td>
<td>(25.0%)</td>
<td>(20.2%)</td>
<td>(45.3%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>995</td>
<td>388</td>
<td>394</td>
<td>29</td>
<td>1 806</td>
<td>79.3%</td>
</tr>
<tr>
<td>% within Gender</td>
<td>(55.1%)</td>
<td>(21.5%)</td>
<td>(21.8%)</td>
<td>(1.6%)</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>% within Race</td>
<td>(82.0%)</td>
<td>(75.0%)</td>
<td>(79.8%)</td>
<td>(54.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>1 213</td>
<td>517</td>
<td>494</td>
<td>53</td>
<td>2 277</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Survey Data

Table 5.2 above shows the percentage representation of gender within a given race. For example, the representation of females within the African race is 18 percent as compared to 82 percent for men. This shows a skewed labour participation rate at PPC Cement. Through the new entrants, there is a need to redress this kind of scenario in order to address poverty among women.

However, if one looks at the female workers at PPC Cement, there is good representation of African women with a labour participation rate across females of 46.3 percent as compared to the lowest labour participation rate for Indian women of 5.2 percent. Generally, PPC Cement is a company with good representation of black workers across both race and gender. This has good implications for poverty alleviation and growth in the cement industry. The only thing that may remain nagging is the quality of that representation which requires further analysis.
5.4. CASE STUDY II: AFRISAM SOUTH AFRICA (PTY) LTD

Afrisam South Africa is a construction materials supply company. Amongst other activities, the company’s products include a range of cements, Ground Granulated Blast Furnace Slagment (GGBFS), aggregate material and readymix concrete. Afrisam South Africa is a black owned company and a level 2 BBBEE contributor; Table 5.3 summarises the gender and race of the company’s employees:

Table 5.3: Cross-Tabulation of gender and race of AfriSam South Africa’s employees

<table>
<thead>
<tr>
<th></th>
<th>African</th>
<th>White</th>
<th>Coloured</th>
<th>Indian</th>
<th>Other</th>
<th>Totals</th>
<th>Marginal Probabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>122</td>
<td>162</td>
<td>55</td>
<td>36</td>
<td>10</td>
<td>385</td>
<td></td>
</tr>
<tr>
<td>% within Gender</td>
<td>(31.7%)</td>
<td>(42.1%)</td>
<td>(14.3%)</td>
<td>(9.3%)</td>
<td>(2.6%)</td>
<td>100%</td>
<td>20.7%</td>
</tr>
<tr>
<td>% within Race</td>
<td>(12.2%)</td>
<td>(31.2%)</td>
<td>(27.4%)</td>
<td>(34.6%)</td>
<td>(21.7%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>870</td>
<td>358</td>
<td>146</td>
<td>68</td>
<td>36</td>
<td>1478</td>
<td></td>
</tr>
<tr>
<td>% within Gender</td>
<td>(58.9%)</td>
<td>(24.2%)</td>
<td>(9.9%)</td>
<td>(4.6%)</td>
<td>(2.4%)</td>
<td>100%</td>
<td>79.3%</td>
</tr>
<tr>
<td>% within Race</td>
<td>(87.7%)</td>
<td>(68.8%)</td>
<td>(72.6%)</td>
<td>(65.4%)</td>
<td>(78.2%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>992</td>
<td>520</td>
<td>201</td>
<td>104</td>
<td>46</td>
<td>1863</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Source: Survey Data*

When compared to PPC Cement, AfriSam has a larger representation of black employees. This may be attributed to the fact that 99 percent of AfriSam is owned and controlled by a government-led company the Public Investment Corporation, while the Government
Employees Pension Fund owns and controls only 13.6 percent of PPC Cement. However, the complexion of labour participation rate has not changed with regard to gender. Interestingly, the calculations in AfriSam have given the exact percentage of women as being the same as that of PPC Cement. However, the within race and across gender dynamics have changed somewhat. In the case of AfriSam, there are more White women (42.1 percent) as compared to less African women (31.7 percent). The Indian representation continues to be the smallest across gender and across races. The Pie-Chart below is a further analysis of the participation rate by race.

