



LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

**DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT AND TOURISM**



**PROFILING CONSTRUCTION AND BUILDING MATERIAL SECTOR
IN LIMPOPO PROVINCE**

2022

TABLE OF CONTENT

List of Abbreviations	2
List of tables	2
List of figures	3
Executive Summary	4-9
CHAPTER 1	
Introduction	10
Background Information	10
Problem Review	11-12
Problem Statement	13
SWOT Analysis	13
Research Questions	14
Objectives and Scope	14
Methodology	15
Limitations of the Study	15
CHAPTER 2	
Literature Review	16-32
CHAPTER 3	
Results-Analysis	33-45
CHAPTER 4	
Findings and Recommendations	46-48
REFERENCES	49

LIST OF ABBREVIATIONS

CIDB	Construction Industry Development Board
GVA	Gross Value Added
NDP	National Development Plan
SANS	South African National Standards
SMMEs	Small, Medium and Micro Enterprises

LIST OF TABLES

		Page
Table 2.1	Distribution of Number of contractors by grade and public sector awards and by value in South Africa	20
Table 2.2	Demand: Public Sector Awards (% distribution by value) 2019 Q1 to 2019 Q4 (General Building)	21
Table 2.3	CIDB Registered general building contractors (Black ownership versus Women ownership)	21
Table 2.4	CIDB Registered civil engineering contractors (Black ownership versus Women ownership)	22
Table 2.5	Black ownership	22
Table 2.6	Woman ownership	23
Table 2.7	Minimum Prescribed Qualifications and experience for Limited Category	24
Table 2.8	Minimum Prescribed Qualifications and experience Required for an External Competence Assessment	24
Table 2.9	Public Sector Project Compliance: 2018 to March 2020	25
Table 2.10a	Product Group and Market Size	26-27
Table 2.10b	Product Group and Market Size	27
Table 2.11	Major Products Group	28
Table 2.12	Estimate of the Imports and exports; 2006	30

LIST OF FIGURES

		Page
Figure 2.1	Market for building and construction materials	29
Figure 3.1	Gross Value Added by Region (GVA-R), Constant 2010 prices	33
Figure 3.2	Average Annual Growth (% constant 2010 prices)	35
Figure 3.3	Contribution to total Economic Growth (% point, constant 2010 prices)	36
Figure 3.4	Gross Value Added (GVA), Constant 2010 prices	37
Figure 3.5	Res Building Completed by Province & Segment: Average 1993-2014	38
Figure 3.6	The market for major Building Products by value.	39
Figure 3.7	Demand for major building product groups by type of building	40
Figure 3.8	The market for major building product groups by province	41
Figure 3.9	Domestic Cement Sales: Cumulative 2013/2014	42
Figure 3.10	Residential Building Plans Passed by Province and Segment	43

EXECUTIVE SUMMARY

FINDINGS

Findings Based on Secondary Data

- The key barriers to sustained growth and development among newly established construction firms in Limpopo Province are shortages of technical skills in construction engineering, shortage of capital and inability to work with well - established construction firms (Worku, 2012).
- In 2011, the minimum prescribed qualifications for grade 5 and 6 was National Certificate: Management of Building Construction Processes and minimum experience of 5 years (CIDB, 2011).
- In 2011, the minimum prescribed qualifications for grade 2 to 4 was National Certificate: Supervision of Construction Processes and minimum experience of 3 years (CIDB, 2011).
- The majority of emerging or small contractors (i.e., grade 2 to 6) share is very small as compared to big companies that are in grade 7 to 9 which claimed 84% in 2010 (CIDB, 2011).
- Most companies that are 51% and 90% owned by blacks in 2010 are in grades between 2 and 6 (CIDB annual report 2019/2020).
- Women ownership of 51% and above constitutes around 30% of all contracting enterprises, while women on 31% and above constitutes around 37% of all contracting enterprises (CIDB annual report 2019/2020).
- Contractors lack technical and entrepreneurial skills as well as skills that are essential for networking with business partners and clients (Deck and Demirguc-Kurt (2012) and Beetsma, Giuliodori, De Jong and Widijanto (2013).
- The finding by Bourne and Walker (2006) indicates that sound education system takes the practical needs of customers and stakeholders into account, and that educational systems used in most developing nations in Sub-Sahara African countries lack emphasis on practical and industrial expertise.
- Newly established construction firms in Limpopo Province are often placed at low grades of the cidb (Worku, 2016).

- The quality of service delivery by emerging contractors in the construction industry is often poor, and that start-up businesses in the construction industry often struggle to compete with well-established contractors (El Asmar, Hanna and Lor (2013)
- Studies conducted by Ahlstrom and Ding (2014), Baloyi and Bekker (2011) and Bateman (2014) have shown that efforts made by the South African Government since April 1994 to improve the performance of emerging contractors in the construction industry of South Africa have not resulted in tangible results.
- Key challenge perceived to affect the performance of the construction industry and projects in South Africa is primarily the increasing cost of building materials (Windapo and Cattel, 2010).
- Price volatility in building materials in the South African Construction Industry are steel, cement, sand, copper, timber, PVC, bitumen and masonry, blocks/bricks, which according to the Engineering News document had increased up to 100% between October 2000 and October 2006.
- The Gross Value Added by Region at constant 2010 prices indicates that the leading province are Gauteng, Kwazulu-Natal and Western Cape while Limpopo Province was above Mpumalanga, Northern Cape, Free State and North West.
- The Gross Value Added by district municipality in Limpopo Province revealed that Capricorn was leading followed by Vhembe District for the period under review.
- In terms of Residential Building Completed by Province and Segment (i.e., 1993-2014), Gauteng was leading followed by Western Cape while Limpopo Province was second from the bottom with only 1.95% average residential buildings completed.
- The study revealed that cement, aggregate and sand, and reinforcing steel and sections had a huge market compared to other building materials.
- The study also revealed that residential buildings demand more building materials at 62.96% followed by non-residential sector at 37.03% and public non-residential segment at 24.57%. Private non-residential segment was at 10.52% during the period under review.

- The study indicates that Gauteng Province took a lead in terms of the market share of building materials followed by Western Cape and Kwazulu-Natal. Northern Cape and Limpopo had the smallest share of building materials market.
- The study also indicates that the demand for cement domestically was higher in November and December during the period under review (i.e., 2013/2014).
- The study revealed that Gauteng and Western Cape took a lead in 2014 in terms of residential plans passed. During the same period, the percentage of building plans passed by the Limpopo Provincial Government was very low, only above that of Northern Cape Provincial Government.

Findings Based on Primary Data

- Seventy eight point fifty seven percent (78.57%) of the participants agreed that the Grade 2-6 contractors lack relevant construction and engineering skills. While only 21.43 percent of the participants disagreed that Grade, 2-6 contractors lack relevant construction and engineering skills.
- On the other hand, 92.86 percent of the participants agreed that the Grade 7-9 contractors poses right skills on construction and engineering. However, this is in contrast with 7.14 participants who disagreed that Grade 7-9, contractors poses right skills on construction and engineering.
- Regarding technical, entrepreneurial skills and networking skills 64.29 percent of participants agreed that contractors lack technical and entrepreneurial skills as well as skills that are essential for networking with business partners and clients, while 35.71% of the participants were in disagreement with the same statement.
- Seventy one point forty three percent (71.43%) of the participants agreed that Grade 7-9 contractors are more likely to secure government tenders than Grade 2-6 as compared to those in lower Grades. On the other had only 28.57% disagreed with the same statement.

- Seventy eight point fifty seven percent (78.57%) of the participants agreed that the majority of emerging or small contractors (i.e., grade 2 to 6) share is very small as compared to big companies that are in grade 7 to 9, while only 21.43% of the participants disagreed with the statement.
- Ninety two point eighty six percent (92.86%) of the participants agreed that the key barriers to sustainable growth and development among newly established construction firms in Limpopo Province are shortages of technical skills in construction engineering, capital and inability to work with well-established construction firms, while only 7.14% of participants disagreed with the statement.
- Eighty five point seventy one percent (85.71%) of the participants agreed that educational systems in South Africa lack emphasis on practical and industrial expertise, while only 14.29% disagreed with the statement.
- Seventy eight point fifty seven percent (78.57%) agreed that the quality of service delivery by emerging contractors in the contraction industry is often poor, while only 21.43% disagreed with the statement.
- Ninety two point eighty six percent (92.86%) agreed that efforts made by the South African Government since April 1994 to improve the performance of emerging contractors in the construction industry has not resulted in tangible results. On the other hand, only 7.14% of the participants disagreed with the statement.
- Ninety two point eighty six percent (92.86%) agreed that small and newly established construction companies find it very hard to survive beyond three years due to lack of working capital, while only 7.14% disagreed with the same statement.
- Eighty five point seventy one percent (85.71%) agreed that failure rate among newly established emerging contractors in Limpopo Province is 50% and above, while only 14.29% disagreed with the statement.

- Hundred percent (100%) of participants agreed that it is essential to provide a combination of technical and financial assistance as well as mentoring, monitoring and evaluation support programmes to start-up construction companies as a means of ensuring viability and long-term survival.
- Ninety two point eighty six percent (92.86%) agreed that most small and emerging construction companies solely rely on provincial government tenders, which are not easy to get due to corrupt nature of awarding tenders, while only 7.14% disagreed with the statement.
- Eighty five point seventy one percent (85.71%) agreed that many building projects are poorly specified, and artisans and supervisors are not accredited in terms of their performance in achieving the necessary standards. On the other hand, only 14.29% disagreed with the statement.
- Ninety two point eighty six percent (92.86%) agreed that there is a need of policy intervention so that underprepared and under resourced construction, companies can have access to local markets while only 7.14% disagreed with the statement.
- Seventy eight point fifty seven percent (78.57%) agreed that the cost of building materials makes it impossible for small, medium and micro enterprises to compete in construction tender projects while only 21.43% disagreed with the statement.
- Hundred percent (100%) of participants agreed that due to COVID-19, the prices of some building materials like cement, steel, bricks/blocks, copper, timber, etc. has increased immensely.
- Eighty five point seventy one percent (85.71%) agreed that the price of materials mentioned above increases because the demand is currently surpasses the supply, while only 14.29% disagreed with the statement.

RECOMMENDATIONS

- This fragmented construction engineering sector requires policy intervention so that underprepared and under resourced construction companies can have access to local markets.
- There is a need to provide a combination of technical and financial assistance as well as mentoring, monitoring and evaluation support programmes to start-up construction companies as a means of ensuring viability and long term survival.
- Provide mentoring and coaching services to start-up construction companies in order to promote the effective utilization of scarce resources and to enable newly established companies to exploit market opportunities.
- Learners should be encouraged to do science and mathematics so that the province can have a pool of engineers and contractors.
- The Limpopo Government should encourage private engineers and well-established contractors to take-in interns both from TVET colleges and from universities.

CHAPTER 1

1. INTRODUCTION

The study was conducted to identify gaps within the Construction and Building Materials industry in Limpopo Province. Limpopo Province is fast growing and most people are relocating to major towns like Polokwane, Makhado and Thohoyandou hence there is a need by the Provincial Government to support the industry so that it can cope with the ever-increasing demand for housing. Small and newly, construction companies are not financially viable, they lack entrepreneurial skills, and as a result, they are not able to render services that are demanded in the local market. Newly established SMMEs in the construction industry in Limpopo Province are characterised by lack of technical skills in construction engineering, lack of basic entrepreneurial skills that are essentially for attracting clients. On the other hand, the prices of building materials are continuously increasing which also a contributor to crowding-out of small construction companies, as they need capital to do projects especially tender work.

