

Opportunities and barriers for greening procurement in South African Provincial Public Entities- perspectives from KwaZulu-Natal

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ABSTRACT

The benefits of green public procurement are extensive. From an environmental perspective, GPP can reduce carbon emissions through the provision of: green electricity; buildings with higher environmental quality; energy efficient computers; and efficient toilets and taps. In addition, the procurement of re-manufactured products can reduce waste to landfill, conserve energy, water and fuel as well as reduce health costs by decreasing exposure to toxins

Section 217 of the Constitution of South Africa and corresponding legislation has shaped public procurement practices and has also created the perception amongst government officials that 'greening' public procurement may not be possible within the South African procurement system.

However, research undertaken to date has established that greening procurement in South African government is possible within the current legislative regime and there are existing policies and strategies that support the implementation of green public procurement. Findings within local government have showed that it is due to a lack of knowledge regarding the possible interventions and mechanisms as well as capacity to enforce green procurement that has hindered implementation.

Schedule 3C Provincial Public Entities (PPE), with their significant budget allocation, can have great potential to influence what goods and services are produced in the market. Thus, these entities can assist South Africa in fulfilling its commitment made in the World Summit on Sustainable Development to green public procurement. However, PPEs are strictly regulated by the Preferential Procurement Policy Framework Act (Act No. 3 of 2000) and an array of other procurement legislation which could hinder the 'greening' of public procurement.

For this reason, this study focuses on exploring barriers and opportunities for implementing green procurement in Schedule 3C Provincial Public Entities (PPEs). A literature review was utilized to contextualise the opportunities and barriers that influence international best practice interventions for greening public procurement as well as the opportunities and barriers for greening public procurement that exist within the South African context. Thereafter interviews were undertaken with Supply Chain Management officials of ten Schedule 3C PPEs within the KwaZulu-Natal province to ascertain barriers that can be addressed and opportunities that can be enhanced within all PPEs.

Through a thorough investigation, this study identified that people largely influence an entity's ability to 'green' public procurement and can either act as barriers or drivers to the process. Utilising Hyden's Norm Model during the interview process, it was found that all entities do have the potential to implement some aspects of green procurement; but, knowledge and a myriad of systemic conditions largely influence individuals' will to 'green' procurement within their entities.

Key words: Green procurement, green public procurement, public procurement, Provincial Public Entity, state-owned entities, barriers, opportunities, drivers, supply chain management, government officials

TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	ii
ABSTRACT.....	iii
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF FIGURES.....	viii
CHAPTER 1	1
INTRODUCTION AND BACKGROUND	1
1.1 Introduction	1
1.2 Problem of Statement.....	1
1.3 Research Aim and Objectives	3
1.4 Background of Study.....	4
1.4.1 Public Procurement in South Africa.....	4
1.4.2 Green Procurement	6
1.4.2.1 Defining Green Procurement.....	7
1.4.2.2 Benefits of Green Procurement.....	7
1.5 Chapter division.....	9
CHAPTER 2	10
METHODOLOGY.....	10
2.1 Introduction	10
2.2 Research Design	10
2.3 Literature Review	10
2.4 Semi-structured Interviews.....	11
2.4.1 Sample Group	12
2.5 Data Analysis.....	13
2.6 Limitations of Study.....	13
2.7 Validity of Study	16
2.8 Ethical Considerations	16
CHAPTER 3	17
LITERATURE REVIEW	17
3.1 Introduction	17

3.2 Green Public Procurement: International Context.....	17
3.2.1 GPP Barriers	17
3.2.1.1 Political and Management Support.....	17
3.2.1.2 Regulatory Framework and Institutional Coordination	18
3.2.1.3 Perceived Cost of Green Products	18
3.2.1.4 Knowledge and Awareness	19
3.2.1.5 Expertise and Training.....	19
3.2.1.6 Environmental Criteria	20
3.2.2 GPP Opportunities.....	20
3.2.2.1 Policies and Legislation.....	20
3.2.2.2 Entities and Role-players	21
3.2.2.3 Centralized Procurements and Forums	23
3.2.2.4 Environmental Labelling	23
3.2.3 International Context: Summary.....	24
3.3 Green Public Procurement: South African Context.....	24
3.3.1 GPP Barriers	24
3.3.1.1 Financial.....	25
3.3.1.2 Market	25
3.3.1.3 Institutional	27
3.3.1.4 Transformation/ Equity	29
3.3.1.5 Systems	29
3.3.2 GPP Opportunities.....	29
3.3.2.1. Governing Framework	30
3.3.2.2 Policies and Strategies	36
3.3.2.3 Green Product Suppliers	36
3.3.3 National Context: Summary	36
3.4 Literature Analysis and Framework Development.....	37
3.4.1 Literature Analysis	37
3.4.2 Interview Framework.....	38
3.5 Conclusion.....	40
CHAPTER 4	41
RESULTS AND ANALYSIS	41

4.1 Interview Protocol	41
4.1.1 Interview Questions	41
4.1.2 Interview Procedure	42
4.2 Results and Data Analysis	43
4.2.1 Demographics	43
4.2.2 Knowledge	44
4.2.3 Values.....	46
4.2.4 Systemic Conditions.....	47
4.3 Summary	55
4.3.1 Knowledge	55
4.3.2 Values.....	56
4.3.3 Systemic Conditions.....	56
CHAPTER 5	58
CONCLUSION AND RECOMMENDATIONS	58
5.1 Summary of Findings	58
5.1.1 Observations on Opportunities.....	58
5.1.2 Observations on Barriers.....	58
5.2 Recommendations	59
5.2.1 Recommendations for Government.....	60
5.2.2 Recommendations for Schedule 3C Provincial Public Entities	60
5.3 Proposed Topics of Research	62
5.4 Concluding Remarks	63
REFERENCE LIST	64
NOTIFICATION OF RESEARCH UNDERTAKING	69
PLEASE TAKE NOTE THAT:	69
INFORMED CONSENT FORM.....	72

LIST OF TABLES

Table 2. 1: Summary profile of the ten Schedule 3C Provincial Public Entities in KwaZulu-Natal (the description of the mandates was extracted from the entities official websites)	14
Table 3. 1: Table showing the applicability of GPP within the public procurement system	31
Table 3- 2: Table showing the three common factors of a Norm.....	39

LIST OF FIGURES

Figure 1-1: Governing Framework for Provincial Public Procurement in South Africa (Turley and Perera: 2014)	5
Figure 3. 1: Barriers to implementing Green Public Procurement (Hanks <i>et al.</i> , 2008).....	26
Figure 3. 2: Proposed Governing Framework for Green Public Procurement in South Africa (Turley and Perera: 2014)	30
Figure 4 1: Bar Graph showing the Occupation of Interviewees	43
Figure 4 2: Bar Graph showing the Years' Experience of Interviewees.....	44
Figure 4 3: Bar Graph showing the Understanding of GPP amongst SCM Officials.....	45
Figure 4 4: Bar Graph showing the value placed on Greening Procurement by SCM Officials	46
Figure 4 5: Bar Graph showing ability to implement GPP within current Policy Framework	47
Figure 4 6: Bar Graph showing ability to implement GPP with current legislative framework.	50
Figure 4 7: Bar Graph showing current status of green procurement interventions in entities	51
Figure 4 8: Bar Graph showing barriers to greening procurement as identified by SCM officials.....	53
Figure 5 2: Diagram depicting tiered approach to 'greening' procurement in PPEs.....	62

CHAPTER 1

INTRODUCTION AND BACKGROUND

1.1 Introduction

Governments across the world are classified as some of the largest spenders, responsible for spending between 25-65% of their budgets on good and services (SEED: Urban, 2012:2). Thus, it can be deduced that government departments and organs of state can influence the types of goods and services that are produced by the market.

Due to the increasing environmental pressures stemming from climate change and degradation of vital ecological systems, ways and means to reduce and avoid environmental impacts and emissions have been intensively and actively sought (Packard, 2012; Porter and Linde, 1995; Province of Western Cape, 2011). In consideration of the leverage that government departments and organs of state hold, greening of public procurement has been on the international agenda since the 1992 Rio Summit whereby all members of state were encouraged to apply sustainable production and consumption (Bratt, 2011; Dolva, 2007:1;). In 2002 at the World Summit on Sustainable Development (WSSD), there was a call to promote public procurement policies that would increase sound environmental practices. Member countries of the Council of the Organization for Economic Co-operation and Development committed to implementing green public procurement (GPP) in order to enhance sustainable development (Dolva, 2007:1).

GPP could be defined as a “...*process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured*” (Commission of the European Communities, 2008:6). The benefits of green public procurement are extensive. From an environmental perspective, GPP can reduce carbon emissions through the provision of: green electricity; buildings with higher environmental quality; energy efficient computers; and efficient toilets and taps. In addition, the procurement of re-manufactured products can reduce waste to landfill, conserve energy, water and fuel as well as reduce health costs by decreasing exposure to toxins (Bolton, 2008:36).

It was after the WSSD that the practice of greening public procurement steadily increased globally.

1.2 Problem of Statement

Discussions in many academic circles have revolved around the commitment made at the WSSD to promote green public procurement. Extensive research regarding whether green public procurement is being adopted, the extent to which it is being adopted and the challenges associated with greening public procurement within the various member states has been ongoing

across the world (Bolton, 2008; Bratt, 2013; De La Harpe, 2008; Dolva, 2007; Thobane, 2009; Wedin, 2012; Wessels, 2014).

Similarly, questions have arisen as to whether green public procurement can be effectively executed in South Africa. Due to Section 217 of the Constitution (1996) which enforces preferential public procurement, there are currently stringent fiscal legislation and regulations that guide the financial management of government departments and organs of state alike, such as the Preferential Procurement Policy Framework Act (PPPFA) (3 of 2000), Public Finance Management Act (PFMA) (1 of 1999) and Broad Based Black Economic Empowerment Act (53 of 2003). As the legislation and regulations have a socio-economic focus, a perception has been created amongst government officials that 'greening' public procurement may not be able to be achieved within the South African procurement system as the objectives of each process are deemed to be divergent.

For these reasons, there has been a fair amount of research to date pertaining to green procurement in government departments, more specifically local government in South Africa. Studies have established that greening procurement in South African government is possible (Bolton, 2008; Wessels, 2014). However, it was found that whilst there is no legislation that prohibits green procurement, there is currently no national legislation which explicitly enforces the implementation thereof (Bolton, 2008; Hanks *et al.*, 2008; Wessels, 2014). In addition, while there are certain policies and strategies present that support the implementation of green public procurement, lack of knowledge regarding the possible interventions and mechanisms as well as capacity to enforce green procurement are evident (Bolton, 2008; Hanks *et al.*, 2008; De la Harpe *et al.*, 2008; Wessels, 2014).

As indicated above, research to date in South Africa has predominantly focused on the potential for local government to implement GPP. There has been little research into the barriers and opportunities of implementing green procurement in Schedule 3C Provincial Public Entities (PPE). These entities are provincial government business enterprises which are established in terms of legislation or a provincial constitution and are fully or substantially funded either from a Provincial Revenue Fund, by way of tax levy or other money imposed in terms of legislation (National Treasury, 2010). Due to their significant budget allocation, PPEs have great potential to influence what goods and services are produced in the market and thus can assist South Africa in fulfilling its commitment to greening public procurement. However, they are also strictly regulated by the Preferential Procurement Policy Framework Act (3 of 2000) and an array of other procurement legislation.

It is for this reason that this study will investigate the barriers and opportunities of 'greening' procurement in Schedule 3C Provincial Public Entities in South Africa.

It must be noted that there are several terms and practices that are used interchangeably when referring to green procurement, such as Sustainable Procurement or Environmentally Preferable Purchasing. The choice between investigating Sustainable Public Procurement (SPP) and GPP has been carefully considered. SPP *“aims to reduce the adverse environmental, social and economic impacts of purchased products and services throughout their life”* (Commonwealth of Australia, 2013:7). Essentially, SPP aims to reduce environmental impacts while increasing social and economic benefits simultaneously (UNEP, 2012:7). As discussed above, social and economic aspects within the South African procurement legislation has been adequately addressed; it is the environmental aspects of procurement that have not been addressed. It is for this reason that this study focuses on greening public procurement.

1.3 Research Aim and Objectives

This study will explore the opportunities and barriers for greening procurement in South African Schedule 3C Provincial Public Entities. Therefore, the research question of the study is as follows:

- What are the opportunities and barriers for greening procurement in South African Schedule 3C Provincial Public Entities?

The intended outcome of the study is two-fold: to identify opportunities and barriers that influence implementation of green procurement in Schedule 3C Provincial Public Entities and to provide the initial recommendations on how to ‘green’ public procurement in Schedule 3C Provincial Public Entities in consideration of the identified opportunities and barriers. Therefore, the objective of this study is:

- Objective 1: To explore the opportunities and barriers for greening procurement within Schedule 3C Provincial Public Entities in the KwaZulu-Natal Province.

The following was considered when defining the research question and research objective:

Supply chain management and procurement is often used interchangeably in organizations when referring to the acquisition of goods and services. However, there is a distinct difference between the two terms. Supply chain management *“...means a system that integrates all supply chain activities, processes and organization functions through relationship management. It involves five elements, namely demand management, acquisition management, logistics management, disposal management and supply chain performance”* (Province of Western Cape, 2011:7). Procurement *“...refers to a specific activity of acquiring or procuring goods and services through an acquisition system”* (Province of Western Cape, 2011:7). This study will focus on the procurement definition to meet its objectives.

A case study approach was utilized, focusing on Schedule 3C Provincial Public Entities in the KwaZulu-Natal Province as it was surmised that all provinces were required to adhere to the

National Treasury Regulations in the same manner and thus data could be obtained within a defined geographical area. The Schedule 3C Provincial Public Entities located within the KwaZulu-Natal Province are varied in size and operations and thus it was also deduced that an array of data would be obtained due to the abovementioned factors.

1.4 Background of Study

This research study considers two processes: public procurement in South Africa and green procurement. For the reader to engage effectively with the research at hand, it is important that a basic understanding of public procurement in South Africa and green procurement is obtained. For this reason, explanations of the processes and their key components are discussed below.

1.4.1 Public Procurement in South Africa

Public procurement policy and legislation has been largely influenced by the historic context of South Africa. A description of the existing public procurement framework is expanded on below. Thereafter the stages of the public procurement process are provided and described.

There are many Acts and regulations that may and do influence procurement activities within organs of state, such as: the Constitution of the Republic of South Africa (1996); the Public Finance Management Act (1999); the Preferential Procurement Policy Framework Act (2000); Preferential Procurement Policy Framework Regulations (2001); the Construction Industry Development Board Act (2000); the Regulatory Framework for Supply Chain Management (2003); the National Treasury Regulations (2005); and the Prevention and Combatting of Corrupt Activities Act (2004). However, for the purposes of this study, three Acts which play a critical role in defining the public procurement process in South Africa will be discussed: The Constitution of the Republic of South Africa (1996), the Public Finance Management Act (1999), and the Preferential Procurement Policy Framework Act (2000) (please refer to Figure 1-1).

The Constitution of the Republic of South Africa (1996)

Section 217 of the Constitution of the Republic South Africa (108 of 1996) defines the manner in which organs of state must undertake public procurement within South Africa. Section 217 of the Constitution states:

- 1. When an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance with a system which is fair, equitable, transparent, competitive and cost-effective.*

2. Subsection (1) does not prevent the organ of state or institutions referred to in that subsection from implementing a procurement policy providing for-
 - a) categories of preference in the allocation of contracts;
 - b) the protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination.
3. National Legislation must prescribe a framework within which the policy referred to in subsection (2) may be implemented.

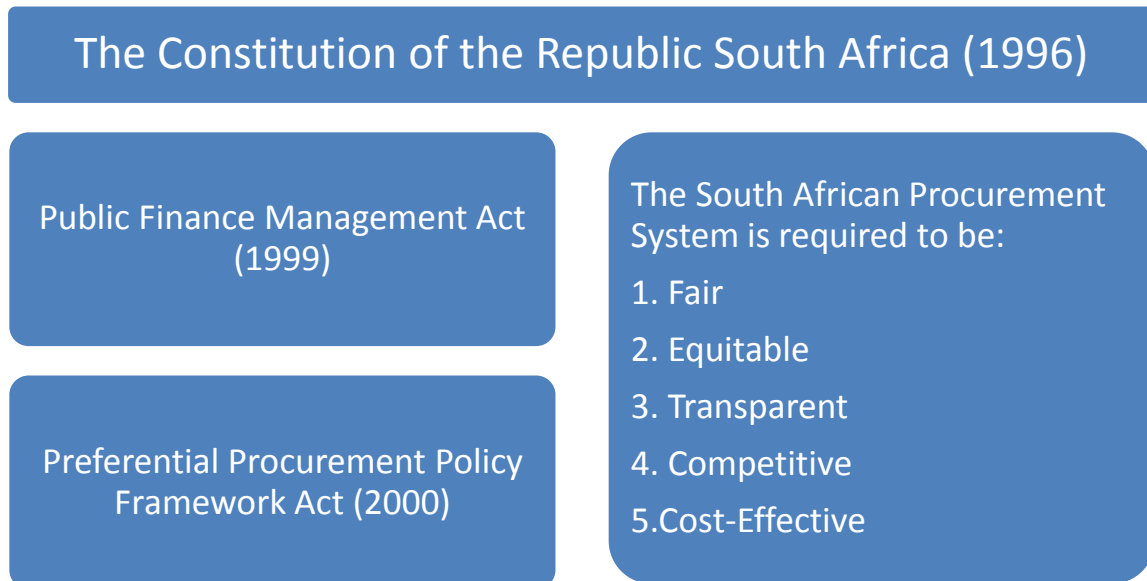


Figure 1-1: Governing Framework for Provincial Public Procurement in South Africa (Turley and Perera: 2014)

South Africa, like many other governments across the world have chosen to utilize public procurement to achieve secondary objectives. Subsection (1) of the Constitution (1996:112) pertains to the actual procurement process and requires organs of state to procure goods and services in a manner that is “*fair, equitable, transparent, competitive, and cost-effective*”. The five criteria mentioned are expected to be considered and integrated into all procurement processes and decisions. Subsection (2) endeavours to utilize public procurement as a policy tool which empowers organs of states to implement policies that would promote “...*the development of historically disadvantaged individuals through a preferential procurement system*” (Thobane, 2009). Finally, Subsection (3), indicates that at a national level, a framework must be prescribed so that preferential procurement policies mentioned in Subsection (2) can be developed and implemented by organs of state in line with its guiding principles and clauses (Bolton, 2008:2; De la Harpe, 2008:59; Turley and Perera, 2014: 7).

