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## Sustainable Public Procurement in the Kuwait Public Sector

Fatimah M A Al Maraghi

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**UAEU**



United Arab Emirates University

College of Business and Economics

SUSTAINABLE PUBLIC PROCUREMENT IN THE KUWAIT  
PUBLIC SECTOR

Fatimah M A Al Maraghi

This dissertation is submitted in partial fulfilment of the requirements for the degree  
of Doctorate of Business Administration

Under the Supervision of Dr. Adriana Gabor

April 2019

### Declaration of Original Work

I, Fatimah M A Al Maraghi, the undersigned, a graduate student at the United Arab Emirates University (UAEU), and the author of this dissertation entitled “*Sustainable Public Procurement in the Kuwait Public Sector*”, hereby, solemnly declare that this dissertation is an original research work that has been done and prepared by me under the supervision of Dr. Adriana Gabor, in the College of Business and Economics at UAEU. This work has not previously been presented or published or formed the basis for the award of any academic degree, diploma or a similar title at this or any other university. Any materials borrowed from other sources (whether published or unpublished) and relied upon or included in my dissertation have been properly cited and acknowledged in accordance with appropriate academic conventions. I further declare that there is no potential conflict of interest with respect to the research, data collection, authorship, presentation and/or publication of this dissertation.

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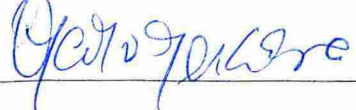
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## Abstract

Sustainable Public Procurement (SPP) is the act of integrating the sustainable development concept into the procurement operations undertaken by the government. The extension of sustainability to public procurement is an emerging area of research; the literature provides little evidence on how to address SPP in general, and specifically in a developing country context. This thesis aims to bridge this gap by investigating the practices of SPP in a developing country such as Kuwait. The primary objective of this doctoral thesis is to assess the current SPP policies and practices in the Kuwait public sector organisations and to identify the main drivers and barriers currently faced by public organisations in their efforts in implementing SPP. This thesis employs quantitative and qualitative research methods supported by the Purchasing Social Responsibility (PSR) model. The data used in the thesis was collected through tender document analysis, semi-structured interviews, and questionnaires distributed among officials in the Kuwait public sector. The results show that some SPP practices are present in the public procurement process. The government is mainly stimulating local industry through intensive use of local products and resources and supporting local suppliers' business; the findings also convey that health and safety and human rights aspects are the most embedded SPP practices. The results indicate that currently, there is a significant effect of cultural norms and Islam religious beliefs on SPP practices in Kuwait. The finding also shows that financial considerations, whether as the costs of sustainability or its financial benefits, are the most significant factors for implementing SPP in Kuwait public sector organisations. Accordingly, this study has policy implications; I believe that the determinants of sustainability-oriented procurement that resulted from this thesis are useful to public procurement managers, policy makers and SPP scholars, as they could be used as a basis for developing a practical managerial framework, guidelines, and policies to procure more sustainably.

**Keywords:** Sustainable Development, Sustainable Public Procurement, Public Sector Management, Kuwait, Developing Countries.