2. BACKGROUND INFORMATION

The construction/infrastructure cluster includes industries that produce new infrastructure and construction assets, the network of suppliers to those industries, and the entities engaged in operating and maintaining this new infrastructure. Infrastructure investment is crucially important because it creates jobs for low-skilled people, encourages private investment, lowers the cost of doing business, promotes spatial inclusivity, and has strong backward linkages to supplier industries (NDP)

The National Development Plan also revealed that the state has committed substantial funding to public infrastructure to address backlogs, but not all of it has been spent. Employment in the construction/infrastructure sector has fallen from 833 000 in 2006 to 712 000 in 2009. More and better quality public housing has strong linkages to local supplier industries, promoting growth and employment. There is also scope for export growth – particularly to other African markets – for products that competitively meet customer needs.

3. PROBLEM REVIEW

The problem in context suggests themes that are assumed the key in addressing poor construction/infrastructure development in the Province. For effective construction/infrastructure development, the following themes need urgent attention:

3.1. Technical and entrepreneurial skills

Due to lack of technical and entrepreneurial skills, small and newly established construction companies are likely not to compete fairly in the local market. Well-established companies from other provinces are therefore likely to get public contracts as they also have branches in the Province. The minimum qualifications required by CIDB for grade 5 to 6 is the National Certificate: Management of Building Construction Processes and minimum experience of five years which might be lacking to many construction companies in Limpopo Province

3.2. Shortage of capital

Small and newly established construction companies do not have required capital in order to compete with well-established companies. Many studies revealed that most SMMEs find it very hard to survive beyond three years due to lack of working capital.

3.3. Education System

The South African Education System hinders many graduates to qualify, as engineers as the majority of students do not follow science stream. Bourne and Walker (2006, as cited in Windapo and Cattell 2012) indicates that sound education system takes the practical needs of customers and stakeholders into account, and that educational system used in most developing nations in Sub-Saharan African countries lack emphasis on practical and industrial expertise.

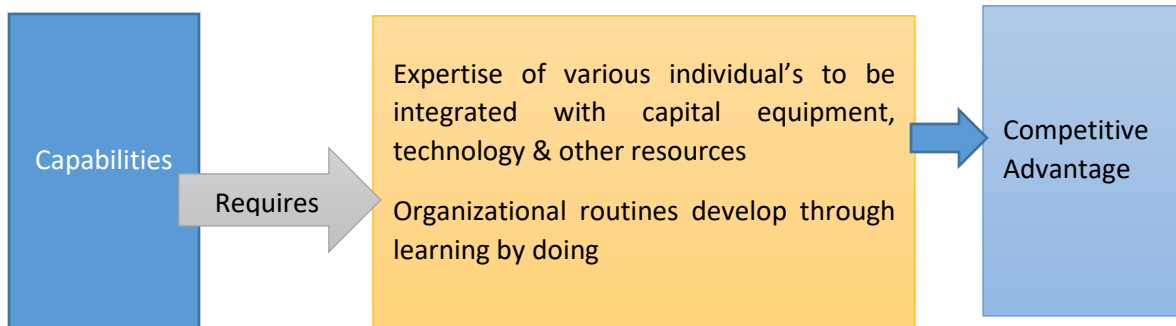
3.4. Cost of building materials

The cost of building materials makes it impossible for small, medium and micro enterprises to compete in construction tender projects in Limpopo Province. The price volatility in building materials in the South African Construction industry are steel, cement, sand, copper, timber, PVC, bitumen and masonry, blocks/bricks, which according to the Engineering News document had increased up to 100% between October 2000 and October 2006.

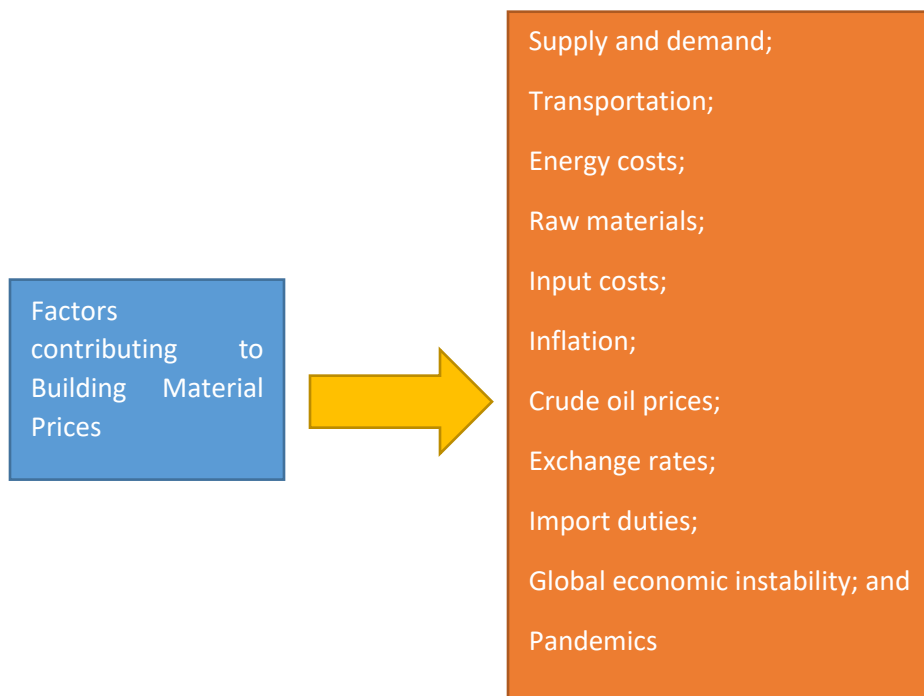
3.5. Capability

Grant (2008) argued that to perform a task, a team of resources must work together. An organizational capability according to Grant (2008), is a “firm’s capacity to deploy resources for a desired end results”.

Capability as a routine



3.6. Factors Contributing to Building Material Prices



The demand for and supply of building materials or lack thereof, can contribute to the trends in the prices of building materials, where the law of supply and demand can be related.

4. PROBLEM STATEMENT

Economic trends indicate that the Economic Contribution by Construction Industry in Limpopo Province to the National Economy is low compared to mining, manufacturing, finance, community and social services, etc. This might be caused by low number of companies that falls under grades between 7 and 9 that are able to compete fairly for government projects. The majority of construction companies in Limpopo Province are between grade 2 and 6. Companies that are within these grades struggle to win government tenders and they lack finances and technical know-how. For a company to compete for huge government projects (tenders) it must have sound financial background so that it is able to pay for building materials.

5. SWOT ANALYSIS

STRENGTH	OPPORTUNITIES
Availability of National Development Plan that support construction/infrastructure development.	High budget allocation into construction/infrastructure to create more employment.
Commitment by both National and local government to support construction/infrastructure development.	Rapid increase in urbanisation that lead to high demand of infrastructure and building materials.
WEAKENESSES	THREAT
Barrier of entry by SMMEs in the supply of building materials and in the construction sector.	High cost of building materials and labour costs.
Tender corruption that disadvantage other SMMEs	Poor quality materials and workmanship
Poor workmanship particularly in government infrastructure, which includes roads, schools, hospitals, low cost housing, etc.	Corruption in both private and public sector
	Possible collusion by main suppliers to increase building materials prices.

6. RESEARCH QUESTIONS

- What are the Construction Industry barriers to sustainable growth and development in Limpopo Province?
- Are the companies in grades 2-6 able to access public contracts compared to those in Grades 7-9?
- What is the level of demand and supply of building materials in the Province?
- What is the level of ownership by blacks and women in Construction Industry in Limpopo Province?

7. OBJECTIVES AND SCOPE

The research objectives are as follows:

- To investigate Construction Sector barriers to sustainable growth and development in Limpopo Province;
- To investigate ownership within the Construction Industry in Limpopo Province;
- To investigate the demand and supply of building materials in Limpopo Province; and
- To determine the level of economic contribution by Construction Sector.

The Scope

The study covers the construction and building materials industry in the Limpopo Provincial Economy. Economic contributions by the districts and local municipalities has been analyzed and comparisons done per province.

8. METHODOLOGY

The study was based on primary and secondary data from Statistics South Africa, Global Insight, CIDB and other official data generators was applied. The survey target group was the local municipalities Building Inspectors. The following municipalities participated in the survey:

Waterberg	Mokgalakwena
Sekhukhune	Makhuduthamaga
	Ephraim Mogale
	Sekhukhune District Municipality
Mopani	Greater Letaba
	Baphalaborwa
	Greater Tzaneen
	Maruleng
Vhembe	Musina
	Makhado
	Collins Chabane
Capricorn	Molemole
	Blouberg
	Polokwane

9. LIMITATIONS OF THE STUDY

The primary data was limited to Building Inspectors within local municipalities due to COVID-19 and financial resources.

CHAPTER 2

LITERATURE REVIEW

According to CIDB (2007) the successful delivery of the government and the private sector infrastructure programmes depends on the effective functioning of many stakeholders – including the building and construction materials sector. CIDB (2007) argue that without the necessary building and construction materials being available and delivered timeously, and at appropriate price and quality, these infrastructure delivery programmes could well falter.

According to Worku (2016) reports issued by CIDB revealed that failure rate among newly established emerging contractors in Limpopo Province is above 50 percent. Worku (2016) also indicated that reports published by the South African National Department of Public Works (2015) and Tshivhase and Worku (2012) show that the key barriers to sustained growth and development among newly established construction firms in Limpopo Province are shortage of technical skills in construction engineering, shortage of capital and inability to work with well – established construction firms. Worku (2016) also indicated that the study conducted by the department of Trade and Industry (2014) shows more than half of newly established businesses in Limpopo Province are not viable financially mostly due to shortage of entrepreneurial skills and inability to render services that are demanded in the local market.

According to Worku (2016) annual reports issued by the Limpopo Provincial Department of Public Works (2014, 2015) show that newly established SMMEs in the construction industry of Limpopo Province are characterized by lack of technical skills in construction engineering, lack of finance and lack of basic entrepreneurial skills that are essential for networking and attracting clients.

Worku (2016) indicated that studies conducted by Ahlstrom and Ding (2014), Baloyi and Bekker (2011) and Bateman (2014) have shown that efforts made by the South African Government since April 1994 to improve the performance of emerging contractors in the construction industry of South Africa have not resulted in tangible results. Worku (2016)

also indicated that Beck and Demirguc-Kunt (2012) and Beetsma, Giuliadori, De Jong and Widijanto (2013) argued that emerging contractors lack technical and entrepreneurial skills as well as skills that are essential for networking with business partners and clients. Blaauw (2015) and Cassia and Minola (2012 as cited in Worku 2016) have pointed out that there is a significant association between poor quality of education and shortage of artisan skills in most developing nations of the world including South Africa.

According to Worku (2016) based on a study conducted in Australia, Bourne and Walker (2006) have shown that a sound educational system takes the practical needs of customers and stakeholders into account, and that educational systems used in most developing nations in Sub-Saharan African countries lack emphasis on practical and industrial expertise.

Worku (2016) indicated that studies conducted by Kassim (2011) and Kang and Park (2009) have shown that it is beneficial to monitor and evaluate the performance of newly established and emerging contractors on a continuous basis as a means of ensuring the quality of service delivery in the construction industry. El Asmar, Hanna and Loh (2013 as cited in Worku 2016) the quality of service delivery by emerging contractors in the construction industry is often poor, and that start-up businesses in the construction industry often struggle to compete with well-established contractors.

Worku (2016) indicated that in Limpopo, emerging contractors are required to be registered with the South African Construction Industry Development Board (CIDB) in order to compete for market opportunities and contracts. According to Worku (2016) newly established construction firms in Limpopo Province are often placed at low grades of the CIDB. This fact makes it difficult for them to compete for large contracts. They often struggle to acquire practical skills by rendering services at the marketplace.

The study by Santos and Eisenhardt (2009 as cited in Worku 2016) has shown that it is not possible to penetrate markets in the construction industry without having adequate skills, capital and access to clients.

