



A comparative business efficacy analysis between private and public-sector construction business operating units



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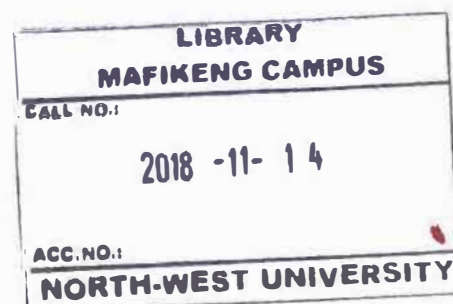
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Declaration

I, Molefi Chwene, declare that this study titled, "*A comparative business efficacy analysis between private and public-sector construction business operating units,*" is my own work carried out under the supervision of Prof Ravinder Rena. This mini-dissertation has not been submitted for any degree at any other university. All sources used in the study have been strictly indicated and acknowledged through references.

Signed

Date

Acknowledgments

Firstly, I would like to thank the North-West University (Mahikeng Campus) for affording me this prestigious and valuable opportunity to be part of the MBA study programme. To the study group of 2016/2017 academic year, you have been a wonderful team to work with.

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I give thanks and praise to God Almighty, for providing me with wisdom, courage, determination, strength and guidance to complete this study.

Dedication

This research study is dedicated to my late mother, Sepelenyane “Auntie” Maria Aloisia Chwene; indeed you have shaped and inspired my life and you have influenced my career development in many ways. Your continuous presence in my thoughts has brought immense motivation towards completing this paper. May your soul rest in eternal peace.

Abstract

The public-sector business strategies at DWS Construction are analysed with an intension to highlight mechanisms that can potentially improve the current business operating model of DWS Construction. The study determines a framework that may influence the efficacy and sustainability of the public-sector construction business unit operating in an environment which is dominated by the private sector businesses. A distinctive relation on similarities based on public and private sector business are drawn to provide possible alternative solutions to the prevailing business administration performance shortcomings at DWS Construction, and to any other similar public-sector business. This is meant to address poor service delivery, low efficacy of public administrative business systems, financial management failures and poor audit outcomes as experienced across most public-sector institutions. A predetermined research sample comprising middle and senior managers who fall between level 11 and 14 according to the public-sector salary levels participated in this study, and the study follows qualitative data approach from these distinct groups selected based on their experience and knowledge of the private and public-sector construction industry. The study finds that DWS Construction is not positioned to operate optimally in the private sector dominant industry due to government bureaucracy and policy directives. Drastic changes to the current strategic architecture are required to corporatise DWS Construction.

Keywords: sustainability, public and private sector, business efficacy analysis, DWS Construction

Table of Contents

CHAPTER 14

INTRODUCTION TO THE RESEARCH4

1. INTRODUCTION4

1.1 BACKGROUND TO THE STUDY AREA4

1.2 IMPORTANCE AND BENEFITS OF THE PROPOSED STUDY5

1.3 PROBLEM STATEMENT AND CORE RESEARCH QUESTION6

 1.3.1 Primary Research Question8

1.4 RESEARCH OBJECTIVES8

 1.4.1 Primary Research Objective8

1.5 CHAPTER LAYOUT9

1.6 DELIMITATIONS AND ASSUMPTIONS10

1.7 CONCLUSION11

CHAPTER 212

CONTEXTUALISATION OF PUBLIC ADMINISTRATION12

2.1 INTRODUCTION.....12

2.2 HISTORICAL PERSPECTIVES OF PUBLIC ADMINISTRATION12

 2.2.1 Introduction of Public administration in South Africa.....13

2.3 THE CONSTRUCTION SECTOR14

2.4 THE SOUTH AFRICAN PRIVATE SECTOR INDUSTRY15

2.5 THE SOUTH AFRICAN PUBLIC SECTOR.....15

2.6 DIFFERENCES AND SIMILARITIES BETWEEN PUBLIC AND PRIVATE SECTOR BUSINESS MARKETS.....16

2.7 LEGISLATIVE REQUIREMENTS FOR PUBLIC BUSINESS PROCESS IN SOUTH AFRICA.....17

2.8 SOUTH AFRICAN BUSINESS REALITIES18

2.9 PUBLIC AND PRIVATE SECTOR BUSINESS OPPORTUNITIES19

2.10 THE ROLE OF THE PRIVATE SECTOR IN THE PUBLIC-SECTOR BUSINESS20

2.11 LEADERSHIP IN THE PUBLIC-SECTOR BUSINESS OPERATIONS20

2.12 AN OVERVIEW OF PUBLIC FINANCIAL MANAGEMENT IN SOUTH AFRICA TODAY
 21

2.13 ETHICS, ACCOUNTABILITY AND PROFESSIONALISM IN THE SOUTH AFRICAN BUSINESS ENVIRONMENT22

2.14 ROLE OF THE SOUTH AFRICAN GOVERNMENT IN THE BUSINESS SECTOR.....23

2.15 CONCLUSION23

CHAPTER 325

RESEARCH METHODOLOGY.....25

| | |
|---|----|
| 3.1 INTRODUCTION | 25 |
| 3.2 SAMPLING METHOD | 25 |
| 3.3 STUDY POPULATION | 25 |
| 3.4 STUDY UNIT OF ANALYSIS | 26 |
| 3.4.1 Techniques of Analysis..... | 26 |
| 3.5 LOCATION OF THE STUDY POPULATION | 27 |
| 3.5.1 Size and nature of the research sample | 27 |
| 3.6 ACCESS TO UNIT OF ANALYSIS | 27 |
| 3.7 RELEVANCE OF THE UNIT OF ANALYSIS | 28 |
| 3.8 ALTERNATIVE UNIT OF ANALYSIS | 28 |
| 3.9 STUDY DESIGN AND METHODOLOGY | 28 |
| 3.10 CROSS SECTIONAL / LONGITUDINAL STUDY | 29 |
| 3.11 DATA COLLECTION | 29 |
| 3.11.1 Research Instruments..... | 29 |
| 3.11.2 Data Collection Strategy..... | 30 |
| 3.11.3 Pre-Test | 31 |
| 3.11.4 Data collection method | 31 |
| 3.11.5 Data Analysis..... | 31 |
| 3.12 CONCLUSION | 32 |
| CHAPTER FOUR | 33 |
| DATA COLLECTION | 33 |
| 4.1 INTRODUCTION | 33 |
| 4.2 SITUATIONAL ANALYSIS OF DWS CONSTRUCTION | 34 |
| 4.3 PERFORMANCE OF DWS CONSTRUCTION | 35 |
| 4.4 ELEMENTS INVESTIGATED | 35 |
| 4.5 “As-Is” OPERATING BUSINESS MODEL | 40 |
| 4.5.1 Construction Industry Characteristics..... | 40 |
| 4.5.2 Industry dynamics..... | 41 |
| 4.5.3 Business model..... | 42 |
| 4.5.4 Operating model | 43 |
| 4.5.5 Policies, legal parameters & constraints | 45 |
| 4.5.6 Leading practice..... | 45 |
| 4.6 ORGANISATIONAL STATISTICS AND TRENDS | 47 |
| 4.6.1 Human Resources..... | 47 |
| 4.6.2 Construction equipment assets | 48 |
| 4.6.3 Financial performance | 48 |

| | | |
|---------------------------|--|-----------|
| 4.6.4 | Project “order book” | 49 |
| 4.7 | CONCLUSION | 50 |
| CHAPTER FIVE | | 51 |
| 5. | INTEPRETATION OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS | 51 |
| 5.1. | INTERNAL ENVIRONMENTAL CONTEXT..... | 58 |
| 5.1.1 | Participation strategy..... | 58 |
| 5.1.2 | Customer selection..... | 58 |
| 5.1.3 | Product/service spread | 59 |
| 5.1.4 | Channel/delivery model | 59 |
| 5.1.5 | Geography | 60 |
| 5.2 | RESOURCE STRATEGY | 60 |
| 5.2.1 | Strategic enablers..... | 60 |
| 5.2.2 | Strategic assets and resources | 61 |
| 5.2.3 | Core competencies..... | 61 |
| 5.3 | COMPETITIVE POSITIONING STRATEGY | 62 |
| 5.3.1 | Core competitive advantage choice..... | 62 |
| 5.3.2 | Differentiated value proposition | 62 |
| 5.3.3 | Strategic control | 63 |
| 5.3.4 | Activity system..... | 63 |
| 5.4 | PROFIT STRATEGY | 63 |
| 5.5. | CONCLUSION | 63 |
| 5.6 | RECOMMENDATIONS | 64 |
| Bibliography | | 65 |
| Appendices | | 73 |

CHAPTER 1

INTRODUCTION TO THE RESEARCH

1. INTRODUCTION

The study focuses on identifying strategies and highlighting mechanisms that can potentially improve the current public-sector business operating model at the Department of Water and Sanitation: Chief Directorate Construction Management (DWS Construction). In this study, attempts are made to draw a distinctive relation, and establish similarities of business administration framework between private and public-sector business processes in the construction sector. This study endeavours to identify viable private sector business administration practices that may be useful to provide alternative solutions to the prevailing business administration performance shortcomings at DWS Construction. The current private and public-sector business administration trends are also be analysed. Furthermore, this study is based on the much-reported success of the private sector business in the construction industry within South Africa. Attempts are made to seek a generic understanding of what characterises the prevailing business administration performance shortcomings at DWS Construction.

This study is an attempt to contribute, through structured business administration and methodological hypothesis, recommendations on how viable private sector business strategies and processes can help improve public sector business units such as DWS Construction, in order to ensure that services are rendered on time and in line with the required business output levels.

1.1 BACKGROUND TO THE STUDY AREA

In South Africa, the economy of the public sector is administered and controlled by the state at national; provincial and local sphere of government. The state is constituted by various departments which have the executive authority to render a range of goods and services to the public. Each sphere of government has varying responsibilities in accordance with delegated powers and functions by the national government, such as to administer their business process through the use of public policies and regulations within their respective areas of jurisdiction. These policies and regulations are designed to accomplish specific goals or produce specific results, although set goals and desired results may not always be achieved.

The Department of Water and Sanitation houses an in-house construction unit operating in four regions across the country, namely: East; West; North and South. These units are part of the National Water Resource Infrastructure Branch (NWRI), under the Chief Directorate: Construction Management. DWS Construction employs an average of 3600 employees countrywide and only undertakes construction projects for selected projects funded by the department. DWS Construction is a non-profit organisation, all work is performed on a cost recovery basis, and all surplus funds generated from its business administrative processes are declared as savings and are annually returned to the National Treasury as income generated by the state.

The construction sector has two main classes of product. One comprises building works associated with housing, offices, hospitals, and factories; and the other is civil works involving the infrastructure for water supply, transport, irrigation, and power generation. DWS Construction is mostly involved in the construction and maintenance of civil works.

In comparison with the private sector construction business processes, all business procedures of DWS Construction are guided by public finance legislations, regulations and policies as determined by the National Treasury under the Department of Finance. These policies and legislations outlines procedural guidelines for procurement and disposal of goods and services by organs of the state. DWS Construction makes use of the Public Finance Management Act 1 of 1999, as amended; the Preferential Procurement Policy Framework Act 5 of 2000, as amended; and the National Treasury Finance Circulars as the main guidelines for conducting its business.

1.2 IMPORTANCE AND BENEFITS OF THE PROPOSED STUDY

All nations around the world rely on business trading agreements between the public and private sector institutions for the provision of defined goods and services. Such trading agreements may also be between nations and governments, or in-between private sector institutions whereby these trade-offs are administered and regulated through structured business administration processes.

The South African government has similarly demonstrated through its various developmental agenda initiatives and also through a range of business ventures that the private sector is a strategic business partner for the state. This partnership makes the public sector attractive to the reform of the public-sector business administration whereby improvement of efficacy in the public-sector business processes is encouraged.

This study attempts to identify factors that can potentially improve public sector business outlook at DWS Construction. This study also provides a vast area of future research possibilities on how to cautiously improve public sector business administration and encourage business prosperity for the public sector in order to operate at optimum efficacy, similarly as in private sector profitable business models. This study also provides an enquiry in to the public-sector business administrative methods that are being used to manage a public-sector business unit.

This study supports the developmental objectives of the National Development Plan (NDP), which is a policy framework for the South African government, which aims to build and enhance capacity and capabilities of the state. This study will, hopefully help identify strategies relevant to DWS Construction which are in support of initiatives by the state to improve efficacy of business processes at DWS Construction.

The study seeks to highlight gaps that are experienced in the administration of public sector business as well as the deterrence experienced in implementing legislative directives in the administration and management of public sector business processes at DWS Construction.

This study investigates business administrative processes and explores business control systems that are available in the private sector that may be relevant to the public-sector business operating units. The study also assesses appropriate mechanisms to improve the administration of business process at DWS Construction.

1.3 PROBLEM STATEMENT AND CORE RESEARCH QUESTION

All nations around the world need governments in order to function effectively and in an orderly manner, hence the public sector plays a central role in the administration of businesses and nations. Additionally, the citizenry also relies on the private and public sector towards fulfilment of individual and collective needs, both sectors are developmental partners for the provision of basic needs (Dorasamy, 2010). This has encouraged both sectors to develop an inclusive system which enables the achievement of maximum benefits from the utilisation of available resources, economically and socially (RSA, 2011).

Munzhedzi (2013) argues that the public sector, particularly in South Africa, is often branded with poor service delivery, ineffective and inefficient systems, financial management failures and poor audit outcomes. However, Theletsane (2013) offers that

the public service needs new capacities in order to exploit new public service business opportunities to ensure professionalisation of this sector, and to also ascertain appropriate capacity building within the public sector.

In the meantime, it has been observed that in South Africa and elsewhere in the world, often because of lack of administrative capacity by the public sector to establish mechanisms to provide timeous goods and services to the public, the private sector has become a first point of call for intervention in areas of provision of required goods and services by the public. This has allowed the private sector to design business products and strategies relevant to the public-sector market, and furthermore, this imply the South African government is now forced to improve its overall business efficacy including its business value processes.

According to Pretorius (2008), success in the private sector market is based on profiting from the demand of products in a competitive environment, whereby business strategies are focused on reducing costs and by having effective planning systems. Eisner (2011) suggests that private sector business seeks to maximise profits and their performance from available opportunities by achieving cost-based advantages.

However, there are distinctive similarities in the business administration processes of both the private and public sector. These sectors make use of similar managerial processes for the administration of their business processes (Du Toit *et al.*, 2002). Both sectors make use of similar human resource management processes and both sectors also enforce accountability within their organisations to their stakeholders. Fourie (2007) suggests that a fundamental role of any government and the public sector is to ensure the allocation of resources for the benefit of the public, ensure stabilisation and growth of the economy.

According to Madue (2009), the world is focusing on South Africa, singled out from many African countries, as one of the most advanced and stable business economies in which government applies sound financial management principles across its various public and private sector business initiatives. The South African government has interestingly established corporate governance principles for the public sector and makes use of legislation to regulate public sector business processes such as by applying the Public Finance Management Act (PFMA), Act 1 of 1999 as amended (RSA, 1999). Legislative frameworks promote governance and accountability in the financial management of the public sector, and it also ensures effective and efficient utilisation of all associated public funds. According to Fourie (2007), these legislations provide control systems to prevent

financial deviations from planned activities and standards; they are also used to measure and evaluate the achievement of financial commitments, and they also strive to ensure sound financial management.