## Title and Abstract (in Arabic)

### المشتريات الحكومية المستدامة في القطاع الحكومي الكويتي

#### الملخص

إن المشتريات العامة المستدامة هي عبارة عن دمج مفهوم التنمية المستدامة في عمليات المشتريات العامة التي تقوم بها الحكومة. ويمثل نطاق المشتريات العامة المستدامة مجالاً جديداً في البحث العلمي؛ فالأدبيات لا تقدم سوى القليل من الأدلة حول المشتريات العامة المستدامة بصورة عامة، وفي سياق البلدان النامية بصفة خاصة. وتهدف هذه الأطروحة إلى سد هذه الفجوة البحثية عن طريق البحث في مجال المشتريات العامة المستدامة في دولة نامية مثل الكويت. ولذلك فإن الهدف الرئيسي من هذه الأطروحة هو دراسة كيف تتعكس حالياً في أهداف التنمية المستدامة في سياسات وممارسات الشراء في مؤسسات القطاع العام في الكويت، وتحديد ماهي أهم الدوافع والعوائق التي تواجهها حالياً مؤسسات القطاع العام في جهودها نحو تحقيق مشتريات عامة مستدامة. في هذا السياق، توظف هذه الأطروحة أساليب البحث الكمية والنوعية التي يدعمها نموذج المسؤولية الاجتماعية للمشتريات (PSR) كأداة مفاهيمية وتحليلية. وقد تم جمع البيانات من خلال تحليل وثائق وعقود المناقصات العامة، وأجراء المقابلات مع قياديين الشراء العام في الكويت ومن خلال الاستبيانات التي تم توزيعها بين العاملين في إدارات المشتريات في القطاع العام الكويتي. وتبين نتائج البحث وجود أدلة على تبني ممارسات المشتريات العامة المستدامة من قبل مؤسسات القطاع العام. حيث تتركز هذه الممارسات المستدامة بصفة خاصة بما تقوم به الحكومة الكويتية من تحفيز الصناعة المحلية من خلال الاستفادة القصوى من المواد والموارد المحلية ودعم للموردين المحليين. وبينت النتائج أيضاً اهتماماً بالحفاظ على أمن وسلامة العمال في الكويت. وأشارت النتائج إلى أن للأعراف الاجتماعية وتعاليم الدين الإسلامي دور مؤثر على الشراء الحكومي المستدام، وأوضحت النتائج أيضاً بأن العوامل المالية مثل ارتفاع أسعار المنتجات المستدامة والعوائد المالية المتوقعة تشكل أهم العوامل المؤثرة حالياً على ممارسات المشتريات الحكومية المستدامة في الكويت. تقدم هذه الدراسة العديد من المساهمات لصناع السياسة والباحثين المهتمين في الشراء الحكومي المستدام. حيث سيكون من المهم معرفة ماهي محددات المشتريات المستدامة في القطاع الحكومي التي يمكن أن توسع أو تكثف عمليات الشراء المستدام في القطاع العام. وتقدم النتائج توجيهات إلى مديري المشتريات الذين يسعون إلى تطبيق أو تحسين ممارساتهم الحالية في مجال الشراء العام المستدام، ويمكن أن يوفر ذلك أساساً لوضع إطار إداري عملي لشراء منتجات أكثر استدامة في منظمات القطاع العام في الكويت.

**مفاهيم البحث الرئيسية:** التنمية المستدامة، المشتريات العامة، المشتريات الحكومية المستدامة، القطاع الحكومي، الكويت، الدول النامية.

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## Dedication

*To my beloved mother, and precious sisters.  
My most humble thanks for all the support and encouragement you gave me*

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## List of Abbreviations

|       |   |
|-------|---|
| CSR   | Corporate Social Responsibility                       |
| CTC   | Central Tenders Committee                             |
| EC    | European Commission                                   |
| EMAS  | Eco-Management and Audit Scheme                       |
| EMS   | Environmental Management Systems                      |
| EU    | European Union  |
| GCC   | Gulf Cooperation Council                              |
| GDP   | Gross Domestic Product                                |
| GPA   | Government Procurement Agreement                      |
| GPP   | Green Public Procurement                              |
| GSCM  | Green Supply Chain Management                         |
| ILO   | International Labour Organisation                     |
| IPR   | Intellectual Property Rights                          |
| ISO   | International Organisation for Standardisation        |
| IT    | Information Technology                                |
| LEED  | Leadership in Energy and Environmental Design         |
| MOF   | Ministry of Finance                                   |
| MOSAL | Ministry of Social Affairs and Labour                 |
| MRA   | Multiple Regression Analysis                          |
| NGO   | Non-Governmental Organisations                        |
| OECD  | Organisation for Economic Cooperation and Development |
| PCA   | Principal Component Analysis                          |
| PP    | Public Procurement                                    |
| PPI   | Public Procurement of Innovation                      |
| PSR   | Purchasing Social Responsibility                      |
| R&D   | Research and Development                              |
| SA    | Social Accountability Standard                        |

|      |   |
|------|---|
| SAB  | State Audit Bureau of Kuwait                    |
| SC   | Supply Chain                                    |
| SCM  | Supply Chain Management                         |
| SD   | Sustainable Development                         |
| SME  | Small and Medium Sized Enterprises              |
| SP   | Sustainable Procurement                         |
| SPP  | Sustainable Public Procurement                  |
| SRPP | Socially Responsible Public Procurement         |
| SPSS | Statistical Package for Social Science          |
| SSCM | Sustainable Supply Chain Management             |
| TBL  | Triple-Bottom-Line                              |
| UAEU | United Arab Emirates University                 |
| UNDP | United Nations Development Programme            |
| UNEP | United Nations Environment Programme            |
| WCED | World Commission on Environment and Development |
| WTO  | World Trade Organisation                        |

## **Chapter 1: Introduction**

### **1.1 Introduction**

In light of environmental degradation, climate change, resource depletion, and persistent global poverty, government procurement is increasingly being advocated to be part of the sustainable development goal realisation through the inclusion of economic, social, and environmental criteria in the public procurement processes (Preuss, 2009; Seuring & Müller, 2008; Walker et al., 2014).