**Figure 5.4: Illustration of labour participation by race at AfriSam South Africa**

The trend of labour participation by race in AfriSam is similar to that of PPC Cement. Two-thirds of the staff in AfriSam comprises of black and coloured people. This may be attributed to the fact that this section of the population was previously excluded from mainstream economic activity during the Apartheid regime and a majority of them received their education through the former system of the Department of Bantu Education. Therefore, the high participation of black and coloured people may be due to the fact that the cement industry is labour intensive and employs a majority of the less qualified of the labour force. It
would be interesting to see though the portion of this group that is in management positions, and is contributing to Afrisam’s level 2 BBBEE contributor.

A further concern to this labour representation is that the race that comprises the majority of the workers (i.e. Black) was previously disadvantaged and is thus, unlikely to possess the relevant skills and expertise to participate in technical and management positions. When one witnesses such a trend in AfriSam, the second largest supplier of cement in South Africa with the means to employ professionals and meet their salary requirements, it becomes a concern. One can infer that although knowledge and expertise is one of the requirements to operate a cement manufacturing plant, there is a shortage of these skills. Therefore, in addition to all the barriers previously unveiled, a new entrant may struggle to acquire employees with the relevant skills base to operate a cement manufacturing plant.

5.5. CASE STUDY III: LAFARGE SOUTH AFRICA HOLDINGS (PTY) LTD

The respondent from Lafarge South Africa confirms the company’s strategy to be seen as industry leader in innovative product line. In line with the company’s strategy and focus on being innovative, Lafarge is investing in resources that will advance its competitiveness in the current production capacity of about 2.3 million tons of cement in South Africa. At this production level, Lafarge’s current market share in cement production is about 18 percent, with ongoing change in other subsidiaries such as ready-mix, aggregates and gypsum. Lafarge has converted the barrier of compliance to environmental legislation to assisting with their efficiency and competitiveness through having an on-site SANS accredited lab; the firm is also currently investigating options for alternative fuel for cement production. This will further lower the current cost of dealing with production externalities which are estimated to comprise about five percent of Lafarge South Africa’s production costs. For new entrants, this implies that capital requirements for a cement production facility increase steadily as the company would need to continuously advance the equipment used so as to remain competitive. Therefore, the challenge is not limited to accessing funding for establishing the plant, but generating adequate revenue to upgrade the plant. New entrants, however, are unlikely to generate profits atleast in the first five years of operations since industry players assert that it takes at least five years to commission a plant and a further two years to grow brand awareness and gain the company’s market share. Similar to PPC Cement, the number
of Lafarge South Africa’s provincial manufacturing plants and cement depots suggests that there is room to accommodate further cement firms as table 5.4 below shows.

Table 5.4: Distribution of Lafarge South Africa’s production units in South Africa

<table>
<thead>
<tr>
<th>Province</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauteng</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Free-State</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Western Cape</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Northern Cape</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Eastern Cape</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Limpopo</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>North-West</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mpumalanga</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

*Source: Survey Data*

Lafarge South Africa only has one cement production site in Lichtenburg, North-West. This Lichtenburg Works cement clinker facility is said to be one of the largest and most technically advanced cement facilities in Southern Africa. It is strategically located close to Tswana Lime Quarry, a source of quality limestone, the primary raw material for cement. The Works processes the cement clinker from which Lafarge South Africa’s plants have the capacity to produce over three million tons of cement per year. The location of this production site confirms the identification of transport costs as a significant contributor to be considered by new entrants.