According to Hyun, Hong, Ji, Yu and An (2011, as cited in Worku 2016) and Hwang, Park, Lee and Kim (2010, as cited in Worku 2016) a fragmented construction engineering sector

requires policy intervention so that underprepared and under resourced construction companies can have access to local markets. According to Friedman, Chi and Liu (2006, as cited in Worku 2016), it is essential to provide a combination of technical and financial assistance as well as mentoring, monitoring and evaluation support programmes to start-up construction companies as a means of ensuring viability and long term survival. Ergen, Akinci, Fast and Kirby (2007, as cited in Worku 2016) have pointed out that it is prudent to provide mentoring and coaching services to star-up construction companies in order to promote the effective utilization of scarce resources and to enable newly established companies to exploit market opportunities. According to Milford, Hodgson, Chege and Courtney (2012, as cited in Worku 2016), training programmes in the engineering and construction in the Province are not tailor-made to the practical needs of emerging contractors.

Milford, Hodson, Chege and Courtney (2012 as cited in Worku 2016), argue that the foremost reason of enterprise stagnation in Limpopo Province is attributed to the acute shortage of engineering skills, lack of access to finance and the absence of mentoring and coaching programmes.

According to Ofori (1990, as cited in Windapo & Cattell 2011) the construction industry may be defined as that sector of the economy which plans, designs, constructs, alters, maintains, repairs and eventually demolishes buildings of all kinds, architectural, structural and civil engineering works, mechanical and electrical engineering structures and other similar works.

A major characteristic of the construction industry is that government has consistently been its largest client the world over (Hillebrandt, 1975, as cited in Windapo & Cattell 2011). According to Windapo and Cattell (2011) government can therefore be said to be the stimulator of demand, but there is nevertheless a wide range of activities countrywide, with outputs mainly in building and civil engineering projects for new work, minor works, capital and maintenance work that effectively constitute the demand for the construction industry.

Table 2.1: Distribution of Number of contractors by grade and public sector awards and by value in South Africa

Project Grade	No of contractors on Register			Public Sector Awards by value	
	General Building	Civil Engineering	Total No of contracts	General Building	Civil Engineering
9	40	50	90	32%	52%
7&8	279	310	589	52%	36%
5&6	1 033	1 173	2 206	12%	9%
2&4	3 501	2 853	6 354	5%	4%
Total	4 853	4 386	9 239	100%	100%

Source: CIDB 2010 as cited in Windapo and Cattell 2011

Table 2.1, above shows that the majority of emerging or small contractors (i.e., grade 2 to 6) share is very small as compared to big companies that are in grade 7 to 9. Table 1, shows that 84% of the value of public contract in the General Building sector were awarded to grade 7, 8 and 9 contractors, who make up 6.6% of the contractors registered in that sector. According to Windapo and Cattell (2011) this might be concerning to Government who wishes to see a stronger presence of emerging black owned construction companies in grade 7 to 9, in order to reverse historical economic imbalances in income distribution and employment.

Windapo and Cattell (2011), argue that in order for a contractor to upgrade to a higher grade on the CIDB Contractor Register, certain capabilities need to be developed and demonstrated. “Capabilities is not a natural endowment – it requires the ability to do something” (Windapo and Cattell (2011)). According to Rush et al. (2007 as cited in Windapo and Cattell 2011), it results from an extended learning process gradually accumulating processes, procedures, routines and structures, which when embedded, is often referred to in practice as “the way we do things around here” or culture.

Table 2.2: Demand: Public Sector Awards (% distribution by value) 2019 Q1 to 2019 Q4 (General Building)

Grade	% Distribution
9	38%
7 and 8	49%
5 and 6	9%
2-4	3%
Total	100%

Source: 2019/2020 CIDB annual report

The table above shows the distribution of public sector contracts in South Africa during 2019/2020 for grades 2 and 9 contractors, with around 87% of public sector awards by value being in tender grades 7 to 9 in all classes of works. According to CIDB annual report 2019Q1 to Q4 indicated that although fewer than 5% of public sector contracts are issued in tender grade 2 to 4, most contracts awarded in grades 7 to 9 are sub-contracted to contractors in grades 20 to 6. However, this seem to be consistent with 2010 allocation of contracts reported in table 1 above.

BLACK OWNERSHIP VERSUS WOMEN OWNERSHIP

Table 2.3: CIDB Registered general building contractors (Black ownership versus Women ownership)

Grade	No of Contractors			Black Ownership						Women Ownership					
	Oct 2008	Oct 2009	Oct 2010	Oct 2008		Oct 2009		Oct 2010		Oct 2008		Oct 2009		Oct 2010	
				No	%	No	%	No	%	No	%	No	%	No	%
7&8	193	280	279	140	73	175	63	174	62	49	29	76	27	67	24
5&6	610	947	1033	521	85	740	78	815	79	268	44	405	43	425	41
2&4	3490	4155	3501	3290	94	3786	91	3026	86	1715	49	2007	48	1673	48
Total	4293	5382	4843	3951	92	4701	87	4021	83	2032	47	2488	46	2166	45

Source: CIDB 2010 as cited in Windapo and Cattel 2011

Table 2.3 above shows that between October 2008 and October 2010 the percentage of black owned companies reduced – from 94% to 86% for Grade 2 and 4 contractors; from 85% to 79% for Grade 5 and 6 contractors; and from 73% to 62% for Grade 7 and 8

contractors. Table 3 above also shows that there are relatively fewer women – owned contracting firms at Grade 7 and 8 level.

Table 2.4: CIDB Registered civil engineering contractors (Black ownership versus Women ownership)

Grade	No of Contractors			Black Ownership						Women Ownership					
	Oct 2008	Oct 2009	Oct 2010	Oct 2008		Oct 2009		Oct 2010		Oct 2008		Oct 2009		Oct 2010	
				No	%	No	%	No	%	No	%	No	%	No	%
7&8	213	371	310	99	46	144	39	151	49	29	14	73	20	69	22
5&6	765	1139	1173	566	74	810	71	862	73	229	30	358	31	365	31
2&4	2472	3136	2853	2265	92	2787	89	2332	82	461	19	604	19	1197	42
Total	3450	4646	4384	2930	85	3741	81	3351	76	719	21	1035	22	1631	37

Source: CIDB 2010 as cited in Windapo and Cattell 2011

Table 2.4 above shows that the total percentage of black ownership declined from 85% to 76% between October 2008 and October 2010. Grades 2, 3 and 4 declined from 74% to 73% over the same period. Table 3 shows that there has been significant growth in women – owned firms. The total percentage of women – owned firms increased from 21% to 37% over the period, with the strongest growth occurring in the Grade 2 to 4 divisions. Table 4 also shows a growth from 14% to 22% in the Grade 7 and 8 divisions.

Table 2.5: Black ownership

Grade	Black ownership (51% +)		Black ownership (90% +)	
	Number	Black (%)	Number	Black (%)
9	69	36%	59	30%
7 and 8	1271	76%	1183	71%
5 and 6	2782	90%	2654	86%
2 – 4	8992	96%	8879	95%
Total	13114	92%	11775	89%

Source: CIDB annual report 2019/2020

Table 2.5 above shows that most of the companies that are 51% and 90% owned by black are companies that are in grades between 2 and 6. Very few companies in grade 9 (i.e. both 51%+ and 90% +) are owned by blacks.

Table 2.6: Woman ownership

Grade	Black ownership (31% +)		Black ownership (51% +)	
	Number	Black (%)	Number	Black (%)
9	47	24%	35	19%
7 and 8	541	32%	411	25%
5 and 6	1083	34%	872	28%
2 – 4	3678	39%	2986	32%
Total	5349	37%	4305	30%

Source: CIDB annual report 2019/2020

Table 2.6 shows that there are very few companies (both 31% + and 51% +) owned by women. The 2010 statistics seem to be relatively constant compared to that of 2010 in table 4 above. The majority of companies that falls into 31% + and 51% + categories are between grade 2 and 6 which is similar to that recorded in table 5 above. Woman ownership of 51% and above constitutes around 30% of all contracting enterprises while woman on 31% and above constitutes around 37% of all contracting enterprises.

CONTRACTOR’S SKILLS REQUIRED BY CIDB

According to CIDB (2011), the key competencies required by an enterprise to run a successful contracting business are business management, building and construction works management (supervision and operational), and legislative issues. These core competencies will be measured against acceptable standards necessary for running a contracting enterprise and for supervising building and construction works.

According to CIDB (2011), the minimum prescribed qualifications and experience or recognized equivalent in the area of building and construction works management required for the “limited” category is as follows:

Table 2.7: Minimum Prescribed Qualifications and experience for Limited Category

Category	grade	Minimum qualifications for building and construction management	Minimum experience
General Building	5 & 6	National Certificate: Management of Building Construction Processes	5 years
Civil Engineering	2 & 4	National Certificate: Supervision of Construction Processes	3 years

Source: CIDB 2011

According to CIDB (2011), these competencies need to reside with the owner and/or key nominated representatives of the contracting enterprise. Where these representatives meet the minimum competencies as required by the CIDB (i.e. business management, building and construction works management and legislative issues) the contractor will be required as a CIDB Accredited Contractor.

CIDB also indicated that where the contractor or his nominated representative does not hold the required minimum formal qualifications, the CIDB could then facilitate an assessment by an external Competence Assessment Panel of the applicant's competence against those that are deemed minimum standards.

Table 2.8: Minimum Prescribed Qualifications and experience required for an External Competence Assessment

Category	Grade	Minimum NQF level Equivalent	Minimum experience without qualifications
General Building	5 & 6	5	5 years
Civil Engineering	2 & 4	3	5 years

Source: CIDB 2011

“CIDB requires an assessment of the likely competence profile of contractors in Grade 2 to 6” to provide an assessment of:

- The number of contractors that may meet the proposed prescribed formal qualifications and experience required;
- The number of contractors that may require an external assessment of the contractor's competence; and

- The number of contractors that may qualify for an external assessment of the contractor's competence.

PUBLIC SECTOR PROJECTS COMPLIANCE

Table 2.9: Public Sector Project Compliance: 2018 to March 2020

Provincial Departments	Non-Compliant	Compliant	Total	Compliance
Eastern Cape	122	63	185	34%
Free State	34	19	53	36%
Gauteng	72	2	74	3%
Kwazulu - Natal	964	489	1453	34%
Limpopo	83	19	102	19%
Mpumalanga	78	19	97	20%
North West	155	42	197	21%
Northern Cape	40	100	140	71%
Western Cape	144	247	391	63%
Total	1692	1000	2692	37%

Source: CIDB 2019/2020 annual report

Table 2.9 above shows that 83 companies in Limpopo Province were found to not complying with tender requirements. The non-compliance has to do with the submission of fraudulent tax clearance certificate, falsified track records, misrepresentation of financial statements and employer non-compliance with the Register of contractors (RoC).

BUILDING MATERIALS

According to CIDB (2007), South Africa has a well-developed set of national standards, which enable manufacturers, and contractors to provide consumer with high quality products, however, concerns have been raised in the industry about increasing non-compliance of materials and products with national standards, including:

- Many building projects are poorly specified, and artisans and foremen are not accredited in terms of their performance in achieving the necessary standards;

- Many of the current specifications are perceived to present a barrier to entry to small scale entrepreneurs and exclude their participation in particular markets, and limited amount of clients are reportedly not requiring materials to comply with SANS standards; and
- There is a lack of capacity amongst building inspectors to evaluate compliance requirements.

As a result, owners of buildings and infrastructure are not always satisfied with the products (CIDB, 2007).