The importance of the government using its procurement' spending for the benefit of its sustainability agenda, particularly in the Gulf Cooperation Council (GCC) region, where rapid economic growth is taking place, often with a negative impact on the environment, gives the rationale for carrying on this research. Poor procurement practices hinder and negatively affect sustainable development. Therefore, developing countries need to be mindful of the importance of improving the public procurement process.

Sustainable Public Procurement (SPP) is the process by which public sector organisations meet their needs for goods and services, in a way that achieves value for money on a whole life basis in terms of generating benefits, not only to the government but also for the economy, environment, and the society (Perera, Chowdhury, & Goswami, 2007; Roos, 2012b; Thomson & Jackson, 2007).

The extension of sustainability to public procurement is an emerging area of research; the literature provides little evidence on how to address sustainable public procurement in general, and specifically in developing countries context (Preuss, 2009; Roos, 2012a; Walker, Miemczyk, Johnsen, & Spencer, 2012).

This thesis aims to bridge this gap by investigating the practices of sustainable public procurement in a developing country by using Kuwait as an example.

In light of these observations, I propose one of the first insight, research into the state of SPP practices in developing countries and the GCC region in particular. The primary objective of this doctoral thesis is to investigate how SPP is currently reflected in the procurement policies and practices in the Kuwait public sector organisation and to identify the primary drivers and barriers currently facing the public sector organisations in their efforts in implementing SPP.

## **1.2 Research Background**

Worldwide, governments are the most prominent procurement spenders. In most countries, public procurement usually represents 10-30% of the Gross Domestic Product (GDP). In the Middle East and North Africa (MENA) countries, these percentages are often higher. Therefore, every public tender contract is an opportunity to drive markets towards more sustainability (OECD, 2013; UNEP, 2012). Nowadays, both developed and developing countries are using public procurement to achieve several goals: (1) To meet their environmental goals, such as reduction of greenhouse emission and encouraging recycling and the use of eco-friendly products. (2) To pursue their social goals, such as the reduction of unemployment rates, improved labour outcomes, an increase in labour standard, an increase of employment opportunities for disabled persons, supporting the local and SMEs businesses. (3) Achieve their economic goals, such as generate income, cost savings, and innovation (Carter, 2004; McCrudden, 2004; Oruezabala & Rico, 2012; UNEP, 2012; Uttam & Le Lann Roos, 2014; Vos, 2010).

Thus, SPP is considered as the new way in which economic, environmental, and social factors can be taken into account in the government's purchasing decisions, and thereby portrays the concept of sustainable development in practical and feasible ways.

### **1.3 Research Questions and Objectives**

Despite the scale and the importance of public procurement in the economy, and the role that government can play through their procurement practices in realising social, environmental, and economic goals, SPP remains an under-investigated research field (Brammer & Walker, 2011; Preuss, 2009). Additionally, the current literature on sustainable procurement is mainly positioned in the private sector and the developed country context (Walker et al., 2014; Walker et al., 2012; Zhu, Geng, & Sarkis, 2013). In response, this thesis asserts that there is a research gap in addressing sustainable procurement within the public sector organisations, in particular in the context of developing countries.

To address this oversight, and to contribute to the emerging body of research on Sustainable Public Procurement (SPP), this empirical study aims to examine the uptake of SPP practice in the Kuwait public sector organisations.

Furthermore, it sought to determine new drivers and barriers in the context of an Arab and Islamic country such as Kuwait, where the cultural and the religious considerations may affect the practices and regulations governing suppliers-buyers relations. As a Muslim country, Islam plays a dominant role in Kuwait and tends to govern every aspect of life, thus, it is essential to assess the influence of Islam in engaging in sustainable practices. Moreover, Sustainability requires new ways of thinking and practices. Hence, it requires change (Sourani & Sohail, 2011).

However, when implementing new initiatives, Arabic and tribal societies, such as Kuwait, often exhibit a resistance to change, this, in turn, suggests that these cultural considerations may have adverse consequences for the implementation of SPP (Walker & Brammer, 2009).

To date, no research has investigated SPP practices in Kuwait. I hope that the facts and insights documented here will encourage more uptake of SPP by the public authorities in Kuwait.

### **1.3.1 Research Questions**

This study is guided by the following research questions regarding SPP in Kuwait.

RQ1: What is the current situation of sustainable public procurement (SPP) practices in the Kuwait public sector organisations?