Public Finance Management Act (PFMA) (1999)

The PFMA is a framework legislation which regulates the financial management practices of national and provincial government as well as state owned entities. In addition, it creates a regulatory framework for supply chain management of the abovementioned entities. The Act aims to “... *secure transparency, accountability, and sound management of the revenue, expenditure, assets and liabilities of the institutions to which the Act applies*” (De La Harpe, 2008:69).

The PFMA allocates responsibilities to national and provincial Accounting Officers and defines the responsibilities of National Treasury. The allocation of responsibilities to designated Accounting Officers indicates that South Africa has adopted a decentralized approach to undertaking procurement and in turn, departments and organs of state alike have an opportunity to be flexible in their procurement practices within the parameters of the existing legislation. The PFMA also makes provision for procurement as a policy tool, and the five criteria which define the characteristics of an effective procurement system, as outlined in the Constitution, have been enshrined as principles of the Act (De la Harpe, 2008:69; Hanks *et al.*, 2008:45; Turley and Perera, 2014: 8).

Preferential Procurement Policy Framework Act (PPPFA) (2000)

The PPPFA gives effect to Section 217 (2) of the Constitution (1996): by providing to develop preferential treatment to historically disadvantaged individuals in the public procurement process. The Act has established mechanisms to expedite the inclusion of black citizens into the economy. This is partly achieved through the allocation of preference points to companies owned by historically disadvantaged individuals utilizing the Broad-based Black Economic Empowerment criteria during the procurement process. (Hanks *et al.*: 2008:46; Turley and Perera: 2014:9).

In consideration of Section 217 of the Constitution (1996) and the procurement legislation that has been developed in line with this Section, it can be surmised that the social and economic aspects within the procurement sphere has been adequately addressed- it is the environmental aspect of procurement that has been left wanting. It is for this reason that this study focuses on ‘greening’ public procurement in South Africa.

1.4.2 Green Procurement

As discussed above, procurement refers to the acquisition of goods or services through a defined process. Green procurement aims to reduce or avoid environmental impacts through the procurement process. By describing the various methods to execute green procurement in an organization the definition for green procurement that will be applied within this study will be

provided. Thereafter benefits for ‘greening’ procurement will be discussed to provide a reader with an understanding of why implementing green procurement should be pursued.

1.4.2.1 Defining Green Procurement

To define green procurement for the purposes of this study, an understanding of the various activities it can encompass must be considered. Studies undertaken by Bolton (2008), De La Harpe (2008), and Wessels (2014) all indicate that there are three ways to integrate green procurement into normal processes. Firstly, green procurement can be implemented by utilizing environmental criteria when procuring products and services. The environmental criteria should make reference to the performance of the product or service post-procurement. These criteria should be incorporated into the invitation to tender and utilized to assess bidders during the functionality assessment. This approach can be utilized when procuring goods such as light bulbs; it can be specified that low energy light bulbs are required (De La Harpe, 2008:54). Secondly, environmental requirements can be specified in terms of the process or production method utilized to produce goods. For example, environmental criteria indicate the level of emissions that are acceptable (De La Harpe, 2008:54). Thirdly, an organization can choose to give preference to tenderers who adhere to broad environmental goals as advocated for by the organization themselves. These goals do not necessarily relate to the subject matter of the procurement. For example, preference may be given to the tenderers who have environmental management systems or practicing green procurement themselves (De La Harpe, 2008:54).

In consideration of the aims and objectives of this study, the methods that can be adopted to implement green procurement as well as the need to undertake green procurement within the framework of South African legislation, a decision has been made to utilize the definition as coined by Wessels (2014:953):

GPP can be defined as the “...greening of public procurement objectives, criteria and methods related to the selection of goods and service whose environmental impact is not harmful (or least harmful) to the environment and human health while promoting the primary procurement objectives”.

1.4.2.2 Benefits of Green Procurement

The benefits of green procurement are far-reaching and diverse. The adoption of the process does not only benefit the environment, but can have social, economic and cumulative benefits as well. From an environmental perspective, many authors use the study undertaken in the European Union to highlight the extraordinary impact that green procurement can have in conserving environmental aspects. Findings from the study show that:

- *If all public authorities across the EU demanded green electricity, this would save the equivalent of 60 million tonnes of CO₂ per year, which is equivalent to 18% of the EU's greenhouse gas reduction commitment under the Kyoto Protocol. Nearly the same saving could be achieved if public authorities opted for buildings of high environmental quality.*
- *If all public authorities across the EU were to require more energy-efficient computers, and this led the whole market to move in that direction, this would result in a saving of 830 000 tonnes of CO₂ per year.*
- *If all European public authorities opted for efficient toilets and taps in their buildings, this would reduce water consumption by 200 000 million litres per year."*

(Bolton, 2008 ; De la Harpe, 2008 ; Wessels, 2014)

The statistics above indicate that greening public procurement can contribute significantly to sustainable development and aid in curbing climate change. In addition, the procurement of re-manufactured products can reduce waste to landfill and conserve energy, water and fuel (Bolton, 2008:36).

From a social perspective, implementing green procurement in entities resulted in a reduction of accidents in the work place. In addition, health costs can be lower for both employees and surrounding communities due to reduced exposure to toxins. The adoption of the process can also promote constructive change in the workplace by increasing employees' awareness and commitment to change (Bolton 2008; De La Harpe, 2008).

Research undertaken by the Commission for Environmental Co-operation of North America (2003) highlighted that there are positive outcomes for both public and private entities should they choose to implement green procurement. Cost savings can be experienced throughout operations of entities. Due to reduction in waste, waste handling costs are lowered, and the conservation of energy, water and fuel also contributes to cost savings. Feedback received from suppliers in the study undertaken by Business for Social Responsibility indicated that due to the reduction in resource utilization, operational efficiency was increased, and liabilities were decreased (Wessels, 2014). It was noted that implementing green procurement demonstrates an entity's due diligence and makes it easier for them to comply with environmental regulations. Findings from both studies indicated that green procurement resulted in improved image and increased media attention which in some cases manifested in increased sales. In the study undertaken by Wessels, (2014:954) General Motors indicated that green procurement can have a cumulative benefit, stating that "*...working together with our suppliers, we can accomplish more to improve the environment than GM can alone*". It is this sentiment that acts as a motivation to

promote the implementation of GPP. In adopting GPP, government entities can act as a catalyst for greening procurement in the private sector as well.

1.5 Chapter division

This mini-dissertation consists of five chapters. The layout is as follows:

Chapter 1: The chapter provides the background and purpose of the proposed study. This chapter focused on the rationale and background of the study, the problem statement and the research aim and objectives.

Chapter 2: The aim of chapter 2 will be to unpack the research design and the research methods used when undertaking the study. A description of the sample group and the limitations of the study will also be provided.

Chapter 3: This chapter serves as the Literature Review for the study. Applicable literature will be engaged to determine international trends pertaining to barriers and opportunities as well as best practice interventions for greening public procurement. Thereafter, relevant South African literature will be sourced and reviewed to understand what the opportunities and barriers are for greening public procurement in the South African context. The reviewed international and national literature will then be used to develop a framework that will be utilized to identify opportunities and barriers for greening procurement in Schedule 3C Provincial Public Entities within the KwaZulu-Natal province.

Chapter 4: Chapter 4 will focus on the results and analysis of the literature review and the semi-structured interviews undertaken with the fourteen Schedule 3C Provincial Public Entities that exist in the KwaZulu-Natal province. The analysis will utilize the framework developed based on the findings in Chapter 3.

Chapter 5: Chapter 5 will serve as the concluding chapter. This chapter will encompass the summary of findings stemming from the literature review and semi-structured interviews and will thereafter provide recommendations and concluding remarks.

CHAPTER 2

METHODOLOGY

2.1 Introduction

This chapter outlines the research design and the corresponding methodology and methods that have been applied to answer the research question and achieve the objective of this study. The chapter starts by describing the research design (Section 2.2). Thereafter the rationale for the literature review (Section 2.3) and the semi-structured interviews conducted with procurement officials from the Supply Chain Divisions of Schedule 3C Provincial Public Entities (Section 2.4) are discussed. The method adopted for the data analysis process will then be provided (Section 2.5) and the chapter will conclude with identified limitations and gaps (Section 2.6), validity of the study (Section 2.7) and ethical considerations (Section 2.8).

2.2 Research Design

The study undertaken utilizes a case study approach which is conducted in the KwaZulu-Natal Province and focuses on the thirteen (13) Schedule 3C Provincial Public Entities as captured in the Public Institutions listed in PFMA Schedule (2017). In addition, the research question posed is exploratory and therefore the research design adopted is empirical. The study utilizes a mixture of both primary and secondary qualitative data (Mouton, 2001). The secondary data consists of previous studies pertaining to green and public procurement and is incorporated in the literature review (Section 2.3). Primary data was obtained during the semi structured interviews with the SCM Officials of the Schedule 3C Provincial Public Entities (Section 2.4).

2.3 Literature Review

A literature review is a "critical evaluation of previous research relating to the research topic" (Du Plooy, 2009:18). The aim of the review is to gain a better understanding of the context in which the research study is being conducted and to provide a background to which the remainder of the mini-dissertation may be evaluated (Onwuegbuzie *et al.* 2012).

The review was used to gain understanding of the opportunities and barriers that influence international best practice interventions for 'greening' procurement. Thereafter, relevant South African literature was reviewed to understand what the opportunities and barriers are for 'greening' public procurement within the South African context. The trends noted in both the international and national literature were utilized to identify a relevant framework that was used to inform the structure of the interviews undertaken with the SCM officials of the Schedule 3C PPEs. The intention of the framework is to provide a focused approach during the interview

process to obtain specific information. The framework is discussed in detail in Section 3.4 of Chapter 3 once trends have been noted in the reviewed literature.

The type of literature review undertaken in this study is a qualitative evidence synthesis which provided a platform for comparing the findings from the literature collected. The qualitative evidence synthesis results in an overarching narrative and provides a broader understanding of green public procurement (Grant and Booth, 2009).

The literature was gathered utilizing the North West University Library Database portal and google search. Key terms such as 'green public procurement', 'green procurement in government', 'public procurement' and 'challenges in implementing green procurement' were utilized to search for relevant journal articles, government guideline documents, legislation as well as industry handbooks. The 'pearl method' was also utilized whereby relevant literature was identified in two key journal articles: "*Incorporating Environmental Considerations into Government Procurement in South Africa*" by Bolton (2008) and "*Green Procurement in Local Government*" by Wessels (2008).

The literature collected was analyzed utilizing the Constant Comparison Analysis method created by Glaser and Strauss (Onwuegbuzie *et al.*, 2012:13). All documents collected were read through in its entirety and information was grouped into meaningful parts. These parts were allocated descriptive labels. The information reviewed in subsequent documents was compared to the pre-existing labels to ensure that information of a similar nature was allocated the same label or additional labels were created. Once all the information was labelled, information was grouped based on the labels. These groups of information were synthesized into the subsections captured in Chapter 3: Literature Review (Onwuegbuzie *et al.*, 2012:13).

2.4 Semi-structured Interviews

Semi-structured interviews were utilized to achieve the objective of the study: to explore the opportunities and barriers for greening procurement within Schedule 3C Provincial Public Entities in the KwaZulu-Natal Province.

According to Terreblanche and Durrheim (1999:128) conducting interviews allows the interviewer an opportunity to understand how interviewees think and feel about a particular subject. Guthrie (2010) further states that interviews provide a platform to obtain qualitative data in a conversational format. Although this method may be time consuming, it allows the interviewer an opportunity to obtain clarity and understanding immediately through follow-up questions, making it a valuable data collection method. It is based on this reasoning that a semi-structured interview method was chosen.

Semi-structured interviews encompass both structured and unstructured questions. An interview schedule is used to ensure that the different interviews are comparable (Guthrie, 2010). The interviewer is allowed some flexibility during the interview process to omit some questions or probe for further information if required (Saunders *et al.* 2009).

As indicated in Section 2.3, based on the analysis of literature, a framework for the semi-structured interviews will only be formulated in Section 3.4 of Chapter 3. For this reason, the interview protocol which consists of the interview questions and the interview procedure will be presented in Section 4.2 of Chapter 4 before the results and analysis is presented. Consequently, Section 2.4 will only describe the sample group that was approached for interviews.

2.4.1 Sample Group

A sample group is a representative group which generates results that can be generalized to the entire population. Guthrie (2010) indicated that the main reason to sample is that it is efficient and effective. It is also beneficial to sample as it may be impractical to interview an entire population and there may be budget and time constraints (Saunders *et al.* 2009).

A decision was taken to utilize the homogenous purposive sampling technique. This method is a non-probability sampling technique where the units that are studied are based on the researcher's judgement. Purposive sampling was chosen as it focuses on particular characteristics of a population that will assist the researcher to answer the research question. In this case, the study will focus on the thirteen Schedule 3C Provincial Public Entities within the KwaZulu-Natal province as per the Public Institutions Listed in PFMA Schedule 2, 2, 3A, 3B, 3C and 3D dated 24 February 2017. These entities are all required to adhere to the same procurement legislation and regulations.

Whilst the entities adhere to the same procurement legislation and regulations; the size, nature, mandate and types of goods and services procured by the entities are varied. The varied nature of the entities was considered to be beneficial, as the operational context provided an opportunity to obtain different perspectives.

Upon consultation with the KZN Provincial Treasury, it was established that the KwaZulu-Natal Provincial Planning and Development Commission is no longer in existence and therefore the sample group was reduced to twelve entities. Of the twelve Schedule 3C entities, ten entities agreed to participate in the study equating to 83.3 % participation. Thus, a representative sample has been obtained.

Fourteen interviewees agreed to participate from the ten entities. The fourteen interviewees were selected based on the officials' direct involvement in supply chain management processes and policies. The number of interviewees selected per entity was based on the size of the SCM unit; 50%-100% of the SCM staff compliment was interviewed for each entity. Where more than one

official were interviewed within an entity, it was ensured that individuals were selected from the different tiers of the SCM organogram. Interviewees were either designated as the Chief Finance Officer, SCM Manager or an employee of the Supply Chain Management Directorate. Table 2-1 provides a summary profile of the ten Schedule 3C PPEs as well as the distribution of interviewees amongst the entities.

2.5 Data Analysis

Kothari (2008:255) states that data analysis is the conversion of collected data into meaningful results. To obtain meaningful results and to ensure accuracy and precision, the transcribed notes from the semi-structured interviews were first edited to eliminate unnecessary data.

For closed ended questions, the data was quantified based on the interviewees indication on the scales provided. The data was then displayed in graphs to summarize and highlight the important findings and thereafter the data was interpreted accordingly.

For open ended questions, the data was sorted in line with the factors defined within the framework in Section 3.4 of Chapter 3. Each response to an open-ended question was allocated to the applicable factor. All responses allocated to a factor were then grouped together and reviewed in order to ascertain obvious patterns and relationships in the responses. The data was then displayed qualitatively.

2.6 Limitations of Study

The following limitations and gaps were noted within the study:

- In consideration of the parameters of a mini-dissertation, and due to time constraints as well as lack of financial resources (as the study was funded by myself), a small sample group was utilized. The study only focused on Schedule 3C PPEs in KwaZulu-Natal.
- Due to the varied nature of the Schedule 3C Provincial Public Entities, the level of procurement practices differed in terms of extent.
- There are several factors that influence and contribute to the implementation of GPP; however, an in-depth analysis of all the factors was not possible. Therefore, a choice was made to focus on gaining insight into the drivers and barriers from a procurement official's perspective.

Table 2. 1: Summary profile of the ten Schedule 3C Provincial Public Entities in KwaZulu-Natal (the description of the mandates was extracted from the entities official websites)

Schedule 3C Entity	Mandate	Number of Interviewees	Interviewees
Amafa AkwaZulu Natali	Provincial heritage conservation agency for KwaZulu-Natal.	1	• Chief Finance Officer
Dube TradePort Corporation	Charged with the responsibility to develop the province's biggest infrastructure project and geared towards promoting foreign and local investment.	3	• Senior Manager: SCM • SCM Specialist • SCM Officer
eZemvelo KZN Wildlife	Entrusted with the long-term conservation of the regions rich biodiversity for the people of South Africa.	3	• Acting Procurement Manager • Senior Procurement Buyer • Supply Chain Buyer
KZN Film Commission	To position KZN as a globally competitive, diverse and sustainable industry and choice film destination.	1	• Chief Finance Officer
KZN Gaming and Betting Board	Strives to be the premier gambling regulator in the country, consistently maintaining and enhancing public trust with integrity, transparency and credibility.	2	• Finance Manager • Senior Fiance Officer:SCM
KZN House of Traditional Leaders	Advise, make proposals and other recommendations with respect to legislation or matters affecting Traditional leaders, Tradition Councils or communities	1	• Acting Deputy Director: Supply Chain

	as well as legislation and matters pertaining to Zulu custom and tradition.		
KZN Liquor Authority	To control and regulate the retail sale and micro manufacture of liquor in the KZN province.	1	• SCM Manager
Natal Sharks Board	Mandated to be a global leader in bather protection against sharks while minimizing environmental impact, thus promoting tourism.	1	• Acting SCM Manager
Royal Household Trust	Mandated to look after the affairs of the Zulu Royal House.	1	• HR Manager
Trade and Investment KZN	Is a trade and inward investment promotion agency established to promote KZN as an investment destination and to facilitate trade by assisting local companies' access international markets.	1	• SCM Officer

2.7 Validity of Study

Schindler and Cooper (2006) indicate that validation is the extent to which the research method measures what the study aims to answer. Within this case study, validity would consider the effectiveness of the interview questions to identify the opportunities and barriers to green procurement in Schedule 3C PPEs.