Table 2.10a: Product Group and Market Size

Product Group		Market size	Rm; 2006
Cement (Tonnes)	Building Industry	9 226 525	6 090
	Construction	4 967 386	3 278
	Sub-total	14 193 911	9 368
Reinforcing steel & sections (Tonnes)	Sub-total	700 000	6 300
Walling (B*1000)	Facebricks	1 157 193	1 526
	Faceblocks	202 073	245
	Stockbricks	2 464 479	1 820
	Stockblocks	4 589 969	2 421
	Sub-total	8 413 714	6 012
Flooring (m ² *1000)	Carpeting	17 538	1 547
	Vinyl	6 562	289
	Ceramic Tiles	39 091	3 161
	Other Tiles	2 912	300
	Sub-total	66 103	5 297
Roofing and Vertical Cladding (m ² *1000)	Roofing	57 451	3 120
	Vertical Cladding	32 005	1 611
	Sub-total	89 457	4 730
Aggregate and Sand (Tonnes)	Sub-total	90 000 000	3 800
Decorative Paint (Litres*1000)	Sub-total	217 062	3 226
Doors & Frames (Units*1000)	Doors	3 742	908
	Garage Doors	189	240
	Windows	3 970	900
	Doors	2 613	740
	Built in Cupboard	207	70
	Patio	150	98
	Shower	98	17
	Sub-total	10 969	2 973
Plumbing Pipes & Fittings (LM*1000)	Pipes & Fittings to Building	9 963	349

	Pipes & Fittings inside Building	26 089	1 868
	Pipes & Fittings from Building		572
	Sub-total	36 053	2 790
Particleboard & MDF (m ² *1000)*	Sub-total	24 745	2 414
Roof Trusses (Units*1000)	Timber Prefab trusses	5 114	1 555
	Timber On-site trusses	1 481	550
	Steel Prefab trusses	339	228
	Sub-total	5 288	2 333

Table 2.10b: Product Group and Market Size

Glass & Mirrors (m ² *1000)	Sub-total	6 356	1 520
Sanware (Units*1000)	Sub-total	2 340	1 193
Taps & Fittings (Units*100)	Chromeware	3 434	487
	Brassware	1 573	144
	Fittings & Accessories	29 458	350
	Sub-total	34 465	981
	Sub-total	5 864	947
Ceillings and Partitioning (m ² *1000)	Ceillings	23465	508
	Partitioning	6968	157
	Sub-total	30 433	664
Geysers (Units*1000)	Sub-total	319	631
Insulation (m ² *1000)	Sub-total	22 851	501
Paving (B*1000)	Sub-total	362 167	478
Windowsills, Fasciaboards & Bargeboards (LM*1000)	Windowsills	4 651	150
	Fasciaboards	6 591	147
	bargeboards	5 848	126
	Sub-total	17 089	423
Guttering & Downpipes (Lm*1000)	Sub-total	13 535	212
Total; Major Building & Construction Materials			56 793
*35% of PB & MDF is used in Building Industry and 65% in furniture and other			

Source: BMI-BRSCU

Tables 10a and 10b above shows that Aggregate Sand (tonnes) command the biggest market size at 90 000 000 followed by Cement (tonnes) at 14 193 911 and walling (B*1000) at 8 413 714. However, Cement was taking a lead in terms of revenue collected followed by Reinforcing Steel and Sections (tonnes) and Walling (B*1000) respectively.

Table 2.11: Major Products Groups

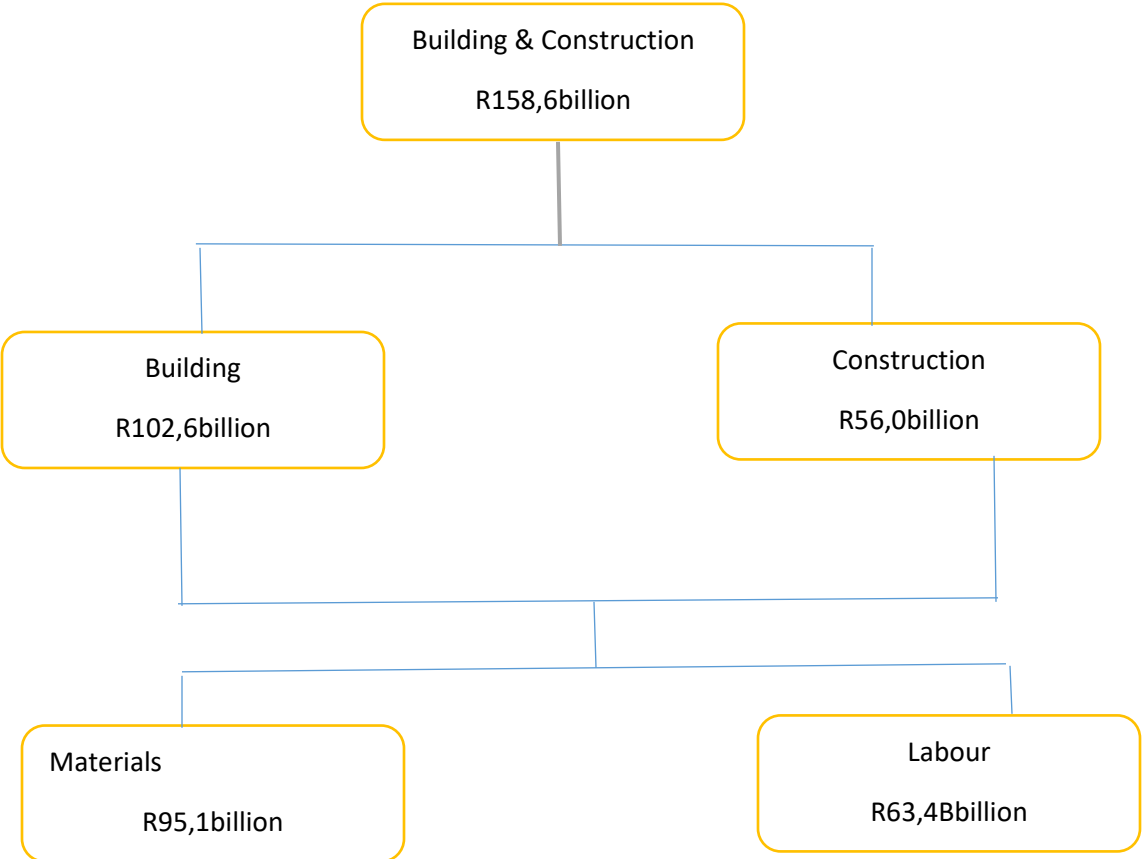
Building Products Group	Leading Manufacturers				
Cement	PPC	Holcim	Lafarge	NPC	
Reinforcing Steel and Sections	Mittal Steel	Macsteel	Highveld Steel	Clotan Steel	Trident
Walling	Corobrick	Crammix	Brikor	Rosema	Ocon
	African Brick	Berts Brick	Kopano	Apollo	SABlock
	INCA	Columbia	Cape Brick	Probrick	Denkem
		DBL			
	Eureka				
Flooring	Belgotex Floorworx	Nouwens	Domo	Ceramic Ind	Johnson
Roofing & Vertical Cladding	Mittal Steel	Macsteel	Global	Clotan	Lafarge
			Roofing		
	Marley	Brikor	Concor		
Aggregate & Sand	Afrimat	WG Wearne	Afrisam/ Holcim	Lafarge	
Doors	TDM	Nulu	Van Acht	Swatland	
Frames	Wispeco	Duro	Nulu	Van Acht	Swatland
Plumbing Pipes and Fittings	DPI	Petzetakis	Incledan		
Particleboard & MDF*	PGBison	Sonae	CIT		
Roof Trusses	Mitek	Federated	Iliad		
Ceilings and Partitioning	BPB	Everite	Lafarge		
	Gypsum		Gypsum		
Glass and Mirrors	PFG Building Glass	AFGLASS			
Taps, Mixers & Fittings	Cobra Watertech	ISCA	Imports		
Geysers	Kwikot	Franke			
Insulation	OCSA	SAGEX	SISALATION		
Paving	Corobrik	Crammix	Brikor	Rosema	Concor
Windowsills, Fasciaboards and Bargeboards	Everite	Hans Merensky			
Guttering and Downpipes	Buildmax	Everite	DPI	Main Ind	Petzelakis

Source: BMI-BRSCU

The table above shows an overview of the leading manufacturers of the major products group.

THE MATERIALS MANUFACTURING SECTOR

Figure 2.1 Market for building and construction materials



Source: cidb, 2007

The market for building and construction materials is derived from primary building (including unrecorded additions and construction) and construction activity. In 2007 financial year, building and construction investment was R158, 6 billion and materials accounts for about R95 billion (cidb, 2007).

IMPORTS AND EXPORTS OF BUILDING MATERIALS

Table 2.12: Estimate of the Imports and exports; 2006

Product/material	Imports %	Exports %
Insulation	20-25%	0.25%
Particles Board	5-10%	Minimal
Medium Density Fibreboard	90.00%	Nil
Glass	2-38%	5-15%
Plastic Piping	2%	6%
Timber Prefab Trusses	10%	10%
Steel Prefab Trusses	15%	85%
Window Frames	2%	5%
Door Frames	2%	Nil
Carpet	5%	10%
Ceramic Tiles	35%	11%
Galvanized Iron	19% to 44%	25%
Chromadek/Globalcoat	15% to 25%	35%
Steel Tiles	1%	20%
Cement	5%	1%
Range	5% to 44%	0 to 85%

Source: CIDB (2007)

According to CIDB (2007), most of the building and construction materials required by the industry are manufactured locally. However, imports are readily available across the product groups, and are particularly important in high value aspirational products such as ceramic wall and floor tiles, taps and mixers, and sanitary ware. Commodity products are imported when need dictates, such as in the cement market. Over 750 000 tonnes of cement was imported in 2006, mainly by the cement manufacturers themselves (cidb, 2007).

According to CIDB (2007), imports are typically from countries with large production capacities and low costs, and are particularly prevalent from China, Eastern European & Latin American countries. Very often, these products are landed in South Africa at prices lower than that of the local production costs (CIDB, 2007).

MATERIAL PRICES FLUCTUATIONS

A study of built environment stakeholders in South Africa by Windapo and Cattell (2010) revealed that the key challenge perceived to affect the performance of the construction industry and projects in South Africa is primarily the increasing cost of building materials. According to CIDB (2007, as cited in Windapo and Cattell, 2010) observed that increases in the prices of some building material products are more rapid than that of others. Li (2000, as cited in Windapo and Cattell, 2010), noted that volatility pushes costs up and transfers major risks to all parties involved such as suppliers, contractors and clients. That result in building contract price fluctuation, changes in contractors' profit margins in the absence of any provision in the contract (Chappell, Cowlin and Dunn, 2008, as cited in Windapo and Cattell, (2010), and major financial stress and difficulties within the project lifespan.

The CIDB (2007), Report indicates that the volatile building materials in the South African Construction Industry are steel, cement, sand, copper, timber, PVC, bitumen and masonry blocks/bricks, which according to the Engineering News document cited within the CIDB Report, have increased up to 100% between October 2000 and October 2006.

Windapo and Cattell (2010), indicated that there has been a definite increase in the prices of building materials over the past years in South Africa. Reinforcing steel, copper and cement, according to Windapo and Cattell (2010), are increasing more rapidly and also more volatile in price changes than the other materials.

FACTORS CONTRIBUTING TO TRENDS IN BUILDING MATERIAL PRICES

- Supply and demand

According to Lipsey and Chrystal (2007 as cited in Windapo and Cattell 2010), the demand for and supply of building materials or lack thereof, can contribute to the trends in the prices of building materials, where the law of supply and demand can be related. Ortvals (2004 as cited in

Windapo and Cattell 2010), noted that cement and reinforcing steel feel the effect of demand rising with no matching supply the most.

- **Transportation**

Sinclair, Artin and Mulford (2002 as cited in Windapo and Cattell 2010), noted that increased material cost is primarily due to increased transport charges. High transport and freight costs have been identified as factors responsible for building material price increase in African countries such as Nigeria, Uganda, and Kenya (Mathews, 2009, Mwijagye, 2010 and Editor, 2011 as cited in Windapo and Cattell 2010).