RQ2: What are the drivers and barriers to the integration of sustainable public procurement (SPP) in the Kuwait public sector?

RQ3: What is the relationship between public sector organisation's sustainable public procurement (SPP) engagement and its drivers and barriers?

RQ4: What are the main recommendations that could be suggested for public sector policy makers and practitioners for more uptake of sustainable public procurement (SPP) practices in Kuwait?

I will be answering the research questions by developing a conceptual model for SPP practices, through a rigorous and systematic triangulation methodology.

### **1.3.2 Research Objectives**

The primary objectives of this thesis can be summarised as follows:

#### **1.3.2.1 General Objectives**

Objective No.1: Review and critically examines the most relevant and current literature on SPP, and identify the status and main drivers and challenges in the current literature on this topic.

Objective No.2: Develop a conceptual model of SPP practices, drivers, and barriers; propose a practical SPP guideline that can be expanded to other GCC and other developing countries.

Objective No.3: Propose recommendations on how to promote drivers and overcome barriers to the adoption of SPP in Kuwait.

### 1.3.2.2 Specific Objectives

Objective No.4: Identify the status of SPP in the Kuwait public sector, and how SPP is currently reflected in policies and practices of the Kuwait public organisations.

Objective No.5: Identify the main determinants of SPP implementation in Kuwait, as a developing country. Specifically, identify the key drivers, and key barriers to the integration of SPP in public organisations in Kuwait.

### 1.3.3 Research General Outline

The research study is fully discussed in nine chapters that are organised in Figure 1 as follows:

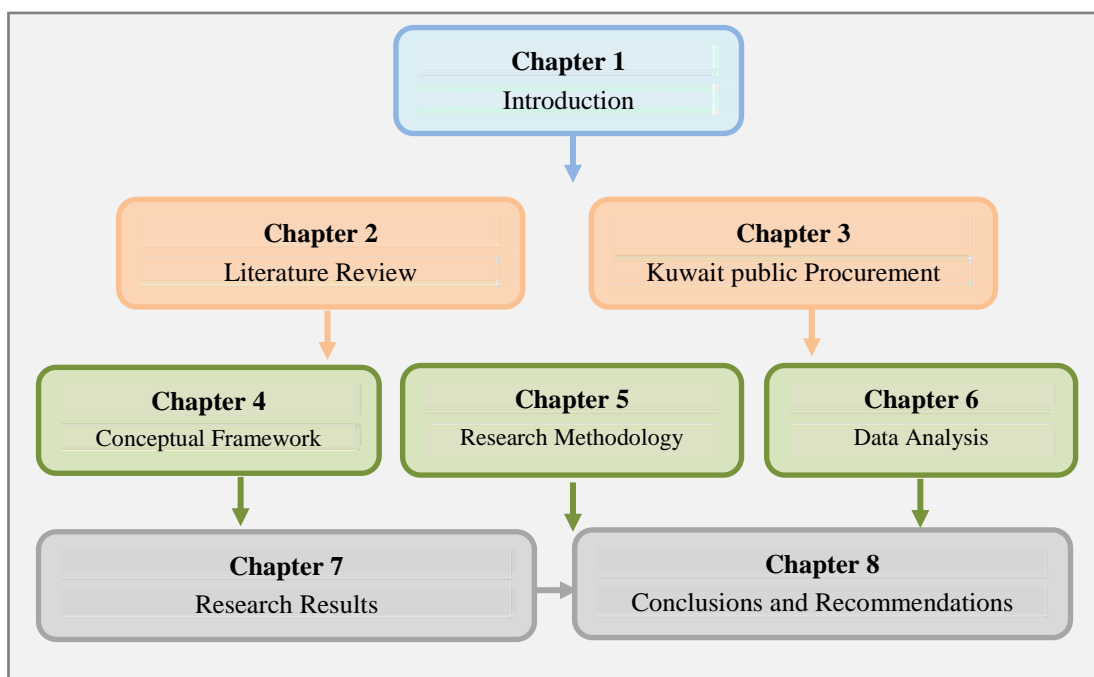


Figure 1: Research General Outline



Chapter 2 presents an overview of the literature on SPP and discusses the drivers and barriers identified in previous papers. This chapter further reviews SPP in the developing countries and ends by discussing the gaps in the existing literature. Chapter 3 presents a general review of the Kuwait public procurement process, with its legislative and administrative frameworks. Chapter 4 presents the conceptual background and discusses how SPP have been addressed previously, reviewing literature that encompasses Purchasing Social Responsibility (PSR) Model and its relating dimensions. Chapter 5 presents the research design and methodology; it outlines the data gathering methods, by means of tender documents, semi-structured interviews with procurement officials, and questionnaire instrument development. Chapter 6 This chapter explains the collection and analysis of the data from the research instruments. It further provides detailed information on data preparation, assumption testing, descriptive and inferential statistical analysis. Chapter 7 presents the results of the data analysis; the discussion of the main findings is also presented. Chapter 8 of the thesis closes with the summary of the findings, implications and recommendations that can be made based on the findings of this study. This chapter concludes with a discussion of the limitations of this research and future research directions.