In order for the public sector to deliver better services, it has to relook at its operational efficacy and with a purpose to become more business orientated in the changing world of business, by aligning itself with private business processes. If not, the private sector will continue to be more involved in the delivery of services that are the responsibility of the public sector. Therefore, the problem is services that have to be delivered by the public sector are increasingly being provided by the private sector, and in some instances, such services are rendered by the private sector with a better-quality standard.

From the above, it is evident that there is a need for an in-depth investigation that can provide a detailed analysis of private sector business strategies that can be emulated in the public-sector business administration framework. A need also persists to outline how business administration is viewed in the South African context. That is, to also examine and evaluate how efficacy can be improved within the South African public-sector business administration environment.

1.3.1 Primary Research Question

The research question applicable to this study attempts to compare business efficacy between private and public construction sector business regulatory framework, taking into account the nature and environment that both business sectors operate within.

Research question below is applicable to this study:

- What are the theoretical defining elements of a public-sector business administration model, such as DWS Construction, that are comparable to a private sector business unit which operates at optimum efficacy?

1.4 RESEARCH OBJECTIVES

1.4.1 Primary Research Objective

The study aims to determine the efficacy of the public-sector construction business unit operating in an environment which is dominated by the private sector businesses. Secondly, it is to identify factors that are embedded within the private sector business regulatory framework that may influence sustainability of the public-sector business construction unit.

1.4.2 Secondary Research Objective

The secondary objective of this study is to draw a distinctive relation, and establish similarities of business administration framework between private and public sector business processes. The study endeavours to identify viable private sector business administration practices which may be useful in providing alternative solutions to prevailing business administration performance shortcomings at DWS Construction, and to any other similar public-sector business.

1.5 CHAPTER LAYOUT

The study framework presents an outline of the research structure, with an overview of each chapter. This research study comprises five chapters and is structured as follows:

Chapter 1: Rationale of the Study, Research Problem and Research Design

This chapter introduces rationale of the study; background to the study area and provides an outline of the research design. This chapter also presents an overview of research discussion; it also tables an outline of the research problem and significance of the study, and also highlights the study objectives.

Chapter 2: Literature Review - Contextualisation of Public Sector Business Administration

The study area is located within the public administration environment whereby all of business administration processes of DWS Construction are performed through the use of policies applicable mostly to public institutions. These policies relate to the allocation and utilisation of government resources such as the finances, placement of personnel, and procurement of goods and services. Therefore, this chapter seeks to exploit new opportunities that are found in the public-sector operating system which can help improve the current business management process at DWS Construction.

This chapter also attempts to capture arguments and debates on business administration within the public sector, and it also presents a theoretical framework on this field of study. An overview on historical developments and characteristics of public administration is also be outlined. Phenomena of business administration in the South African context, in terms of private and public-sector business processes interface, is also sketched out. An overview of public sector business processes is presented in an effort to validate the importance and relevance of the existence of a government owned business unit.

This chapter also studies various business administration strategies to highlight the current business administration processes that can potentially help improve the efficacy of DWS Construction at the least cost and time, whilst improving upon product quality outputs.

Chapter 3: Research Methodology

This chapter presents the research design and method for the study. Description of various research methods are outlined. Population and unit of analysis, size of research sample and data analysis methods are also provided within this chapter.

Chapter 4 - Data Collection and Case Study Analysis

The discussions in this chapter present an outline of the in-depth evaluation and analysis of legislation and policies which regulate administration and management of a public-sector business. This chapter analyses possible business efficacy strategies based on the research data collected with emphasis on DWS Construction. Specific reference is made to business administration practices by DWS Construction and the desired public-sector business processes.

Chapter 5: Findings, Conclusion and Recommendations

This chapter presents research results from the literature that was consulted and interviews that were conducted throughout the study. The researcher attempts to locate literature review as provided in Chapter Two with the views and responses that have been raised by the study participants.

This chapter tables interpretation of the research findings, and presents the research outcomes. In this chapter, conclusion and recommendations are drawn from the study findings.

1.6 DELIMITATIONS AND ASSUMPTIONS

The study is centred on testing the efficacy of governance and administration of a public-sector business operating unit. This relates to the administration processes of a public-sector business which operates mainly in a private sector dominant business environment, in theory and practice. The study aims to identify and highlight best business administration practices available in the private sector and from other public-sector businesses that may be relevant to a public-sector construction business unit. Reference is made to the current government legislation and policies applicable to the administration

of public sector business entities. Furthermore, the study also attempts to determine the viability of commercialisation of a government owned business construction unit.

With regard to the research participants, their selection is based on ease of access to them by the researcher for the purpose of the study. The research participants relevant to the study have vast experience in both public and private sector construction business administration.

1.7 CONCLUSION

This chapter has introduced the orientation, rationale and background to the study. It has also presented a motivation for the need of this study. An attempt has also been made in this chapter to provide an outline of the theoretical framework for business administration applicable to private and public-sector business. This chapter has also tabled an overview of the objectives for the study.

The next chapter focuses on, and presents the debates and context of business administration by highlighting characteristic developments of this field of business. This chapter endeavours to validate relevance and existence of private sector business administration principles within the public-sector business processes, whereby public-sector business can operate similarly as a viable private sector business unit.

CHAPTER 2

CONTEXTUALISATION OF PUBLIC ADMINISTRATION

2.1 INTRODUCTION

The study area is located within the public administration environment whereby all of business administration processes at DWS Construction are managed through the use of public policies. These policies that DWS Construction makes use of are mainly concerned with the allocation and utilisation of government resources such as the finances, placement of personnel, and procurement of goods and services. Therefore, this chapter seeks to exploit new opportunities that are found in the public-sector system which can help improve the current business management process at DWS Construction.

Literature on public administration defines this type of administration as an activity commonly referred to as a process that expresses principles, values, and interests of the citizenry, society and communities. Like any other public-sector institution, DWS Construction exists in an administrative domain which is influenced by the ever-changing social, political, and economic environments. All public institutions and government sector departments are active accomplices in the field of public administration, their business strategies are guided by public policies. This suggests that these institutions rely on public administration activities for them to be able to expedite the accomplishment of considerable change and an impact on society.

This chapter provides baseline data on the synergy of the business processes at DWS Construction whereby operations are in the public administration environment. Reviews of theoretical foundations of Public Administration are also be presented. Scientific examination of this field is also provided, and an insight into the characteristics of this field is highlighted. This chapter also presents a synopsis of the origins and historical developments up to the post-modern era of Public Administration. An examination of public administration principles is sketched in order to validate the theory and practice of this study to the business administration environment, with relevance and in particular, to the policies that influence business processes at DWS Construction.

2.2 HISTORICAL PERSPECTIVES OF PUBLIC ADMINISTRATION

The practice and scientific domain of public administration has an exciting history. According to Basheka (2012:27), the discipline of public administration has been in existence for more than 100 years, and it has ancient origins that have matured through

the years. This is a type of administration that has provided comparative templates when it comes to the control systems.

The British history places the origins of public administration to 1215, at the time when King John was the reigning King, and during this term, King John introduced a new government regime in England. In this period, King John introduced a new type of government administration (Hannekom & Thornhill 1982:11). Caiden (1982:9) describes it as the ancient government role in the public sector whereby all administrative decisions were depended on the King's will and on the King's court. This was at a time when institutions within society were integrated with the functions of government. These ancient practices which are a concern and cancer to modern administrative practices, continuously received focus with an attempt to improve the efficacy of the government and public-sector systems.

Basheka (2012:41) offers that throughout the period between 1927 and 1937, the practice and discipline of public administration ordered a high degree of respect both in business and government arena. It has also been noted that since the origin of public administration, this scientific discipline has concerned itself with matters that are of interest to the public. It has also been observed in public institutions over the years that these institutions require and make use of policies to manage public organisational functions. Amongst other things, these public policies are also used as instruments to outline rules of order for the formation of social science principles, as well as for the management and administration of substances that are of interest to the public.

2.2.1 Introduction of Public administration in South Africa

In the case of South Africa, public administration was first introduced as a tool used to maintain law and order. Later in the years, this saw change in the government and public institutions whereby administrative practices had to give effect to the changing needs of the public (Geldenhuys *et al.*, 1988).

Khunou (2009:84) confirms that pockets and traces of administrative practices in South Africa are also embedded in the methodology followed in the establishment of homelands in 1913 under the regime of the old South African government. During the 1950s, public administration practices changed, and became increasingly sophisticated thereby the public sector becoming intricate. Chipkin and Meny-Gibert (2012:105) claim that between 1965 and 1970, public administration in the homelands grew quickly and by 1994, public administration in the South African government became too multifaceted to govern. Kuye

(2006:291) highlights in Maluka, Diale and Moeti (2014:1021) that by 1994, administration in government was directed and led by lessons drawn from the legacies of the past, whereby policies were developed from visions held by the new government of 1994.

This theorises that service delivery, in government institutions is now based on the management techniques which have been adopted from the private sector whereby high emphasis is now placed on the efficacy of provision of services, increased responsiveness to the customer needs and on application of sound financial management techniques. In this regard, this approach is also notable in how government and the public sector now applies its mechanisms for the promotion of the rule of law and the introduction of new control systems to create responsive public administrative systems.

2.3 THE CONSTRUCTION SECTOR

Construction sector stimulates the world economy thus it leads to increased socio-economic activities. This sector further contributes to employment, household income and economic growth. Hagedoorn and Zobel (2015) suggests that 7% of the total global employment comes from the construction sector, and it also contributes approximately one-tenth of the world's gross domestic product. The net value of the global construction sector is estimated to be over US \$4 trillion in 2015, where the South African construction industry accounts for about 0,3% of that total. The total income for the SA construction industry in 2015 was estimated at R100,4 billion, with an industry-wide net profit before tax of R3,9 billion.

Construction sector is an exciting industry, its participants are mostly faced with increasingly complex activities involving the use of multiple resources. This is a high-risk business that often involves large sums of money tied up in the production process that are frequently lengthy. Success claimed by the industry participants often depends on attention to the detail on the construction processes followed, methodologies and quality of workmanship. Many sources consulted claim that success or the lack thereof cannot only be determined by the size of the balance sheet on the financial statements although profitability factor is a good indicator towards perceived success in any business environment (Botha, Adendorff & Smallwood, 2014).

Business in the construction industry in general integrates innovation and overall organisational performance in both the public and private sector environments. This is characterised by continuous change of construction methodologies and pursuit for competitiveness. The ability by organisations within the construction sector to navigate

and adapt to environmental changes has overtime proven itself to have its rewards which may be positive, costly or life-threatening for the existence of many of these industry participants. The environmental changes comprise mainly of two scenarios, namely: being efficiently competitive on cost and business strategies and being adaptive to the changes in this business environment (Khmalo & van der Lingen, 2017). Hagedoorn and Zobel (2015) explains that the rewards of being adaptive to the environmental changes includes amongst others direct and indirect; formal and informal; planned and consequent benefits.

2.4 THE SOUTH AFRICAN PRIVATE SECTOR INDUSTRY

Business institutions that are privately owned are mainly regulated through the exercise of power with a sole purpose to maximise the shareholder's wealth. Naidoo (2009) explains that the framework through which these institutions exist, operate and function is set by the law of the republic. The Companies Act (Act 71 of 2008), as amended, provides an outline through which companies are established, structured and also how they should be managed in order for them to be regulated.

The law allows companies flexibility in terms of responsibility and adaptation to the changing business environment. Naidoo (2009) offers that the Companies Act allows private sector organisations to apply their own assets and income for the distributive growth of their business operations with minimal infringement from the law.

2.5 THE SOUTH AFRICAN PUBLIC SECTOR

The South African public sector is no exception and has the same mandate similarly as any other government in the world such as it is the case in countries like Germany and other European states. This mandate is to promote the wellbeing of the state, to serve and protect the needs of the public. The existence of the South African public sector recognises the relevance of distinctive administrative systems whereby people need to work together through a common system of administration. In South Africa and elsewhere in the world, the importance of governance has been accepted and is being recognised in both the private and public sector as a tool which enables organisations to achieve their developmental objectives to citizens of the country.

The South African public service sector is comprehensively guided by application and the use of legislation and public policies, for provision of goods and services by organs of the state. The public service also exists in order to meet the needs of the citizens of the country (Du Toit, Knipe, Van Niekerk, Van der Waldt & Doyle, 2012). Unlike the existence of the private sector, the public sector provides goods and services to the public at no

profit margin to the services rendered, it means that the public sector is mainly focused on service delivery. The public sector is service oriented and outcome driven with a purpose to improve the wellbeing of the citizens (Carhill & Kincaid, 1989; *Constitution*, 1996; Du Toit *et al.* 2002; Van der Waldt & Du Toit, 2005).

The South African public sector has been faced with several challenges but with many opportunities since the birth of democracy twenty years ago, this country noteworthy fills the economic space within Africa and also in the globe (WEF, 2014). Challenges include amongst others unemployment, poverty, inequality and inadequate access to basic services by all (Bekker, 2009; Van der Nest, 2005; Venter & Landsberg, 2011; World Bank, 2011). Other difficulties within the public-sector amount to corruption and political interference as a hindrance towards effective and efficient provision of public services by the state, challenges which threaten the economic stability of the country (Mafunisa, 2007; Nengwekhulu, 2009; World Bank, 2011). In order for the public sector to be effective and efficient, it requires sound administrative policies and governance structures. These cover elements of good leadership, transparency and sustainability.

2.6 DIFFERENCES AND SIMILARITIES BETWEEN PUBLIC AND PRIVATE SECTOR BUSINESS MARKETS

The main difference between these sectors is that private sector is profit driven whilst public sector is service oriented (*Constitution*, 1996; Du Toit *et al.*, 2002; Van der Waldt & Du Toit, 2005). According to Pretorius (2008), success in the private sector market is based on profiting from the demand of products in a competitive environment, whereby business strategies are focused on reducing costs and by having effective planning systems. As a result, it is more complex to measure efficiency and effectiveness of the public sector than of the private sector. Measurement of profit is based on how much money an organisation has generated within the shortest period whilst using the least resources. Eisner and Allen (2011) suggest that private sector business seeks to maximise profits and their performance from available opportunities by achieving cost-based advantages.

With reference to the public sector, measurement of service delivery is purely based on personal opinion on access to a service, it is based on a response received from a sample population for statistical analysis, and it is also based on personal preference but not a

pre-determined unit of analysis. However, measurement of performance in the public sector is based on the effectiveness of application of public sector legislation.

There are distinctive similarities in the business processes of both the private and public sector. These sectors make use of similar managerial processes for the administration of their business processes (Du Toit *et al.*, 2002). Both sectors make use of similar human resource management processes and both sectors also enforce accountability within their organisations to their stakeholders. Stakeholders in a private sector may be shareholders and a board of directors of an organisation, whilst stakeholders in a public sector may refer to the citizens, public interest groups and society. In a public sector, governments are elected by the people, and government accounts to the people. On the other hand, the executive within government accounts to the legislative. In this regard, the executive is the people that have been appointed by government to run and be responsible for the administration of government, whilst the legislative are politicians that have been elected by the people to govern the affairs of the state.