To ensure validity, the following was undertaken:

- Interviewees were required to answer all questions during the interview process.
- All interviews were recorded utilising a cell phone recording application in order to ensure that data was captured accurately (Silverman, 2006:272).
- Whilst the research sample was small, it allowed for more detailed analysis of the data.

2.8 Ethical Considerations

In accordance with the guidance obtained from Cresswell (2009:89-91) and Leedy and Ormond (2010:101), I can confirm the following actions were taken in reference to ethically considerations:

- North-West University requires students to obtain ethical clearance from the Research and Ethics Committee before engaging with human subjects. It is for this reason that the researcher obtained the relevant ethical clearance from the Committee on 19 January 2017, prior to undertaking the semi-structured interviews.
- Permission was obtained from the Chief Executive Officers to undertake semi-structured interviews with their SCM Staff.
- Interviewees were provided with all relevant information pertaining to the research study and the interview process.
- A letter of consent was signed by all interviewees before the interview process commenced (Annexure A). The consent letter advised interviewees of their right to withdraw from the interview process at any time and were further assured that their names would not be disclosed in the study.
- No results were fabricated for personal gains.

I am confident that the research design, methodology and methods applied during this study will extract the necessary data to address the research aim and objective pertaining to the opportunities and barriers for 'greening' procurement in PPEs.

CHAPTER 3

LITERATURE REVIEW

3.1 Introduction

The aim of this literature review was to contextualise the opportunities and barriers that influence international best practice interventions for greening public procurement with the opportunities and barriers for greening public procurement within the South African context.

The first section of the review will provide an understanding of the opportunities and barriers that have influenced international best practice interventions for greening procurement. Thereafter, an explanation of the possible opportunities and barriers for greening public procurement in the South African context will be provided. The findings from the reviewed international and national literature will then be comparatively analysed to determine commonalities and thereafter utilized to identify a relevant framework that can be applied during the semi-structured interviews with procurement officials from Schedule 3C PPEs.

3.2 Green Public Procurement: International Context

The below section is a summary of findings based on a review of international literature. The section is divided into opportunities and barriers experienced while implementing GPP by other countries and international organizations. It must be noted that research reviewed was ranging from studies undertaken between 1998 and 2016. While this is a significant range, GPP is still a relatively new concept in South Africa, and therefore it was assumed that the barriers and opportunities noted in older studies will still be prevalent for the current research aim and objectives.

3.2.1 GPP Barriers

Within this section, the six barriers experienced when implementing GPP in other countries and international organizations will be discussed. The barriers pertain to activities, processes, as well as human resource capacity and perceptions which are currently hindering the progress of implementing GPP. It must be noted that while these barriers have been split into different sections, they often are interdependent and overlap.

3.2.1.1 Political and Management Support

A study undertaken in Nigeria by Akenroye *et al.* (2013) has highlighted the lack of political will as one of the top six barriers hindering the implementation of GPP. The authors highlighted that politicians did not consider GPP to be as important as other social and economic issues. Similarly, environmental issues were not prioritized. It was anticipated that political interference in

government operations would undermine GPP policy objectives in Nigeria as political interference was experienced in European countries when attempting to implement GPP.

Research undertaken by the European Commission under the ambit of the RELIEF Project indicated that senior public officials in Europe have little awareness of the GPP agenda and this lack of higher level support creates a barrier to the broader implementation of GPP. Similar research undertaken in Norway by Dolva reiterated this point and indicated that while political and management support is currently a barrier, they could also act as a driver should they have a different perspective (Bouwer, *et al.* (2006); Dolva, 2007).

3.2.1.2 Regulatory Framework and Institutional Coordination

Findings in Nigeria have indicated that there is currently a lack of buy-in by government officials to integrate the concept into procurement practice as there is no regulatory framework which supports and enforces the implementation of GPP. It was thus surmised that the lack of legal ramifications may result in procurement officials ignoring instructions to procure green products and integrate GPP into procurement practice. It was noted that while having a policy supporting GPP is a step in the right direction, the lack of supporting legislation, institutional arrangements and enforcement thereof would increase the difficulty of coordinating and integrating GPP interventions (Akenroye *et al.*, 2013).

A study undertaken for GRIP and ASTRA Tech by MMI indicated that due to the lack of clearly defined roles and responsibilities, the integration of environmental considerations into procurement practices often do not take place. Furthermore, it was found that there is often a lack of networking, coordination and exchange of best practice interventions between entities which results in recurring inefficiencies and outcomes when implementing GPP (Dolva, 2007).

3.2.1.3 Perceived Cost of Green Products

Akenroye *et al.*, (2013) highlighted that the primary focus of normal government procurement is to obtain products and services at the lowest possible price and as a result, environmental aspects are often ignored and compromised. Studies have shown that a general perception amongst government officials is that green products and services cost more than their alternatives (Bouwer *et al.*, 2006). However, the RELIEF project undertook a comparative analysis of the financial impact in the European Union between 2006/2007 and it was shown that there was a 1% difference between the cumulative purchasing of normal products and green products. Furthermore, it has been found that suppliers in many countries, specifically the United States of America, are producing products which are environmentally preferable at an increasing rate. Essentially, as the supply of a product increases, costs will correspondingly decrease (Wessels, 2008:37).

It has been found that while including environmental criteria in the tender may increase the initial costs, the maintenance and disposal costs for the life cycle of green products and services are generally lower. Similarly, a study undertaken for the European Union by Oko-Institut e.V and Eclei in Germany stated that it is not correct to assume that green products are more expensive than non-green products as the price of a product is determined by not just the environmental aspects. Other more important factors that determine the price are the “...*brand (or make), quality, technical merit, aesthetic or functional characteristics as well as the price deduction schemes related to different purchase volumes*” (De La Harpe, 2008:57).

3.2.1.4 Knowledge and Awareness

For GPP to be applied and implemented effectively, a wide array of knowledge and skills are required to be applied. In Europe, studies indicated that procurement officials struggled to obtain sufficient product specific knowledge for the various products that they are required to purchase. In turn, this directly impacted on their ability to develop environmental criteria that can be incorporated into tender documents and evaluate bid submissions. Situations arose whereby functionality criteria included in tenders were too ambiguous or too complicated. When criteria were found to be too complicated, officials found it difficult to evaluate the bid documents. In addition, it was found that suppliers sometimes chose not to participate in the procurement as the requirements were too difficult to answer. In other instances, officials did not have the ability to determine whether environmental criteria were sufficiently met due to a lack of information provided by the service provider (De la Harpe, 2008; Wessels, 2008).

In Nigeria, a developing country, it was found that the provision of basic needs and poverty reduction are the first priorities of the state. Awareness and concern for environmental matters, GPP included, is therefore neglected. In addition, the difficulty in obtaining information on green products and services in Nigeria is prevalent and two-fold: purchasers are unable to obtain information on green products from the market and suppliers are unaware that the market exists to provide green products (Akenroye *et al.*, 2013).

3.2.1.5 Expertise and Training

A Danish Special Report on Green Procurement undertaken in 1998 indicated that a lack of competency in green procurement is a significant barrier to implementing GPP. As mentioned above, a multifaceted skillset is required to facilitate GPP effectively. Contributions are required from environmental and procurement fields as well as sector and product specific fields dependent on an entity's required goods and services (Nielsen, Baarstrom, Pedersen, 1998 in Dolva, 2007).

Training revolving around the legal and technical aspects is crucial to practice GPP effectively. It was found that procurement officials often lack the skill to incorporate green criteria into tender

documents while still adhering to legality of the procurement process. Environmental professionals, who should be responsible for identifying the environmental aspects and impacts associated with products, often lack the skill to execute the task which essentially slows down the implementation of GPP. The implementation of GPP is also hindered as officials have often indicated that there is limited time to develop environmental criteria (Akenroye *et al.*, 2013; Bouwer *et al.*; Dolva, 2007).

3.2.1.6 Environmental Criteria

The Nordic Minister Council as well as studies undertaken by the European Commission (2005; 2002) and GRIP and ASTRA Tech indicated that two factors posed a significant challenge to implementing GPP: development of environmental criteria and compilation of tender documents. It is a difficult task to gain enough knowledge about the different alternatives that are available in the market. Studies indicated that in the absence of already established environmental criteria, officials experience difficulties in defining an acceptable level of environmental quality for products and services and creating and including appropriate criteria to quantify the environmental quality during the tendering process. As indicated in section 3.2.1.4 above, functionality criteria included in tenders can either create too much restriction or by way of omission result in the greenest product not being procured. In the case of overly restrictive criteria, it was found that suppliers did not participate in the procurement as the requirements were too difficult to answer.

Additionally, officials evaluating bid documents often lack the ability to assess and verify the fulfilment of the environmental criteria within proposals submitted by service providers (Akenroye *et al.*, 2013; Dolva, 2007).

3.2.2 GPP Opportunities

Within this section, opportunities and drivers of GPP that have been experienced in other countries and international organizations will be described and discussed. Opportunities can be seen as situations or interventions that exist and can assist the implementation of GPP. For the purpose of this study, drivers of GPP, which expedite the process of GPP will also be considered and incorporated as opportunities.

3.2.2.1 Policies and Legislation

In studies undertaken in both developing and developed countries alike, it was surmised that the existence of explicit policy and legislation which makes the implementation of some form of GPP compulsory is necessary to expedite integration of the process (Bolton, 2008; Hanks *et al.*, 2008; Wessels, 2014).

To support this statement, in 2011, the United Nations Commission on International Trade Law developed the Model Law on Public Procurement which is aimed at achieving cost-effective public procurement. States have been encouraged to adapt the Model Law into their procurement

practices as it is considered international best practice. The Model Law incorporates environmental considerations throughout its text. Environmental considerations have been addressed in the definition of socio-economic policies, qualifying suppliers and contractors, evaluation of criteria, procurement proceedings and methods of procurement. Thus, it can be stated that the Model Law addresses environmental objectives by promoting the use of environmental criteria in the bid document. The Model Law does not control the type of socio-economic policies that are pursued through the procurement system, but the manner in which these policies are applied. This has allowed a level of flexibility, for a State to choose the policy objectives they wish to pursue. However, the Model Laws' stringent rules and restrictions pertaining to transparency forces States to undertake a cost-benefit analysis of their policy objectives to ascertain whether the objectives contradict the principles of public procurement. The Model Law can thus aid States in developing green policy objectives and green procurement opportunities in line with best practice principles (United Nations, 2011).

Existence of directives in the European Union, such as Directive 2014/24/EU on public procurement and Directive 2014/25/EU on procurement by entities operating in the water; energy; transport and postal services sectors, have facilitated the creation and enforcement of GPP interventions within the various European countries. It is due to these Directives that technical specifications are defined, standardized environmental labelling is promoted and regulated, and life-cycle costing is enforced. The Directives also allows public entities to establish innovation partnerships with one or more partners to research and create goods or services that are not available in the market as well as allows public entities to consult and obtain preliminary advice from suppliers in order to develop specifications (European Commission, 2016).

3.2.2.2 Entities and Role-players

Entities and human resources, both internal and external, play a key role in introducing and driving the adoption and integration of GPP in organizations and countries. The following six groups that can influence the implementation of GPP positively have been identified: Government Regulatory Entities; Political and Internal Management Support; Procurement and Environmental Professionals; Non-Governmental Organizations; Community Service Organizations and Media; and Politicians and Green Product Suppliers (Akenroye *et al.*, 2013).

Government Regulatory Entities

Findings by Akenroye *et al.* (2013) indicated that Regulatory Entities are paramount to facilitating the adoption of GPP within a country. It was recommended that the designated authority have a national ambit of control and should be responsible for the formulation of regulations, guidelines, tools, environmental criteria and standards. In addition, the designated authority should also be responsible for monitoring the execution of GPP to ensure effective implementation. Thus, a compliance and enforcement component within the department would be necessary in order to

monitor adherence with the regulations. Furthermore, it was found that the monitoring and enforcement of the regulations can be regionalized to ensure that state entities within a designated area are monitored regularly regarding adherence to regulations (Akenroye *et al.*, 2013).

Internal Management Support

Findings from both the studies undertaken by Dolva (2007) as well as Akenroye *et al.* (2013) indicated that to be efficient and effective in introducing, integrating and maintaining GPP within an organization, a positive attitude from management is necessary. It was deduced that a management team that is amenable towards GPP would mean more resources could be allocated to implement GPP and to address environmental concerns.

Procurement and Environmental Professionals

Trends in the field have indicated that the implementation of green procurement can be expedited through the coordination and integration of two specific fields: environmental and procurement. Procurement professionals have the skill set to integrate green interventions into procurement practices. The function of procurement officials would be to identify and procure green alternatives and formulate and integrate sustainable standards into the procurement system. Environmental professionals are and would be responsible for identifying and assessing the risks and impacts of products and services that are procured by their organization. It was found that these two professionals would need to collaborate to develop environmental criteria that can be included in procurement documents (Akenroye *et al.*, 2013; Bouwer *et al.*, 2006; Dolva, 2007).

Another professional that can and has played a pivotal role in green procurement is an accountant. An accountant has the ability to calculate the cost benefit of purchasing specific green products and therefore has the ability to prove the life cycle benefits to higher management. The fulfilment of this role can aid in promoting and expediting green procurement in entities (Akenroye *et al.*, 2013; Bouwer *et al.*, 2006; Dolva, 2007).

Non-Governmental Organizations, Community Service Organizations and Media

While green public procurement is a fairly new concept in Nigeria, it was found that NGOs and the media can play a significant role in creating awareness and educating the public on the concept and its various mechanisms. Besides the educational component, the media can report on the current initiatives that entities are undertaking and the progress that has been achieved when implementing GPP. It was surmised that the CSOs and NGOs also have the ability to hold government entities accountable and therefore can influence these entities to introduce or expedite implementation of GPP (Akenroye *et al.*, 2013; Bouwer *et al.*, 2006; Dolva, 2007).

Politicians

Several studies have indicated that politicians can and do play a crucial role in influencing whether GPP is implemented, as they have the ability to garner acceptance and expedite development of regulations, initiatives and mechanisms, particularly through the formalization of legislation. Should politicians have a positive outlook on GPP, they have been known to appoint heads of institutions to assist in facilitating the integration of processes into government entities. Politicians can also influence and apply pressure on individual government entities to award suppliers which offer green alternatives and solutions (Akenroye *et al.*, 2013; Bouwer *et al.*, 2006; Dolva, 2007).

Alternatively, politicians can also be seen as a barrier should they not support the GPP agenda.

Green Product Suppliers

Studies have indicated that the private sector can play a significant role in promoting green procurement in government entities by informing officials of the possible products that are available in the market. By increasing awareness in government entities, officials are exposed to various opportunities to integrate GPP (Bolton, 2008; Bouwer, *et al.*, 2006; Wessels, 2014).

3.2.2.3 Centralized Procurements and Forums

The study Dolva (2007) conducted in Norway, which revolved around the extent to which GPP has been adopted in government entities and the factors that drove or created barriers to the GPP process, suggested that a centralized procurement system would assist implementation of GPP within state entities. The study stated that procurement officials in state entities found the development of environmental criteria challenging. Thus, a centralized procurement system would allow organizations to share criteria for products that have already been developed with the central procurement body so that it can be applied to all procurements of the same nature going forward- therefore expediting the GPP process. In addition, the creation of a centralized system would provide a platform for officials to discuss challenges experienced and potential solutions moving forward. A centralized procurement system would create a focused approach to implementing green procurement and allow designated officials to become more accustomed to implementing GPP, hence expediting the adoption of GPP.

3.2.2.4 Environmental Labelling

Environmental labelling, such as the Energy Star labels for electronic equipment, are predefined labels which confirm that products meet certain environmental standards and provide information on the environmental aspects of the product. Environmental labelling creates a sense of comfort for users as it is a standard that pre-confirms environmental soundness. It is a specification which can be included as environmental criteria in tender documents for products which have pre-

existing labels. This would aid GPP as the drafting and evaluation of tenders would be easier (Dolva, 2007).

3.2.3 International Context: Summary

Sections 3.2.1 and 3.2.2 above has provided a brief summary of barriers and opportunities that are prevalent in the international context. Barriers identified from the literature included the lack of political and management support; absence of regulatory framework and institutional coordination; misconceptions pertaining to green product costs; lack of knowledge, awareness and expertise; and the inability to formulate effective environmental criteria in the tender process. Opportunities identified in the literature showed that it was beneficial to have legislation which explicitly addresses the execution of GPP. Environmental labelling made the procurement of green products and services simpler for procurement officials. In addition, it was highlighted that government regulatory entities; internal management, procurement and environmental professionals; non-governmental organizations, community service organizations and media; politicians; and green product suppliers can all influence the execution of GPP positively.

The findings from the international research has shown that human resources play a significant role in either creating barriers or providing opportunities to fulfilling GPP objectives. It is their perceptions, attitude, will, knowledge and expertise which would define whether GPP can be successfully implemented in a country as a whole, or within individual organizations and state entities.

3.3 Green Public Procurement: South African Context

The below section is a summary of findings based on a review of South African literature and legislation pertaining to public procurement, green procurement and green public procurement. There has been a fair amount of research to date pertaining to greening procurement in the public sector, but it must be noted that the research has focused predominantly on local government in South Africa. The reviewed material has first been divided into barriers and opportunities and thereafter into subsections within the two primary sections based on commonalties.

3.3.1 GPP Barriers

Within this section, GPP barriers in South Africa have been identified based on the review of previous research and will be discussed below. The barriers that have been identified have been divided into five sections: financial; market-related; institutional; transformational and system-specific (please refer to Figure 3-1).