Since a significant portion of the demand for cement is for residential development and the population residing in rural areas and developers have to pay for transporting cement from depots and shops situated in the urban areas, there is room for new entrants to produce and distribute cement in the rural areas.
Table 5.5: Cross-Tabulation of male employees by race at Lafarge South Africa

<table>
<thead>
<tr>
<th>Males (Headcount)</th>
<th>Occupational Level</th>
<th>African</th>
<th>Coloured (including Chinese)</th>
<th>Indian</th>
<th>Non Black (White and Non South African)</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top management</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Senior management</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
<td>49</td>
<td>18</td>
<td>20</td>
<td>142</td>
<td>229</td>
</tr>
<tr>
<td></td>
<td>Skilled Workers</td>
<td>209</td>
<td>45</td>
<td>28</td>
<td>147</td>
<td>429</td>
</tr>
<tr>
<td></td>
<td>Semi-skilled Workers</td>
<td>642</td>
<td>55</td>
<td>8</td>
<td>17</td>
<td>722</td>
</tr>
<tr>
<td></td>
<td>Unskilled</td>
<td>163</td>
<td>10</td>
<td>2</td>
<td>6</td>
<td>181</td>
</tr>
<tr>
<td></td>
<td>Disabled</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total Employees</td>
<td>1066</td>
<td>131</td>
<td>59</td>
<td>324</td>
<td>1580</td>
</tr>
</tbody>
</table>

Source: Survey Data

Table 5.6: Cross-Tabulation of female employees by race at Lafarge South Africa

<table>
<thead>
<tr>
<th>Females (Headcount)</th>
<th>Occupational Level</th>
<th>African</th>
<th>Coloured (including Chinese)</th>
<th>Indian</th>
<th>Non Black (White and Non South African)</th>
<th>Sub-Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top management</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Senior management</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Professionals</td>
<td>43</td>
<td>10</td>
<td>5</td>
<td>44</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>Skilled Workers</td>
<td>79</td>
<td>19</td>
<td>20</td>
<td>72</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td>Semi-skilled Workers</td>
<td>110</td>
<td>10</td>
<td>0</td>
<td>22</td>
<td>142</td>
</tr>
<tr>
<td></td>
<td>Unskilled</td>
<td>59</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>62</td>
</tr>
<tr>
<td></td>
<td>Disabled</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Total Employees</td>
<td>292</td>
<td>40</td>
<td>29</td>
<td>142</td>
<td>503</td>
</tr>
</tbody>
</table>

Source: Survey data
Table 5.5 and table 5.6 highlight a challenge of skills shortage in the cement and lime production, and the entire construction industry. This confirms the concern of skills shortage as was discussed in the case of PPC Cement in section 5.3 and AfriSam in section 5.4. Across gender, only 17 percent of the workers are categorised as professionals, senior management and top management. Despite the large amounts of money committed by government for infrastructure expenditure and the cement companies’ capacity expansion programmes, the shortage of technical and project management skills may limit growth, especially in the commercial and industry property sectors where cement is a significant contributor and input product. In 2004, government through the Department of Home Affairs, identified a range of scarce and critical skills. Further, government set the relevant quotas of foreigners to be allowed in the country for each of the categories of scarce skills. Unfortunately, to date minimal efforts have been made for the transfer of skills from foreign labourers to South Africans, which is critical in order to develop the necessary skills to fulfil the needs of the various industries.

**Figure 5.5: Lafarge South Africa’s labour participation by gender**

![Labour participation by gender](source: Survey data)

Figure 5.5 illustrates a skewed gender representation, similar to that of PPC Cement and AfriSam where females comprise less than a third of the work force. Once again, the concern of skewed gender representation is related to the skills shortage argument and that the fight against poverty is of low intensity since the workers in the majority are those who were
previously disadvantaged. This pattern also raises concern of the deeply entrenched migrant labour system, where more than 60 percent of males employed in Lafarge South Africa are unskilled and therefore, likely to be living close to at the cement production facility or depot, away from their families. For a new entrant this assumes that, since the industry is labour intensive, they ought to employ more of South Africa’s unskilled workforce. This poses a challenge for a company or entrepreneur that also has to attract highly skilled workers to ensure that the company remains competitive as the portion of the workforce that is unskilled takes up much of the wage and salaries account.