2.7 LEGISLATIVE REQUIREMENTS FOR PUBLIC BUSINESS PROCESS IN SOUTH AFRICA

The South African public sector is subjected to a wide range of legislation, but for the purpose of this study, only legislation applicable to the administration of public sector business processes at DWS Construction is discussed. The Public Finance Management Act, Act 1 of 1999, as amended, hereafter referred to as the PFMA, and National Treasury Regulations on administration of financial matters, and on procurement of goods and services have been identified as most relevant legislation in this regard.

The PFMA was introduced in 1999 with the aim of regulating effective, efficient and economic use of all available financial resources of the state, to also ensure governance in service delivery by the state to the society. This act applies to all national and provincial departments, state owned organisations and public entities which are accountable to parliament.

Section 76 of the PFMA along with Section 216(1) of the *Constitution* requires the National Treasury to issue finance regulations on norms and standards to all public-sector organisations in order to ensure accountability and transparency in public sector institutions. These regulations came into effect in March 2015 and they provide guidelines

to all public institutions on the management and administration of public financial resources.

All public-sector institutions are mandated to adhere to all treasury regulations and to the PFMA whereby accounting officers in these intuitions are responsible to enforce and to adhere to all rules provided on financial matters. In addition, accounting officers in all public-sector institutions including DW Construction have the responsibility to comply with all other legislative provisions applicable to state institutions, for the provision of public services. DWS Construction makes use of the PFMA and National Treasury Regulations to conduct its business processes, and they also account to Parliament.

2.8 SOUTH AFRICAN BUSINESS REALITIES

Most countries are battling with challenges of socio-economic development following economic instability in the United States of America, Europe and China. Due to this, many are increasingly focusing on business-led state socio-economic developments with attention paid towards what could rather be achieved through multi-sectoral state relationships, such as the state being a business partner in service delivery (Schwab, 2013). Although South Africa has noticeably achieved some progress towards addressing social problems such as poor education developmental systems, uneven overall public-sector performance, unemployment, poor infrastructure support base, and over dependence on economic resources, the state continuously attempts to address all associated socio-economic problems. There is a growing belief that the state is now focusing on new collaborations across sectors rather than being dependent and relying solely on the private sector (RSA, 2013).

Preston and Post (1975) (in Palmer,2004) content that private sector business strategies are founded in the selection of market choice which is based on products that will assist a private sector organisation to achieve its business objectives. However, public institutions base their business strategies on political ramifications and on social pressures. The implication of this is that the public sector depends on the availability of private sector market products in order to respond to the socio-economic demands as presented by society. With regard to a public-sector institution operating similarly as a private sector organisation, such public institution needs to strike a balance between the application of government owned business administrative processes versus application of competitive business practices such that the said public institution becomes effective, efficient and sustainable in its business activities.

This implies that, in order for organisations to survive economically and be competitive, within the public or private sector, they require continuous institutional renewal of their business processes, they also need to forge new business relationships. This also suggests that both sectors have a responsibility to ascertain that all market products on offer must be in accordance with the needs and expectations of the customers but not so much on policies that enables such products to be made available, as it is a common practice in the public sector.

2.9 PUBLIC AND PRIVATE SECTOR BUSINESS OPPORTUNITIES

The availability of business opportunities by the public sector presents lucrative business for the private sector. The South African government is in the meantime, incorporating private sector business process into the public-sector domain in an attempt to improve the turnaround time and quality of services that the state provides to the public. However, public sector business functions differently when compared to the private sector, the public sector is rule bound and policy driven, whilst the private sector is product and process driven.

The introduction of modern private sector business administration principles to the public-sector business processes in South Africa is another attempt towards making the public service more competitive and bringing it a step closer in line with competitive modern business economy. Involvement of private sector business administration provisions in the public sector, goes further than the ordinary introduction of new business administration rules in the public-sector environment. It affects the South African public-sector business strategic decision making in respect of the availability of business corporate resources as well as governance issues on the nature and type of business ventures that the private sector may be suitably involved in.

According to Siswana (2007), governance is critical for private and public-sector business, it enables the achievement and maintenance of organisational objectives, values, structures and systems. Governance is crucial with regard to organisational decision making especially on budgeting, expenditure, resource allocation and management thereof. Governance also provides clear lines and system responsibility, it encourages accountability and transparency. Wixley and Everingham (in Siswana, 2007) affirm that governance is concerned with structures and administrative processes that have everything to do with management and control in organisations.

2.10 THE ROLE OF THE PRIVATE SECTOR IN THE PUBLIC-SECTOR BUSINESS

Fourie (2007) suggests that a fundamental role of any government and the public sector is to ensure allocation of resources for the benefit of the public, for the redistribution of the income from taxes, ensure stabilisation and growth of the economy, and ultimately for the formulation and implementation of public policies. Government and the public sector have an obligation to ensure the creation of enabling environment for both the private and public-sector business to operate in all economic opportunities available in the country at any given moment.

Interestingly, the public-sector business processes are regarded by many, as being too formal and yet they present a lucrative market for goods and services. It is with interest to note that the public sector has seen increased purchasing power with associated social problems of lack of skills by government officials, and failure to implement correct government regulations on procurement and resource allocation of goods and services.

Private sector has in the meantime, developed business models to create and innovate products in order to infiltrate the public-sector business markets. The private sector has also taken note of the importance of measuring business economic performance of the public sector, not only to inform formulation of public policies, but also as a means to characterise performance of the public-sector market. Although many indicators have been developed to measure various aspects of the performance of government, an aggregated single index is yet to be agreed upon, which will be used as a means to measure the overall activities of the business administrative efficiency of government.

Often, because of lack of administrative capacity by the public sector to establish mechanisms to provide goods and services to the public, the private sector automatically becomes a first point of call for intervention in areas of provision of required goods and services by the public-sector institutions. This has allowed the private sector to design business products and strategies relevant to the public-sector market.

2.11 LEADERSHIP IN THE PUBLIC-SECTOR BUSINESS OPERATIONS

Christensen and Laegreid (2011) argue that there is a need for public institutions to attend to conflicting demands and to rapidly complex institutions, this requires high level of leadership in order to achieve organisational priorities that the state has set for all public-sector institutions. The implication is that public sector systems require strong leadership given the bureaucratic processes which regulate the affairs of society.

Chen and Bozenman (2014) explain that managers in the public sector are always required to take a lead and responsibility in terms of determining business environment and all associated regulatory framework for public sector to operate within. In this sense, leadership arises from the desires of individuals to achieve organisational objectives, rather than from the organisation itself, it involves the ambition to work collaboratively across other business organisational spectrum.

Leadership potential has been identified by many as a serious concern when it comes to measuring the success of various organisations (Troth & Gyetvey, 2014; Dries & Pepermans, 2012). According to Troth and Gyetvey (2014), there is an increasing recognition that leadership potential is critical for the long-term organisational survival.

Leaders arise in various organisations and in segments of society, be it business, politics, social or religious context. These leaders have a potential to bring together, diverse segments of society. However, leadership in the public-sector business processes has far reaching implications due to the complexities of decision making in the public-sector business operations. Middleton (2007) and Common Purpose (2013) suggest that the rationale for leadership initiatives is increasingly demanding leaders to work beyond their organisational boundaries of authority, not only to break segregation of work environments but also to bring organisations together, as a unit.

In South Africa, fellowships such as the African Leadership Initiative (2013) and the African Leadership Institute (2013) are amongst many initiatives that demonstrate leadership perspectives of resolving complex socio challenges that the public-sector business is facing, but also to demonstrate public sector business interest in the private sector business processes.

2.12 AN OVERVIEW OF PUBLIC FINANCIAL MANAGEMENT IN SOUTH AFRICA TODAY

According to Madue (2009), the world is focusing on South Africa, singled out from many African countries, as one of the most advanced and stable business economy whereby government applies sound financial management principles across its various public and private sector business initiatives. The South African government has interestingly established corporate governance principles for the public sector and it makes use of legislation to regulate public sector business processes such as by applying the PFMA and the MFMA, as amended.

These legislative frameworks promote governance and accountability in the financial management of the public sector, and ensure effective and efficient utilisation of all associated public funds. According to Fourie (2007), these legislations provide control systems to prevent financial deviations from planned activities and standards, they are also used to measure and evaluate achievement of financial commitments, they also strive to ensure sound financial management.

With regard to the private sector, the government of the Republic of South Africa does not directly regulate business administrative processes of the public sector, but it monitors and regulates the norms and standards of the private sector, it also monitors the collection of taxes within the private sector. Madue (2009) suggests that government makes use of fiscal policies to raise revenue and taxes, to also regulate; verify, test and check business procedures within the country. Visser and Erasmus (2002) assert that fiscal policy enables government to steer the economy in the best interest and benefit of the society.

2.13 ETHICS, ACCOUNTABILITY AND PROFESSIONALISM IN THE SOUTH AFRICAN BUSINESS ENVIRONMENT

The use of ethical codes of conduct are not the only means through which government and society can promote ethical behaviour. Every profession calls for people in that profession to conform to defined ethical standards in an attempt to regulate the practice of that profession (Raga & Albrecht, 2008).

Good principles of ethics, professionalism and accountability are as old as the existence of governments, and are not new to the private and public-sector business environments. They are the cornerstone of business administration and management because they have everything to do with acceptable business processes, globalisation, understanding of business reforms, as well as the establishment of suitable business values. They also partake within a firmly controlled business environment by means of legislative framework across all business sectors.

Edwards (2008) claims that ethics include characteristic of a good person, and theoretically, they can also refer to best practice. This implies that ethics refer to a set of moral principles on standard of what is good and bad, acceptable and not. Fox and Meyer (1995) and Cloete (1995) confirm that ethics are simply about collection of good values and moral principles which serve behaviour that is focused on promotion, achievement and maintenance of the general welfare of society.

Mafunisa (2000) highlights that professionalism refers to the high levels of competency capabilities, efficiency and expertise for officials to undertake their work duties with precision, efficiently and effectively, with pride. Therefore, professionalism requires due diligence from functionaries in order to complete all tasks at hand, it promotes positive work ethics and continuous development of similar work values. Whereas Ababio (2007:5) describes accountability as the answerability for performance concerning all decisions made on the utilisation and allocation of resources. It can summarily be argued that acceptable ethical behaviour and accountability are the prerequisites that underpin trust within the private and public business administration environment.

2.14 ROLE OF THE SOUTH AFRICAN GOVERNMENT IN THE BUSINESS SECTOR

South Africa is governed by the constitution which directs democracy and development in the country. This means that the South African government is pursuing policies of one dominant political party as government of the day in order to influence government decisions on modernisation of the economy of the state. Taylor (2002) points out that the state is pursuing policies and is also coordinating investment plans to promote growth and economic development. Vu (2007) remarks that in such a state, focus is on promoting business sector performance, and also on the role of the state in support of the industrial policies.

The South African government continues in its attempts to build capacity within the public-sector administration, and it is also focusing on soliciting interdependent business networks between international organisations, public and private sector institutions. Attempts have also been demonstrated by the state to modernise innovation and technology into the public and private sector business processes. In addition, government has privatised its non-core assets with a determination to focus on services that it has direct control over like fiscal, industrial, trade and labour policies. This implies that the South African government recognises a need to formulate a coordinated partnership between private and public-sector business in order to stimulate the growth of the economy, to also discover new knowledge for business development in both the public and the private sector.

2.15 CONCLUSION

Discussions in this chapter unpacked different phases and developments of Public Administration. Attempts were made in this chapter to delineate and describe generic public administration functions. The literature surveyed also provided brief debate on the

foundations and nature of public administration. The historical developments of public administration in South Africa and afar were also discussed.

Evidence gathered from sources consulted advocate that public administration is a type of science, art and practice which can be applied similarly to the private and public-sector business market. In this chapter, it has been demonstrated that the foundations of public policy development and application are all imbedded within public administration activities. It is evident in this study that public administration is diverse, it is a complex field with multi-facial characterisations.

With regard to literature on NPM, it can be concluded that this is a new flair of public administration which encourages accountability; good leadership; innovation and performance monitoring. This chapter has proven that efficacy within the public sector can be improved through application of management techniques used in the private sector business.

This section provided reviews of theoretical foundations of business administration with an attempt to capture debates and highlight characteristics of this field of study. An analysis of business administration principles was outlined in order to attempt validation of the theory and practice of this study with relevance to its influence on the public-sector business processes. Business administration phenomenon in terms of private and public-sector interface was also documented.

Focus on critical investigation and analysis of the public and private sector business administration framework was also outlined in terms of how business administration is viewed in the South African context. The study explored how the influence of the private sector business administration processes advanced the common good around grappling with a wide range of complex and multifaceted political, social and economic challenges that the South African public-sector business administration is faced with.

Discussions in the next chapter focus on the research design and method for the study. Description of various research methods are also be outlined. Population and unit of analysis, size of research sample and data analysis methods are also provided within this chapter.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter outlines the methodology and design for the research applicable to this study. In this chapter, an overview of different research methods and options relevant to this study are also be presented. Different research phases are also be documented, and these are semi-structured interviews and a questionnaire containing multifaceted dimensions and complexities applicable to a qualitative study. This chapter also details data collection method, sampling and data analysis for the study.

3.2 SAMPLING METHOD

The research participants are amongst the limitations of this study because the identified possible research participants are scattered amongst various provinces in South Africa, but they are all reachable. It is for this reason that this study uses a purposive sampling, which is a non-random sampling method, to select the appropriate research participants. This sampling method is more economical and relevant as it enables the researcher to use study participants in an environment where the researcher is unable to reach the entire study population (Brink, van der Walt & van Rensburg 2012). Criteria used to select the study participants are based on the following:

- They must be knowledgeable of the phenomena being studied, which are private and public-sector business processes;
- They must have worked in the construction industry on a senior management level, with a minimum of ten years of relevant working experience;
- They must be willing to participate in the study; and
- They must be able to read and comprehend the English language.

3.3 STUDY POPULATION

Saunders and Lewis (2012) theorise population as a set of complete group members to be studied. It must be noted that in the public-sector institutions in South Africa, government levels range from level 1 up to 16, with management level ranging from level 13 upwards, whilst Director General level is at level 16. For the purpose of this study, research participants are middle managers who fall between level 11 and 12 and senior managers who are placed at level 13 and 14.

The population for this study comprise the public-sector institutions in South Africa that have also adopted the private sector business administration methodologies for the systematic management and administration of their business processes. Study approach is on the basis of independent analysis of such public-sector institutions. Unit of analysis will be based on managers who occupy positions in the public-sector institutions.

3.4 STUDY UNIT OF ANALYSIS

In order to ascertain accuracy of the information collected from the semi-structured interviews held with the study participants, open ended questions were presented to the study participants. The outcome of the interviews and all associated responses were captured whilst in contact with the study participants, and the interpretive analytical method was used to evaluate the results. Rowlands (2005) offers that throughout this process, data collected is analysed with an assumption that that the study participants and the researcher have gained knowledge through their close connection between the research subject and the matter being studied. Terre Blanche and Kelly (1999) also argue that the interpretive study method relies on first-hand contact between the research and study participants, it tries to understand the context of the information being studied and responses being provided by all study participants.