3.3.1.1 Financial

Premium on Green Products

A study undertaken by Perera *et al.* (2008:36) as well as a study undertaken by Wessels, (2014) confirmed that there is an existing perception that green products are costlier than traditional products. This perception can be accepted as true in some cases as costs could be stemming from the manufacturing process, limited accessibility of the product, the green verification process or transportation as products are not available locally (Wessels, 2014).

In consideration of the premium that may be associated with green products, officials in the public sector may find it difficult to justify the procurement of green products and services which may initially cost more but may be cheaper when considering the life cycle. The public sector in South Africa is required to motivate for, justify and manage their funding on an annual basis, which is short term perspective to manage goods and services.

The approach adopted in the current procurement system is to obtain goods at the lowest possible price. Thus, green products and services are often not chosen as their initial costs are higher. Life cycle cost savings are therefore not realized.

Statistics captured between July 2003 and December 2004 in King County in the United States of America, showed that the County saved approximately \$950 000 when purchasing environmentally preferred products for \$70 000 (Wessels, 2014). The environmentally preferred products that were purchased included products which reduced waste or conserved energy. Research has indicated that when the life cycle cost of green products is considered, which includes operational and disposal costs, the cost of green products are equal to or less than traditional products.

3.3.1.2 Market

Within this section, barriers within the South African market will be described and discussed. The barriers that have been identified have been divided into the following four sections: verification of green products; availability of products and suppliers; quality of green products; and competition with existing products.

Verification of Green Products

There is currently no localized green verification system within South Africa. The environmental labelling and verification systems that have been adopted have originated from international initiatives. However, there are currently databases and initiatives which showcase environmental products on the market such as the Green Building handbook series and GreenFILE publication. It must be noted that more often than not, the products that have been captured in these publications have not been through a verification process (Perera *et al.*, 2008:42; Thobane, 2009).

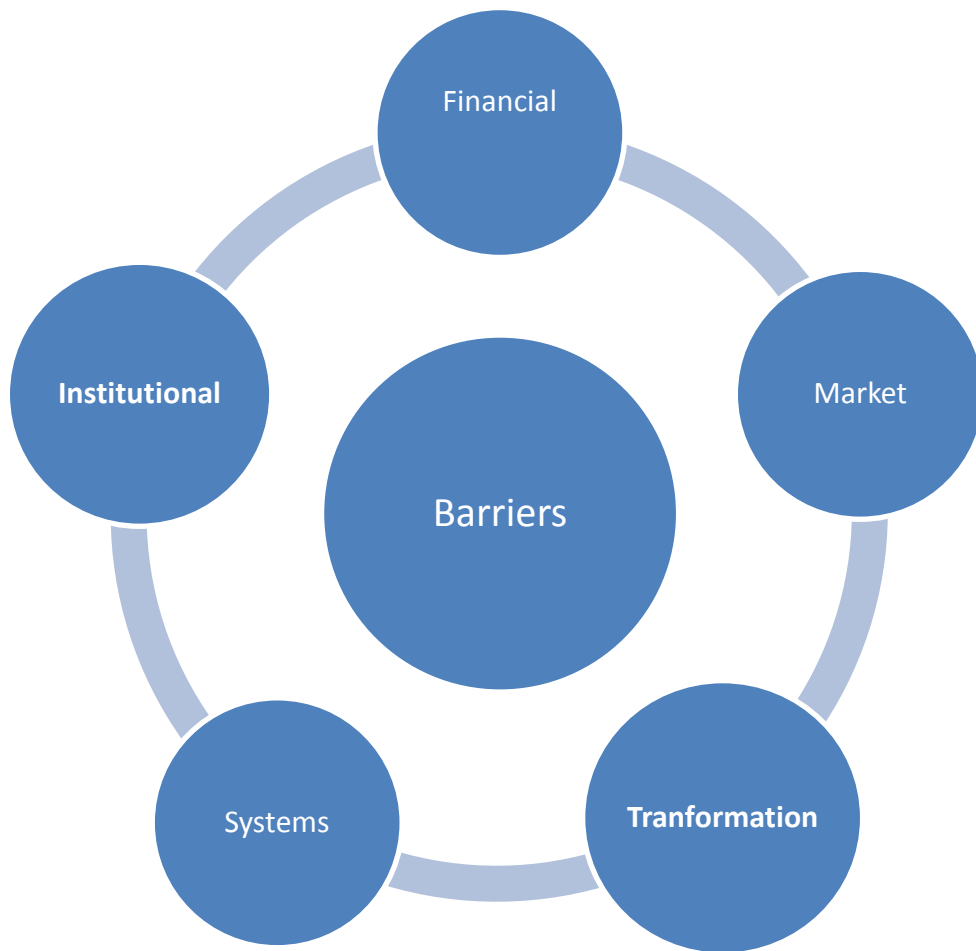


Figure 3. 1: Barriers to implementing Green Public Procurement (Hanks *et al.*, 2008)

The lack of accredited green products in South Africa is due to the absence of a formalized verification system and established criteria. The absence of a verification system can be attributed to a lack of expertise to undertake the verification process for products. Additionally, there is limited time as well as a lack of human and financial support to verify products (Perera *et al.*, 2008:42; Thobane, 2009). The absence of a green verification system or scheme to confirm the authenticity of green products hinders the implementation of GPP. As indicated in the international context, officials often lack the knowledge, awareness and expertise to know whether a product is in fact green. Therefore, in the absence of a green verification system, officials can be exposed to misrepresentation by suppliers during the procurement process and overall the implementation of GPP is slowed down without pre-existing green labels that can be utilized in the procurement process (Perera *et al.*, 2008:42; Thobane, 2009).

Availability of Products and Suppliers

In the study undertaken by Bolton (2008:36), it was noted that a perception exists that products are not readily available in the country (Thobane, 2009). This may be true in some part; as green procurement is still considered a new process in South Africa. However, the provision of green

products in South Africa has steadily increased over the years, as suppliers have identified the need in the market.

As local distributors may not stock green products or do so in small quantities, this may result in premium costing of the products. Organizations who are adopting green procurement have had to opt to procure products from international suppliers due to the low availability in local markets. This has raised concerns that the mature international market may out-compete the local market in providing green products which could threaten the mandate of the current South African procurement system (Perera *et al.*, 2008:42). Alternatively, the lack of availability of products results in users remaining with traditional goods and services.

Quality of Green Products

There is currently a perception that green products are inferior to traditional products (Wessels, 2008:36). This perception is largely influenced by events that occurred during the initial stages of green production and manufacturing, when products were of a lower quality. The perception has also been fuelled by suppliers whose businesses may be jeopardized due to the introduction of green products in the market (Perera *et al.*, 2008:43). However, as time progressed, it has been found that green products adhere to the same technical specifications and are of the same quality as traditional products. In many instances, the products may have superior characteristics (Wessels, 2008:36).

Competition with Existing Products

The preference to specific products, brands and manner of executing works in industry and government has been noted as a challenge to implementing green procurement. It has been surmised that officials may not be willing to change practices from traditional goods and services as green products are lesser-known in the market and relationships are already established with existing suppliers (Perera *et al.*, 2008:42; Wessels, 2014).

3.3.1.3 Institutional

Within this section, institutional barriers within South Africa will be described and discussed. The barriers that have been identified have been divided into the following six sections: lack of legal mandate and political framework; unwillingness to alter existing procurement system; management buy-in; limited knowledge and expertise; additional burden on procurement officials; and decentralized procurement structure.

Lack of legal mandate and political framework

The existing legislative framework for public procurement focuses on undertaking procurement in a manner that is “*fair, equitable, transparent, competitive and cost-effective*”. The procurement system also has a secondary objective to advance people that have been disadvantaged or

exposed to unfair discrimination historically (South Africa, 1996:112). Officials highlighted that the lack of an explicit political mandate and legal framework to implement GPP is a barrier as there is no compulsory requirements captured within the current legislation that requires an entity to implement GPP. Therefore, it is at the entity's discretion to choose to enforce GPP; and in the South African context, the will to implement GPP is low as sustainable development is not standard practice (Perera *et al.*, 2008:43; Thobane, 2009).

Unwillingness to alter existing procurement system

As indicated in the international context, the execution of green procurement is multi-faceted and requires input from several fields. Should there be a lack of understanding of the purpose, requirements, or roles and responsibilities of GPP by team members, the execution of the process may be derailed (Perera *et al.*, 2008: 43).

Management Buy-in

As discussed in the international context, the absence of management support can result in the ineffective execution of GPP or the absence of implementation altogether. Political interference in government operations are prevalent in South Africa and can either expedite or make processes obsolete. Observations made in the study undertaken by Perera *et al.* (2008:43) have indicated that the lack of buy-in for GPP by politicians would be a significant barrier.

In addition, Wessels (2014:955) has highlighted that commitment from many role-players are required to ensure the effective execution of GPP, including councilors, senior managers as well as officers from budget and treasury offices. It was proposed that formal commitment from the abovementioned role-players is obtained to allow for easier implementation.

Limited knowledge and expertise

Wessels (2014:954) has highlighted that most local government officials are not aware of the GPP concept. Understanding of the concept, its processes and interventions are necessary for effective execution of GPP. To implement GPP, officials would be required to have the necessary knowledge and skills to apply and incorporate green procurement into scoring criteria, technical specifications of bid documents and to evaluate bid proposals. The lack of knowledge and expertise was noted by Perera, Davies and Hanks as the top two barriers that may hinder the implementation of GPP (2008:43; Thobane, 2009).

Additional burden on procurement officials

The implementation of GPP requires substantial effort to be invested to ensure effective implementation of GPP. Officials would be required to undertake market research, participate in the development of specifications and verify claims made by suppliers. It is foreseen that

procurement officials may not be able to handle the additional workload on top of the rigorous process they are already required to oversee (Perera *et al.*, 2008:43; Thobane, 2009).

Decentralized procurement structure

As indicated in the background of the study, the PFMA has allowed for the creation of a decentralized procurement system. Whilst this allows an organization flexibility to make decisions on procurement processes within the ambit of the existing procurement legislation, it also means that each organization undertakes procurement separately. That being said, each organization would be required to invest in separate skills development, awareness training and manage the use of local suppliers to implement GPP. The decentralization of procurement in South Africa means that additional resources are required to ensure GPP is executed across the public sector, which would slow down execution (Perera *et al.*, 2008:43).

3.3.1.4 Transformation/ Equity

The study undertaken by Perera *et al.* (2008:44) highlighted that the execution of GPP may put SMMEs out of business as companies may not be able to meet the tender requirements or offer products as required under the ambit of the green procurement paradigm. The possibility that SMMEs may be prejudiced is seen as a reason to not execute GPP. In addition, it is perceived that GPP criteria may be in conflict with and contravenes the mandate of the PPPFA, hence hesitation to execute GPP has always been prevalent.

3.3.1.5 Systems

The current procurement system is complex and has stringent requirements for execution (Wessels, 2014). The complexity of the system can be considered a barrier to the execution of GPP. Furthermore, it has been highlighted that the onerous nature of the current system may impact the will of officials to execute GPP as it would mean additional responsibilities.

National Treasury is responsible for developing systems such as the Integrated Financial Management System which was developed in 2008. However, it is often found that the provincial or municipal authorities are not effectively briefed and trained on new systems that are rolled out. The ineffective training of officials often leads to new mechanisms and systems not being executed optimally. This can be identified as a potential barrier for implementing GPP (Perera *et al.*, 2008:43).

3.3.2 GPP Opportunities

Within this section, the opportunities prevalent in South Africa have been identified from a review of relevant research, literature and legislation which will be discussed below. The opportunities section will be divided into two sections: Governing Framework and Policies and Strategies. The

governing framework and policies and strategies which can influence the implementation of GPP positively can be seen below as Figure 3-2.

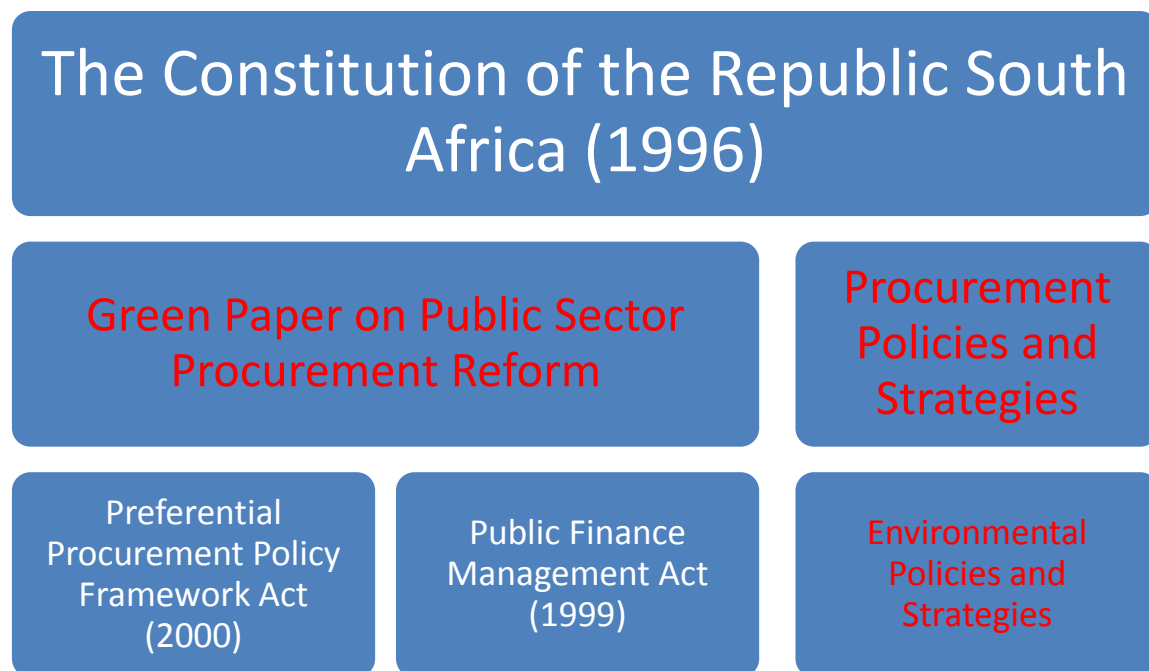


Figure 3-2: Proposed Governing Framework for Green Public Procurement in South Africa (Turley and Perera: 2014)

3.3.2.1. Governing Framework

The review of literature so far has indicated that in order to effectively execute GPP, a governing framework explicitly promoting the process is necessary. However, it can be said that while there is no legislation which explicitly enforces GPP in South Africa, there is currently no legislation that prohibits it. The aim of this section is to summarize sections and clauses within the existing legislation which could provide a platform for the implementation of GPP.

The Constitution

As indicated in the background of the study, the public procurement process has been afforded Constitutional status, which means that enforcement of public procurement as prescribed in the Constitution is a right of South African citizens. Section 217 (2) of the Constitution (1996:112) states that an organ of state should develop a procurement policy that provides for the allocation of contracts based on categories of preference and to implement a procurement policy which protects and advances people that have been historically disadvantaged by unfair discrimination. However, the Constitution has also made allowances for the protection of the environment.

Under Section 24 of the Constitution (1996:9), it states:

“Everyone has the right-

- *to an environment that is not harmful to their health or well-being; and*

- *to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that-*
 - *prevent pollution and ecological degradation;*
 - *promote conservation; and*
 - *secure ecologically sustainable development and use of resources while promoting justifiable economic and social development.”*

In consideration of both Section 24 and Section 217 (2), it can be determined that the objectives of public procurement do not need to only focus on the advancement of previously disadvantaged individuals. Section 217 (2) has made mention of allocation of contracts based on categories of preference and did not limit nor indicate the types of categories. Thus, it can be deduced that GPP can be considered a category of preference. In addition, the protection of the environment has also been afforded constitutional status and accordingly state-owned entities are obligated to utilize their procurement powers to promote the protection of the environment (Bolton, 2008; De La Harpe, 2008). Therefore, the platform to implement GPP exists; however, a balance should be pursued when considering introducing and integrating GPP with the current public procurement system.

Furthermore, Section 217 (1) of the Constitution (1996:112) requires the public procurement system to be “... *fair, equitable, transparent, competitive and cost-effective*”. These criteria determine the manner in which the procurement process is undertaken and how decisions are to be made. A study undertaken by De La Harpe in 2008 showed that GPP can be implemented within the ambit of these criteria. The interpretation of these factors, for the purposes of GPP is displayed below:

Table 3. 1: Table showing the applicability of GPP within the public procurement system

Criteria	Interpretation
Fair	○ Meaning, procedural or administrative fairness. Administrative fairness, amongst other things, refers to the equal evaluation of bid documents. Procedural fairness refers to the relationships between organs of state and private parties, i.e. organs of state need to treat private parties fairly by executing a transparent process and all parties are treated equally in relation to each other. ○ In consideration of GPP, promotion of environmental rights in public procurement must be done in a procedurally fair manner. This can be achieved by providing environmental evaluation criteria that are objective and which would be applied during the evaluation process. In addition, to

	achieve fairness when implementing GPP, entities cannot unreasonably favour particular service providers and further entrench past inequalities. (De La Harpe; 2008)
Equitable	○ Meaning: Fair and impartial. However, equitability must also consider the relevant circumstances. To determine what is equitable, one needs to consider the nature of a party's rights and situation and the rights of the state and the general public. Thus, the use of public procurement to advance previously disadvantaged individuals through preferential treatment can be considered equitable, as it is the intention of the state to uplift these citizens and rectify past injustices. It must be noted that the state does not need to treat all citizens the same to achieve equality. ○ It can be seen as equitable to procure environmentally friendly goods and services as opposed to traditional goods in consideration of the sensitivity of the environment, the scarcity of resources as well as the social and environmental consequences that may be experienced should environmental criteria not be considered in a particular procurement. (De La Harpe; 2008)
Transparent	○ Meaning: The Constitution entrenches values of accountability, responsiveness and openness. Public procurement must be transparent throughout all the stages of the procurement process. In order to achieve this, information on the tender rules and practices; the procurement opportunities; applicable evaluation criteria and tender outcomes needs to be correct, accessible and timeously available. ○ As GPP has not been widely applied, transparency at all stages of procurement would be essential: - Accurate and detailed criteria pertaining to goods or services that will be procured needs to be shared; - Clear evaluation criteria that will be used to select a tenderer must be communicated; and - The award criteria will need to be clear, quantifiable, objective and linked to the procurement subject matter. (De La Harpe; 2008)

Competitive	○ Means: establishing suitable levels of competition in order to ensure best value outcomes. This means that a tenderer should be awarded based on merit; awarding a tender based on merit means that cost should not be the only factor that is considered. Additionally, in order for a tender to be competitive, the details captured within the tender document must be detailed, precise, easily understandable and scientifically correct. ○ From a GPP perspective, to ensure the competitive nature of the tender process is maintained, a clear description of the product requirements needs to be communicated from the onset. This ensures that all tenderers are privy to the same details. As indicated above, price does not need to be the only criteria to determine a tender award, other attributes can be considered such as the life cycle costs of a product to ascertain value for money. De La Harpe indicated that while the initial costs of a product may be more expensive, the product may have a longer lifespan, which effectively means that the product is cheaper in the long run.
Cost-effective	○ Meaning: <i>“effective or productive in relation to its cost”</i> (De La Harpe, 2008:65). Within the procurement process, the needs analysis for products, the procurement system and the outcomes of the procurement process need to be cost-effective. As indicated in the section above, value for money does not necessarily mean appointing a tenderer who provides the lowest cost for a product- the most meritorious tenderer should be appointed. The most meritorious tenderer could mean a tenderer who would assist in achieving the secondary objectives as committed to by an entity. ○ From a GPP perspective: <i>“...the beneficial outcomes of green procurement are therefore relevant to cost effectiveness (as it can be defined as an objective of an entity). These outcomes should be quantified where possible and need to be taken into account when the best value for money is sought”</i> (De La Harpe, 2008:66).