#### **1.4 Research Main Contributions**

Despite the significance of sustainable public procurement in achieving sustainable development goals and the fact that governments are being encouraged to procure sustainable products (DEFRA, 2006), there is relatively little research on the implementation of sustainable procurement in the public sectors (Preuss, 2009).

Furthermore, even less empirical work has explored how SPP is being implemented in developing countries (Roos, 2012a; Walker et al., 2012). This study will be conducted in the public organisations in Kuwait, thereby reducing this research gap and providing insights into the progress of SPP operations in the Kuwait public sector. Furthermore, this thesis will investigate the factors perceived to be the primary drivers and barriers to further engagement with SPP in Kuwait public sector. Thus, this empirical study seeks to make three distinct contributions to the emerging body of research on sustainable public procurement.

First, by investigating how Kuwait's public sector has implemented economic, environmental, and social policies when contracting for procurement, it provides insights on how public procurement can be used as a policy tool to achieve sustainable development goals. More specifically, I investigate empirically how sustainable development dimensions are reflected and transmitted through the operations of public procurement in Kuwait public sector organisations.

Second, the majority of SPP literature has focused on environmental or the social issues only, with economic issues being the subject of significantly less research (Carter & Rogers, 2008; Seuring & Müller, 2008; Walker, 2010b). Applying the concept of sustainability to public procurement requires the public organisations to consider the social, economic, and environmental aspects of their operations (UNEP, 2012). This study offers an integrated conceptual and empirical treatment of all sustainability dimensions, by also analysing the economic dimension of sustainable procurement.

Third, the majority of prior studies have explored sustainable procurement in developed countries and the private sector (Walker et al., 2014; Walker et al., 2012; Zhu et al., 2013).

Only limited empirical research has analysed sustainable procurement practices in the public sector in the context of developing countries (McMurray, Islam, Siwar, & Fien, 2014; Roos, 2012a; Walker et al., 2014), something that is addressed in this paper.

### **1.5 Overview of Research Methodology**

This study utilises a mixed methods methodology, comprising of quantitative and qualitative techniques. The mixed methods approach involves using more than one method to gather data in order to enrich the value of the statistical findings, to increase the study's validity, and to achieve greater depth and insights into the phenomenon under investigation (Creswell, 2013; Kothari, 2004).

Therefore, I utilised a triangulation strategy of data collection, based on primary and secondary sources: (1) Existing literature, tender and procurement document analysis. (2) Semi-structured interviews. (3) Survey questionnaires. The semi-structured interviews with procurement managers were conducted in order to gain an understanding of Kuwait's public organisation experience with SPP, and the underlying factors that affected the adoption of SPP in their organisation. The survey questionnaires were used to measure the current practices, barriers and drivers of SPP in the Kuwait public sector. This study employed the quantitative scale of the extended Purchasing Social Responsibility (PSR) Model, which embodies a broad range of aspects of SPP practices.

### **1.6 Conclusion**

This chapter laid the foundations for the thesis. It provided the introduction and detailed the justification and rationale for this study. The research problem, objectives,

and questions were introduced, and an overview of the structure of the thesis structure was presented. Finally, the research methodology was briefly outlined.

The next chapter, Chapter 2, reviews the literature on SPP, with a detailed description of the dimensions of SPP. Furthermore, it provides a review of the drivers and barriers to implementing SPP. The review also provides an identification of limitations and gaps in the existing literature, with suggestions for future research directions.

## **Chapter 2: Literature Review**

### **2.1 Introduction**

The many challenges of development, such as climate change, environmental degradation, resource depletion, and fair trade are increasingly being addressed in academic and practitioner literature. This is apparent from the increasing number of business practices, and academic management literature' papers published in the field of sustainable supply and procurement management in recent years (Amann, K. Roehrich, Eßig, & Harland, 2014; Linton, Klassen, & Jayaraman, 2007; Rao & Holt, 2005; Srivastava, 2007; Walker et al., 2012).