For the purpose of data analysis and theme induction, coding and data interpretation were undertaken whereby the researcher first familiarised himself with the content of the responses to be provided by the study participants. Secondly, identification of the general themes from the responses was done and coding of the themes according to categories was explored and elaborated more closely in accordance with the interpretation of the themes produced. The researcher collect data until data saturation was reached whereby new data collected were repetitive of the data previously captured.

3.4.1 Techniques of Analysis

Bryman (2012) offers that qualitative data are rich with attractive data, with their own unique difficulty to find analytical route which is easy. In this study, a narrative method of analysis was used.

This study follows two methods of analysis, namely (1) case studies; and (2) in-depth interviews. Yin (1994) predicts that case studies enable diverse sources to be used for critical evaluation of complex processes. This implies that case studies are useful to generate hypotheses. Berg and Lune (2014) also argue that although case studies are not suitable for extrapolating findings, they are however suitable to provide baseline data

for a research although they may encounter difficulties when determining an appropriate research sample group.

For the purpose of data analysis, the collected data were used to provide baseline information for the purpose of investigating planning, management and production operations between private and public-sector business processes. Data collected were used to identify theoretical and business values that could allow in-depth and comparative analysis between these two business sectors.

3.5 LOCATION OF THE STUDY POPULATION

3.5.1 Size and nature of the research sample

Theoretical sampling was used for the purpose of case study analysis, whilst literature review was used for guidance on selection of the case studies. The choice of the research sample for this study was primarily based on convenience and on accessibility to the identified research participants. Purposive sampling was used for this study whereby selection of the research participants was highly relevant to this sampling technique. According to Bryman (2012:418), purposive sampling is a non-probability sampling, researcher does not choose research participants randomly but in a strategic way where research participants are relevant to the study. This study made use of research participants who are directly involved in the domain of the study phenomenon.

A total of 16 executives from the public-sector institutions were interviewed based on their knowledge and their extensive experience on the study area in order to solicit expert opinion. Interaction with the study participants was used to gain access to their thoughts and ideas on the possible application of private sector business administration methods into the public sector at DWS: Construction. The researcher's knowledge and experience within the public-sector business administration processes was not used to influence nor to distort research data being collected.

3.6 ACCESS TO UNIT OF ANALYSIS

Secondary data from published literature formed a theoretical foundation of this study and was supplemented by in-depth semi-structured interview questions on the research participants. This allowed the researcher an opportunity to obtain a comprehensive picture of opinions on the possibilities; perceptions and options available for a public-sector business unit to operate effectively and efficiently, similarly as a private sector business.

3.7 RELEVANCE OF THE UNIT OF ANALYSIS

The unit of analysis fit for this study is the Analytical Induction Method. Bryman (2012) explains this method as a demanding and server method of analysis whereby when a hypothetical definition of a research problem differs with a single encounter of a case, then it warrants further hypothetical reformulation, it also requires additional research investigations, and as well as further data collection exercises.

This is an ideal method for data analysis in this study, and for providing casual explanation to a phenomenon until common explanations and factors leading to a phenomenon are discovered. If there is a contradiction to the explanation of a phenomena, then further investigations and revisions of a phenomena is instituted including cases that were previously investigated until such time it is no longer practical for the researcher to pursue contradictive explanations of a phenomenon. Further investigations will stop at a time when saturation point for new information is reached and when there is certainty about the hypothesis of a phenomenon.

3.8 ALTERNATIVE UNIT OF ANALYSIS

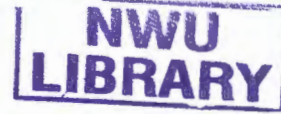
Another method of analysis applicable to this study is known as the grounded theory, this method constructs theory based on the analysis of the collected data. Bryman (2012) affirms that this unit of analysis makes use of a constant comparison of data analysis whereby a series of questions is presented by the researcher until saturation point where new information cannot be abstracted, enabling generalisation of a theory to be reached.

3.9 STUDY DESIGN AND METHODOLOGY

Schurink (2010) highlights that factors such as location of research information, procedures to be followed to access and gather such information, and research instruments as well method of data analysis play a critical role in deciding on the appropriate research design and methodology.

There are three research techniques available which may be used to conduct this study. Mouton (2001) describes that quantitative and qualitative are the main methods used in scientific research. According to Du Plessis and Majam (2010), the third method is the mixed research method which comprises both qualitative and quantitative research techniques. Welman, Kruger and Mitchell (2005) as well as Webb and Auriacombe (2006) claim that qualitative research method focuses on observation of events and attitudes; subjective interpretations of meanings and relationships, in order to understand a

phenomenon. Deduction from all research techniques that have been considered for this study favour a qualitative research method.



A predetermined research sample was used to gather qualitative data from distinct groups whereby the researcher used his judgement for the purpose of this study. Judgement and interpretation by the researcher were based on contribution by the study participants in terms of experience on their direct and indirect individual knowledge of the private and public-sector construction industry.

3.10 CROSS SECTIONAL / LONGITUDINAL STUDY

There are two types of analytical approaches that this study may follow namely, longitudinal and cross-sectional analysis strategy. However, the nature of this study requires an in-depth analysis of business activities and process at DWS Construction which is best suited for a critical evaluation of business environmental factors over a period of time hence the study was based on a longitudinal analysis approach. According to Kraemer, Yesavage, Taylor and Kupfer (2000), cross-sectional analysis refers to a study whereby research variables are measured over a single point in time.

With regard to a longitudinal study, research subjects and variables are repeatedly measured over a period of time, with examinations and observations taken over predetermined time intervals, be it fixed or randomly selected time periods of diagnosis. Farall, Hunter, Sharpe and Calverley (2014) suggest that qualitative longitudinal studies have now become popular, and this research approach allows contact with research participants to be possible over time. This is because research samples are small, with research being conducted by a single person and consequently, it is relatively easy to keep contact with research participants. Corden and Millar (2007) affirm that qualitative longitudinal studies focus on change over a time span and on the relationship between research participants and their understanding of the change in terms of the subject being studied.

3.11 DATA COLLECTION

3.11.1 Research Instruments

The study participants were issued with five secondary open-ended questions in order for them to provide written responses. These questions emanated from the primary research question which took into account the nature of business and the environment of the study area.

The following secondary research questions were used in this study:

- What is the impact of the current business administration policies of DWS Construction, in terms of business efficacy, on the success and functionality of this business unit?
- How can optimum efficacy of public sector business processes be achieved similarly as in private sector business?
- Explain and provide your understanding of possible policy models which are available within the public-sector business framework that can be used to improve the efficacy of business processes at DWS Construction?
- Which are the business administration instruments that can help steer the business process of DWS Construction towards product, cost and customer based business structure?
- What are the theoretical business administration processes which can influence the success of a public business unit such as DWS Construction?

3.11.2 Data Collection Strategy

In order to answer the research questions, detailed data on private and public-sector business process on the selected case studies were required. Data were collected from documentary review and by means of semi-structured interviews within the study area. Mouton (2001:165) emphasises documentary review as scrutinising of literature from applicable documents or text books. Saunders *et al.* (2007:611) highlight semi-structured interviews as interviews which commence with a set of predetermined questions but where supplementary questions may be added during the interview session.

An interview guide was prepared for data collection in order to provide an aligned structure for discussions with the research participants on the study propositions. However, study participants were given an opportunity to discuss the research questions with few constraints in order to stimulate research discussions, and to allow the researcher to gain maximum advantage of the respondent's in-depth knowledge and experience on the study questions posed.

3.11.3 Pre-Test

After completing the research questionnaire and interview schedule, a pre-testing session took place in order to allow the researcher to identify relevance and accuracy of research questions asked, and all other possible problems associated with the research design, such as the identification of the ability by the study participants to comprehend how research questions have been composed (Zikmund, 2003).

For this purpose, a pre-test was conducted based on the research questions to determine the relevance of the research questions to the study. Secondly, the purpose of this exercise was to establish the flow of questions versus the ease which the research participants could respond to the questions posed. Thirdly, the pre-test was also used to establish appropriate manner of posing research questions to the research participants.

3.11.4 Data collection method

This study follows case study analysis. A database of the research case studies applicable to this research was created in order to increase the reliability of the research data collected. Case study notes, study documents and previously completed reports were used to supplement research interviews completed for this study. Interviews were planned and held within an hour on average, and open-ended interview questions were used for the study. Responses to the research questions and interviews were recorded verbatim for authenticity and accuracy of analysis, with the consent of the study participants. The researcher ensured that protection of the study participants on anonymity of the recorded responses was achieved throughout the study.

3.11.5 Data Analysis

This study made use of and reviewed secondary data including investigations and analysis of data that had been previously collected. Although secondary data could not be critically interrogated, it proved the background to the research questions and for other discussions with the research participants during the interview sessions.

All raw data collected were recorded and analysed in order to achieve the objective of collecting research data. Each question for the study had a theme used as a code for the analysis. Respondent's answers to the research questions were carefully examined to determine the understanding of the response to the theme of the question, and also to establish if the study participants did not bring out into the study, any unexpected themes from the responses that they provided. All key point details in the responses given by the study participants were noted and recorded as part of the interpretation of the research findings.

3.12 CONCLUSION

This chapter has presented sampling methods applicable to a qualitative, quantitative and to a mixed research study method. In this chapter, it was concluded that this study followed a qualitative study method. Available and possible sampling methods and study population were documented, and also in this chapter, study unit of analysis as well as data collection methods were outlined.

The next chapter focuses on data collection and analysis thereof. This chapter tables a presentation on a case study enquiry on private and public-sector construction business operating units. The chapter also provides an in-depth evaluation and analysis of DWS Construction operating model.

CHAPTER FOUR

DATA COLLECTION

4.1 INTRODUCTION

The construction industry across the world faces challenges and difficulties relating to the alignment of infrastructure development strategies with government procurement regulation guidelines. However, in developing countries, these difficulties and challenges are present alongside a general situation of socio-economic stress, chronic resource shortages, institutional weaknesses and a general inability to deal with the key issues. There is also evidence that these problems have become greater in extent and severity in recent years (Ofori, 2001). The importance of taking measures to improve the performance of the construction industry has now been recognised in several countries at various levels of socio-economic development

State-owned construction organisations are established for various purposes. In countries where there is a good supply of competitive contractors, the public sector usually takes charge of construction, repair, maintenance and emergency work which generally are unattractive to the private sector contractors. In countries that present unusual mobilisation problems or risks, which inhibit the presence of international contractors or make their services too costly, state-owned enterprises can fill this void. In yet other cases, governments may try to start up a domestic construction industry by creating a public organisation to act as a seedbed for developing construction skills or supporting incipient domestic companies.

Seemingly, a state-owned construction organisation is regarded by many as an essential vehicle which can be used to carry out a wider scope of work and it should, as far as possible, be autonomous of the government; and it should also be allowed to compete with private contractors and other public enterprises, and be disbanded when it is no longer competitive. The improvement of construction capacity and capability therefore is regarded as important to most developing countries. Its existence is needed to improve efficacy of the state in terms of service delivery, timeliness and quality of construction and maintenance work in many developing countries. And lastly, there is a growing recognition that construction can be a more important generator of jobs in developing countries driving socio-economic development.

4.2 SITUATIONAL ANALYSIS OF DWS CONSTRUCTION

It has been observed within the construction industry that procurement and contracting procedures often fail to ensure a fair, competitive business practice. Contracts are often one-sided, expressing the rights of the owner and the obligations of the contractor, without compensation to the latter for default by the owner. Contract difficulties, cost and time overruns, can frequently be traced to such problems. Contract documents often are also excessively complex for the job to be done and sometimes inhibit participation in tenders by domestic contractors. Inexperienced and excessively rigid contract supervision often further add to the problems. Other problems of the construction industry concerning skilled personnel equipment, and materials shortages can usually be addressed, but in the absence of adequate management and continuity of work opportunities, their effects become short-lived.

The structure and organisation of the construction industry varies considerably among countries. The differences within the industry are determined by the relative importance of a few specific conditioning factors and special characteristics of the industry as well as by the degree of development of a country's economy. The structure of the industry is shaped by three main factors:

- *Nature of the work to be done* which, in turn, is a function of factors of scale, geographic dispersion; function; and specialisation (building or civil engineering construction, for an example).
- *The choice of technology*, which depends on the industry's state of technological development, the relative abundance or scarcity of labour and capital (and prices for them), climatic and physical conditions, government policies, and the overall development level of the economy.
- *Social and economic environment*, which is conditioned by the general structure and state of the economy, politico-government environment, and the traditions affecting the manner in which business is carried out.

Publicly owned construction and maintenance organisations usually face considerably more constraints for achieving efficiency than do private contractors. For example, unrealistically low salary levels may not motivate staff; limitations on civil service careers may induce complacency, lack of commitment of the senior staff and a general reluctance to take risks. Likewise, restrictions on the freedom to hire and fire staff and the use of

public employment as a social or a political tool may frustrate managers and cumbersome bureaucratic procedures may affect procurement (World Bank, 1984).

Dedicated efforts are launched frequently to continuously improve the industry, although sometimes driven by different objectives, responsibilities and levels of authority. DWS Construction is experiencing similar challenges threatening its future existence.

4.3 PERFORMANCE OF DWS CONSTRUCTION

The performance ability of DWS Construction is seriously hampered by restrictions placed on the procurement of goods and services and the inability of this organisation to recruit employees for projects currently under construction. This situation has resulted in a significant drop in general morale and demotivation of the staff. Workplace relations have deteriorated and this organisation is in a desperate need to successfully develop and implement recovery strategy to ensure that its capacity is regenerated, and to also warrant that projects are completed within time, within budget and in accordance with the required quality standards and/or specifications.

4.4 ELEMENTS INVESTIGATED

The respective elements included in this analysis are informed by Siddiqui (2007) and include:

- The present organisational system;
- Stakeholders, users, functions and objectives;
- Areas of concern with the present system;
- Inconsistencies, inadequacies in functionality and performance policies;
- Possible solution alternatives;
- Different business processes for solving the problems; and
- Advantages and disadvantages of the alternatives.

This approach was not followed strictly but was applied as a guideline and a roadmap in attempts to develop a better understanding of the current situation, and intricacies to be able to formulate a way forward in improving the organisation.

Figure 4.1 below indicates how cost and resources are allocated during the life span of a project varies over time (Project Management Institute, 2008). The organising and preparation phase of the project is where the implementation-planning and construction

scheduling is supposed to take place preferably in advance of any physical construction commencing. The purpose of this report is to mainly concentrate on the construction phase and how the performance of DWS Construction can be optimised through the interventions of a recovery strategy.