Table 3-1 above has shown that there is opportunity to adopt GPP within the ambit of the existing Constitutional requirements for a public procurement system.

Green Paper on Public Sector Procurement Reform 1997

In April 1997, the Green Paper on Public Sector Procurement Reform was formulated with the intention of providing guidance on Section 217(2) of the Constitution (1996). The Green Paper provided principles and a ten-point plan to guide the execution of public procurement. The document put forward principles and guidance on components of the tendering process, such as access of tendering information, content of tender documents, various procurement processes, and awarding tenders based on development objectives. It further proposed the development of a procurement policy which focuses on affirmative action pertaining to socio-economic objectives in line with Section 217 of the Constitution (1996) (Bolton, 2006:205). It is based on the above guiding principles that the existing South African governing framework for public procurement was developed.

However, clause 4.27 of the Green Paper (1997), which provided the green aspects that should be included in the public procurement system, was not considered and incorporated within the current governing framework. Clause 4.27 stated that public entities should develop policies which influence service providers to adhere to environmental legislation and supply products that are environmentally friendly and possibly produced from recyclable material.

Furthermore, the Green Paper indicated that public entities should:

- *“buy only from vendors who are in compliance with all environmentally-related legislation;*
- *Promote environmental awareness amongst suppliers, service providers and contractors;*
- *Favour procurement of less environmentally damaging products;*
- *Discriminate in favour of products made from recycled materials;*
- *Require that suppliers limit packaging to the minimum necessary to protect the items supplied;*
- *Favour products which provide information about their effect on the environment;*
- *Develop the environmental awareness of government officials;*
- *Develop and maintain a database of vendors in which information relating to their environmental conduct is retained;*
- *Develop and promote a code of conduct for vendors;*
- *Develop a policy with respect to the use of products containing asbestos”*

In consideration of service providers, it was proposed that service providers:

- *“comply with the requirement of all environmental legislation;*
- *Require that their suppliers and sub-contractors in turn comply with all environmental legislation;*

- *Consider the environmental impact of their products over their full life cycle from 'cradle to grave'*
- *Minimise the use of energy, non-renewable resources, hazardous chemicals and toxic substances;*
- *Maximise the use of recycled materials;*
- *Minimise the production of waste;*
- *Dispose of all wastes in an environmentally responsible manner;*
- *Not offer products of packaging containing CFCs, HCFCs, halons, carbon tetrachloride and other ozone depleting substances."*

It can be seen from the abovementioned guiding principles, that the authors of the Green Paper had a different understanding of Section 217 of the Constitution, i.e. the incorporation of GPP was foreseen, promoted and deemed possible. The Green Paper highlights the possible mechanisms that can be implemented within the procurement system. The fact that the guidelines for adopting GPP currently exists within the Green Paper can be seen as an opportunity and precursor to develop explicit legislation to green public procurement.

Preferential Procurement Policy Framework Act (5 of 2000)

Section 217 (3) of the Constitution (1996) indicated that national legislation must to be developed in order to fulfil the requirements of Section 217 (2) of the Constitution. Thus, the PPPFA was promulgated with the intention of facilitating the preferential treatment of previously disadvantaged individuals during procurement activities. The framework provides a points system which allocates preference points based on categories of preference. For contracts above a specific amount, 10 points can be allocated for specific goals, and for contracts that are equal to or below a specific amount, 20 points may be allocated for specific goals as communicated by the entity.

The PPPFA itself cannot accommodate the allocation of preference points for GPP, as the Framework Act's mandate and focus is on uplifting previously disadvantage citizens. However, it can be concluded that GPP can be considered a category of preference and the sentiments of the Framework Act can be applied in national legislation that can still be developed pertaining to GPP.

Public Finance Management Act 1999

The PFMA (1999) sets out the framework in which the designated Accounting Officer can operate a procurement system. The five criteria for a procurement system (fair, equitable, transparent, competitive and cost-effective) as defined by the Constitution resonates in the PFMA. The PFMA

allows every department and state-owned entity to adopt its own procurement system as long as it is within the ambit of the framework.

At a national and provincial level, government departments and public entities listed in Schedule 2 and 3 as well as constitutional entities are required to identify and obtain procurements based on the needs identified within their individual entities. De La Harpe (2008) has indicated that it is well within these entities ambit of control to choose to procure goods and services that are green and opt for suppliers which utilize green production methods. However, he has also indicated that these specifications would need to be communicated in the invitation to tender. The entities would need to specify the requirements that need to be met; for example, if an entity is procuring light bulbs, they can indicate that the light bulbs must be energy saving light bulbs. It must be noted that the five criteria as stipulated in the constitution must be adhered to; should the inclusion of green procurement compromise that, the process cannot be initiated. As indicated above, the PPPFA cannot accommodate GPP, as its mandate has already been established. It is for this reason that GPP would not be able to be incorporated into the stage where preferential points are allocated. Therefore, the requirements for GPP should be assessed under the functional evaluation phase of the public procurement process.

3.3.2.2 Policies and Strategies

As mentioned before, the Constitution addresses public procurement and the environment separately. As such, all policies, legislation, standards and regulations have been developed to address these matters separately. However, when considering the integration of procurement and the environment, elements of green procurement can be identified in policies and strategies. The policies and strategies that can contribute to GPP include: the Framework for Considering Market-based Instruments to Support Environmental Fiscal Reform in South Africa; Procurement of Localised and Renewable Energy Sources; Green Economy Accords; Energy Efficiency Policy and Strategy; Climate Change Policy and Commitments; Water Management Policy; Waste Management Policy; Environmental Impact Assessments.

3.3.2.3 Green Product Suppliers

Studies have indicated that the private sector can play a significant role in promoting green procurement in government entities by informing officials of the possible products that are available in the market. By increasing awareness within government entities, officials are exposed to various opportunities to integrate GPP (Bolton, 2008; Bouwer *et al.*, 2006; Wessels, 2014).

3.3.3 National Context: Summary

Sections 3.3.1 and 3.3.2 above has provided a summary of barriers and opportunities that are prevalent in South Africa. Barriers summarized from the literature were split into the following five

subsections: financial constraints; market-related challenges; current institutional situations; transformational conflicts; and ineffective system implementation. Within the South African context, it can be seen that issues are not only pertaining to human resources, as was the case in the international context, but also includes systemic matters. The opportunities identified in the research predominantly revolved around the existing legislation and the potential to adopt GPP within the existing governing framework. Additionally, environmental policies and strategies would provide validation for adopting GPP. It can be concluded that the review of literature and legislation has shown that the barriers currently outweigh the opportunities to implement GPP in South Africa.

3.4 Literature Analysis and Framework Development

This section will provide an analysis of the literature reviewed in order to identify trends in the findings which would assist with the selection of an appropriate framework for the semi-structured interviews (Section 3.4.1). Thereafter, the chosen framework will be defined, and its parameters explained in Section 3.4.2.

3.4.1 Literature Analysis

Within the international and national context, three themes came to the forefront in terms of the types of opportunities and barriers that were identified; they were either pertaining to systemic conditions; knowledge and expertise; or willingness to implement GPP.

Systemic conditions can be referred to as the existing processes and situations that are currently occurring. The systemic conditions noted in both the international and national context from an institutional perspective revolved around the existence of regulatory frameworks and entities to enforce GPP, the additional burden on SCM staff, and the type of procurement structure which could facilitate or hinder GPP (decentralized or centralized). From a market perspective, the presence or absence of a verification system for green products influenced the implementation of GPP.

Secondly, knowledge and expertise determine how effectively and efficiently GPP can be implemented. It was found that the presence of knowledge and expertise pertaining to cost, the availability of products and services, how to integrate GPP into procurement procedures and the benefits of GPP is vital amongst various stakeholders to ensure effective implementation.

Whilst most of the opportunities and barriers were either systemic or knowledge based, there were three which could be classified as willingness to implement. Willingness refers to one's desire to implement GPP. It was found that the support of politicians and higher management can drive the implementation of GPP; however, if GPP does not fit within their mandate, they can deter implementation. Additionally, it was found that the attitude of suppliers to a new process can influence the rate at which GPP is implemented.

In observation of the above, it can be surmised that it is a combination of human resources and systemic conditions that can either create barriers or drive potential opportunities to implement GPP. It is the will and level of knowledge and expertise of human resources as well as systemic conditions that determine the success or failure of a process within individual organizations, state entities or in a country as a whole. Therefore, a decision was taken to adopt a framework that would assess both human behavior and systemic conditions when attempting to adopt GPP.

The methodologies of studies incorporated into the literature review were appraised in order to obtain a guide post on the framework that could be adopted in this study. A study undertaken by Dolva (2007:33) titled, *“How widespread is Green Public Procurement in Norway, and what factors are seen as drivers and barriers to a greener procurement practice?”* was noted to have a similar research design and objectives. Dolva interviewed procurement officials to assess the opportunities and constraints as well as the norms and traditions of public entities who were required to implement GPP by utilizing the theory and norm-model of Professor Hakan Hyden.

Professor Hyden’s norm-model states that normative elements act as determinants for an individual’s actions and can be investigated or evaluated empirically to assist researchers in determining why some actions may occur while others may not (Dolva, 2007; Hyden, 2002). The model is designed as an analytical tool to assist in identifying the motives behind human actions or the lack thereof. The model has been published in journals as well as books, therefore it was surmised that it is sound tool to utilize during this study (Hyden and Svensson, 2008; Hyden, 2002) and therefore it was decided that the model will be utilized to develop a framework for the semi-structured interviews and the analysis thereafter.

3.4.2 Interview Framework

The framework selected has guided the investigation and assessment of the knowledge, mandates and will of human resources within the public procurement sphere in order to better understand the current barriers and potential opportunities that exist for implementing green procurement within the operational context.

The below section provides a description of the framework that has been utilized to develop an interview framework for the semi-structured interviews. It must be noted that without the framework, semi-structured interviews may not provide the answers required for the data analysis, and therefore it was found to be necessary to undertake this step to ensure a robust investigation.

Hyden’s Norm-Model

As mentioned previously, Hyden’s norm-model states that normative elements act as determinants for an individual’s actions and can be investigated or evaluated empirically to assist researchers in determining why some actions may occur while others may not (Dolva, 2007; Hyden, 2002). Hyden has indicated that there are three common factors which influence a norm:

will and evaluation; knowledge and cognition; and system and opportunity (Dolva, 2007; Hyden, 2002). Furthermore, Hyden states that these “...*factors play an important role as either drivers or barriers to certain patterns of behaviour* (Dolva, 2007:34; Hyden, 2002). A description of the three factors and the context to which they can be applied in this study can be found in Table 3-2 below.

Table 3- 2: Table showing the three common factors of a Norm

Factor	Description
Will (value-based condition)	This factor considers the motive or value behind the action. These motives can be influenced by a person's ideology, political views, religious values, ethics or morals. Within the context of this study, the public procurement officials' views on greening procurement can be assessed.
Knowledge	Knowledge is required in order to evoke action and implement a norm. Therefore knowledge, education and experience are important contributors to ensuring effective implementation of a norm. Within the context of this study, it can be assessed whether sufficient awareness, knowledge and expertise on how to practice GPP is prevalent amongst public procurement officials.
Opportunity (systemic conditions)	Systemic conditions focus on whether the system in place is conducive for a norm to occur. Within the context of this study, existing opportunities and barriers (administrative, political, economic, or technical structures/platforms) that may disallow or allow public procurement officials to execute GPP can be assessed.

Framework on GPP

Hyden (2002) stated that in order for GPP to be adopted as common practice (norm), individuals who undertake the procurement of products would need to have a certain set of values in terms of the environment, knowledge on how to implement GPP and the systemic platform to implement GPP (Dolva, 2007; Wickenberg, 2004). In other words, Hyden's conceptual model indicates that normative elements such as values, knowledge and systemic conditions are necessary for policies such as GPP to be effectively implemented.

The three factors described will be utilized as categories of discussion during the semi-structured interviews to pinpoint where opportunities and barriers exist for greening public procurement in Schedule 3C PPEs. This study focused on both the actor orientated factors as well as the systemic conditions. This approach is divergent from Dolva's study which only focused on the actor-orientated factors and not the systemic conditions as Norway has already established government interventions to implement GPP and therefore systemic conditions were not

considered a barrier. Within the context of this study, the question of whether systemic conditions are seen as an opportunity or barrier is yet to be determined and therefore needed to be investigated.

It is important to note that the factors highlighted above often overlap and the subject matter obtained from the interviews may often be interlinked. For example, will and values determine what a person may deem to be relevant knowledge. Knowledge is obtained and dependent on the existing system and systemic conditions may influence the values that are considered prevalent in society. However, it is beneficial to have a structured manner to obtain information in order to identify and analyses the potential barriers and opportunities that may be stemming from a specific factor (Dolva, 2007).

3.5 Conclusion

There are many factors which can influence the successful implementation of GPP. However, based on the review of literature, it has been surmised that human resources and systemic conditions play a significant role in either creating barriers or driving potential opportunities. In consideration of this observation, Hyden's norm-model has been chosen as the framework that will guide the investigation and assessment of human resources within the public procurement sphere with the intention to better understand the current barriers and potential opportunities that exist for implementing green procurement within the operational context.

CHAPTER 4

RESULTS AND ANALYSIS

This chapter summarizes and analyses the results of the study. In Section 4.1, the interview protocol, consisting of the questions for the semi-structured interviews and the interview procedure that was followed during the interviews, is presented. Thereafter the results for each question and its' corresponding analysis is displayed in Section 4.2. The decision was taken to display the results and the analysis of each question together for the reader to better contextualize the arguments.

4.1 Interview Protocol

4.1.1 Interview Questions

In consideration of Hyden's norm-model and the framework that was proposed in Chapter 3, seven questions were developed to address the research objective. Two demographical questions were included at the beginning of the interview to ease the interviewees into the interview process. Therefore, questions have been arranged into four categories: demographics, knowledge, will, and systemic conditions. The rationale for each category is stated within each category below.

Demographics

1. Can you tell me about your role in the organization?
2. How many years' experience do you have in the supply chain field?

1- 4 Years	5-9 years	10-14 years	15-20 years	Above 20 years
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Rationale: The purpose of these questions is to assist in assessing the technical questions that follow. It is deduced that the designated role of an employee and their years of experience in the SCM field may directly impact their knowledge and understanding of systemic conditions.

Knowledge

3. What is your understanding of green procurement?

Rationale: The purpose of this question is to ascertain whether the interviewee has any knowledge or understanding of GPP. A lack of understanding of the concept would indicate that the interviewee's knowledge on how to implement GPP can be considered a barrier.

Will

4. On a scale of 1-5 (1= Not Important; 5= very important), do you think that it is important to green public procurement? Please substantiate.

Rationale: The purpose of this question is to determine whether the interviewee places value in greening public procurement which will reflect their willingness to implement GPP.

Systemic Conditions

5. In consideration of your organization's current procurement practices, could you indicate on a scale of 1-5 (1= not possible; 5= highly possible), whether it is possible to green procurement practices within your organization? Why?
6. In consideration of existing legislative framework, could you indicate on a scale of 1-5(1 = not possible; 5= highly possible), whether it is possible to green procurement practices within your organization? Why?
7. Does your organization currently incorporate any environmental considerations in your procurement process? If so, what interventions are currently being implemented?
8. Do you think there are any interventions that could be implemented within your organization?
9. What do you think is the biggest barrier for greening public procurement?

Rationale: The purpose of these questions is to determine the systemic barriers and opportunities.

4.1.2 Interview Procedure

In line with Jacob and Ferguson's guidelines (2012), the following protocol was utilized during the interview process:

1. A script was prepared for the beginning and end of the interviews. At the beginning of the interview, the interviewees were briefed on the reason for the research and what the study was pertaining to. They were then requested to sign a consent form to participate in the study and to allow the interview to be recorded. The consent form highlighted their rights to withdraw from the process at any time and they were advised that their identity would not be disclosed in the mini-dissertation.
2. The first interview undertaken was a test interview with a SCM consultant. The interview was conducted to assess the validity of the questions and to ascertain where prompts may be required. It was determined that after the third question pertaining to the interviewee's understanding of GPP, the researcher would define GPP within the ambit of the study in

order to ensure that both the interviewee and researcher are discussing the same concepts and process for the rest of the interview.