- **Energy costs**

According to Bureau of Economic Research (2008 as cited in Windapo and Cattell, 2010), high-energy costs have a knock-on effect on the production processes of most construction materials in South Africa, because manufacturers have to increase building material prices to wage off the increases in high-energy costs.

- **Raw Materials and Input Costs**

According to Windapo and Cattell (2010), Prior (2011), and Iyengar (2011), acknowledged that rising raw materials costs along with other factors such as oil, gas and energy are the key causes of increases in the prices of building materials such as cement, roofing membranes and water proofing.

- **Inflation**

The principle behind inflation and how it affects building material prices according to Rakhra and Wilson (1982, as cited in Windapo and Cattell, 2010), is that there is a time lag between an increase in inflation and the effective resulting increase in building material prices.

- **Crude Oil Prices**

Anderson (2011 as cited in Windapo and Cattell 2010), noted that the global crude oil price is the main driver behind the volatility of some building materials such as PVC, which is a polymer whose production material is crude oil.

- **Exchange Rates**

The exchange rate between two currencies is the amount for which one currency is exchanged for the other, and is used in determining the strength of one currency to another. The degree to which building materials prices are affected by exchange rate movements depend on the types and quantities of materials being imported by a country at a specific time, the need to import the

raw materials used in the production of building materials locally, and on whether local materials (such as copper, timber and steel), are internationally traded commodities (Busreport, 2006; Mohamed, 2006; and Anderson, 2011; as cited in Windapo and Cattel 2010).

- **Import Duties**

Import duties are a charge on goods and products brought into South Africa. Import duties are put in place to protect local producers from client trying to outsource cheaper goods from abroad (National Treasury, 2008 as cited in Windapo and Cattel 2010).

CHAPTER 3

ANALYSIS

Findings Based on Secondary Data

This section analyzed amongst other things, namely the gross value added by region; contribution to economic growth by provinces; Limpopo local municipalities average annual growth; Limpopo local municipalities contribution to total economic growth; residential building completed by provinces and segment (average 1993-2014); the market to major building products groups by value; demand for major building products groups by type of building and the market for major building products groups by province.

Figure 3.1. Gross Value Added by Region (GVA-R), Constant 2010 prices

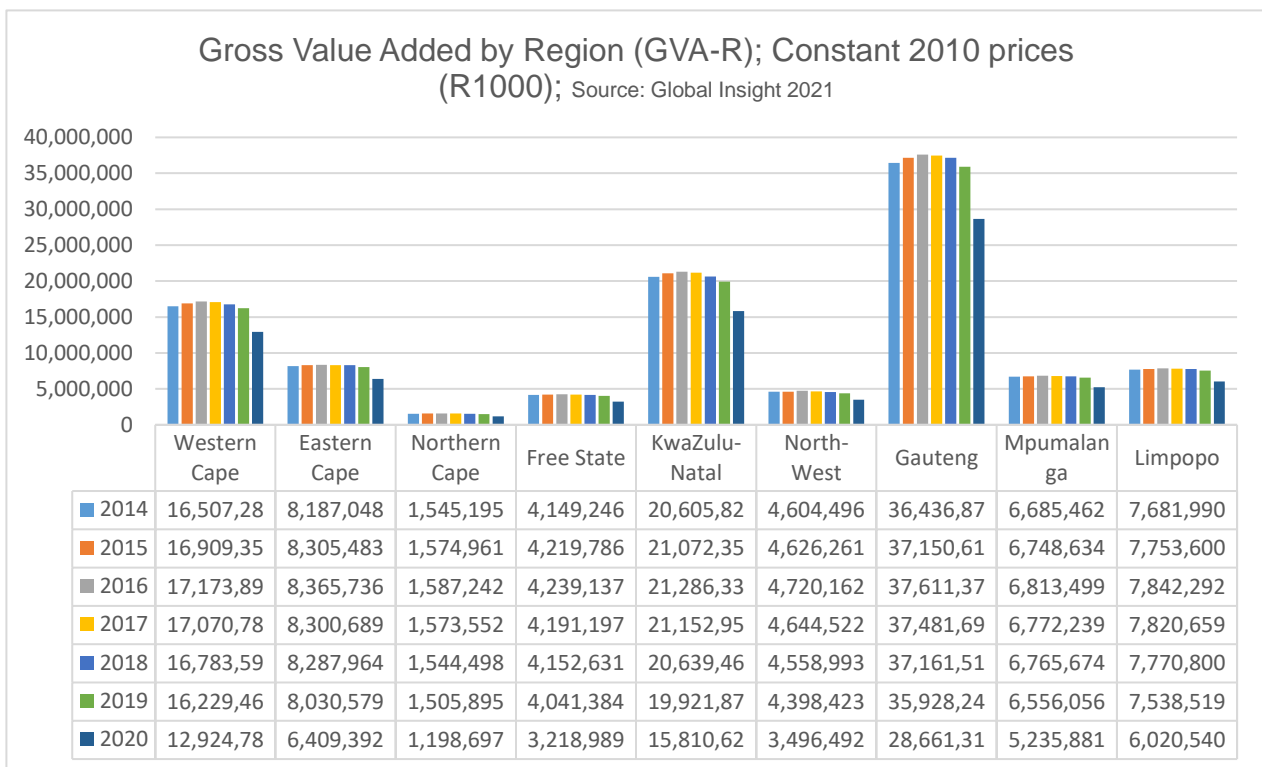


Figure 3.1 above indicates that Gauteng province was leading followed by Kwazulu Natal and Western Cape respectively. This is an indication that most construction project are concentrated in three areas. However, the Limpopo Province was ranked the best compared to Mpumalanga, Northern Cape, Free State and North West in terms of gross

value added in constant 2010 prices during the period under review (i.e., 2014 to 2020). The financial year 2020 shows a decline across all provinces due to COVID-19 pandemic.

Figure 3.2. Average Annual Growth (% constant 2010 prices)

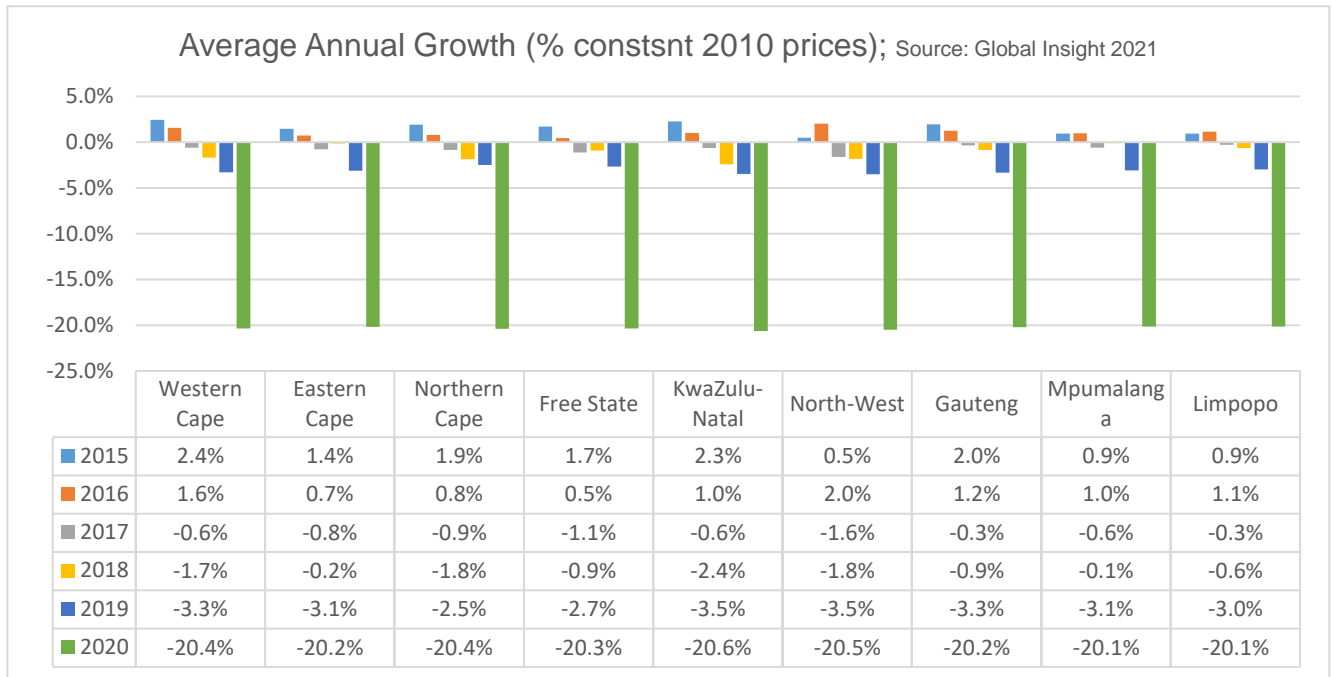


Figure 3.2 above reveal the average annual growth per province. The figure above also reveal that all provinces recorded positive average annual growth only in 2015 and 2016 and recorded negative average annual growth from 2017 to 2020. This is an indication that the construction industry was under strain not only due to COVID-19 pandemic; however, 2020 was badly affected as compared to other years.

Figure 3.3. Contribution to total Economic Growth (% point, constant 2010 prices)

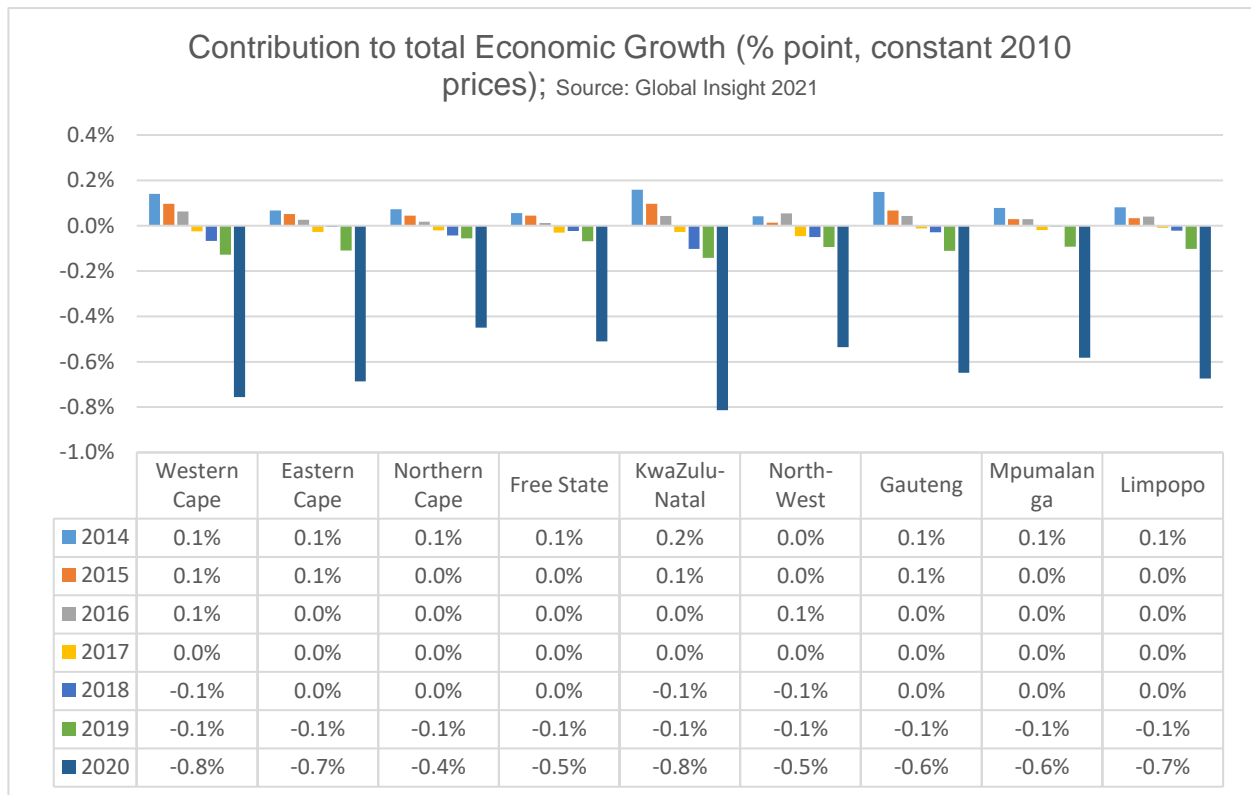


Figure 3.3 above shows the contribution by construction industry to total Economic Growth (% point, constant 2010 prices). The figure also indicates that all provinces contributions to economic growth was minimal. Kwazulu Natal was the only Province that contributed more to economic growth in 2014 while Limpopo Province and other provinces like Western Cape, Eastern Cape, Free State, Mpumalanga and Gauteng contributed only 0.1% each.