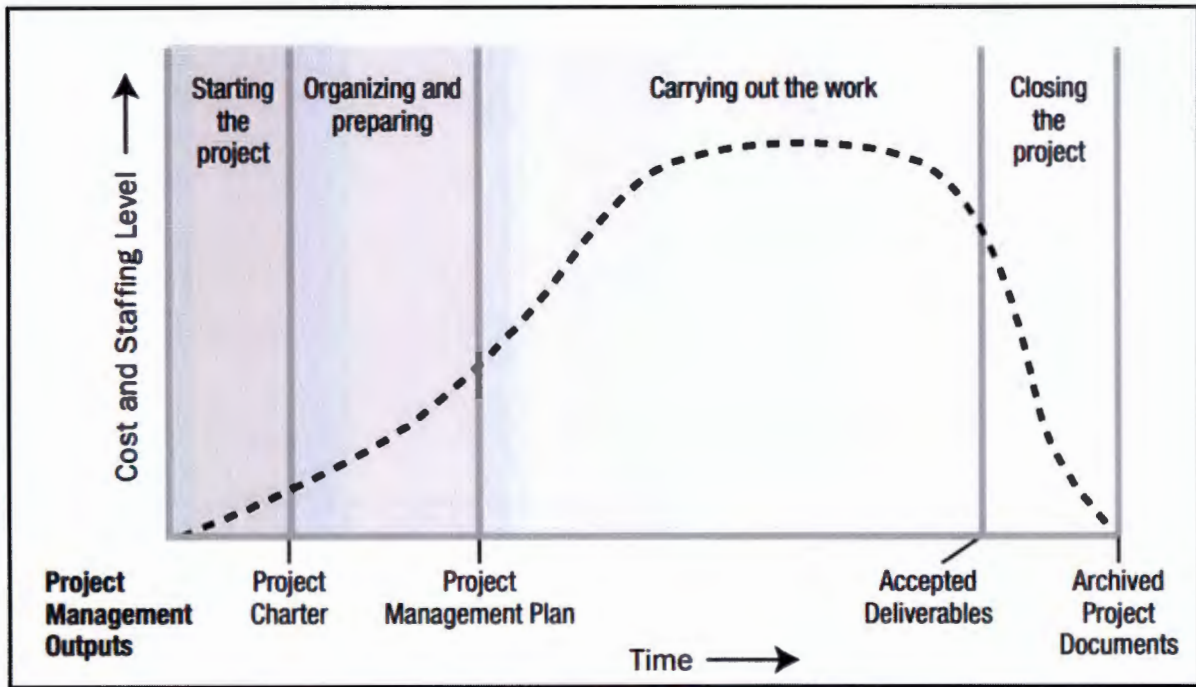


Figure 4.1 - Typical cost and staffing levels across the construction project life cycle

Source: Project Management Institute (2008)

There are different role-players in the construction industry, each of them has an important role to ensure that a project performs well. According to Wessels (1986), the client and designer can have up to a 75% influence on the total project cost, if they were involved in the pre-construction phases of the project. It is therefore important to consider these role-players when trying to optimise construction of projects. It is also critical to ensure that the relationship between parties is of such a nature to ensure they complement each other (Wessels, 1986). Based on this viewpoint to segregate functions for DWS in-house projects in an indiscreet or ill-justified manner compromising collaboration between the respective parties will most certainly compromise project delivery. The different role-players having a direct influence on construction projects are indicated below in Figure 4.2.

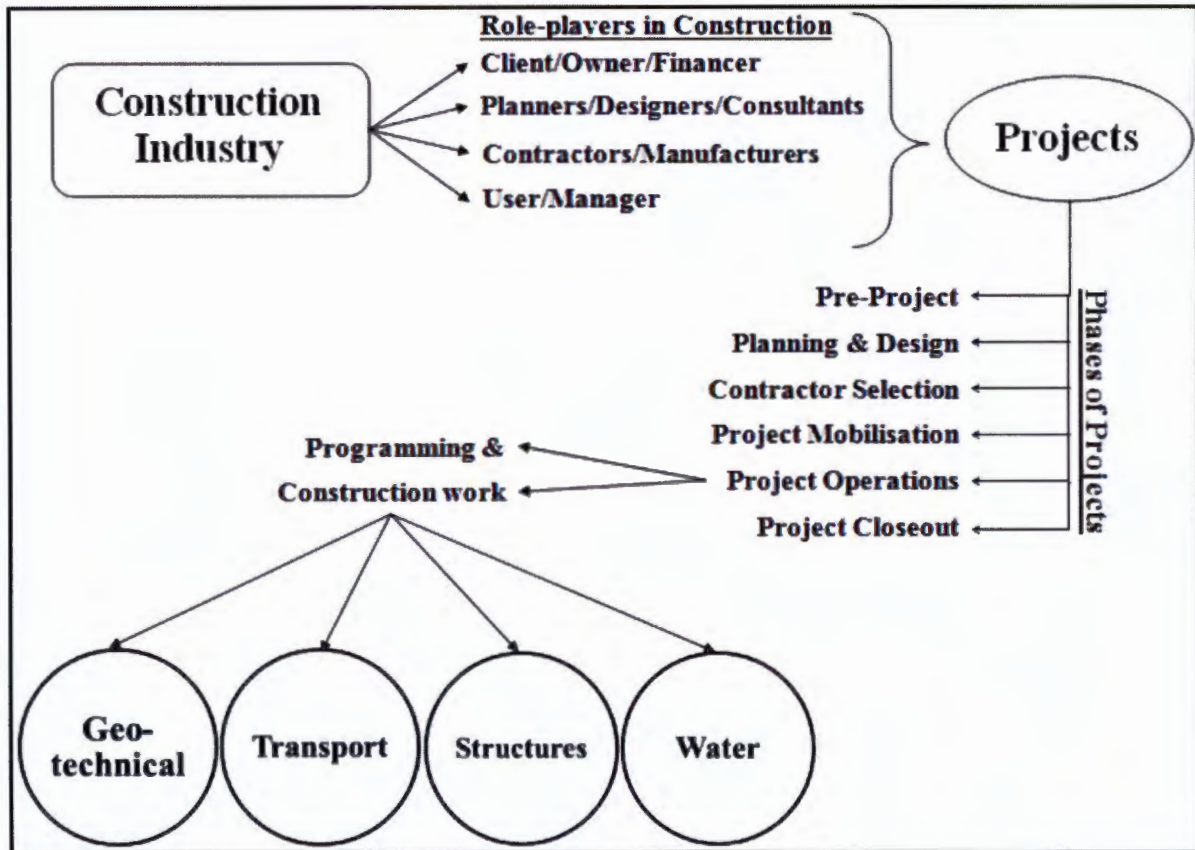


Figure 4.2 - Schematic representation of the focus areas within the construction industry

Source: Kriel (2013)

Construction projects are complex because they involve many human and non-human factors and variables. They usually have a long duration, various uncertainties and complex relationships among the participants. The need to make changes in a construction project is a matter of practical reality and occurs on basically each and every project. Even the most thoughtfully planned project may necessitate changes due to various factors (O'Brien, 1998).

Needs of the owner may change in the course of design or construction, market conditions may impose changes to the parameters of the project, a change in political expectations and technological developments may alter the design and the choice of the engineer. The engineer's review of the design may bring about changes to improve or optimise the design and hence the operations of the project. Furthermore, errors and omissions in engineering or construction may force a change. All these factors and many others necessitate changes that are costly and generally un-welcomed by all parties.

Due consideration must therefore be given from the initial stages (inception) of the project until commissioning. Contractual provision is required to define the conduct of owner, project engineer and contractor to participate in, and manage variations within a project. Systematic and proper procedures must be set in place to process a change from conceptual development until it materialises in the field. The reality is that an adverse environment exists among parties in the construction industry. Variations could be perceived as positive or negative to the preconceived goals of the professionals involved in a project. Therefore, a major variation must be managed and handled professionally in order to minimise project cost; schedule and consequential impact that may divert the project away from its targeted goals. To identify and analyse potential variations in a project as early as possible can enhance the effective management of the project. Learning from these variations is imperative because the professionals can improve and apply their experience in the future.

Dozzi and AbouRizk (1993) suggest that improvement of productivity on a construction project is better understood if the construction project is seen as a complete system. This system comprises of inputs such as materials, personnel, management and equipment as illustrated in Figure 4.3 below. Each of these inputs is measured in different units and used in different quantities. The construction project, as a system, consumes the inputs in order to deliver outputs. These outputs are called production units and in the case of a construction project, it can be a building, pipeline, road or any other end product of a construction project. The production unit is subject to the system used. If the system is defined by an activity, the production unit can be a laid brick, a standing wall or a complete building. The production units are therefore defined by the level and detail in which the productivity measurement is calculated. Within the system, there are factors influencing the productivity. These factors are grouped in three main categories namely: Management practices, Material timeliness and Labour effectiveness.

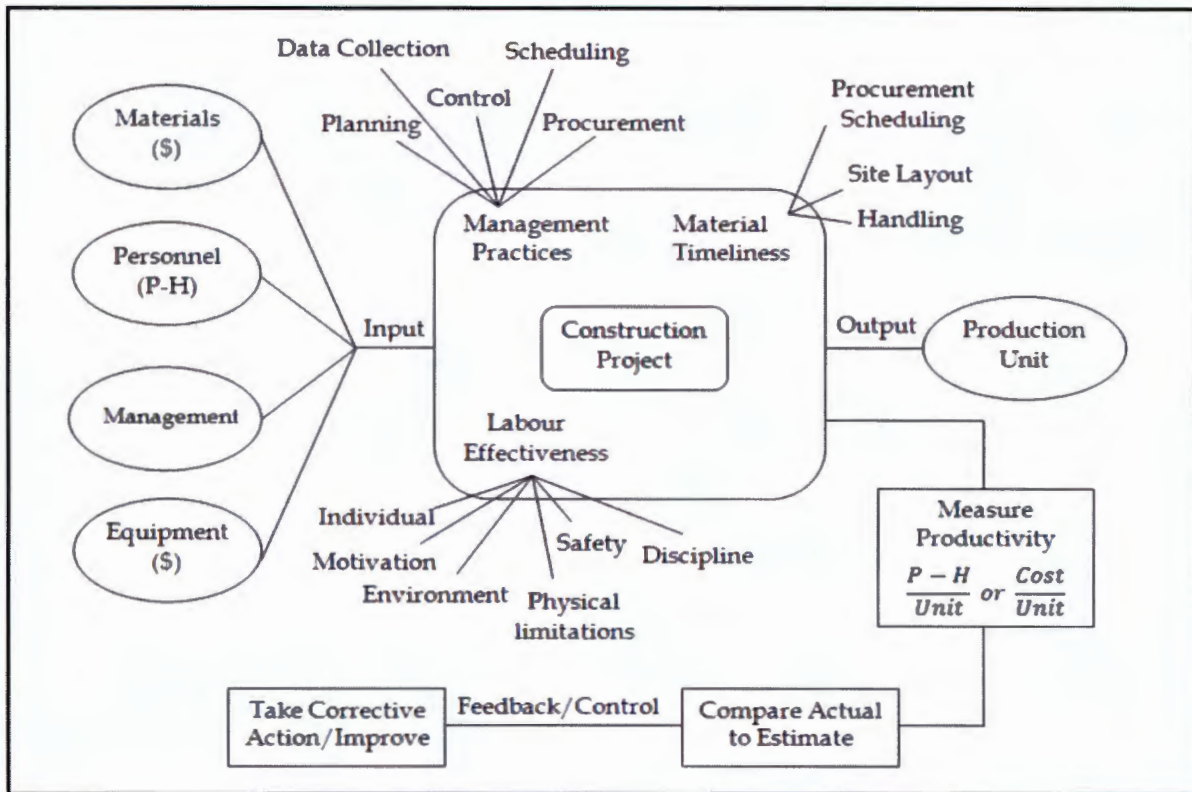


Figure 4.3 - System for productivity improvement

Source: Dozzi and AbouRizk (1993)

The five factors primarily influenced by management or the lack thereof are planning, data collection, control, scheduling and procurement. Effective planning in terms of phase sequence reduces the rework percentage. Accurate and timely data are important aspects of data capturing that could reduce the magnitude of negative effects by giving real-time productivity measures. Control has the ability to have positive and negative impact on productivity depending on the mechanisms used. Scheduling is a factor that management should value in order to achieve good productivity on site. The reason for this statement is because there are many areas, categorised under the scheduling factor that could negatively influence productivity. These areas include stop-go operations, ripple effects, multiple shifts, concurrent operations and overtime. These areas were shown to have negative effects on productivity if there is a lack of management assigned to these areas. Ineffective and inefficient procurement of labour will influence productivity negatively and the same will happen with the stacking of trades, crowding, late crew build-up and overstaffing.

Hendrickson and Au (2008) state that material handling should be attended to with great attention in order to reduce costs. The availability thereof directly influences productivity.

Areas within this category include handling, site layout and procurement scheduling. Procurement scheduling refers to the strategic sequence in which procurement during the construction phase must happen. The method of procuring must ensure that the risks regarding the availability of materials on site are minimised in relation to quality, acceptable lead times, deliveries to site in a timely manner and be cost-effective.

Labour effectiveness is another category, within the productivity improvement system, which influences productivity. This category includes factors mainly directed at the human quantities and qualities of labourers. There are six categories under this category and include qualities such as the individual, safety, motivation, environment, physical limitations and discipline. The personality of labourers play a role in the morale of the crew of labourers and the learning curve play a big role in terms of time savings in sustained productivity. The safety on a construction site is an inevitable responsibility and it can save time, cut accident costs and increase productivity. If some of the negative factors are mitigated, the motivation of workers will improve. The environment, within which the labourers have to work, is important and both the working environment and the external environment should be considered when productivity is managed. The physical limitations of labourers are real and foremen and supervisors need to remember the physical nature of the work. Discipline in terms of absenteeism and turnover is seen to be a major factor during construction and may cause the project to lose productivity and valuable man-hours.

4.5 “As-Is” OPERATING BUSINESS MODEL

4.5.1 Construction Industry Characteristics

From an environmental, structural and cultural perspective, the construction industry varies vastly from other industries. Studying the contents of Table 4.1 will not only confirm this viewpoint but also serve as proof that the construction industry differs fundamentally from other traditional organs or other forms of government institutions. A similarity can be

observed between the automobile industry and the workings in government departments.

| Construction industry | Automobile industry |
|---|---|
| Environment | |
| Higher labour intensity Lower material intensity Lower plant intensity Site production Mechanized production Discontinuous production Unit production | Lower labour intensity Higher material intensity Higher plant intensity Assembly line production Automated production Continuous production Mass production |
| Structure | |
| Fewer levels of management Not formalized Decentralized Much verbal communication Organic structure | More levels of management Formalized Centralized Little verbal communication Mechanistic structure |
| Culture | |
| Not well defined Highly communicative Result oriented Professional Pragmatic | Well defined Little communication Process oriented Organizational Normative |



Table 4.1 - Comparison of construction and automobile industry

Source: Brockmann & Birkholz (2007)

4.5.2 Industry dynamics

The construction industry in South Africa is becoming more competitive and facing increasing pressures regarding the high raw material costs and the shortage of skilled resources. The competitive forces (both industry and competitors) are analysed in accordance with the model developed by Michael Porter in order to understand how the five competing forces interact to shape the industry and segments. Summary of the five competitive forces is provided below.

- a. *Threat of new entrants*: The industry is characterised by a strong threat of new entrants: new entrants come from large experienced international construction companies, and local Small Micro Medium Enterprises (SMMEs).

- b. *Buyer power*: Buyer power in the industry is seen as moderate to high. Buyers in the market are mainly governmental departments and parastatal enterprises (such as Eskom).

- c. *Threat of substitutes*: Currently there are not any viable alternative sources of water supply emerging that are likely to impact on the need for new water infrastructure such as dams and water infrastructure.