3. During the interview, the researcher recorded the dialogue utilizing a cell phone recording application and took key notes on potential interventions that can be used to implement GPP as was recommended by individual interviewees.
4. At the end of the interview, contact details were provided for both the researcher and the designated supervisor. The interviewees were advised that they could use the contact details if they required further details on the study or required clarity on the process. Furthermore, the interviewees were informed that they would be contacted to verify answers and to confirm accuracy of the transcribed notes if necessary.
5. The notes from each interview was then transcribed sentence-by-sentence from the recordings to create a script. The scripts were reviewed to ensure that the information was accurately captured. The scripts were then utilized in the data analysis phase of the study.

4.2 Results and Data Analysis

4.2.1 Demographics

Question 1: Occupation of interviewees

Results

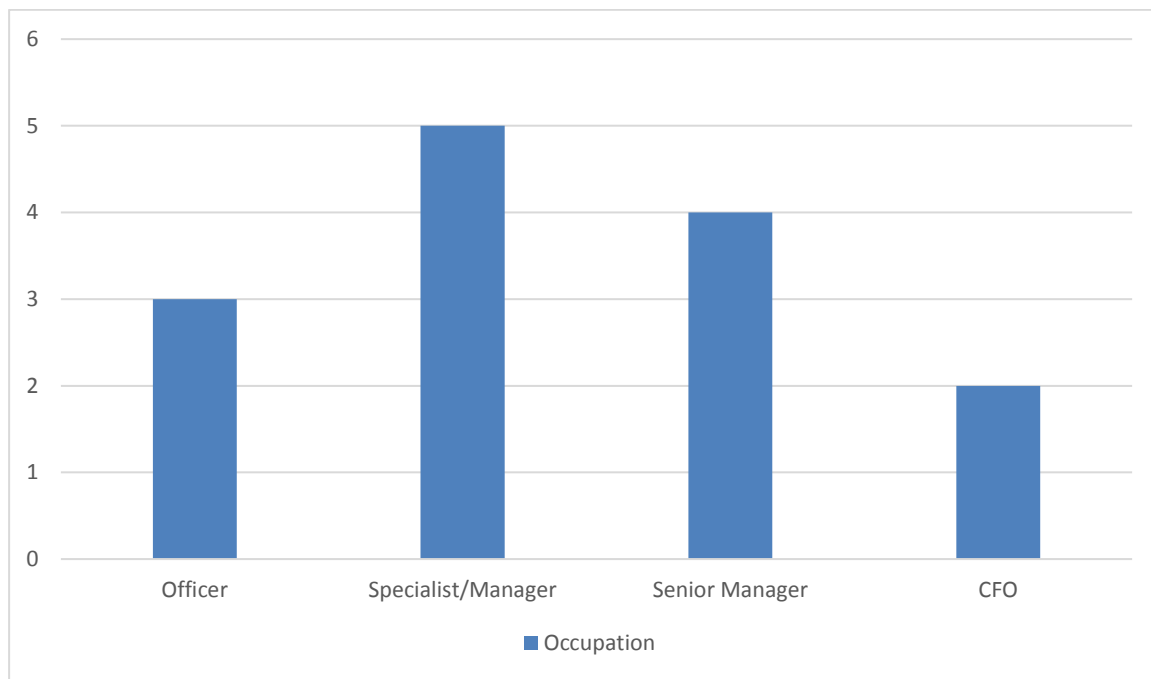


Figure 4-1: Bar Graph showing the Occupation of Interviewees

The bar graph shows that the semi-structured interviews were undertaken with individuals in different tiers of the organogram: officer; specialist or middle manager; senior manager or chief finance officer. Of the fourteen interviewees, three were officers, five were specialists or middle managers, four were senior managers and two were chief finance officers. It can be stated that interviews were well distributed amongst the different tiers of the SCM organogram.

Question 2 Years' experience of interviewees

Results

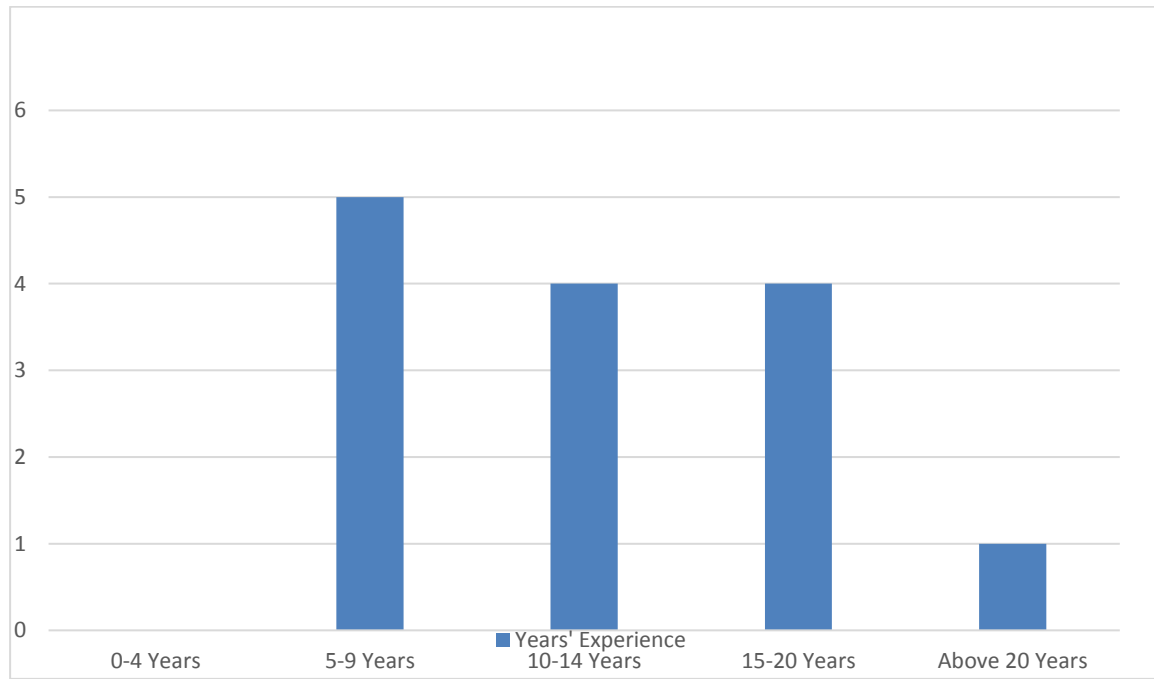


Figure 4-2: Bar Graph showing the Years' Experience of Interviewees

The bar graph showed that the individuals interviewed have a minimum of 5 years' experience. Therefore, it can be deduced that all interviewees have a good understanding of supply chain management processes.

4.2.2 Knowledge

Question 3

Results

Officials were asked what their understanding of green procurement was. The results were divided into three categories: none, basic understanding and a comprehensive understanding. Officials were allocated to 'none', when they were unable to provide any response to the question. Officials were allocated to the basic understanding category, when their response partially fulfilled the definition provided in Chapter 1. Officials were allocated to the comprehensive understanding category, when their response fulfilled the definition provided in Chapter 1. As seen in Figure 4-

3, four officials had no understanding of GPP; six officials had a basic understanding of GPP; and 4 officials had a comprehensive understanding of GPP.

The six officials who were allocated to the 'basic understanding' category all referred to streamlining of the SCM process itself. Most made reference to a 'paperless' environment and of introducing an 'e-procurement' solution to streamline the bureaucratic procurement process which consumes too much paper.

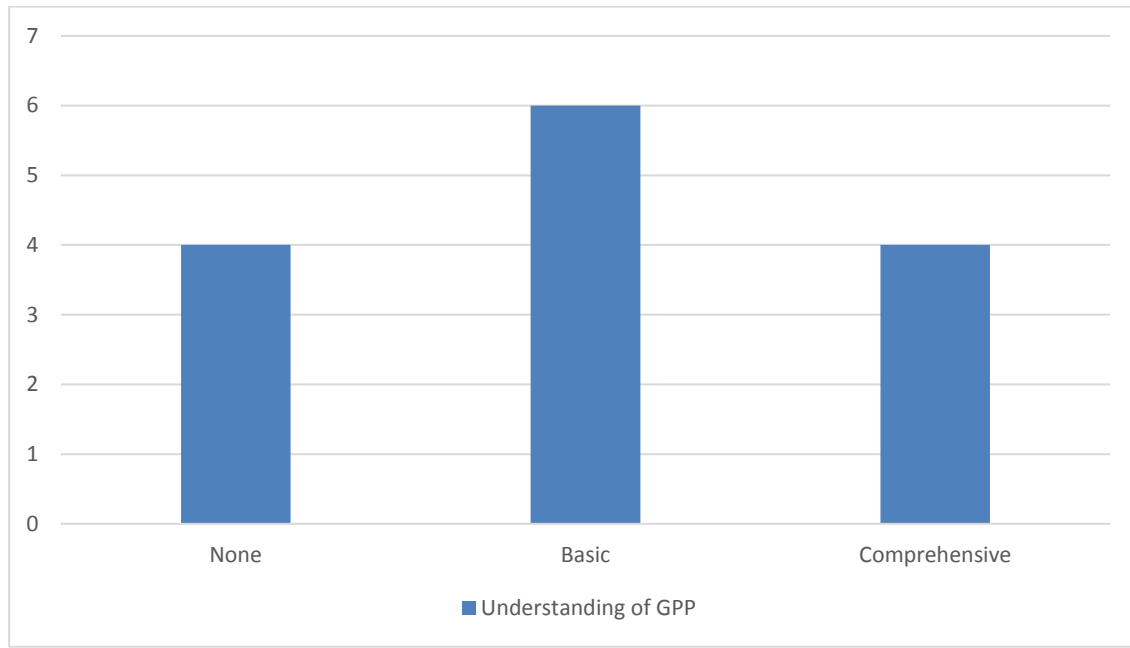


Figure 4-3: Bar Graph showing the Understanding of GPP amongst SCM Officials

Analysis

Upon reviewing the results, it can be determined that knowledge and understanding of what GPP entails is low; this correlates with the findings of the literature review where it was found that knowledge is considered a barrier amongst procurement officials. Officials allocated to the 'none' and 'basic' understanding categories account for 71.4% of the sample group, which indicates that knowledge on greening procurement is low and can be considered a barrier to implementation. It must be noted that the four individuals that had a 'comprehensive' understanding of GPP were all in higher management positions. Therefore, it can be further deduced that exposure to the concept is taking place at a higher level and training interventions will need to be intensively sought for the middle and lower tiers of the SCM units.

4.2.3 Values

Question 4

Results

Officials were requested to indicate on a scale of 1-5 (1=Not important; 5= Very Important) whether they thought greening procurement was important. As seen in Figure 4-4, nine officials thought it was very important to green procurement and indicated that greening procurement is a 5 on the importance scale. Of the five remaining interviewees, two officials scored a 3 and three officials scored a 4.

The individuals who scored a 3 indicated that they considered socio-economic aspects when providing a score. One official state that “... *it is important to focus on the environment now as there are consequences, but we also need to consider whether we have the means and resources to actually deal with that*”. An official who scored a 4 indicated that we “...*need ensure that the green principles are applied across the entire supply chain to be able to achieve sustainable goals*”. It was also indicated that if greening the economy would result in job opportunities then the importance of implementing GPP would increase.

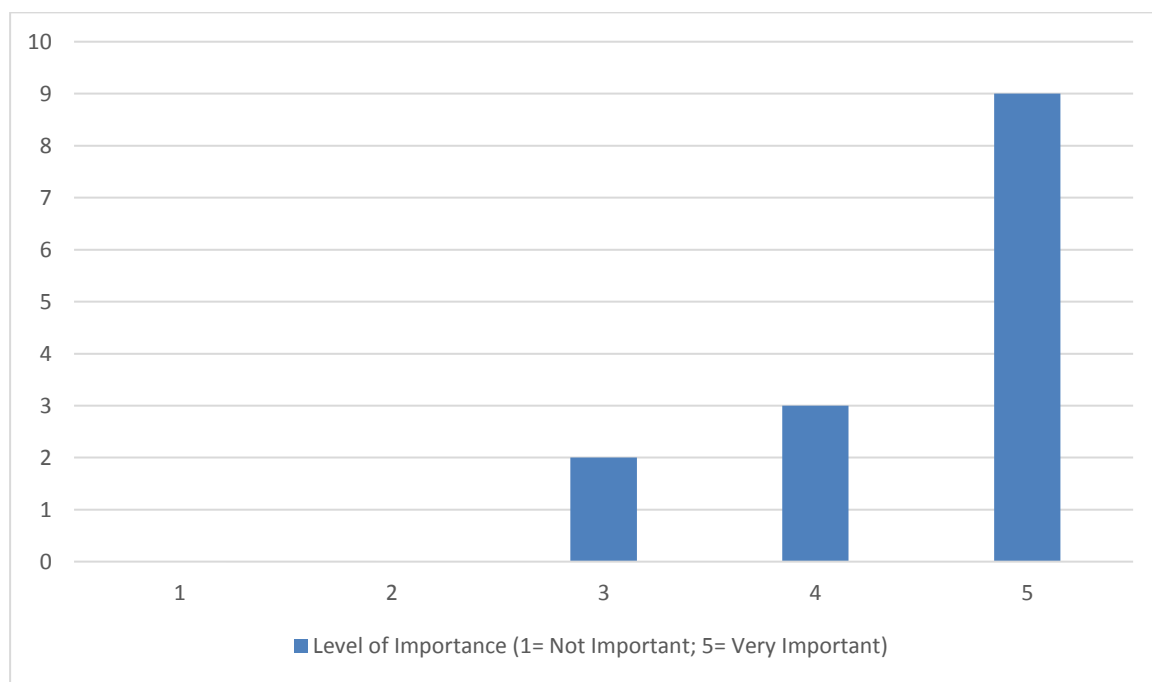


Figure 4-4: Bar Graph showing the value placed on Greening Procurement by SCM Officials

Officials who scored a 5 responded in two ways. Of the nine officials, five were unable to link the importance of GPP with real world situations; whilst the remaining four individuals provided comprehensive answers, linking the benefits of the GPP process with global issues.

Analysis

Upon review of the results, it was positive to note that no officials scored between 1 and 2 in the scale of importance. All officials stated that greening procurement is important. It was surmised that officials that scored a lower score had a more pragmatic approach to the implementation of GPP and their responses took into consideration the socio-economic constraints that we are facing in South Africa. 55% of the officials who scored a 5 on the importance scale could not effectively communicate why it would be beneficial to green public procurement which is indicative of the level of understanding regarding GPP. This correlates with the analysis made in Section 4.2.2.

It is important to note that the will and knowledge categories work hand in hand. If officials do not understand what the implementation of GPP would entail in terms of their workload, the question has arisen as to whether they would be willing to implement GPP once their knowledge has been increased on the matter. Therefore, while it can be stated that the will to implement does exist, it is done so cautiously. This observation is in contrast with the findings of the literature review, where it was found that understanding would increase an individual's will to implement. As South African institutions are often under capacity, the will to implement additional interventions is often low. This was reiterated by an official who stated that they do not have the capacity to implement GPP at this time irrespective of its importance.

4.2.4 Systemic Conditions

Question 5

Results

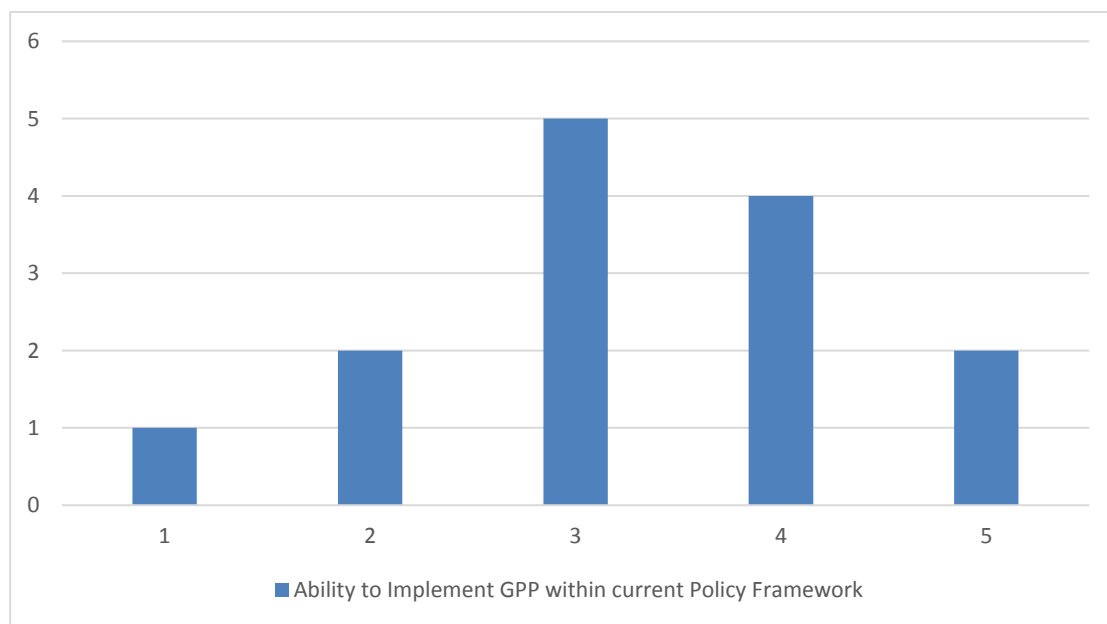


Figure 4-5: Bar Graph showing ability to implement GPP within current Policy Framework

The interviewees were requested to indicate whether they thought it was possible to implement green procurement within their organizations in consideration of their internal policies and standards. One official indicated that it was not possible to implement green procurement and two others indicated that it was highly unlikely. In contrast, two officials indicated that it was highly possible, while nine officials indicated that it was possible to green procurement in their entities. However, they highlighted challenges that could be experienced during implementation.

Four of these officials indicated that procurement staff themselves would be a barrier. It was stated that “...*mind-sets would need to change*” and education on GPP and environmental interventions is necessary before implementation.