5.6. CASE STUDY IV: SEPHAKU CEMENT (PTY) LTD

Sephaku Cement is a new entrant that is to commence cement manufacturing operations in 2014. The entrance by Sephaku Cement into South Africa’s cement industry will be a first since 1934. The company is an associate to Sephaku Holdings, a company specialising in limestone and cement exploration. Sephaku Cement’s strategic footprint is to locate its integrated cement manufacturing plant called Aganang at Lichtenburg, in the North-West province. This plant has the capacity to produce 2.6 million tons of cement per annum and will be situated close to the quarry from which the raw materials will be sourced. The grinding station will be located in Delmas, close to its market. Both these plants are said to be equipped with the latest state of the art technology, geared at process cost savings with regard to manufacturing of blended cements and reduction of carbon dioxide emissions. Sephaku’s majority shareholder, Dangote, aims to have installed a capacity of 55 million tons throughout the African continent by 2016. Sephaku Cement’s capacity expansion and target market share is based on and driven by South Africa’s National Development Plan.

In starting up with their operations, Sephaku Cement is concerned and notes the following factors as potential barriers which may inhibit their growth: rising input costs are a concern particularly for electricity and coal; the company is considering taking advantage of the concern of rising electricity costs and pursuing initiatives such as generating their own power. Stringent and constantly evolving legislation is another concern; however Sephaku is focused on turning such barriers into growth opportunities for the company. For example, with regard to the proposed carbon tax, Sephaku sees this as an emphasis on using alternate fuels and an

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1 The last entrant into South Africa’s cement industry was by Holcim in 1934.
even greater use of extenders, moving away from coal. Thirdly, with the concern of escalating labour unrest, Sephaku envisages increased mechanisation at their operations. Finally, the company agrees that cement is heavy and with high transport costs it tends to no longer be cost effective in use if cement is being transported more than 300 kilometres from a plant or depot. Therefore, they are considering moving more of their input raw materials and finished cement by rail instead of the conventional transportation by road. Sephaku acknowledges that for the rail investment decision, they rely on the materialisation of the planned Transnet Freight Rail investment.

5.7. CONCLUSION

The interaction with Sephaku Cement confirms the barriers highlighted by the theoretical and empirical literature of this research. From their planned operations, it is evident that a new entrant in South Africa’s cement industry ought to embrace and deal with the barriers to entry and expansion through being innovative such as Sephaku is doing for the carbon tax legislation and rising input costs. Further, factors highlighted which are of greater importance is the need to align operations with the country’s policies and taking advantage of the proposed developmental initiatives. Sephaku has done this by aligning their capacity expansion to the infrastructure targets outlined by the National Development Plan. According to the National Development Plan, if South Africa spends ten percent of its annual budget on infrastructure development, by 2030 South Africa would have spent a total of R11.8 trillion on infrastructure. Therefore, Sephaku Cement’s capacity expansion plans will ensure that they are ready to take advantage of these developments. Finally, Sephaku Cement is planning on taking advantage of the Department of Energy’s Independent Power Producers Procurement Programme by producing their own energy, lowering their inputs costs.

In light of the established cement manufacturing firms which have significant market share and from the analysis of interactions with these firms in sections 5.2, 5.3, 5.4 and 5.5, it seems that the companies are dominant and there is little room for new entrants. However, Sephaku Cement’s plans highlight that, despite the barriers to entry and expansion discussed, there is still space for new entrants who are focused on being innovative, with plans that are long-term focused.
CHAPTER SIX
CONCLUSION

6.1 SUMMARY OF FINDINGS

This study assessed the barriers to entry and expansion for SMMEs into South Africa’s cement industry. It contributes to the existing body of literature on challenges which SMMEs encounter in their quest for growth and attempts to contribute to South Africa’s fight against unemployment and inequality. Theoretical literature has proven that the barriers which inhibit participation of SMMEs in capital intensive industries can be categorised as either strategic or structural in nature. Despite the barriers, the establishment and growth of SMMEs is believed to have a positive impact on an economy. The positive relationship between the increase in the number of SMMEs and economic growth stems from findings which demonstrate these enterprises as prolific job creators; these enterprises are able to absorb the large numbers of South Africa’s labour force which is unskilled.

The empirical literature suggests that there is a relationship between the availability of capital, legislation, industry knowledge and expertise, and the probability of new entrants into South Africa’s cement industry.