Figure 3.4. Gross Value Added (GVA), Constant 2010 prices

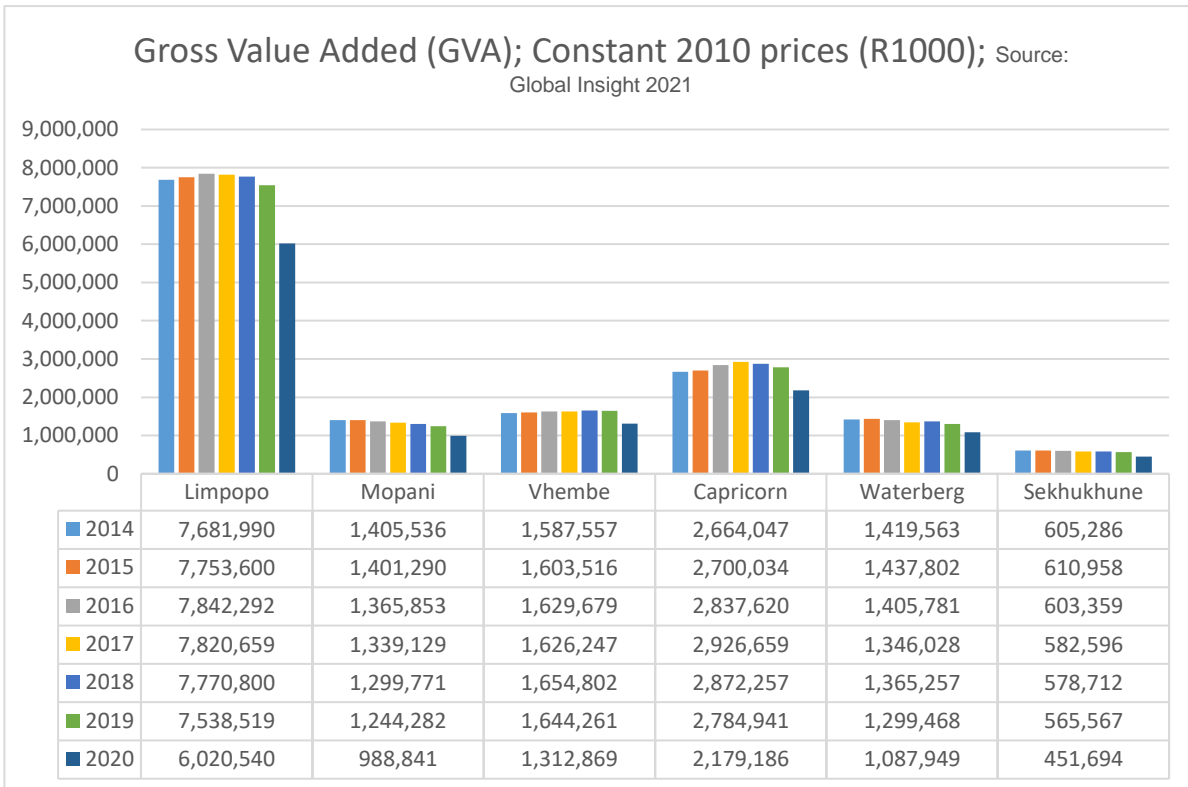
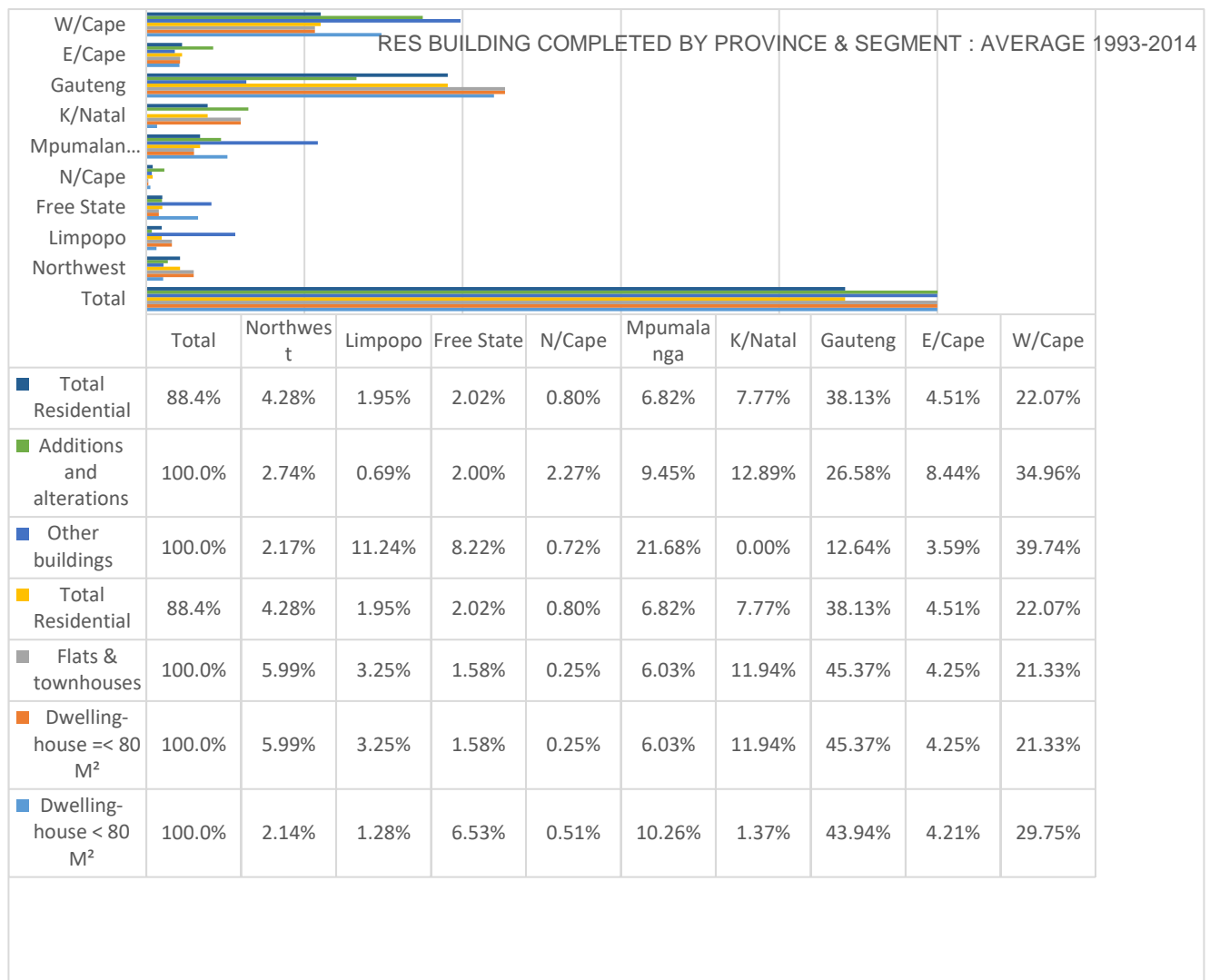


Figure 3.4 above shows the Gross Value Added (GVA), Constant 2010 prices per district municipality in Limpopo Province under construction industry. Capricorn was leading in terms of Gross Value Added (GVA) followed by Vhembe district. The figure above also shows that due to COVID-19 pandemic, not all district municipalities performed well in 2020.

Figure 3.5. Res Building Completed by Province & Segment: Average 1993-2014



Source: StatsSA, BNI-BRSCU Prov BC Dashboard, Chart 728, as cited in Lewis 2015

Figure 3.5 above reveals that Gauteng was leading in terms of residential buildings completed followed by Western Cape while Limpopo Province was second from the bottom with only 1.95% average residential buildings completed. Gauteng was also leading in terms of flats and townhouses completed at an average of 45.37% followed by Western Cape at average of 21.33% while Limpopo Province was at 1.58% only above Northern Cape which was at 0.25% in the same period.

Figure 3.6. The market for major Building Products by value.

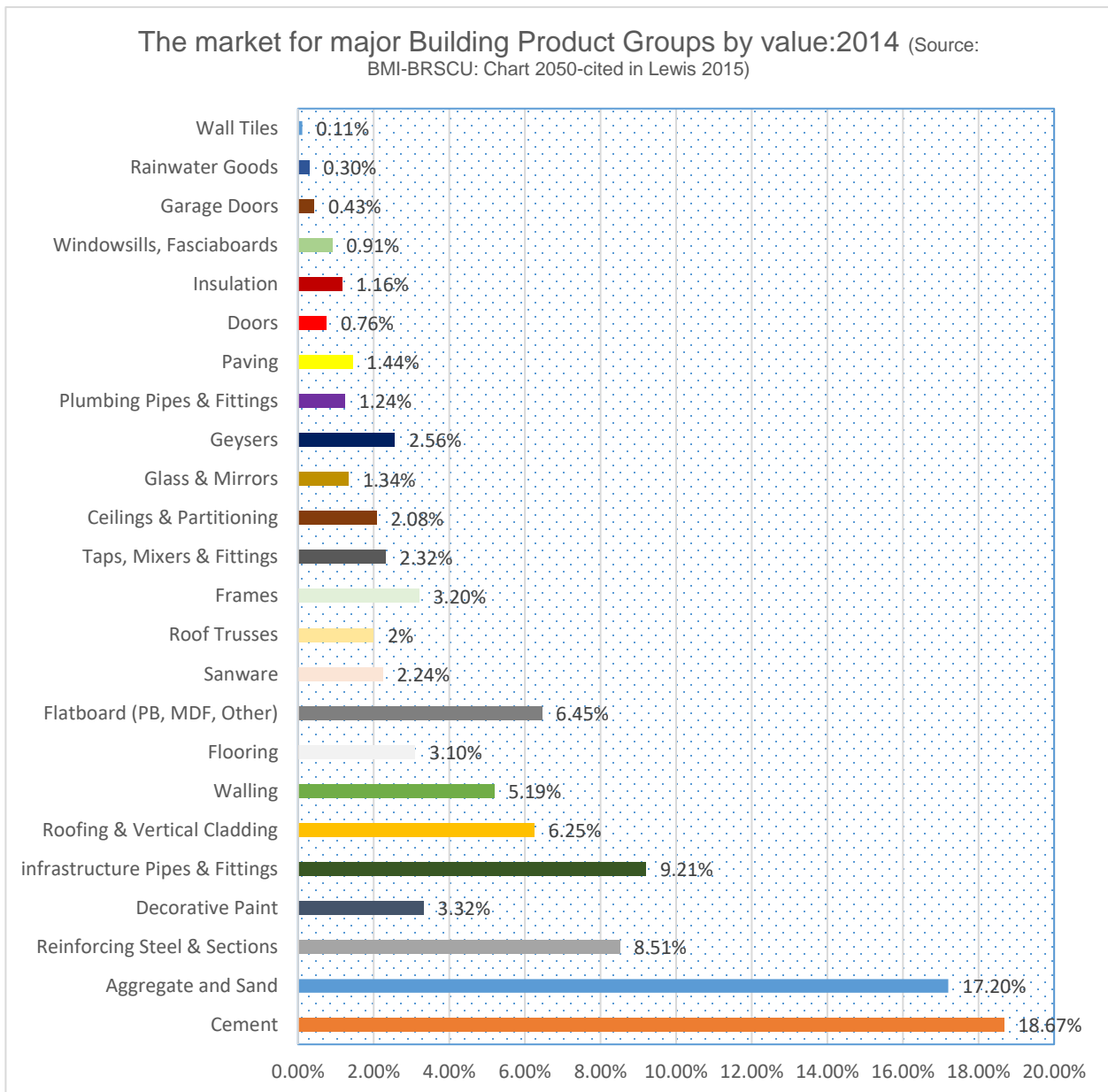


Figure 3.6 above revealed that cement, aggregate and sand, and reinforcing steel and sections had a huge market compared to other building materials. In some instances, the demand for cement in South Africa surpasses the supply. Between May 2020 and February 2021, the country witnessed shortage of cement and that might be because of Covid-19 pandemic.