While research concerning sustainable procurement management in the private sector has a long tradition (Linton et al., 2007; Seuring, Sarkis, Müller, & Rao, 2008; Srivastava, 2007), current knowledge of Sustainable Public Procurement (SPP) remains limited, despite its importance (Walker & Brammer, 2012; Walker & Phillips, 2009).

In this literature review, I present an overview of the SPP research field, and the anticipated links to environmental, economic, and social dimensions of Sustainable Development (SD). At the same time, I examine the benefits of SPP and analyse the patterns of SPP experience in different countries. Also, I provide a review of the drivers and barriers to implementing SPP. The review continues with the identification of limitations and gaps in the existing literature to offer the justification of the research in response to these shortcomings.

### **2.2 Sustainable Development (SD)**

The word sustainability means to 'maintain' or 'support' (Meehan & Bryde, 2011). However, since the 1980s sustainability has been used more in the sense of

human sustainability, while ‘development’ has always been concerned with improving the overall ‘quality of life’ (Smith, 2011).

Sustainable Development (SD) has become an increasingly important topic at the global level and was declared as an “overarching policy goal” by governments at the Earth Summit on Development and Environment (Sourani & Sohail, 2011).

Given the increasing recognition of the concept, more than 200 definitions of sustainable development exist. Although there are many definitions, Berns et al. (2009) and Lehtinen (2012) claims that there is not a single established definition of sustainability. Nonetheless, the most widely quoted definition of sustainable development is possibly the one introduced by the World Commission on Environment and Development (WCED) in 1987, also known as the Brundtland’ definition: “Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their needs.”. The WCED’s definition is a macroeconomic one, which integrates the social, environmental, and economic dimensions of sustainable development. Yet, the Brundtland’ definition is so far-reaching, that organisations often find it difficult to determine their distinct roles within the broader macroeconomic perspective (Lehtinen, 2012). Therefore, the way the WECD definition is often applied is through the triple-bottom-line (TBL), or “profit, people, and planet”, a concept developed by Elkington (1997).

The Triple-Bottom-Line (TBL) focuses not only on the economic value the organisation adds but also, on the environmental and social value-added (Giunipero, Hooker, & Denslow, 2012). From this perspective, the TBL has emerged as a paradigm for sustainable development, however, from a microeconomic point of view (Lehtinen,

2012; Meehan & Bryde, 2011; Zailani, Jeyaraman, Vengadasan, & Premkumar, 2012).

Figure 2 shows a visual representation of these three dimensions.

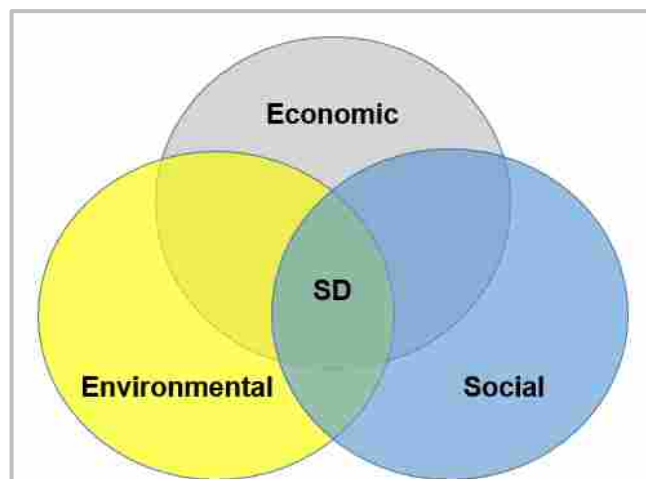


Figure 2: Triple-Bottom-Line (TBL) of Sustainability

One way in which governments are attempting to meet sustainable development goals is to reconsider how the public sector procures goods and services (DEFRA, 2006; Meehan & Bryde, 2011; Walker et al., 2014). Out of the growing interest in the sustainable development concept and paradigm, great attention has been paid to the use of public procurement as a tool to promote sustainable development (Arrowsmith, 2010; Bratt et al., 2013). Therefore, I will next review the concept of public procurement.

### **2.3 Public Sector Procurement**

Public Procurement (PP) can be defined as “the process to award timely and effectively contracts to qualified contractors, suppliers, and service providers for the provision of goods, work, and services to support the government’ operations, with the principles and procedures established in the public procurement rules” (Lynch, 2012).

Procurement plays a strategic role in supply chain operations, including product design and selection, transportation and logistics services, supplier selection, inventory management, and supplier relationships (Carter & Jennings, 2004).

Procurement includes all phases of acquiring goods, property, or services beginning with the process of determining a need for them and ending with contract completion (Lloyd & McCue, 2004). The term 'Procurement' applies to both the government and businesses. However, procurement in the public sector is different from procurement in the private sector in a number of ways.