- d. *Supplier power*:
 - (i) *Raw materials*: Due to global supply constraints and increased demand from emerging economies, raw material costs have increased substantially. Suppliers are in a strong position to take advantage of current market conditions.

 - (ii) *Talent shortage*: Skilled and experienced resources are in high demand - they are able to pick and choose from the jobs or projects they are interested in. e.
Degree of rivalry: Competition is moderate due to the current high infrastructure investment levels in the South African market. The majority of construction companies have also diversified, and do not depend only on bulk water infrastructure construction in South Africa.

4.5.3 Business model

DWS Construction specialises in the development of bulk water infrastructure primarily for Government and government owned entities. The current business model is graphically displayed below in Figure 4.4.

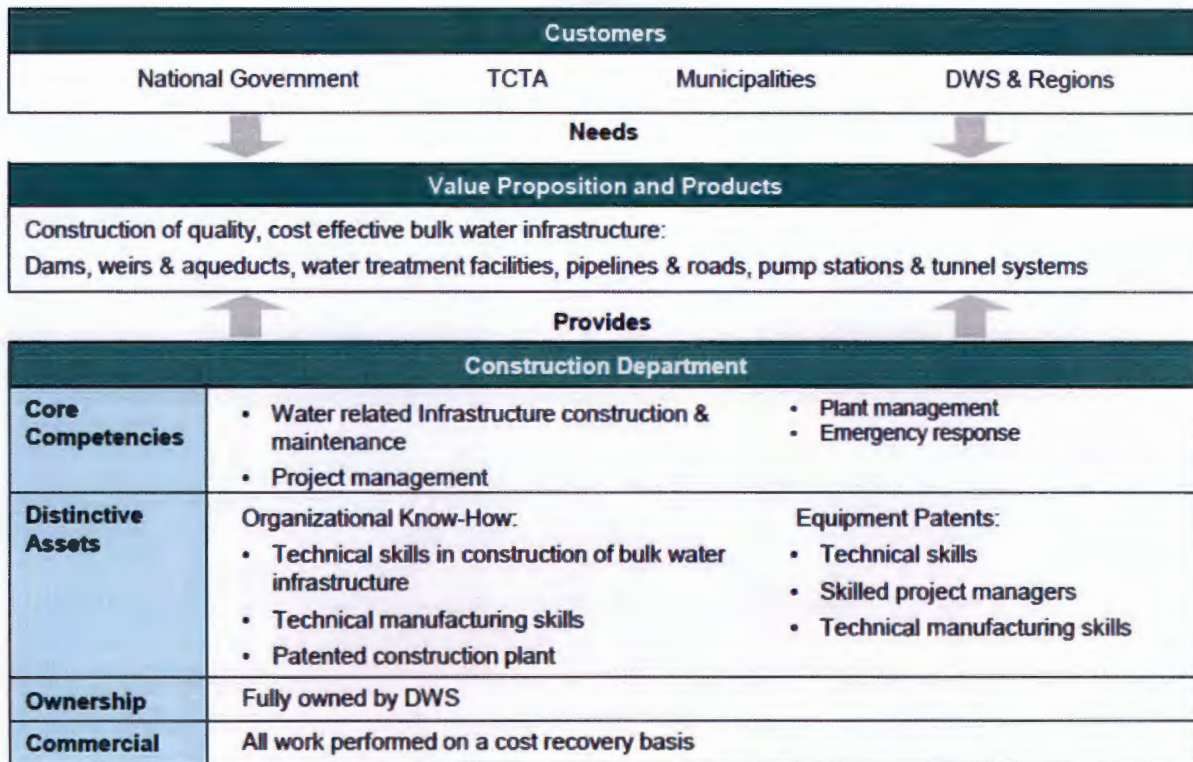


Figure 4.4: Graphical display of the DWS Construction business model

Source: TCTA (n.d)

4.5.4 Operating model

The capabilities as illustrated in Figure 4.5 below exist at various levels of maturity within DWS Construction Management. From Figure 4.5 it is clear that corporate capabilities are non-existent and/or lacking for strategic planning, enterprise performance management, contract management, knowledge management, emergency planning and emergency response. Localised (on construction unit level) capabilities are lacking from a contract management perspective. It is alarming to observe that the operating capabilities on localised level are more developed than those on corporate level. This is symptomatic of a situation where a lack of leadership combined with a dysfunctional management style at corporate level result in the operational efficiency at localised level to improve to such an extent where intervention from corporate level becomes obsolete.

In this type of situation, the lack of corporate capabilities may adversely influence the future existence of the organisation.

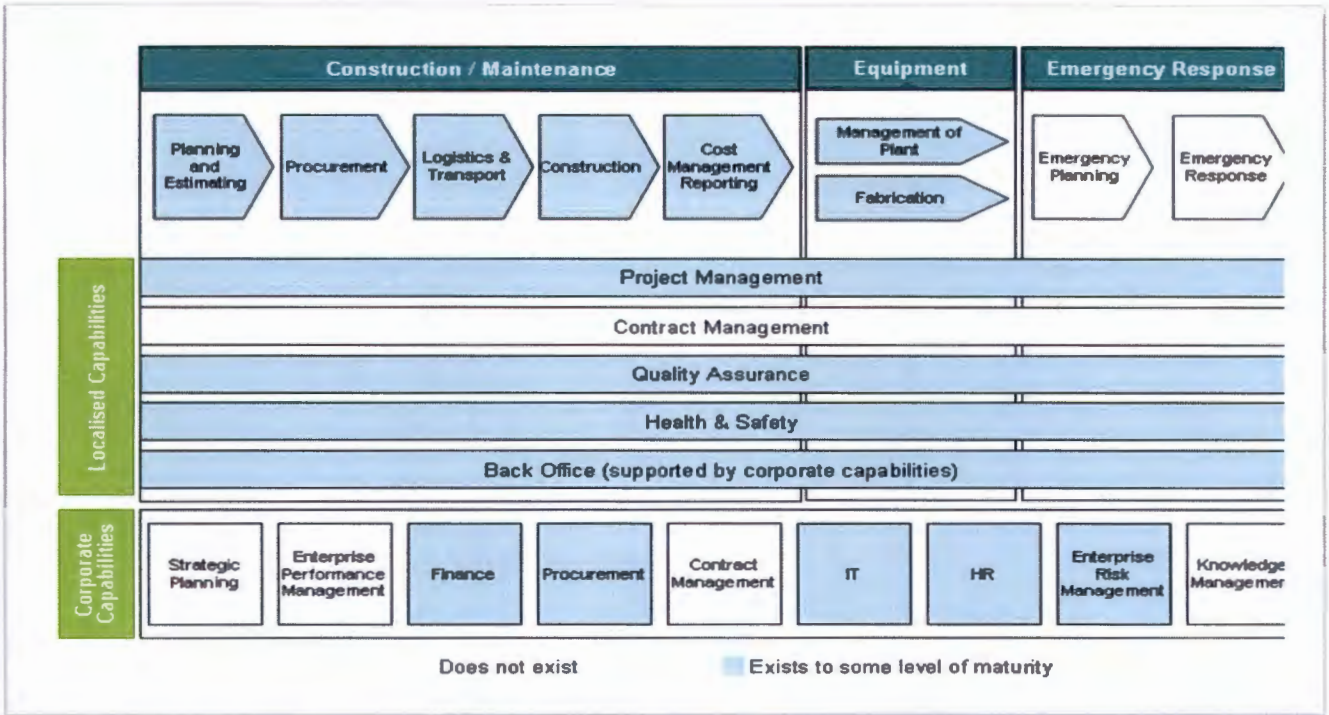


Figure 4.5: DWS Construction operating model (capabilities)

Source: DWS (2017)

Depiction of Figure 4.5 indicates the classification “exists to some level of maturity” improved to “self-sufficient” and those capabilities indicated as “does not exist” advanced to “exists to some level of maturity”. From an organizational perspective the DWS Construction operational model is structured along regional lines as displayed in Figure 4.6.



Figure 4.6: DWS Construction operating model (organisational)

4.5.5 Policies, legal parameters & constraints

DWS is governed by established laws, policies and procedures. Figure 4.7 provides a summary of the respective legislation, different policies and the impact thereof on the industry and more specific on DWS Construction.

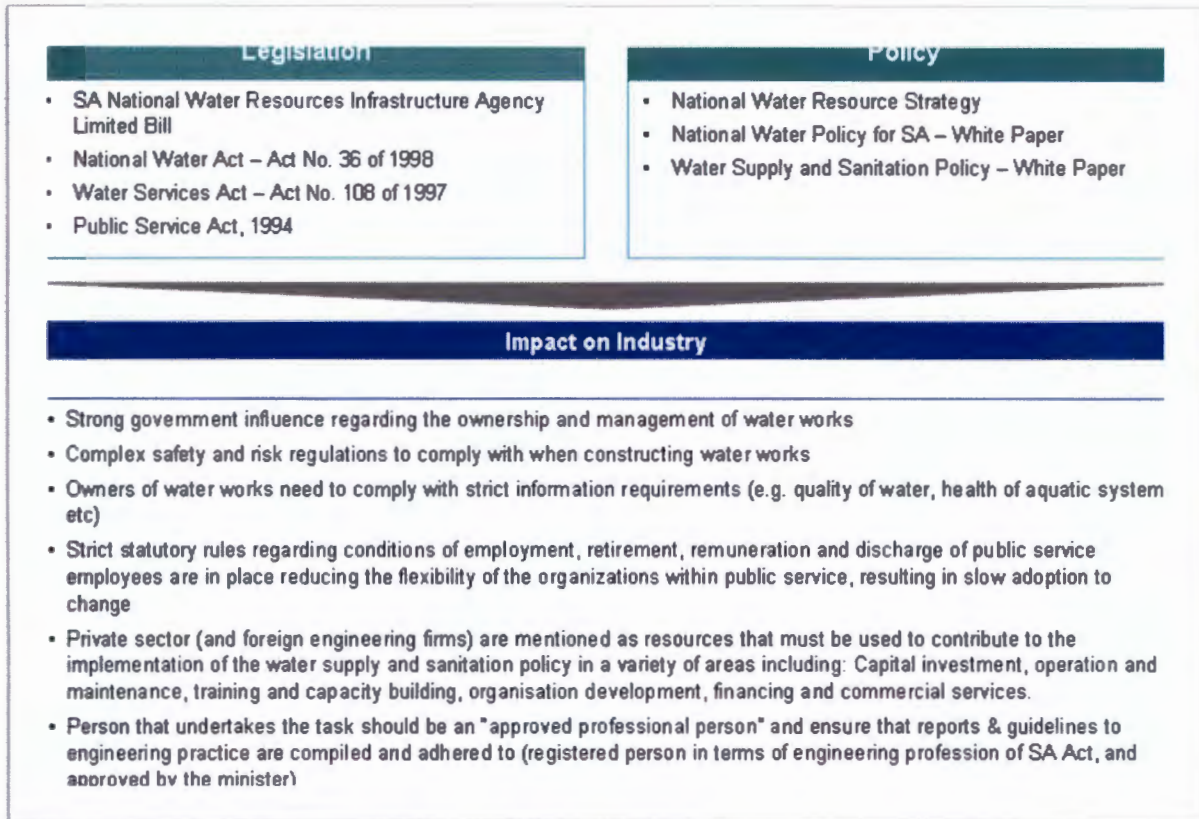


Figure 4.7: DWS legislation, policies and the impact on the industry

Source: DWS (2017)

4.5.6 Leading practice

4.5.6.1 Industry trends

Engineering and Construction companies are becoming more diversified in their offerings and going across borders to achieve higher profits and increased growth. Figure 4.8 graphically displays how the roles, responsibilities and functions of the construction industry changed over time. At this stage DWS Construction is limited in becoming diversified outside the parameters of their current core competence of constructing and maintaining water related infrastructure. DWS Construction also has no government mandate to operate across borders. Indications are that DWS Construction will continue to operate within a niche market within the water infrastructure construction sphere. The only way for DWS Construction to diversify will be to provide construction and maintenance services to other government departments.

This approach is plausible because DWS is currently the only national department still having an in-house construction capability.

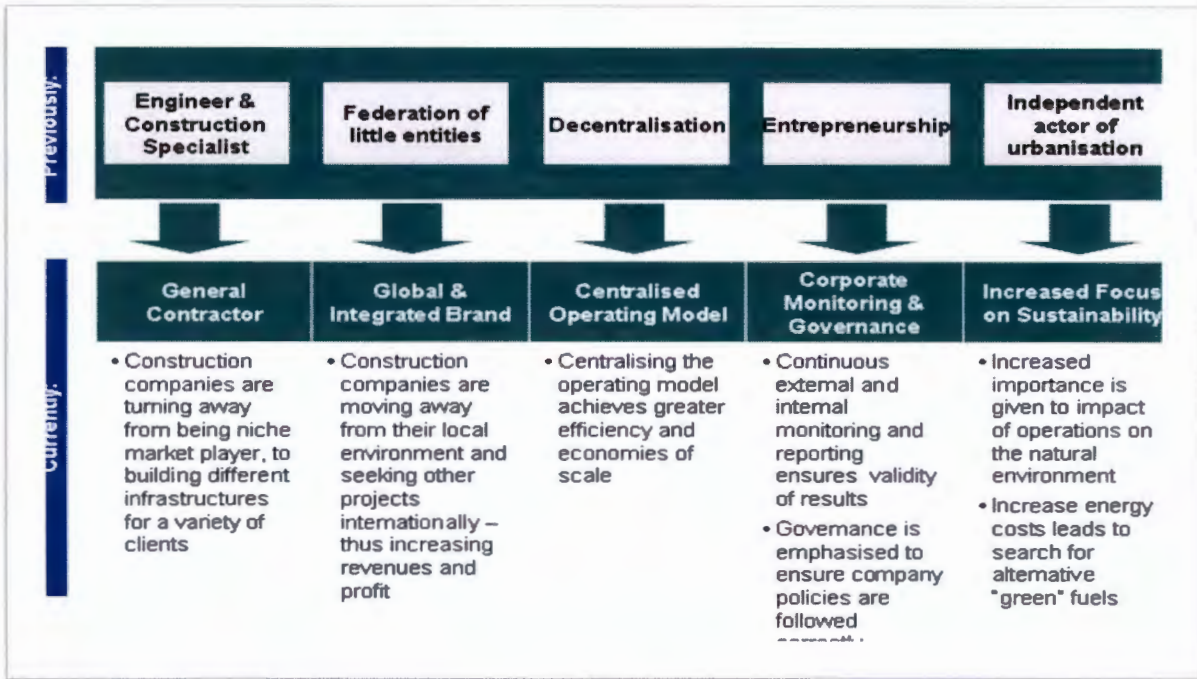


Figure 4.8: Leading practice industry trends

Source: Accenture research (2008)

Currently, DWS Construction is not following leading practices (moving towards a centralised operating model) in the construction industry and because of this approach might become less competitive in an open market. The current geographical organisation/dispersion of construction units is however advantageous to allow for optimisation operating models to achieve greater efficiency and economies of scale within geographical areas.

4.5.6.2 Summary of global leading practice ratings

DWS Construction was benchmarked against global construction leading practice on the following factors, namely; strategy, management, finance, risk human resources, information technology, tendering, sourcing, procurement and safety. DWS Construction appears to have much to learn from global construction leading practices. A summary of the key findings are provided in Figure 4.9.