An official indicated that it would be difficult to implement GPP as the procurement system is currently geared towards empowering previously disadvantaged groups. It will be seen as taking away suppliers’ opportunity, as it was assumed that they will be unable to cater to the green procurement requirements. Another official agreed that it is for this reason that they would struggle to implement GPP independently without existing legislation as suppliers may challenge the entity’s choice to purchase green products. Similarly, many officials indicated that they would have no “*leg to stand on*”; hence, they were fearful to adopt green procurement on their own. In addition, it was felt that suppliers would, “...*not deem us as much business to change*”. An official stated that government as a whole would need to green their supply chain, so that suppliers would be forced to change.

Two other officials indicated that due to their organizations’ SCM operations and the types of goods they procure, it would be very difficult for them to implement GPP. Within one organization, the procurement system is decentralized whereby each individual is required to undertake their own procurement. The addition of green procurement requirements would be seen as an additional burden to staff. Within another organization, the procurement needs are service based, and the acquisition of goods are fairly minimal. Therefore, the individual felt that it would be very difficult to green consultant-based procurements. Two other officials reiterated this sentiment by indicating that whilst they can attempt to green procurement, they were uncertain about whether the principles can be applied across all their procurements.

Positively, an official advised that the best way to implement GPP was to obtain buy-in at Board level and thereafter change the entity’s policy. The individual indicated that a ‘top-down’ approach would be optimal. In fact, most individuals did indicate that there was nothing substantive that disallowed them from changing their procurement policy.

Analysis

A wide range of responses were received regarding whether it is possible to green procurement in consideration of an entity's internal policies and standards. This can be attributed to the different types of operations and the various sizes of organizations.

Barriers that were noted included SCM officials' reluctance to change procurement practices; limited capacity of SCM departments to implement GPP; suppliers' lack of buy-in; no legislation or regulations to support GPP; and perceived inability to apply green principles to all types of procurement. While most of the barriers listed above correlate with the findings of the literature review, the perceived inability to apply green principles to all types of procurements was a new and interesting finding. It shows that the roll-out of GPP within entities must be carefully considered and it would be prudent for implementation to take place in stages in order to avoid resistance from officials and entities as a whole.

On a positive note, most officials indicated that it was possible to implement green procurement within their current procurement system and it was noted that there were no actual barrier prohibiting entities' changing their policy, standards or practices. However, it was emphasized by many individuals that implementing GPP would be easier if there was legislation that explicitly promotes it.

Question 6

Results

The interviewees were asked to indicate whether they thought it was possible to implement green procurement within their organizations in consideration of the current legislative framework. One individual indicated that it was not possible to green procurement as the legislation focuses on the social aspect and radical economic transformation; whilst thirteen individuals indicated that it is possible to green procurement within the current legislative framework.

The thirteen individuals indicated that while there is no legislation that promotes GPP, there is currently no legislation that disallows procurement. However, the officials had various levels of reservations. One official indicated the following:

"There is no act or policy that we can adopt or comply with; we can just create our own thing. However, when you create policies like that, without any national legislation, it is easy to be challenged. Because you are not referring to anything, so it is a risk. If there is a national policy, then we will be comfortable that we are complying with national law. We can create our policy but with reservations on things because we can be challenged as it is not enforced anywhere. That is why I am saying 3, as we may face challenges and litigation in the absence of the national policy and legislation."

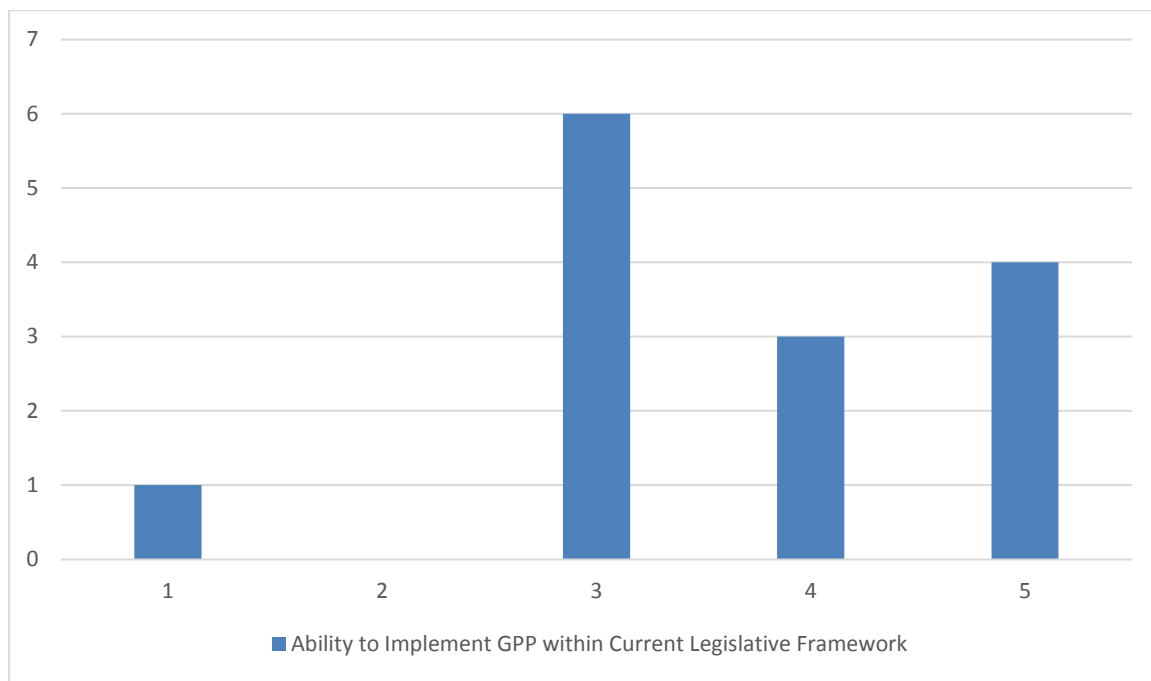


Figure 4-6: Bar Graph showing ability to implement GPP with current legislative framework.

Many individuals agreed with the sentiments captured above. However, another official displayed a more positive outlook and was confident that implementing GPP was possible as the current legislation provides an organization with an opportunity to introduce anything within functionality. The official indicated that the legislation does not state that it is mandatory to choose the cheapest price, it indicates that the organization can reserve the right to take the cheapest price. However, the organization must explicitly communicate their functionality requirements in order to avoid being discriminatory. The official stated that SCM specialists choose to limit the types of methods that can be utilized by focusing on a paragraph that prohibits alternative measures and do not consider the full content of the procurement legislation.

Another official indicated that it is possible to green procurement within Schedule 3C PPEs, it is just that officials have not considered it as yet.

Analysis

In consideration of the results received for question 6 and as was found in the literature review, there are no clauses captured in legislation that prohibits the implementation of GPP. However, the absence of explicit promotion of GPP within legislation has made officials fearful of the liability they may incur should their organizations adopt the process on their own accord. It can be deduced that the fear to implement may directly influence individuals will to proceed with implementation of GPP.

While it was found in the literature review that the lack of legislation explicitly promoting GPP was a barrier, it was not noted that officials were fearful to implement GPP. Within the legislation, the absence of legislation meant that officials had no legal mandate to implement the process.

Question 7

Results

The interviewees were asked to indicate whether they are currently implementing any green procurement interventions within their organizations. Eight individuals indicated that their organization were not implementing any green procurement interventions; while five individuals indicated that their organizations are implementing some aspects of green procurement. One individual indicated that their entity implements GPP, but it was mainly applied on an ad hoc basis dependent on the user requirements. In addition, the official indicated that the SCM unit enforces green principles when procuring maintenance items.

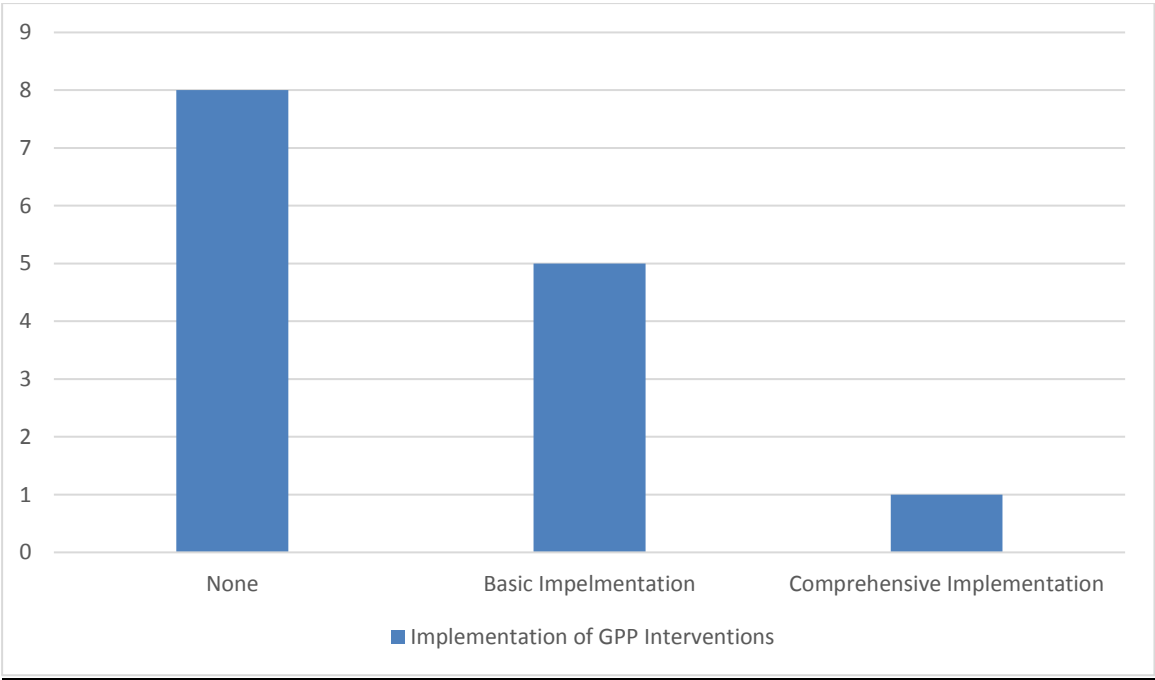


Figure 4-7: Bar Graph showing current status of green procurement interventions in entities

Of the five individuals who indicated that their organizations apply some green principles, most were referring to construction projects whereby Environmental Authorizations and Environmental Management Programmes were included in the tender and enforced once a supplier was awarded. One individual did indicate that their Environmental Managers attend briefing sessions with potential suppliers to brief them on the environmental parameters of the site.

Two individuals indicated that electronic procurement systems are being implemented within their organizations, thus reducing their paper consumption.

Analysis

The purpose of asking this question, was to identify whether there are any green procurement mechanisms currently being implemented in an entity which could be implemented in other Schedule 3C PPEs. From the responses, it can be determined that GPP is still in its infancy within Schedule 3C PPEs in KZN. However, it can be seen that green procurement can and is being practiced in some categories of procurement.

Question 8

Results

The interviewees were asked to indicate what interventions could potentially be implemented within their organizations. Seven individuals did not propose any interventions; however, seven individuals put forward suggestions.

One individual indicated that a green procurement standard or procedure should be developed for the purpose of standardizing processes in an organization to respond to green initiatives. Similarly, an official indicated that an organization needs to prioritize education as GPP means different things to different people. Once this is done, consensus would need to be reached with internal stakeholders on a GPP strategy. The official indicated that there would be little chance of failure once this is done as *"...it would be there, it would be clear as to how we are doing it, and we can deliver on it"*.

Another official expanded on these suggestions by stating that government should develop a basic model that can be implemented in any state-owned entity. In that way officials would be required to know green procurement irrespective of which government entity they work for. This would expedite the understanding of GPP amongst government officials.

Two officials indicated that their internal procurement policies can be changed to include green principles. Another official indicated that their organization could attempt to achieve 'quick wins' such as changing the type of light bulbs and cleaning materials they procure as well as changing their printing policy. They stated further that government should take a lead and make it mandatory for suppliers to be accredited with a registered body (that would need to be established) for green compliance. This certificate can be used during the procurement process as a compliance requirement.

An individual from a small entity stated that there should be a dedicated SCM official to screen and analyze procurement transactions to ascertain whether green principles can be incorporated into individual procurements. Furthermore, it was stated that organizations should incentivize green procurement. Incentives should not only be applied to suppliers, but also relevant

stakeholders and they do not need to only be financially focused but could incorporate forms of recognition.

Analysis

The recommendations captured above indicate various levels of GPP implementation and would be considered in the recommendations in terms of the roll-out and feasibility within Schedule 3C PPEs.

Question 9

Results

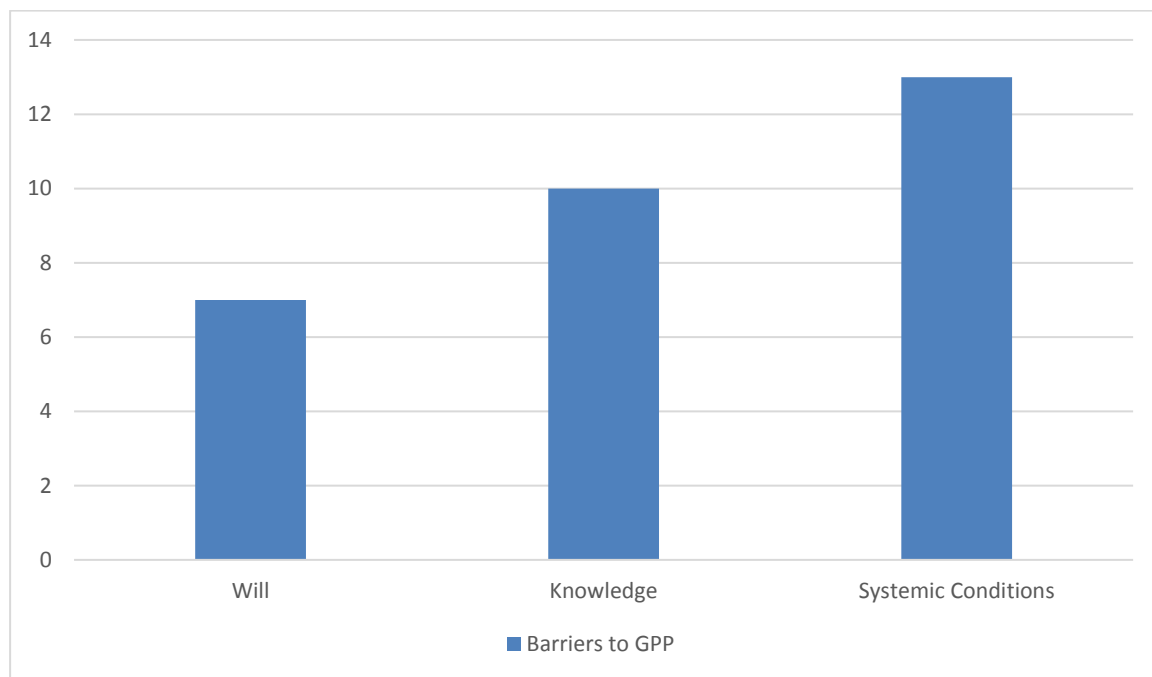


Figure 4-8: Bar Graph showing barriers to greening procurement as identified by SCM officials

The interviewees were asked to indicate what they thought is the biggest barrier to greening procurement was. However, the researcher was flexible during this question and allowed the sample group to list all the barriers they thought would hinder implementation of GPP. The barriers were assigned to categories as per Hyden’s Norm Model: will, knowledge and systemic conditions. The results as per Figure 4-8 indicated that there were thirteen mentions of systemic barriers, ten mentions of knowledge barriers and seven mentions of will barriers.

Upon engagement with officials, the types of barriers within each category was expanded. For example, systemic conditions originally included legislative and internal procedural barriers. However, the category now accounts for market and economic barriers as. This is stemming from the feedback received by many officials which indicated that there are limited suppliers in the market and thus cost of green products would be supplied at a premium. An official stated, “...out

of ten, only three companies got practices and procedures that are focused on green, the rest do not have that. So you now have a situation where you are reducing your market, and left with three companies because your system excludes the rest of the suppliers. The companies that do meet the criteria, will now know that they are one of a few that meet the criteria, and will start to raise the cost”.

Cost implications directly influence entities willingness to change. Officials indicated that cost implications will not only be as a result of premium pricing associated with green products, but from operational costs where an entity would be required to change processes and train staff. Furthermore, the challenges would not only be experienced by government entities, but by suppliers who would now need to change their operations and type of products they supply. The cost of change would be significant. Two officials indicated that due to these cost implications, approval would need to be obtained from government prior to implementation. A choice would need to be made as to whether government as a whole will bear the cost of change within their entities.

In terms of will to implement GPP, the category was expanded beyond the SCM officials to include the suppliers. Officials indicated that greening procurement would not be in the interest of suppliers. It is the feeling of many that greening public procurement would face challenges and resistance from suppliers as suppliers would feel that GPP would contradict BEE and limit their opportunities to work for government entities.

In reference to the SCM officials, an interviewee indicated that “...*they work in an overly sensitive and fearful environment. They fear to be creative within the space that they operate in. They are very inflexible*”. In addition, another official indicated that whilst at higher levels the implications of GPP may be understood, at an operational level officials are mainly concerned with processes. Therefore, a top-down approach needs to be adopted whereby a directive from higher management instructs the entity to adopt green procurement and its corresponding principles.

In terms of the knowledge barrier, the category was expanded to include different types of people that require training. It is not only the SCM officials who require training on green procurement, but higher management, user departments who draft specifications as well as suppliers. Within the entities themselves, training will be required for higher management in order to gain buy in. Buy in from higher management is important as it was noted previously that individuals at the operational level do not have the will to change. Therefore, decisions need to be taken at a higher level that are made compulsory actions at the operational level. Training for user departments are also found to be necessary as SCM officials have indicated that they are not responsible for drafting the actual specifications but are responsible for ensuring that the specifications are in line with the regulatory requirements. Therefore, user departments will need to know what green interventions can be considered and incorporated into their specifications

Analysis

The answers that were obtained from interviewees indicated that the barriers are far more diverse and that recommendations would need to take into consideration many more factors.