The study made interesting discoveries. First, it found that availability of capital is the main requirement for operating a cement manufacturing companies, where the main expense is due to high logistical costs from transporting raw material to factories, transporting partly finished products to intermediate factories, transporting finished products to depots and, transporting products from the most convenient depot to customers. Second, it identified that stringent legislation which entails the acquiring of mining rights, water licences, and compliance to environmental regulation. Third, it became evident that the challenge of skills shortage in the cement and lime production, and the entire construction industry is persisting. Across genders, a small percentage of the workers are categorised as professionals, senior management and top management. Despite the large amounts of financial commitments by government for infrastructure expenditure and the cement companies’ capacity expansion programmes, the shortage of technical and project management skills may limit growth,
especially in the commercial and industry property sectors where cement is a significant contributor and input product.

It should be acknowledged that South Africa has a range of initiatives have been set in place to deal with barriers for the broader SMME group across sectors. While the research narrows down on the barriers specifically for South Africa’s cement industry, we cannot conclude that solving these blockages will automatically translate to an increase in the number of SMMEs in the cement industry.

6.2. POLICY IMPLICATIONS AND RECOMMENDATIONS

The analysis in Chapter Two and results discussed in Chapter Five demonstrate that since the disbandment of the legal cartel, entry into the cement industry is no longer controlled by the four major cement producers but mainly by the availability of capital. The current focus on infrastructure development makes the cement industry a sustainable business which will continue to be important for development. As a result of these growth prospects, South Africa and the continent as a whole represents an attractive market for cement companies. However, the success of this industry is largely dependent on a company’s ability to be innovative and manage challenges peculiar to the continent.

As has been confirmed by the preceding discussions, cement production can only be undertaken in highly sophisticated and complex plants that are hugely expensive to build and operate. Thus, the existing practise which is seen as a solution to opening up the market has been smaller operators obtaining bulk cement supplies from local and imported products, and blended or re-constituted the material for resale. Such activity is also happening to quite an extent through cement distributors. However, the reality is that small operators (i.e. blenders) invariably lack the resources and expertise to run a modern facility and consequently their cement products often gets a bad name.

In light of the ongoing growth and development, cement producing companies have, over the years, invested in production resources and technological developments. Subsequently, these

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2 Success lies in managing and overcoming some of the key challenges such as power shortages, high manufacturing costs and logistical challenges.
have contributed to the four main dominant players’ growing production facilities and turnovers. The current trend amongst the players of regeneration and recycling of lime may eventually affect the extent of the players’ production; therefore, companies are further investing in technological developments. In the manufacturing of cement, machines are essential, from the quarrying of the raw materials, the equipment necessary for manufacture of the cement, the transportation of raw materials and finished product. The reality, however, is that cement manufacturing companies established their operations many decades ago and the cost of upgrading technologies is high and time consuming. Therefore, these companies have been opting for importing the relevant machinery and technologies that are adoptive to the environmental regulations. With infrastructure developments, it has been noted that two-thirds of any expenditure remains within South Africa, while almost a third leaves the country on imported equipment and services. Further, the policy focus on the green economy and protection of the environment has resulted in activities such as recycling. Subsequently, these have introduced and increased opportunities for specialists in waste material, dust-control and other raw materials. Therefore, where the barriers to producing cement are high, SMMEs could explore the avenue of specialising and contributing towards environmental compliance. Thus, it is recommended that policy be put in place and investment commitments be made towards equipping the SMME market with the skills to specialise in the relevant environmental technical skills. In this way, SMMEs would complement the cement industry with the professional and specialised skills that they lack. It is further recommended that policy be put in place to support emerging entrepreneurs towards providing the relevant equipment, parts of the machinery or upgrading the existing machinery of the cement manufacturers towards addressing the current environmental concerns.

Focusing further on innovation, more than fifty percent of all cement produced is bagged, making packaging vital. Some of the main players in South Africa’s cement industry have established in-house packaging divisions. For example, Afripack is PPC’s packaging division. This company makes paper bags for cement and manufacturers of food products. Since its establishment, Afripack has been reporting increasing profits. This is another avenue for SMME participation in the cement industry through supplying the required packaging.
6.3. LIMITATIONS OF THE STUDY AND AREAS FOR FURTHER RESEARCH

The main challenge encountered during this research was the limited availability of data on the cement manufacturing companies, particularly for the pricing information. To compensate for the limited information, the explorative research technique was the appropriate technique to use as it allowed for the gathering of in-depth data on the study, concepts and improve the research design of the study.