The first difference between these two types of organisations' procurement regards the purpose of purchasing goods and services. Governments' procurement operations are focused primarily on social benefits, rather than focusing on profits, by providing public goods and services freely to the public such as national defence, public safety, education, and infrastructure, while the private sector is profit-centric (Lynch, 2012; New, Green, & Morton, 2002; Thai, 2001; Walker, 2010b). However, the main difference is still that public sector organisations are required to comply with public procurement laws and regulations, while the private sector organisations are not (Harland, Telgen, & Callender, 2013; New et al., 2002).

Public procurement is one of the highly legislated and regulated fields in a government (Lloyd & McCue, 2004). The rules and regulations governing how public procurement is conducted can be of national and international nature, such as the regulations imposed by the WTO' International Government Procurement Agreement (GPA), European Union, North American Free Trade Agreement (NAFTA), and the Cooperation Council for the Arab States of the Gulf (GCC) (Harland et al., 2013; Ssenoga, 2006; Thai, 2001).



Governments have an active role as participants in the market itself, by purchasing an enormous amount of goods and services (McCrudden, 2004; Nijaki & Worrel, 2012; Uyarra et al., 2014; Van Asselt, Van der Grijp, & Oosterhuis, 2006).

The public sector bodies, such as government ministries, military, schools, and hospitals are large purchasers, dealing with huge budgets, and purchase vast amounts of products and services every year (Bratt et al., 2013; Løland Dolva, 2007). Public procurement takes place in a different social and economic sectors such as the construction, education, health, energy, food, transportation, and defence (Mont & Leire, 2009; World Bank, 2013). In some of these sectors (e.g. Defence, health, and energy), government procurement tends to be the single or primary source of acquisition or contracts, making governments the largest single purchaser in any economy (Testa, Iraldo, Frey, & Daddi, 2012; United Nations, 2008).

On average, the total public procurement represents approximately 15% of GDP in OECD countries, and up to 30% of GDP in developing countries (UNEP, 2012; United Nations, 2008). Measurement of the extent of government procurement has shown that public sectors spend around 45% - 65% of their annual budgets on public procurement (Bratt et al., 2013). Within such a significant buying power, lies a high potential for the public sector to influence suppliers, and to have a considerable influence in shifting the whole economy towards sustainability, due to the scale of their budgets (McCrudden, 2004; Musa et al., 2013; Thai, 2001)

Traditionally, the goal of public procurement was to obtain the most appropriate and highest quality goods or services possible for the least cost. Consequently, the approach in public procurement was concerned with awarding public contracts on the lowest price bids (Chari & Chiriseri, 2014; Nijaki & Worrel,

2012). However, recently, public procurement has shifted to be a strategic management and policy function of the government.

More complex award strategies involving multiple criteria are being assessed in the decision of tender awards, such as sustainable criteria related to the environmental, social, and economic development objectives (Sporrong & Bröchner, 2009; Wickenberg, 2004).

Finally, although public procurement is perceived as a primary function of a government, it has been a neglected area of academic education and research (Thai, 2001). Only recently, scholarly attention has turned to ways in which public procurement can be used as a tool for achieving sustainability goals (Schaltegger & Burritt, 2014; Wilkinson, Hill, & Gollan, 2001).

The integration of sustainable development goals within the public procurement operations will be addressed in the following section.

#### **2.4 Sustainable Development and Public Procurement**

In recent years, existing literature suggests that governments can use their purchasing power to advance the targeted policy of sustainable development goals and objectives (McCrudden, 2004; Thai, 2001; Walker & Phillips, 2009).

Sustainable Procurement (SP) builds on the traditional procurement practice, but seeks to extend it through applying the concept of sustainable development principles, to the procurement operations, such as ensuring justice to the society, environment preservation, and a strong and robust economy (Sourani & Sohail, 2011; Srivastava, 2007). Walker and Brammer (2009) and Walker and Phillips (2009) define sustainable procurement as “the pursuit of sustainable development principles through

purchasing and supply process”, a definition that is applicable to both public and private organisations.

Applying the concept of sustainable development to the public sector procurement yielded the new concept of Sustainable Public Procurement (SPP) (Brammer & Walker, 2011; Matthew, 2012; Preuss, 2009). The most frequently cited definition for SPP originates from the United Kingdom Sustainable Procurement Task Force (DEFRA). DEFRA defines SPP as “a process whereby public organisations meet their needs for goods, services, works, and utilities, in a way, that achieves value for money on a whole-life basis in terms of generating benefits not only to the organisation but also to society and the economy, while minimising damage to the environment.” (DEFRA, 2006). According to the United Nations Development Programme (UNDP), SPP means ensuring that the buying of products and services by the government is as sustainable as possible, with the lowest possible environmental impact, most significant economic effectiveness, and that has a positive social impact (UNDP, 2008).