Figure 3.7. Demand for major building product groups by type of building

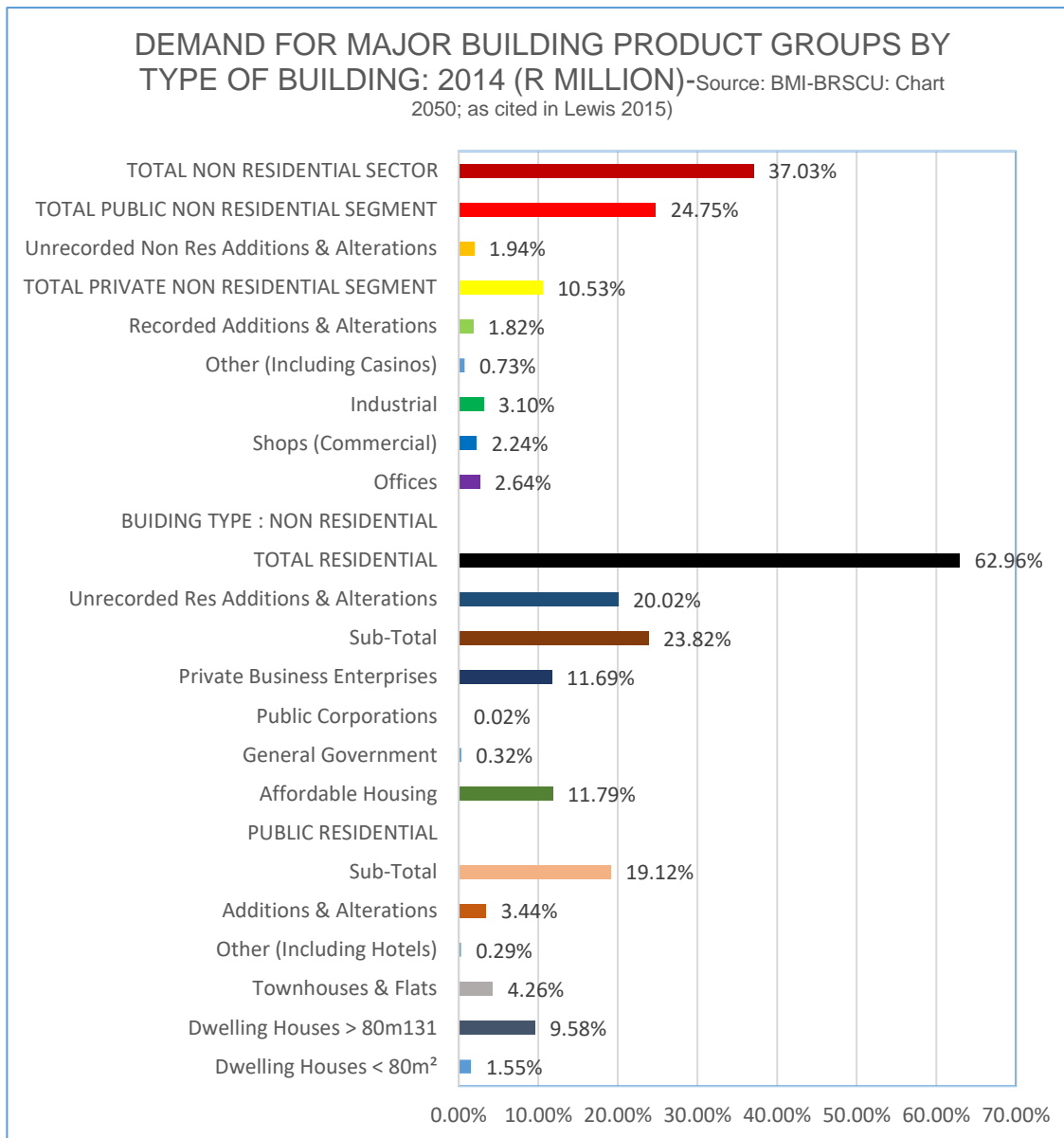


Figure 3.7 above indicates that the residential buildings demand more building materials at 62.96% followed by non-residential sector at 37.03% and public non-residential segment at 24.57%. Private non-residential segment was at 10.52% during the period under review.

Figure 3.8. The market for major building product groups by province

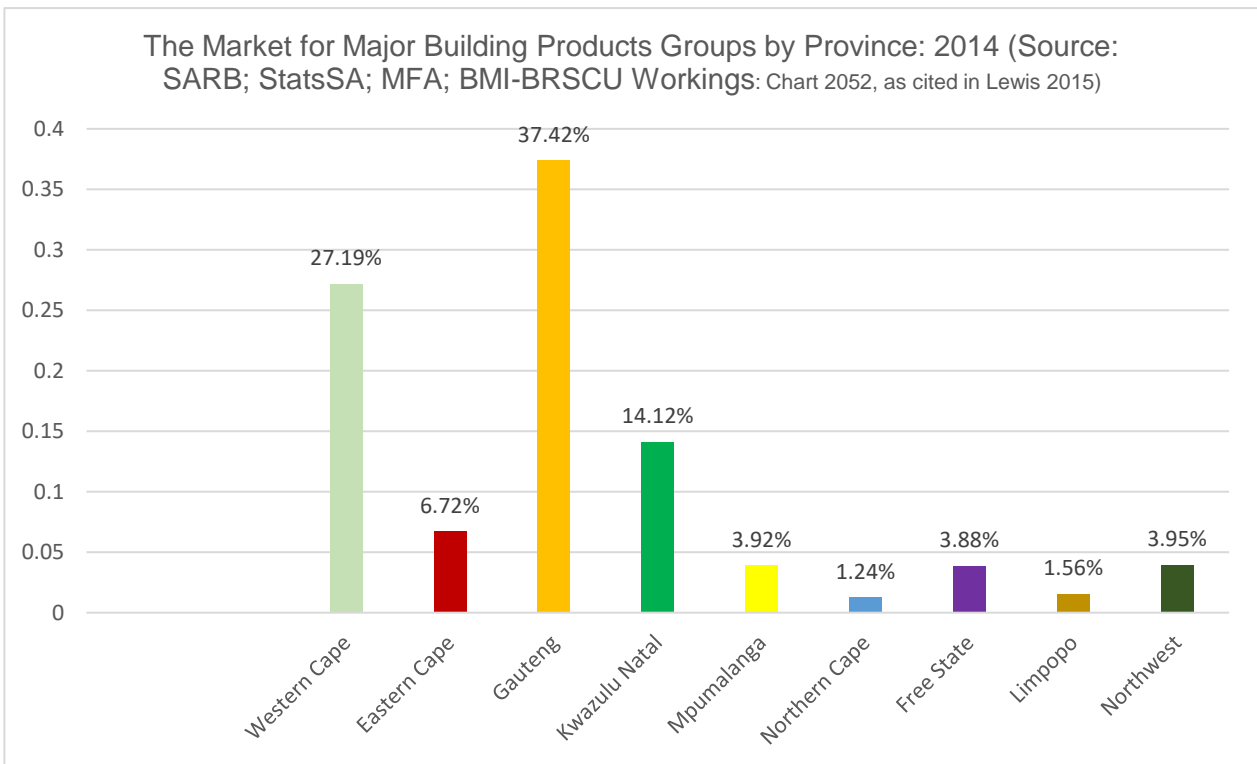


Figure 3.8 above revealed that Gauteng Province took a lead in terms of the market share of building materials followed by Western Cape and Kwazulu Natal respectively. The figure above also revealed that Northern Cape and Limpopo provinces had the smallest share of building materials market. This also indicates that most constructions projects were happening in Gauteng and Western Cape provinces.

Figure 3.9. Domestic Cement Sales: Cumulative 2013/2014

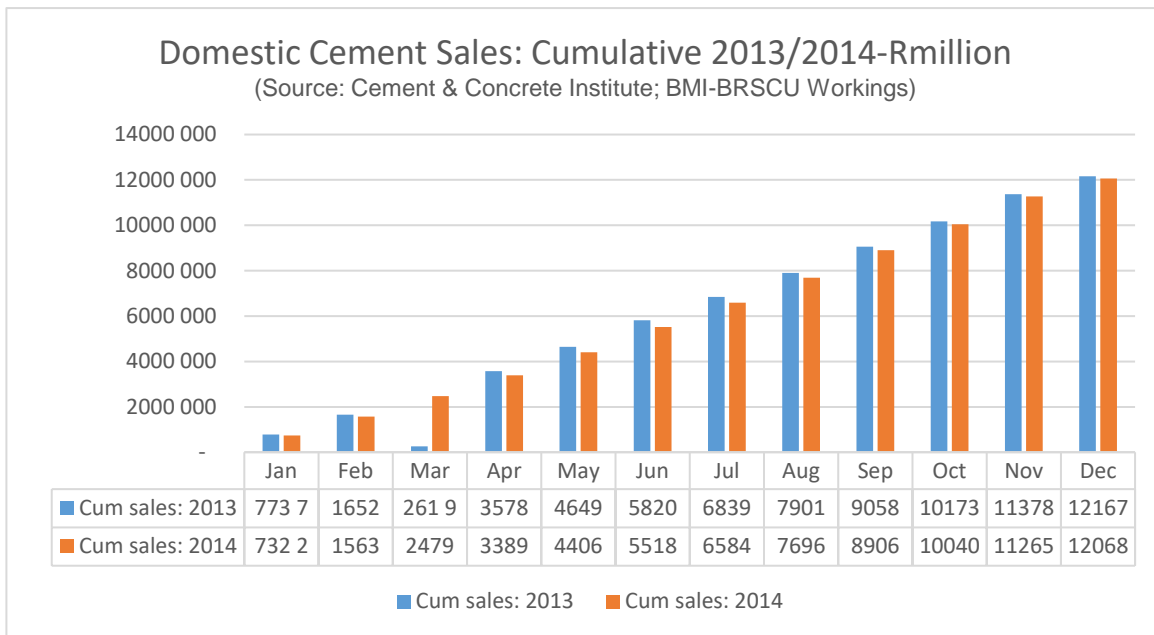


Figure 3.9 above revealed that demand for cement domestically (South Africa) was high for both 2013/2014 in November and December. The figure also revealed that the demand for cement started to peak-up from April of all years under review. The increase of demand gradually from April to December of each year might be as a result that the Government financial year start in April.