Going forward, further studies could investigate the skills required for the construction industry as a whole and how government, business and labour can work together to correct for the skills shortage in this industry. Since Africa comprises of developing countries and more developed countries are gaining interest in the continent, the construction industry will continue to grow in the long term. This study could then assist in ensuring that the benefits to the people of Africa are sustainable; ensuring that apart from getting income from these projects, they also acquire skills which would assist towards being marketable for the future, in turn easing the burden on the fiscus which provides social assistance to the unemployed and poor. Currently, the trend in South Africa is that black people benefit from infrastructure development projects through tendering as BBBEE partners. The benefits thereof are generally unsustainable and these entrepreneurs are seen moving as partner from one project to the next. With the current challenge of skills shortage, many of the developers and investors from the developed countries bring with their own workforce on projects in Africa and there is usually no transfer of skills to the local employees. However, if a country’s labour force were to be up-skilled, when issuing infrastructure development projects the country could incorporate a condition in the performance contract of utilising local employees and the transferring of skills from foreign workers. At the end, Africa would grow to be well endowed not only with natural resources, but a workforce that is skilled with the ability of optimising on the limited resources at their disposal. Together, these initiatives and efforts would intensify the fight against poverty, unemployment and inequality.
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Whom.
Introduction:
I am a Masters student at the University of Cape Town’s Graduate School of Business and I am conducting an impact assessment on the barriers to entry and expansion for SMMEs in South Africa’s cement industry. The research focuses on factors related to the structure of South Africa’s cement industry, regulation, access to finance, start-up costs and skills endowment. Such barriers inhibit entry and growth of number of medium-sized enterprises in South Africa’s cement industry. Based on the realisation by the South African Competition Commission that competition issues have a bearing on development; amongst others, this study seeks to understand the threat that anti-competitive behaviour is posing towards infrastructure development which is paramount to Africa’s economic development.

Please note that your participation as a respondent in the study is highly appreciated and feel free to respond to the questions and provide the best possible details. You are also welcome to contribute further insight towards this study which may be beyond the scope of the questions below.

Confidentiality clause:
Kindly note that all responses and views expressed towards this study will be treated with the utmost level of confidentiality. All necessary precautions will be taken to safeguard identifiable records of individuals.
SECTION I

Applicable to all interviewees

(i) Background information on the interviewee

1. Would you like to be anonymous?

2. How old are you in years?

3. Sex: (Tick appropriate box)

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
</table>

4. Race: (tick an appropriate box)

<table>
<thead>
<tr>
<th>White</th>
<th>Black</th>
<th>Coloured</th>
<th>Indian</th>
<th>Asian</th>
<th>Other</th>
</tr>
</thead>
</table>

5. What is the name of your company?

6. What position do you hold in the company?

7. What are your primary assignments?

8. How many years have you been employed in this company?
9. What is your education level?

-----------------------------------------------
(ii) Background information on the firm

10. In manufacturing cement, what is the company’s strategy?

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-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------

11. What is the size of the company according to revenue and market share?

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-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------

12. How many tons of cement does the company produce in South Africa?

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-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------

13. How many tons of cement are produced in other cement operations outside South Africa?

-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------

14. How do you see your operation changing in the next five years?

-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------
15. Specify the number of provincial manufacturing sites (plants) and cement depots that the company has:

<table>
<thead>
<tr>
<th>Province</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauteng</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Free-State</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KwaZulu-Natal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western Cape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northern Cape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern Cape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limpopo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North-West</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mpumalanga</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

16. What measures do you have in place to comply with government regulations on dealing with the production of externalities during the process of producing cement?

17. What is the estimated annual cost for dealing with the production externalities?

18. Do you have any pollution rights (i.e. tradable pollution permits)? What happens when pollution from production exceeds the quota?