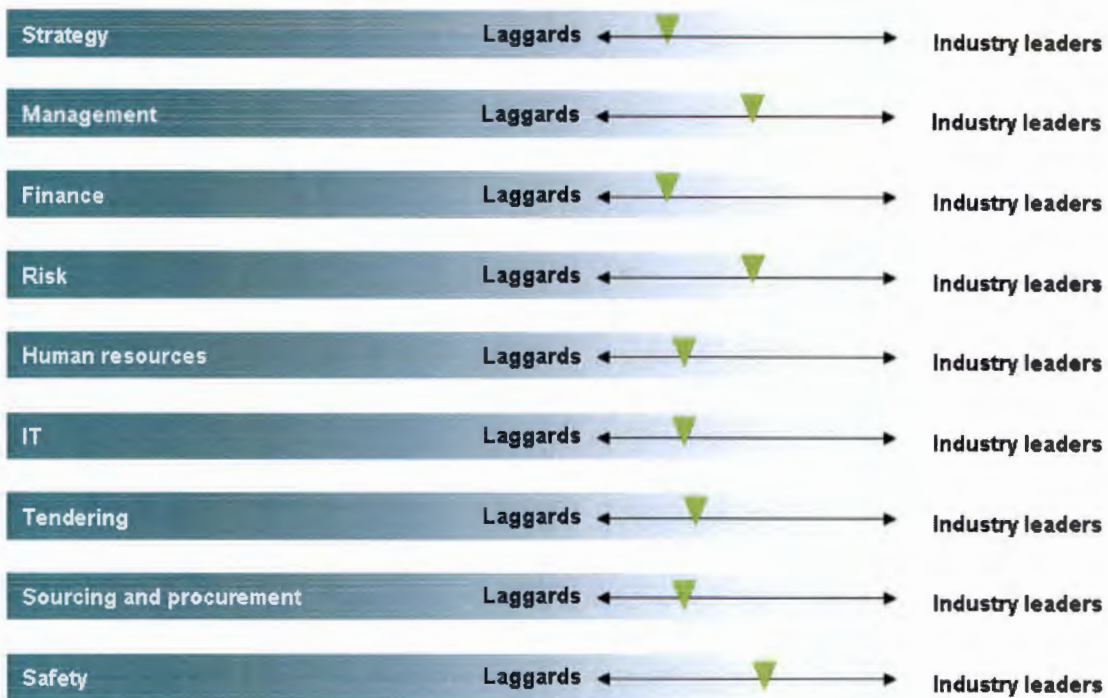


Figure 4.9: Summary of leading practice ratings

Source: Accenture research (2008)

DWS Construction rates moderately on factors such as management, risk and safety in comparison with global leading practice. However, against all the other factors, it lags behind global leading practice. Those operational factors practiced on a daily basis on geographical unit level are also those factors with a moderate rating. The factors lagging are those factors driven by policy and procedures which should be a head office function seen from a government perspective. One could also argue that those factors are influenced by the policy decision makers relative to the larger government sphere and not aligned with the functions of DWS Construction and could ultimately have a detrimental effect on the long-term sustainability of this organisation.

4.6 ORGANISATIONAL STATISTICS AND TRENDS

4.6.1 Human Resources

The current personnel strength of the CD: CM as at 01 June 2017 is attached as Annexure D. Because of cumbersome recruitment processes the DWS Construction personnel strength declined during the previous financial year resulting in a complete misalignment between the amounts of work to be performed in relation to the human resources required to perform such work ultimately compromising the performance ability of DWS Construction as a whole.

The involvement of the DWS Branch Corporate Services which is fully conversant with Public Service Act appointments with the recruitment and selection processes further caused frustrations. The inability of Corporate Services to understand the need for temporary National Water Act appointments to support the temporary nature of projects undertaken by the DWS Construction further caused structural problems. The fact that human resources are needed in accordance with the activities dictated by the respective project construction programme received no understanding from those residing outside this organisation.

4.6.2 Construction equipment assets

From a balance sheet perspective DWS Construction possesses no assets other than the construction equipment resorting under the Directorate: Construction Equipment (see Figure 4.4). A summary of the value of construction equipment is illustrated in Table 4.2 below.

| Equipment Type | Qty | Current Book Value | Current Replacement Cost |
|----------------------|------|--------------------|--------------------------|
| Yellow Fleet & Plant | 1412 | R 329 010 928.00 | R 1 611 225 000.00 |
| White Fleet | 531 | R 23 383 948.00 | R 116 245 000.00 |
| Stationary & other | 432 | R 19 131 500.00 | R 123 730 432.00 |
| Grand Total | 2375 | R 371 526 376.00 | R 1 851 200 432.00 |

Table 4.2 – Construction equipment asset value

Source: DWS (2017)

4.6.3 Financial performance

The annual expenditure patterns of DWS Construction over the past 5 years indicates monetary value of the work since FY2010/2011 until 2013/2014 on average grew at R 115.1 million per year (or at 8.36% expressed as a percentage of the total scope of work in 2010/2011). If an annual inflation rate of 6% is taken as norm the real growth over this period is in the order of 2% (in line with national GDP growth). However, because of changes in recruitment and selection processes and the withdrawal of certain procurement delegations, the total expenditure dropped in 2014/2015 onwards until end of FY2016/2017 with R 278.8 million (-15.17% expressed as a percentage of the total scope of work in 2014/2015).

Closer scrutiny of the figures revealed that the cost of employment did not change substantially over the period. In attempts of Construction Units to perform in accordance with their respective business plans and not having enough human resources to their disposal, this has resulted in an increase in the amount of overtime work performed. This conclusion is backed up by further breakdowns of the cost of employment.

The withdrawal of certain procurement delegations and long lead times with national bids has negatively impacted the ability of this organisation to perform in non-financial terms, and ultimately affecting overall financial performance. It is clear that expenditure trends are dictated more by the procurement of goods and services than the cost of employment. Unfortunately, as in the case of overtime work Construction Units have no alternative method to deal with procurement constraints.

4.6.4 Project “order book”

Projects currently under by DWS Construction are indicated in Annexure E. Adopting an approach allowing the DWS Construction to complete a project which had been started means that DWS Construction will only be in a position to formally complete all work in the financial year 2017/2018 (with no additional work issued). Based on this scenario potential projected expenditure is illustrated as per Table 4.3.

| Financial Year | 2014/2015 | 2015/2016 | 2016/2017 | 2017/2018 |
|--|-------------|-------------|-----------|-----------|
| Amount (R) | 1 906 818.4 | 1 631 309.6 | 375 528.5 | 160 565.0 |
| Rand value expressed as a % of 2014/2015 | 100 | 86 | 20 | 8 |
| Rand value expressed as % of the total | 47 | 40 | 9 | 4 |

Table 4.3 – DWS Construction Work in progress

Source: DWS (2017)

The breakup of these projects in the respective programmes is indicated in Table 4.4.

| Programme | No of Projects |
|----------------------------|----------------|
| RBIG | 13 |
| Water Services | 4 |
| Infrastructure Development | 2 |
| DSRP | 4 |
| Regional Clusters | 11 |

Table 4.4 – DWS Construction Work in progress per different programme

Source: DWS (2017)

4.7 CONCLUSION

This chapter has tabled a wide-ranging case study analysis of business efficacy of DWS Construction on the ability to operate similarly like private sector construction business unit. The study advocates that all DWS Construction is not currently positioned to operate optimally in the private sector dominant industry due to government bureaucracy and policy directives. This means that Government policy constraints also make it impossible for DWS Construction to compete in a commercial environment. Drastic changes to the current strategic architecture are required to corporatise DWS Construction.

This study has demonstrated that projected future existence of DWS Construction is not certain mainly because of its operational inefficiency, and fierce competition for securing construction work by the private sector contractors. Contrarily, the study also indicates that DWS Construction has a potential to be competitive, only if some of the administrative restrictions on procurement of construction raw materials and recruitment of personnel are relaxed.

Interpretation of the research finding is presented in the next chapter. Recommendations from the study followed by the study conclusion is also be tabled in the next chapter.

CHAPTER FIVE

5. INTERPRETATION OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

The DWS, NWRIB and CD: CM, all being organs of the state, are classified as typical not-for-profit organisations with the ultimate function to transform funding streams into tangible products and services and by doing so satisfying target groups in a cost-effective manner. The Chief Directorate Construction Management (CD: CM) at DWS Construction must also be seen as operating within the competitive environment of the commercial construction environment (industry). One substantial difference between Construction Management and the general construction industry is that DWS Construction is not allowed to make a profit or to participate in a competitive open bid tender process in obtaining contracts. Construction projects are sponsored by government (annual budgets). DWS' utilisation of DWS Construction as a preferred contractor to maintain existing water infrastructural resources and to build new ones is therefore a highly contentious issue seen within the competing construction environment. The future existence of DWS Construction within the NWRIB and ultimately within DWS is dependent – on the ability of DWS Construction to be competitive.

Despite some alignment between the DWS and NWRIB vision/mission statements, the creation of tension between the respective vision/mission statements and current reality is found to be lacking. This ultimately results in the absence of a common goal-seeking dynamic which should be present throughout the organisation. The DWS Construction requires its own vision/mission to be aligned with the DWS delivery model.

Different key focus areas were identified to facilitate a change process taking DWS Construction forward. The status of the current situation with respect to such specific focus area as well as the action required to ensure the desired results could be obtained were obtained to take this organisation forward.

Tables below are the illustrations of the findings with proposed recommendations applicable to DWS Construction.

| Key focus area | Current status | Desired result |
|---|--|--|
| 1. Operational efficiency | | |
| (i) Build technical capacity | | |
| <p>To build and retain technical capacity to ensure the seamless implementation and execution (construction) of water resource infrastructure projects</p> <p>Project management capacity</p> | <p>The CD: ID has limited project management ability but because of officials retiring the capacity is continuously depleted</p> | <p>Project management capacity to be fully developed in the CD: ID through new recruitment efforts and training courses. Capacity across the NWRI to be developed in line with a 10-year plan (new and rehabilitation of projects inclusive of a maintenance capacity). Standardise efforts through the implementation of the IDMS CIDB 2010 Toolkit throughout the NWRI</p> |
| <p>Design engineers</p> | <p>CD: ES still has capacity but not aligned with the needs of DWS. Newly recruits will take another 5 years to become more proficient</p> | <p>Design capacity to be developed to adhere to 10-year project plan</p> |
| <p>Costing experts</p> | <p>Ability of the CD: CM aligned with own needs. Neither CD: ID nor CD: ES has capacity to perform independent assessments of pricing efforts done by CD: CM</p> | <p>Through training courses and personal development initiatives and the rotation of professionals this capacity should be developed to exist in a proficient manner in all NWRI Chief Directorates</p> |
| <p>Contract management</p> | <p>Contract management ability exclusively vested in the CD: CM with limited capacity available elsewhere in DWS</p> | <p>Through training courses and personal development initiatives and the rotation of professionals this capacity should be developed to exist in a proficient manner in all NWRI Chief Directorates</p> |
| <p>Project Management Office</p> | <p>No in-house capacity exists in DWS to manage projects across project life cycle phases/stages and across the different Chief Directorates. With current functions provided by consultants in the office of the DDG: NWRI, DWS' own ability further declines while own in-house ability is not further developed</p> | <p>A separate Chief Directorate to perform project management functions should be created to over time take over the functions of the CD: ID. These two Chief Directorates should operate in parallel for at least 24 months</p> |

| Key focus area | Current status | Desired result |
|--|-------------------------------|---|
| <p>(ii) Procurement processes</p> | | |
| <p>Ensure the procurement of goods and services is done in a timely manner to support construction business operations</p> | <p>SCM processes too slow</p> | <p>Have alternative supplier/s in case of non/poor delivery of goods and services</p> <p>Set predefined timeframes for different processes and put the necessary remedies in place as alternative not to compromise service delivery</p> <p>Ensure process flows are optimised and continuously optimised</p> <p>Ensure the SCM processes to be implemented is construction industry friendly to support the construction efforts of the CD: CM</p> <p>Improve working relations/ governance between CD: Finance (office of the CFO) and end users</p> <p>Ensure weekly feedback to encourage effective and efficient two-way communication between SCM Committees and end users</p> <p>Strategic sourcing initiatives/ mechanisms to be implemented (user friendly terms contracts of frequently used construction materials)</p> <p>Implement a procedure to periodically benchmark/revisit SCM processes and the functionality of approval authorities to ensure continuous improvement of procurement efforts</p> |

| Key focus area | Current status | Desired result |
|---|--|--|
| (ii) Procurement processes (cont) | | |
| Development of local SMMEs | Too low threshold values | Engage with National Treasury to ensure threshold values of acquisition management delegations are lifted |
| | Other than the 80/20 principle no other provisions are available to create scope for participation by local SMME, women and youth owned businesses | Engage with National Treasury to set aside a larger portion of the 20% to encourage participation by local SMME, women and youth owned businesses |
| | No proportion of local procurement reserved for SMME, women and youth owned businesses | Engage with National Treasury to reserve a minimum percentage of local procurement for SMME, women and youth owned businesses |
| Develop an effective and efficient Supply Chain Management System | Not supporting the business operations of the CD: CM | To incorporate Chapter 30 of the Draft Treasury Regulations in collaboration with the Draft Standards to develop a Construction Procurement. This task must form part of the TOR of the consultant to be appointed |

| Key focus area | Current status | Desired result |
|----------------|----------------|----------------|
|----------------|----------------|----------------|