Figure 3.10. Residential Building Plans Passed by Province and Segment

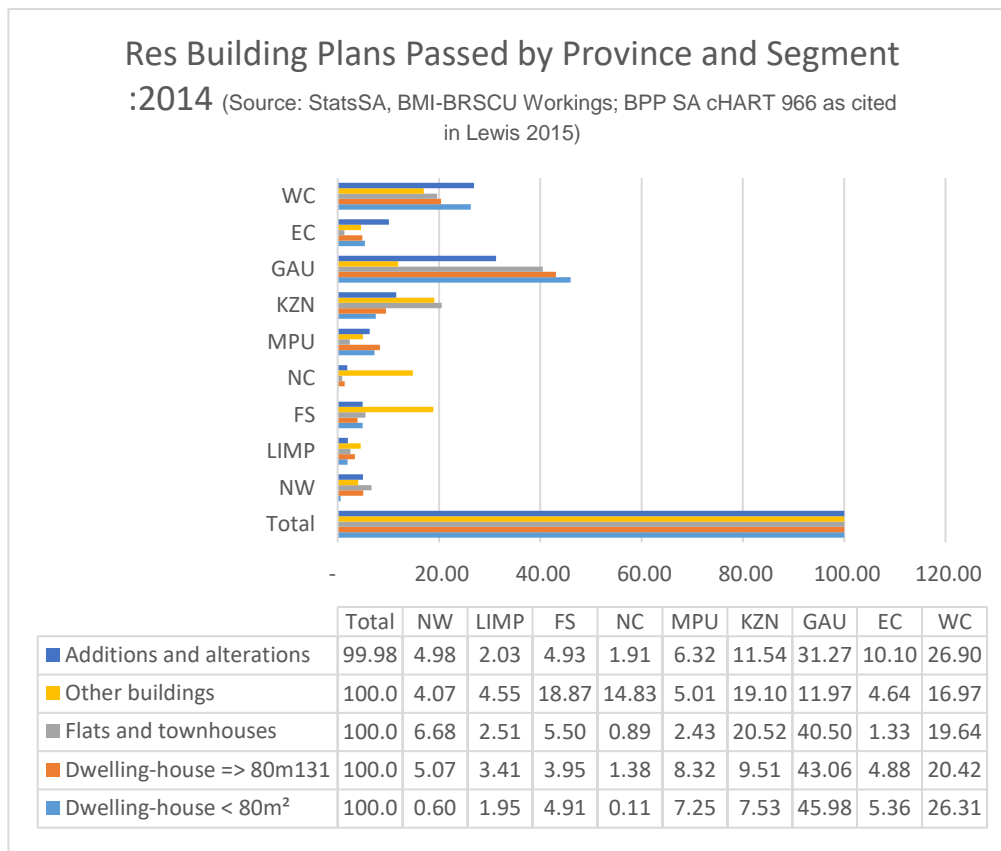


Figure 3.10 above revealed that Gauteng and Western Cape took the lead in 2014 in terms of residential plans passed. This was confirmed by the building materials share market, which indicates that Gauteng and Western Cape had lion share of the demand of building materials in 2013/2014. The percentage of building plans passed by the Limpopo Provincial Government was very low in 2014 only above that of Northern Cape Provincial Government.

Findings Based on Primary Data

- Seventy eight point fifty seven percent (78.57%) of the participants agreed that the Grade 2-6 contractors lack relevant construction and engineering skills. While only

21.43 percent of the participants disagreed that Grade, 2-6 contractors lack relevant construction and engineering skills.

- On the other hand, 92.86 percent of the participants agreed that the Grade 7-9 contractors poses right skills on construction and engineering. However, this is in contrast with 7.14 participants who disagreed that Grade 7-9, contractors poses right skills on construction and engineering.
- Regarding technical, entrepreneurial skills and networking skills 64.29 percent of participants agreed that contractors lack technical and entrepreneurial skills as well as skills that are essential for networking with business partners and clients, while 35.71% of the participants were in disagreement with the same statement.
- Seventy one point forty three percent (71.43%) of the participants agreed that Grade 7-9 contractors are more likely to secure government tenders than Grade 2-6 as compared to those in lower Grades. On the other had only 28.57% disagreed with the same statement.
- Seventy eight point fifty seven percent (78.57%) of the participants agreed that the majority of emerging or small contractors (i.e., grade 2 to 6) share is very small as compared to big companies that are in grade 7 to 9, while only 21.43% of the participants disagreed with the statement.
- Ninety two point eighty six percent (92.86%) of the participants agreed that the key barriers to sustainable growth and development among newly established construction firms in Limpopo Province are shortages of technical skills in construction engineering, capital and inability to work with well-established construction firms, while only 7.14% of participants disagreed with the statement.

- Eighty five point seventy one percent (85.71%) of the participants agreed that educational systems in South Africa lack emphasis on practical and industrial expertise, while only 14.29% disagreed with the statement.
- Seventy eight point fifty seven percent (78.57%) agreed that the quality of service delivery by emerging contractors in the contraction industry is often poor, while only 21.43% disagreed with the statement.
- Ninety two point eighty six percent (92.86%) agreed that efforts made by the South African Government since April 1994 to improve the performance of emerging contractors in the construction industry has not resulted in tangible results. On the other hand, only 7.14% of the participants disagreed with the statement.
- Ninety two point eighty six percent (92.86%) agreed that small and newly established construction companies find it very hard to survive beyond three years due to lack of working capital, while only 7.14% disagreed with the same statement.
- Eighty five point seventy one percent (85.71%) agreed that failure rate among newly established emerging contractors in Limpopo Province is 50% and above, while only 14.29% disagreed with the statement.
- Hundred percent (100%) of participants agreed that it is essential to provide a combination of technical and financial assistance as well as mentoring, monitoring and evaluation support programmes to start-up construction companies as a means of ensuring viability and long-term survival.
- Ninety two point eighty six percent (92.86%) agreed that most small and emerging construction companies solely rely on provincial government tenders, which are not easy to get due to corrupt nature of awarding tenders, while only 7.14% disagreed with the statement.
- Eighty five point seventy one percent (85.71%) agreed that many building projects are poorly specified, and artisans and foremen are not accredited in terms of their performance in achieving the necessary standards. On the other hand, only 14.29% disagreed with the statement.

- Ninety two point eighty six percent (92.86%) agreed that there is a need of policy intervention so that underprepared and under resourced construction, companies can have access to local markets while only 7.14% disagreed with the statement.
- Seventy eight point fifty seven percent (78.57%) agreed that the cost of building materials makes it impossible for small, medium and micro enterprises to compete in construction tender projects while only 21.43% disagreed with the statement.
- Hundred percent (100%) of participants agreed that due to COVID-19, the prices of some building materials like cement, steel, bricks/blocks, copper, timber, etc. has increased immensely.
- Eighty five point seventy one percent (85.71%) agreed that the price of materials mentioned above increases because the demand is currently surpasses the supply, while only 14.29% disagreed with the statement.

CHAPTER 4

FINDINGS AND RECOMMENDATIONS

FINDINGS

- The key barriers to sustained growth and development among newly established construction firms in Limpopo Province are shortages of technical skills in construction engineering, shortage of capital and inability to work with well - established construction firms (Worku, 2012).
- In 2011, the minimum prescribed qualifications for grade 5 and 6 was National Certificate: Management of Building Construction Processes and minimum experience of 5 years (CIDB, 2011).
- In 2011, the minimum prescribed qualifications for grade 2 to 4 was National Certificate: Supervision of Construction Processes and minimum experience of 3 years (CIDB, 2011).
- The majority of emerging or small contractors (i.e., grade 2 to 6) share is very small as compared to big companies that are in grade 7 to 9 which claimed 84% in 2010 (CIDB, 2011).
- Most companies that are 51% and 90% owned by blacks in 2010 are in grades between 2 and 6 (CIDB annual report 2019/2020).
- Women ownership of 51% and above constitutes around 30% of all contracting enterprises, while women on 31% and above constitutes around 37% of all contracting enterprises (CIDB annual report 2019/2020).
- Contractors lack technical and entrepreneurial skills as well as skills that are essential for networking with business partners and clients (Deck and Demirguc-Kurt (2012) and Beetsma, Giuliodori, De Jong and Widijanto (2013).
- The finding by Bourne and Walker (2006) indicates that sound education system takes the practical needs of customers and stakeholders into account, and that educational systems used in most developing nations in Sub-Sahara African countries lack emphasis on practical and industrial expertise.
- Newly established construction firms in Limpopo Province are often placed at low grades of the cidb (Worku, 2016).

- The quality of service delivery by emerging contractors in the construction industry is often poor, and that start-up businesses in the construction industry often struggle to compete with well-established contractors (El Asmar, Hanna and Lor (2013)
- Studies conducted by Ahlstrom and Ding (2014), Baloyi and Bekker (2011) and Bateman (2014) have shown that efforts made by the South African Government since April 1994 to improve the performance of emerging contractors in the construction industry of South Africa have not resulted in tangible results.
- Key challenge perceived to affect the performance of the construction industry and projects in South Africa is primarily the increasing cost of building materials (Windapo and Cattel, 2010).
- Price volatility in building materials in the South African Construction Industry are steel, cement, sand, copper, timber, PVC, bitumen and masonry, blocks/bricks, which according to the Engineering News document had increased up to 100% between October 2000 and October 2006.
- The Gross Value Added by Region at constant 2010 prices indicates that the leading province are Gauteng, Kwazulu-Natal and Western Cape while Limpopo Province was above Mpumalanga, Northern Cape, Free State and North West.
- The Gross Value Added by district municipality in Limpopo Province revealed that Capricorn was leading followed by Vhembe District for the period under review.
- In terms of Residential Building Completed by Province and Segment (i.e., 1993-2014), Gauteng was leading followed by Western Cape while Limpopo Province was second from the bottom with only 1.95% average residential buildings completed.
- The study revealed that cement, aggregate and sand, and reinforcing steel and sections had a huge market compared to other building materials.
- The study also revealed that residential buildings demand more building materials at 62.96% followed by non-residential sector at 37.03% and public non-residential segment at 24.57%. Private non-residential segment was at 10.52% during the period under review.

- The study indicates that Gauteng Province took a lead in terms of the market share of building materials followed by Western Cape and Kwazulu-Natal. Northern Cape and Limpopo had the smallest share of building materials market.
- The study also indicates that the demand for cement domestically was higher in November and December during the period under review (i.e., 2013/2014).
- The study revealed that Gauteng and Western Cape took a lead in 2014 in terms of residential plans passed. During the same period, the % of building plans passed by the Limpopo Provincial Government was very low, only above that of Northern Cape Provincial Government.

RECOMMENDATIONS

- This fragmented construction-engineering sector requires policy intervention so that underprepared and under resourced construction, companies can have access to local markets.
- There is a need to provide a combination of technical and financial assistance as well as mentoring, monitoring and evaluation support programmes to start-up construction companies as a means of ensuring viability and long-term survival.
- Provide mentoring and coaching services to start-up construction companies in order to promote the effective utilization of scarce resources and to enable newly established companies to exploit market opportunities.
- Learners should be encouraged to do science and mathematics so that the province can have a pool of engineers and contractors.
- The Limpopo Government should encourage private engineers and well-established contractors to take-in interns from both TVET colleges and universities.

REFERENCES

CIDB (2007). The Building and Construction Materials Sector, Challenges and Opportunities. Cidb. South Africa.

Grant R (2008). Contemporary Strategy Analysis. Blackwell Publishing Ltd.

Windapo A, and Cattell K, (2012). Examining The Trends in Building Material Prices: Built Environment Stakeholders' Perspectives. University of Cape Town, South Africa.

Windapo A, Cattell K and Oyewobi L, (2014). Competitiveness of Construction Organizations in South Africa. University of Cape Town, South Africa. [CRCPaper_Oyewobietal_Published_May_2014, Accessed June 2021.](#)

Worku Z, (2016). Developmental obstacles adversely affecting emerging contractors in the Construction Industry of Limpopo Province. Problems and Perspectives in Management, Volume 14, Issue 4, 2016.

ACTING DEPUTY DIRECTOR GENERAL
ECONOMIC DEVELOPMENT
MAJA ML

DATE