19. Is the company BBBEE compliant?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

20. If ‘yes’, please specify the BBBEE level contributor

-------------------------------------------------------------------------------------------------------
21. What is the staff compliment of the company by race and gender?

<table>
<thead>
<tr>
<th>Gender/Race</th>
<th>African</th>
<th>White</th>
<th>Coloured</th>
<th>Indian</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. What is the average staff turnover over the last five years according to the following:

<table>
<thead>
<tr>
<th></th>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23. If high, why is this so?

--------------------------------------
-----------------------------------------------------------------
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-------------------------------------------------------------------------------------------------------

24. What is your retention policy?

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-----------------------------------------------------------------
-------------------------------------------------------------------------------------------------------
-------------------------------------------------------------------------------------------------------
(iii) Understanding market dynamics

25. Please list and describe the different types of cement products.

-------------------------------------------------------------------------------------------------------

-------------------------------------------------------------------------------------------------------

-------------------------------------------------------------------------------------------------------

26. Can the different types of cement products be used as substitutes?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

27. If ‘yes’, please provide the different types of cement that can be used as substitutes

-------------------------------------------------------------------------------------------------------

28. Would you describe the cement business as:

<table>
<thead>
<tr>
<th>Local</th>
<th>National</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

29. How would you describe transport costs?

<table>
<thead>
<tr>
<th>High</th>
<th>Moderate</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30. Describe in detail the nature of competitive rivalry in the cement business.

-------------------------------------------------------------------------------------------------------

-------------------------------------------------------------------------------------------------------

-------------------------------------------------------------------------------------------------------

31. Are there imports of the different types of cement?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

32. If ‘yes’, please specify
33. What percentage of supply do imports account for in the South African market?

34. Are there barriers to importing, such as tariffs or standards that must be complied with? Explain.

35. From your experience and in your view, what factors have contributed to the cement industry growth overtime?

36. Do you think there is a correlation between the industry’s growth (performance) and the major investment announcements?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

37. If ‘yes’ please specify
SECTION IV
Applicable to independent experts and new entrants in the cement industry

(iv) Impediments to SMME development in South Africa

38. In your view, how do you think the structure of South Africa’s cement industry has changed since the disbanding of the cartel in 1996?

39. What structural factors would you suggest be addressed to further open up this market?

40. In expanding South Africa’s cement industry to include SMMEs, which of the following factors would you identify as the barriers to entry for these businesses?

<table>
<thead>
<tr>
<th>Availability of capital</th>
<th>Industry knowledge</th>
<th>Legislation</th>
<th>Other (please specify)</th>
</tr>
</thead>
</table>

41. Which of the following factors would you identify as barriers to expansion for SMMEs in South Africa’s cement industry?

<table>
<thead>
<tr>
<th>Brand loyalty</th>
<th>Price sensitivity by consumers</th>
<th>Competition from imports</th>
<th>Logistical costs</th>
<th>Other (please specify)</th>
</tr>
</thead>
</table>
42. What would be the capital investment required (in Rand terms) to start a business. Explain you answer in reference to the following:

42.1. Cement production business targeting infrastructural building purposes

42.2. Blended cement products

43. Are there any other barriers to entry such as regulatory requirements, brand loyalty, labour (skills and costs), other (transportation, electricity, etc) that a new entrant can encounter and how do this impact on the ability of that firm to effectively compete in the market? Explain you answer in reference to the following:

43.1. Cement production business targeting infrastructural building purposes

43.2. Blended cement products

44. Provide a substantiated estimate of the time needed for a new entrant to enter the market and become an effective competitor/gain market share. Explain you answer in reference to the following:

44.1. Cement production business targeting infrastructural building purposes
44.2. Blended cement products

45. Do you know of any firm that has entered the market in the past five years?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

46. If ‘yes,’ please provide their name and contact details

47. What impact has this had on prices and service levels in the market?

48. Do you know of any firm that has exited the market in the past five years?

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

49. If ‘yes’ please provide their name and contact details.

50. Do you have any knowledge as to why they did so?

51. Do you have any further insight to share?

Your valuable time and contribution to this research is appreciated, thank you