In terms of systemic conditions, to address market and economic conditions in the absence of regulatory support will be challenging. Government entities are required to ensure the procurement process is equitable, transparent and fair and will therefore be required to brief suppliers on green procurement and allow them an opportunity to change. Additionally, a decision must be taken by entities and government as a whole as to whether they will absorb the costs associated with the transition to GPP.

In terms of knowledge, training interventions need to be expanded beyond SCM officials to suppliers, user departments, and higher management. Training interventions would need to highlight the potential benefits for greening procurement, the various mechanisms that can be utilized, as well as the different classes of products and services that can be greened and how to develop and incorporate green principles and criteria into the procurement process and specifications respectively.

It must be noted, that the barriers listed by officials largely correlate with the findings noted in the literature review. It is anticipated that if the systemic conditions are conducive and knowledge on GPP is increased, that the will to implement GPP will be increased.

4.3 Summary

A summary of the findings on the opportunities and barriers to greening public procurement can be found below.

4.3.1 Knowledge

Knowledge on green procurement is necessary to ensure effective implementation. SCM officials are required to understand what GPP entails and how interventions can be incorporated into procurement processes.

Knowledge has definitely been identified as a barrier as 71.4% of the sample group were either unable to explain green procurement or provided a basic answer. Upon further investigation it was found that it was not only awareness and knowledge of SCM officials that requires attention but the awareness and knowledge of higher management, user departments who draft specifications as well as suppliers. Education interventions need to cover not only the understanding of GPP but should also include the different GPP mechanisms that can be applied within the system and the various green criteria that can be utilized within the different procurements.

Interestingly, it must be noted that in some instances, individuals in the same organization responded differently indicating the various levels of knowledge and exposure to activities taking place in the organization. As a general trend, it was observed that individuals at a higher level were more knowledgeable on GPP, legislation and the parameters within which GPP could be implemented.

4.3.2 Values

All officials within the sample group stated that greening procurement is important. However, 55% of the officials who scored a 5 on the importance scale could not effectively communicate why it would be important to green procurement which is indicative of the level of understanding regarding GPP. It must be noted that the will and knowledge categories work hand in hand. As the officials do not know what implementing GPP would entail, the question has arisen as to whether they would be willing to implement GPP once their knowledge has been increased on the matter. Therefore, while it can be stated that the will to implement does exist, it is done so cautiously.

It was found that SCM officials were not the predominant issue within the 'will' category. The category was expanded to include the suppliers as well. Individuals indicated that supplier's may create a barrier to the implementation of GPP as they perceive the process to contradict BEE and limit their opportunities to work for government entities should they choose not to align their products and services to GPP requirements.

4.3.3 Systemic Conditions

A wide range of responses were received regarding whether it is possible to green procurement in consideration of an entity's internal policies and standards. Barriers that were identified, included: limited capacity of SCM departments to implement GPP; suppliers' lack of buy-in; unavailability of products in the market; premium pricing of products and services, operational costs for changes to systems; no legislation or regulations to support GPP; and perceived inability to apply green principles to all types of procurement.

On a positive note, most officials indicated that it was possible to implement green procurement within their current procurement system and it was noted that there were no actual barrier prohibiting entities' changing their policy, standards or practices. However, it was emphasized by many individuals that implementing GPP would be easier if there was legislation that explicitly promotes it.

In reference to whether there is any legislation that creates barriers to GPP, there is currently no legislation that promotes GPP. However, there is currently no legislation that disallows procurement. The absence of explicit promotion of GPP has made officials fearful of the liability they may incur should their organizations adopt GPP of their own accord. It can be deduced that

the fear to implement may directly influence individuals' will to proceed with implementation of GPP.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

Ultimately, the 'greening' of public procurement can improve the impact we have on the environment. This study sought to identify the barriers and opportunities for greening procurement in South African Schedule 3C Provincial Public Entities with the intention of providing the initial recommendations on how to 'green' public procurement within these entities in consideration of the identified opportunities and barriers.

This chapter will summarize the findings of the study (Section 5.1). Thereafter the initial recommendations on how to 'green' public procurement in Schedule 3C Entities will be provided (Section 5.2) and future topics of research will be proposed (Section 5.3). The chapter will end with concluding remarks (Section 5.4).

5.1 Summary of Findings

The findings of this study have been divided into the opportunities and barriers that have been identified.

5.1.1 Observations on Opportunities

The predominant opportunity that was noted revolved around systemic conditions. There is currently no legislation that prohibits the implementation of GPP. In addition, public procurement is practiced in a decentralized manner within South Africa which affords individual public entities the opportunity to implement GPP at their own discretion. Therefore, as indicated by the Schedule 3C PPEs during the interviews, the entities are at liberty to change their procurement policies to incorporate green interventions. Furthermore, and in accordance with findings from the literature review, environmental policies, strategies and legislation can be utilized to promote the rationale for 'greening' procurement.

5.1.2 Observations on Barriers

The following barriers were noted upon review of the literature and during the semi-structured interviews:

Values

At this time, the will to implement GPP is fragile. It has been surmised that without knowing the full extent of GPP requirements, the SCM officials' affirmation that the implementation of 'greening' procurement is important cannot be fully accepted. Officials did highlight that implementation of the process can be an additional burden to staff and therefore it is deduced that this can also have negative connotations to their will to implement.

Resistance from suppliers were noted to be a barrier and can have significant impacts to the implementation of GPP. The challenges brought forward by suppliers also influences SCM officials' will to implement GPP as they are fearful of potential litigation.

Knowledge

The findings of the literature review showed that human resources play a significant role in either driving or hindering the implementation of GPP. Therefore, individuals' understanding of GPP's benefits and the various mechanisms that can be used is paramount to ensuring effective implementation. Knowledge and experience of SCM officials was noted to be a barrier during the interview process. As knowledge and experience can be considered the foundation to implementation, it can be deduced that the implementation of GPP will be challenging if intensive training is not actively sought.

Furthermore, it was found that the knowledge of higher management, suppliers and user departments as stakeholders of the process can also create a significant barrier should they not be addressed.

Systemic Conditions

Systemic barriers that were identified encompassed institutional, regulatory and market factors. As green procurement is currently in its infancy in South Africa, there is currently no existing green product verification system that can assist in screening green products and ultimately making the evaluation of products easier. Due to limited resources within government entities to undertake the additional responsibilities such as the verification of products mentioned above, it was communicated that GPP would not be able to be effectively implemented.

Premium costing is anticipated due to the small amount of suppliers able to provide green products; the initial higher cost of green products may deter buy-in by higher management and government as a whole.

In consideration of regulatory factors, there is currently no legislation that explicitly promotes GPP. Based on the responses of many interviewees, the promulgation of legislation enforcing GPP would expedite implementation.

5.2 Recommendations

Within the South African arena, one would need to consider the socio-economic constraints when developing and proposing the implementation of a new process. In order to ensure existing suppliers are not discriminated against and provide SCM officials with the peace of mind to introduce and implement GPP without exposing their organization to legal challenges, a pragmatic approach has been adopted when proposing recommendations.

5.2.1 Recommendations for Government

In order to expedite the implementation of GPP, it would be ideal if GPP was prioritized by government. The following process of regulatory implementation, aligned with other third world countries, is proposed for national government's consideration:

1. Develop a legal framework for GPP aligned to existing environmental policies and strategies pertaining to renewable energy sources; green economy; energy efficiency; climate change; water management; waste management; and environmental impact assessments. This will establish the legal foundation for implementing GPP.
2. Establish Regulatory Authorities to provide support, regulate and enforce the clauses of the legal framework. The role of the authorities would be to develop guidelines on processes and develop procedures as well as green criteria. It is recommended that the regulatory body contribute to the national central supplier database by verifying the environmental credibility of suppliers.
3. Develop Green Product Schemes. This would entail the development of green product directories, environmental standards for energy etc., and green codes for types of products. This step acts as a supporting mechanism and will make the development of terms of reference easier to compile and the functional evaluation of products more robust.
4. Develop and execute training interventions based on needs analysis. This would entail the training of all relevant stakeholders on the legal framework and its requirements; relevant processes and procedures; green criteria; green product directories, environmental standards, and green codes. Training interventions should vary and include formal, informal and campaign interventions. The training interventions should target all stakeholders of the procurement process.

(Akenroye *et al.*, 2013)

The recommendations made above are highly dependent on political intervention. As previously indicated, government's facilitation of the GPP process would expedite implementation. In the interim however, the below recommendations are made for individual facilities.

5.2.2 Recommendations for Schedule 3C Provincial Public Entities

In consideration of the current operational constraints, recommendations for individual are proposed below. It must be noted that procurement officials will be expected to lead the process as they understand the parameters of the procurement system. However, input from environmentalists are highly recommended. The following is recommended:

1. A champion should be nominated within the procurement division of an entity to drive the green procurement process. This would ensure that there is a point of contact for the process and the individual can be held accountable for progress on the matter. This individual should be responsible for the following:
 - a. Research various mechanisms that can be applied within their individual entity in consideration of the entity's operations;
 - b. Issuing of an expression of interest to the market to ascertain the types of green goods and services that are already available in the market. The expression of interest should highlight the types of goods and services that the entity currently procures and request guidance from the market as to whether there are green options available. This would assist the entity in developing a database of existing products and services which is easily accessible.
 - c. Undertake a gap analysis to identify, assess and address the constraints and opportunities for implementing GPP within the specific organization. An action plan to address the constraints and enhance the opportunities should be developed.
2. It is recommended that the first point of implementation is to gain buy-in from higher management to execute GPP within the entity. The procurement policy should be amended to integrate green principles into the procurement process. It must be communicated whether the organization will commit to basic green procurement whereby only 'quick win' items are changed or where the entire system is changed. It is recommended that a tiered approach is adopted where entities start with 'quick wins' and as the organization acclimatizes to the process, green procurement interventions are expanded (please refer to Figure 5-1). The policy should account for the following:
 - a. A change management strategy to communicate with and prepare suppliers. The strategy should endeavour to effectively communicate the entity's intention to green procurement and what this would entail. The engagement process should effectively take 2-3 years, allowing suppliers sufficient time to make changes. This intervention would assist in curbing the premium costing that is anticipated.
 - b. A research strategy to ensure the continuous development of environmental criteria for the various products and services procured within the organization as well as an internal green product scheme.
 - c. Internal roles and responsibilities to facilitate GPP. This must include the roles of the procurement officials as well as the user departments in terms of development of the environmental criteria.

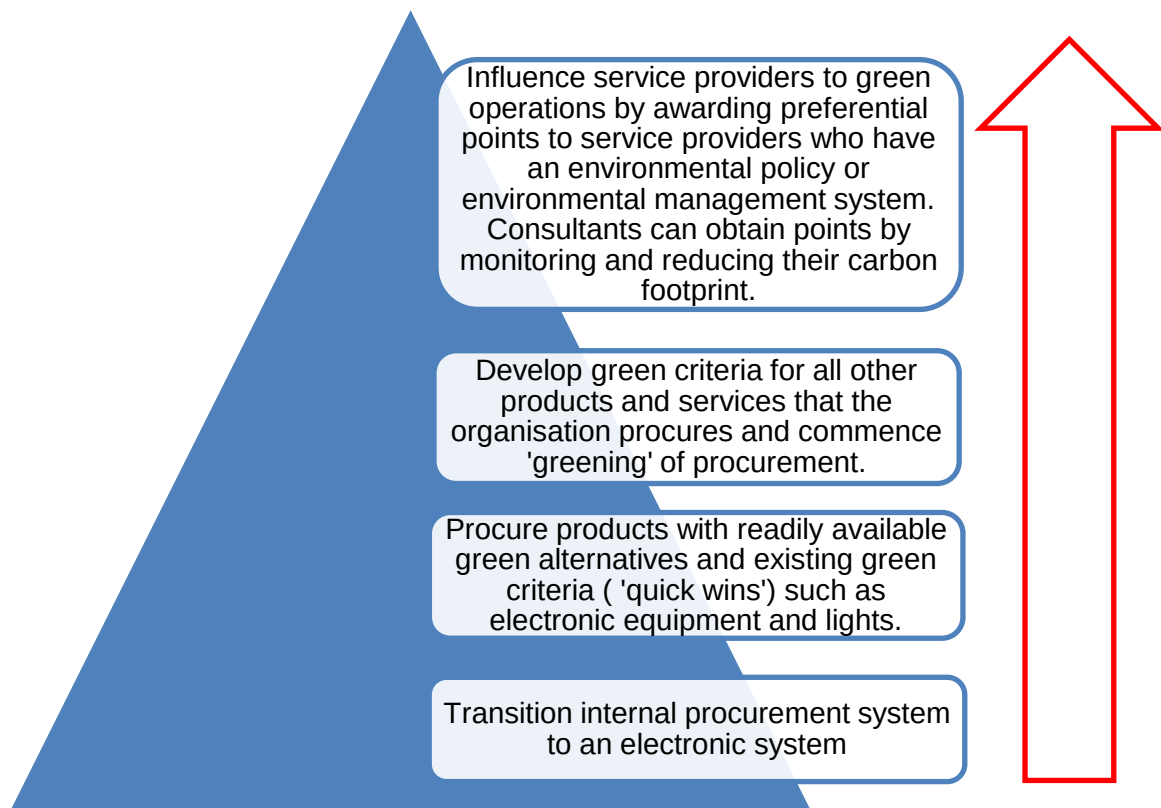


Figure 5 1: Diagram depicting tiered approach to 'greening' procurement in PPEs

3. Undertake a gap analysis to assess the training needs of all stakeholders involved in GPP, inclusive of suppliers and user departments. Training interventions should include formal training, workshops and road shows. Training should encompass the following:
 - a. Understanding of environmental aspects, product-specific environmental information and how to construct proper environmental criteria for user departments. Training of internal staff should be undertaken as soon as possible and on a regular basis.;
 - b. Green procurement requirements for suppliers;
 - c. Benefits and a high-level explanation of GPP for higher manager.
4. A forum amongst state-owned entities should be developed to share information, lessons learned as well as developed green criteria; and to discuss challenges regarding GPP.

5.3 Proposed Topics of Research

It is proposed that the following topics are researched further:

- Green criteria for categories of goods and services. This topic can be divided into different studies per category of product or service. The development and refinement of green criteria for the South African market would expedite the implementation of GPP.

- Operating models for 'greening' procurement in public entities. Research into this topic would assist public entities who are considering 'greening' their procurement system.
- A quantitative cost analysis of traditional products versus green products. This study is proposed to show the financial gains of transitioning from traditional procurement to life cycle thinking. The study will assist officials in motivating for the change to GPP.

5.4 Concluding Remarks

The importance of the environment has become a prominent topic in the international context and can no longer be avoided as the consequences thereof are materializing across the world. Green procurement is one mechanism that can be utilized to effectively and efficiently manage resources. As government entities are one of the largest consumers, the incorporation of green procurement into their internal process could have a large impact in influencing what the market produces.

This mini-dissertation sought to explore the barriers and opportunities that exist for 'greening' procurement in Schedule 3C Provincial Public Entities within the KwaZulu- Natal Province in order to provide the initial recommendations to implement green procurement.

Through the review of literature and relevant documentation as well as interviews conducted with SCM officials, barriers and opportunities to 'greening' procurement in these entities were identified and recommendations to enhance opportunities and address barriers have been proposed.

It is the researcher's belief that the research objective for the study has been fulfilled. It is hoped that the recommendations made for the greening of procurement in the Schedule 3C PPEs and topics for further research are considered.

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ANNEXURE A1: NOTIFICATION OF RESEARCH UNDERTAKING

NOTIFICATION OF RESEARCH UNDERTAKING

Dear Participant,

Re: Participation in research into the 'greening' of public procurement

I, Ms. Clarissa Tamsyn Naicker, am a student in the School of Geo and Spatial Sciences at North West University (Potchestroom Campus). As part of my Master's mini-dissertation, I am conducting research on the 'greening' of procurement within Schedule 3C Provincial Public Entities. I therefore kindly seek permission to conduct research at your organization. The title of my research project is:

Opportunities and barriers for greening procurement in South African Provincial Public Entities- perspectives from KwaZulu-Natal

This study focuses on the potential to 'green' procurement in Schedule 3C Provincial Public Entities. Due to Section 217 of the Constitution and corresponding legislation, a perception that GPP may not be able to be achieved within the South African public procurement system exists amongst government officials. However, studies have established that greening procurement in South African government is possible as there is no legislation that prohibits green procurement. Thus this study endeavors to identify the barriers and opportunities for greening procurement in Schedule 3C Provincial Public Entities in the KwaZulu-Natal province with the intention of providing recommendations on greening public procurement going forward.

PLEASE TAKE NOTE THAT:

There will be no financial benefits that participants may accrue as a result of their participation in this research project.

Your identity will not be divulged under any circumstance/s, during and after the reporting process.

All your responses will be treated with strict confidentiality.

A coding system will be utilized to represent your name and organization.

Participation is voluntary; therefore, you are free to withdraw at any time you wish without incurring any negative or undesirable consequences/penalty on your part.

For further information on this research project, please feel free to contact me using the following contact details: Clarissa T. Naicker; Tel: 032 814 0123; Email: clari.t.naicker@gmail.com; Cell: 071 176 5992, or my supervisor: Dr. Jan-Albert Wessels; Tel: 018 299 1477; janalbert.wessels@nwu.ac.za.

Your positive response in this regard will be highly appreciated

Thanking you in advance

Yours sincerely

C. T. Naicker

ANNEXURE A2: INFORMED CONSENT FORM

INFORMED CONSENT FORM

I, _____, (full names of participant) hereby confirm that I understand the contents of document and the nature of this research project. I understand that confidentiality will be maintained and that I have the right to withdraw from the study at any stage. I therefore consent to participating in a semi-structured interview in the study entitled:

Opportunities and barriers for greening procurement in South African Provincial Public Entities- perspectives from KwaZulu-Natal

Consent for audio visual use	YES	NO
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SIGNATURE OF PARTICIPANT