(iii) Human resources (Recruitment and Selection & Retention)

| | | |
|--------------------------|--|---|
| Recruitment of personnel | Recruitment and selection processes are too slow and cumbersome to support business operations | Revisit delegated authorities and place decision-making back in the hands of the end user for lower rank personnel required |
| | | Develop a head-hunt process to fill higher positions with fast response times to support business operations |
| | | Develop a model to retain staff through the formulation of a controlled environment of making counter offers |
| Succession plan | No succession plan exists | Development and implementation of a workable succession plans |

| Key focus area | Current status | Desired result |
|---------------------------------|---|---|
| (iv) Business continuity | | |
| Ensure business continuity | The award of projects based on an <i>ad hoc</i> basis ultimately compromising the ability of the CD: CM to maintain high performance levels and the ability to build, maintain and extend operating capacity is lacking | <p>Develop a growth strategy to cater for real growth to be at least 10% (excluding the effects of inflation) on a year on year basis and then secure project availability on continuous basis purely based on the performance ability of the organisation. Project allocation must be based on the long term strategic plan of the CD: CM to focus on water infrastructure projects and those construction activities the organization can do best</p> <p>The water resource infrastructure construction industry should not be monopolized and based on the growth strategy adopted by the CD: CM other work must be made available to the commercial sector, SMMEs and emerging contractors. The process to allocate projects to the commercial sector, SMMEs and emerging contractors must be a joint decision-making process including CD: CM</p> <p>Implement a multi-year theoretical order book to ensure the sustainability of CD: CM through the timely allocation of projects (minimum 3 years in advance) is maintained</p> |

| Key focus area | Current status | Desired result |
|--|---|--|
| (v) Policies | | |
| Develop new and improve current policies | Policies are designed to cater for public service administration functions/activities and not for the different environment the CD: CM competes in seen from a commercial construction industry perspective | <p>Policies to support the construction activities and efforts of the CD: CM to implement projects within set timeframes and costing structures</p> <p>Develop construction industry related policies (e.g. Recruitment & Selection, Housing, Plant Management, HR Management, PMDS, Financial Management, etc.)</p> <p>Labour Relations Management should be done outside the confines of the public sector and more industry related</p> |

| Key focus area | Current status | Desired result |
|--|--|--|
| (vi) Business-orientated support systems | | |
| Develop construction industry-related systems to support and improve business operations CD:CM | <p>The current ERP system (SAP) cannot compile, issue and track Payment Certificates issued on a monthly basis for work performed and measured in the same month</p> <p>SAP cannot produce actual monthly cost reports broken up into the various construction activity items as defined by the respective project Bill of Quantities (which was used during the actual scheduling and estimation or pricing of the project)</p> | <p>It is proposed that the SAP ECC6 ERP system should be replaced by with Candy/Buidsmart which has the following advantages:</p> <p>Link the BOQ with the Gantt chart</p> <p>Display the relationship between the Gantt chart and income generated</p> <p>Display the relationship between actual expenditure and income on construction activity item level and produce variance reports (real time and/or any other periodicals/frequencies as and when required)</p> |

| Key focus area | Current status | Desired result |
|--|--|--|
| 2. Transformation | | |
| (i) Reflect population on salary levels 10 to 12 | | |
| Ensure workforce reflects population on all organizational levels taking due cognisance of diversity, demographics, scarce skills constraints. | <p>Not enough HDIs in the ranks of CMs, Ass CMs and Site Agents (race, colour, youth and gender)</p> <p>Compression of a number of ranks on salary level 12 compromising lines of command in the organizational structure</p> <p>A stagnant organization creates limited opportunity for HDIs other than to wait for someone to resign or retire</p> | <p>Determine the amount of positions to be filled by HDIs (race, colour, youth and gender) to represent population and set a timeframe to become fully represented</p> <p>Open up salary level 13 for CMs</p> <p>Create additional scope for implementation through the adoption of a growth strategy to deal with the "limited opportunity situation". Construction East must split up into different units each with its own CM with effect of 01/04/2018 (on a trial basis for a period of 6 months). If the methodology proves to be successful the concept must be rolled-out to other construction units</p> |

| Key focus area | Current status | Desired result |
|---|--|--|
| (ii) Succession planning | | |
| Develop and implement a succession plan | <p>No approved succession plan exists</p> <p>Currently the practice of replacement planning through recruitment and selection processes to fill vacancies on the one end and succession management to cater for unforeseen replacements of key individuals at the other is grossly confused with succession planning</p> | <p>A succession plan through personal development and mentorship programmes should be developed and implemented to acknowledge the effects of an ageing workforce, foreseeable increases in the number of employees becoming eligible for retirement, actual and anticipated skills shortages, impacts of employment equity programmes, etc. This must be done through recruitment, retaining, development and promotion initiatives. The succession plan must be aligned with construction industry principles.</p> <p>Formal leadership development programme to be developed through approved tertiary training</p> |

| Key focus area | Current status | Desired result |
|---|--|--|
| (iii) Black-owned construction companies | | |
| The development of black-owned construction companies | <p>No formal development programme and or project specific targets are set to facilitate black-owned construction company development through the implementation of in-house projects.</p> <p>The Construction Sector Broad-Based Black Economic Empowerment Charter Version 6 (Final) is the only working document on this aspect</p> | <p>Set targets for the involvement of black-owned construction companies in in-house construction projects</p> <p>Encourage and assist the registration of black-owned construction companies with the CIDB</p> <p>Through in-house projects encourage and assist black-owned companies to register at higher categories as per the CIDB registration categories</p> |

| Key focus area | Current status | Desired result |
|--|--|--|
| (iv) Professional registration with ECSA | | |
| To develop a programme to assist candidates to register professionally with ECSA | Inconsistent approach benefitting individual candidates with the best connections most | Develop a formal training programme in CD: CM to facilitate successful registration of ECSA professionals. Establish a CD: CM ECSA registration committee to oversee the construction unit efforts and appoint an ECSA champion per construction unit to oversee the efforts of specific individual candidates at a specific construction unit |

5.1. INTERNAL ENVIRONMENTAL CONTEXT

In order to facilitate the proposed change process, adopting the following Strategic Architecture could be advantageous to the DWS Construction.

5.1.1 Participation strategy



5.1.2 Customer selection

The careful selection of customers in the commercial construction industry is of utmost importance in order to ensure long-term sustainability. The fact that DWS Construction is a not-for-profit organization, does not change the perspective of being in the midst of a customer-centric age. As indicated in the current business model, DWS Construction executes projects for customers like DWS national, CD: RBIG, CD: Operations and Maintenance (O&M) and Municipalities.

If DWS Construction wants to strategically position itself to gain a significant market share, it has various options to expand or retain strategic customer selection:

- Clearly define which customers can offer multi-year projects on a sustainable basis.
- Align the existing or design a new business model with a focused approach on efficiency, effectiveness and competitiveness. The current business model of DWS Construction is not conducive to improvement of customer selection.
- DWS Construction will have to diversify its activities in order to provide construction and maintenance services to other government departments.

5.1.3 Product/service spread

DWS Construction will have to review its current situation in terms of its mandate of service delivery, as well as its product competitiveness. There are major and competent competitors in the construction industry that are waiting to enter the “reserved” market that it operates within. DWS Construction needs to focus on what it can do best in order to give it a competitive advantage. For more than fifty years the construction directorate of DWS was known for its ability to construct dams, canals, pipelines and pump schemes, and this should be regarded as its core business. Currently, DWS Construction has diversified extensively, leading to the acceptance of work outside the spectrum of its core business where a lack of experience, knowledge and capabilities could influence the successful delivery of its product and service. Few organizations have the ability to successfully deliver the full spectrum of water related infrastructure, as some projects require specialised methodology and techniques.

If the DWS Construction wants to diversify its service spread in order to increase the client / customer base, the business model will have to be re-designed and implemented accordingly.

5.1.4 Channel/delivery model

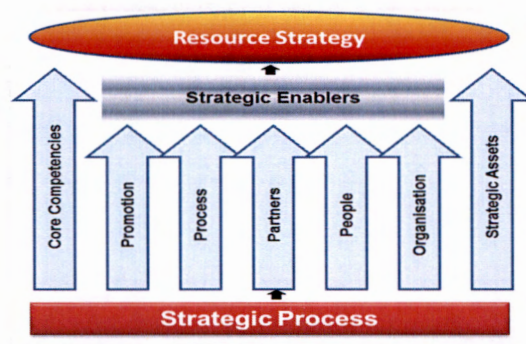
The need for where the implementation of major water infrastructure projects should take place is analysed and decided upon by DWS on a national level. This implies that DWS Construction does not normally have the choice to decide where to work. To cater for this, the respective “Head Offices” of the four construction units of DWS Construction were strategically located throughout the country; hence, the decision of which unit must do what work becomes easier. Currently there is not a good balance in terms of workload.

Some construction units are flooded with work and are experiencing rapid growth, while others are scaling down their activities, a clear indication that improvement to the existing delivery model is becoming necessary.

5.1.5 Geography

As mentioned above, the DWS Construction has the ability to cover the entire geographical area of South Africa with the strategic positioning of its construction units. Few competitors in the construction sector can compare with DWS Construction in this regard. Therefore, it is foreseen that the current geographical location configuration should be left unchanged.

5.2 RESOURCE STRATEGY



5.2.1 Strategic enablers

Ungerer *et al.* (2015) describe strategic enablers as “the key factors that are utilised to support and enable you to deliver business model components consistently”. The people element is perhaps one area that negatively influences the current responsive ability of DWS Construction. This proposition is seen as twofold:

- a. The so-called brain-drain of engineering professionals from the department; and
- b. The inefficient recruitment and selection policy of DWS Construction does not create a conducive and/or supportive environment for successfully recruiting technical skills.

In order to make the DWS Construction more competitive and to improve service delivery, management will have to decide how the elements of promotion, process, partners, people and organisation will have to be utilised and incorporated into the resource strategy.

5.2.2 Strategic assets and resources

Strategic assets and resources are defined as “The key assets and resources that will be leveraged to make the business model a reality” (Ungerer *et al.*, 2015).

The DWS Construction owns an impressive resources component in terms of plant that can be utilised effectively to leverage its competitive advantage in the construction of water related infrastructure. By keeping the existing fleet in good condition, and by continuously growing the plant component in relation to the growth strategy of the department, DWS Construction can competitively position itself in the market.

By recruiting and retaining experienced people, DWS Construction can deploy its strategic assets to work even harder thereby improving both overall performance and its competitiveness.

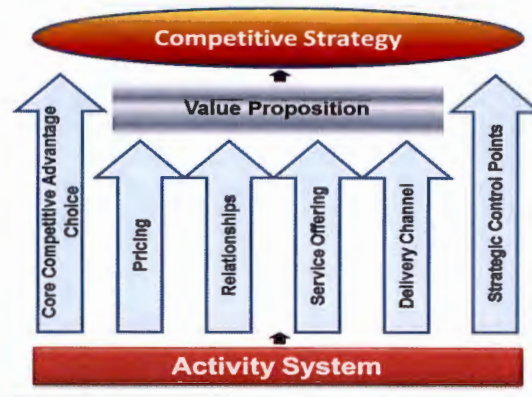
5.2.3 Core competencies

Despite losing some valuable human capital over the last three financial years, DWS Construction still employs extremely competent and experienced engineers and technicians. “Old hands” within the Chief Directorate and Construction Units contribute significantly towards the core competencies as a strategic resource. However, possessing the strategic assets and human resources only, is not enough. The core competencies are negatively impacted when the combination of people, systems, resources and processes are evaluated. The lack of a fully integrated ERP system, as well as lengthy and ineffective procurement procedures and processes hamper the optimal utilisation of the core competencies of DWS Construction. Under the current conditions the performance of DWS Construction does not meet the three criteria of core competencies:

- a. Creation of unique customer value;
- b. Competitive benefits; and
- c. Leveraged in multiple target markets.

What is however important, is the fact that DWS Construction does have the expertise to construct water infrastructure, and this should be regarded as its core competency.

5.3 COMPETITIVE POSITIONING STRATEGY



5.3.1 Core competitive advantage choice

According to Porter's competitive advantage approaches, DWS Construction has a focussed strategy based on differentiation, because of its value-differentiating offer which is focussed on DWS National, CD: RBIG, CD: Operations and Maintenance, Municipalities and the TCTA predominantly. The provision and delivery of water infrastructure to these customers is an individualised and customised market.

5.3.2 Differentiated value proposition

The client base of DWS Construction has an opportunity to make use of this organisation in a sustainable way by considering offering the following:

- ✓ Delivery of water infrastructure projects which are in line with industry prices
- ✓ If good relationship dynamics are guaranteed
- ✓ If projects can be completed in a timely fashion, and;
- ✓ When DWS Construction is able to supply the required services

DWS Construction has not demonstrated throughout this study its ability to offer a complete differentiated value proposition within its current business model. This observation is based on evidence that the current business procedures and processes are not aligned with each other, and this accounts for major operational inefficiencies. DWS Construction can therefore not pass on any significant value propositions to customers. This supports the idea that a new improved operating model will have to be developed and adopted.

5.3.3 Strategic control

DWS Construction has a very effective choke point effect in the sense that it does not have to enter into commercial tender procedures to secure work. By delivering work economically; within specification; and within time, Clients belonging to DWS Construction are highly likely to be “locked in”. It will be unnecessary to go elsewhere to find better companies as the current working relationship would be convenient, effective and efficient.

The learning effects that were established and attained over time are difficult to replicate by competitors and holds a strong strategic control effect for DWS Construction. The different types of knowledge represent the complex part of the accumulated learning kept within DWS Construction.

5.3.4 Activity system

The strategic position that DWS Construction has within the DWS National framework enables it to do work for various government departments without having to enter into commercial tender procedures. Of strategic importance is the fact that DWS Construction can assist in emergency work with the fiscal back up from government. This is something that competitors cannot easily compete with.

5.4 PROFIT STRATEGY



DWS Construction is a not-for-profit organisation. Unless a new business model is required, this organisation will have to continue doing business in the same manner.

5.5. CONCLUSION

DWS Construction is heading for eventual closure mainly because of its operational inefficiency. Government policy constraints make it impossible for DWS Construction to compete in a commercial environment. Drastic changes to the current strategic

architecture are required to corporatise DWS Construction. Even if CD: CM remains in its current state, the strategic architecture should be reconsidered as a matter of urgency to cater for the following limitations:

Strategy: Lack of clear vision and mission.

Policy/Process: Restrictive government policy; delayed communication of construction budget from National Treasury; no standardised performance measurement framework; lack of knowledge management; inefficient procurement policy; no risk management processes in place; and no standardised processes, guidelines and protocols.

Technology: Absence of the appropriate technology to manage the business.

People/Organisation: HR not employee focussed; ineffective recruitment strategy; and inadequate change management.

Facilities & equipment: Inaccessible remote sites.

The inability of DWS Construction to address the critical factors mentioned above as part of a new strategic architecture will have a detrimental effect on the future existence and sustainability of DWS Construction.

5.6 RECOMMENDATIONS

A principled decision is required from the DWS Top Management to address the current undesirable state of affairs as covered under the key focus areas as discussed in this chapter of the report. Political will to make a difference is seen as a fundamental requirement to implement the actions as defined under the column marked “*desired results*”. Further delays in implementing the proposed action to achieve the desired outcomes to improve the operational efficiency of DWS Construction may further affect the performance ability of DWS Construction negatively. Reluctance to address these problem areas may tarnish the ability of this organisation to perform and ultimately lead to the eventual closure of DWS Construction. A principled decision to provide DWS Construction with a mandate to manage itself in a more autonomous manner taking due cognisance of the different environment within which the CD: CM is considered as a possible prerequisite for the future existence of DWS Construction.

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Appendices

APPENDIX A: Research data collection instrument

APPENDIX B: Ethical clearance certificate

APPENDIX C: Turn-it-in Report

APPENDIX D: Certificate of Language Editing

Semi-structured Interview Guide

Research Question Set No.1: Public sector business process

- a) Question 1. What are the challenges with the public sector business process?
- b) Question 2. Is the public sector able to operate similarly as a private sector business unit?
- c) Question 3. What are the limiting factors of having a successful public sector business unit?
- d) Question 4. Which public sector business processes can be amended to suit a private sector business model?

Research Question Set No. 2: Public sector business model

- e) Question 5. In your opinion, is it viable to have public sector business unit which operates similarly as a private sector business entity?
- f) Question 6. What are the potential benefits of having an *"in-house"* business unit which operates similarly like a private sector business entity?
- g) Question 7. What would enable a successful public sector business unit which operates in a private sector dominant environment?
- h) Question 8. Is the South African public sector able to create an enabling environment for a public sector business unit to successfully operate and function?
- i) Question 9. What are the stimulating factors applicable to a successful public sector business unit?
- j) Question 10. What are the key elements that would encourage efficacy of a financially viable public sector business unit?