Earlier research on SPP has originated in the concept of Green Public Procurement (GPP). Researchers initially began their interest in sustainable procurement by examining how it can contribute to meeting environmental challenges, such as climate change, soil degradation, and access to fresh water (Brander & Olsthoorn, 2002; Day, 2005; Lundberg, Marklund, & Strömbäck, 2003; Simcoe & Toffel, 2013). The following section reviews the GPP dimension next.

## **2.5 Green Public Procurement (GPP)**

The purchase, use, and disposal of products and services might have an adverse effect on the environment (Grob & Benn, 2014), as each action of the supplier,

manufacturer, and trader has the potential to generate a negative impact on the ecological and the social system (Sarkis & Setthasakko, 2009).

Public procurement is potentially one of the most critical areas for environmental improvement, as governments have a significant environmental impact through their purchasing practices (Fet, Michelsen, & Boer, 2011; Van Asselt et al., 2006).

Green Public Procurement (GPP) can be defined as “a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their lifecycle when compared to other products with the same primary function that would otherwise be procured.” (EU Commission, 2010; European Commission, 2008; Testa, Annunziata, Iraldo, & Frey, 2014). GPP covers areas such as the purchase of energy-efficient buildings, greener IT, office equipment and furniture, recyclable paper, electric cars, eco-friendly public transportations, organic food, and renewable energy sources (Fet et al., 2011; Van Asselt et al., 2006).

Governments can help reduce the adverse impacts of their purchasing operations on the environment, by using the public purchasing power to select products that respect the environment (Fet et al., 2011). The selection, purchasing, and using products that are eco-friendly by the government sends a clear message to the market, eventually leading to stimulate an environmental production and consumption patterns in the society (Bratt et al., 2013; Li & Geiser, 2005; Zhu et al., 2013).

Additionally, the purchasing power of the public sector could play a significant role in encouraging the local market towards greener production methods, by expressing eco-friendly preferences in the public tender, and due to the scale of the public contracts, the government can lower the costs and prices of green products (Sporrong & Bröchner, 2009; Wickenberg, 2004).

The state and progress of GPP practices have earlier been measured by analysing the existence of green criteria in the calls for tenders.

For example, a study by Løland Dolva (2007) analysed the state and progress for implementing GPP practices in Norway by analysing green criteria in public tenders. The results revealed that 60% of all tender documents included some environmental criteria. Likewise, Parikka-Alhola (2008) applied the same method, by analysing the environmental and eco-label criteria in the calls for tenders of furniture in Finland and Sweden public procurement operations, revealing that around 70% of the calls for tenders included some green criteria. Similarly, Bratt et al. (2013) examined the green criteria development in the public procurement processes at Swedish governmental bodies. The results informed that Swedish public procurement included some environmental aspects, such as energy efficiency and greenhouse gas emissions criteria. A research by Li and Geiser (2005) studied public computer procurement in the United States; their research concludes that currently many US' states and local governments engage in the environmentally responsible public procurement, with an overall goal of GPP being to reduce pollution by creating and expanding the market demand for environmentally friendly computers. Likewise, Testa et al. (2014) measured GPP performance for Italian municipalities. They found some progress within Italian local institutions in the use of recycled materials and the diffusion of energy-efficient practices in buildings and renewable sources.

The above examples illustrate how environmental concern has been integrated into the public procurement process in many state and local government organisations around the world. However, academic papers on the GPP topic are still few (Nissinen, Parikka-Alhola, & Rita, 2009; Testa et al., 2014; Testa et al., 2012).

Moreover, several studies have pointed out that the uptake of GPP operation being relatively slow, particularly, in the developing countries (Bratt et al., 2013; Musa et al., 2013).

## **2.6 Social Responsible Public Procurement**

After the GPP research wave, the social dimension of sustainability also has been taken into consideration, leading to a growing amount of research investigating the Socially Responsible Public Procurement (SRPP) (McCrudden, 2004, 2007).

Through their public procurement, governments are trying to achieve desired social policy objectives (Thai, 2001). For that reason, the literature has extended to include the role that public procurement can play in the achievement of social development goals (Prier, McCue, & Bevis, 2008).

Socially responsible public procurement refers to “the process of using the procuring power of public organisations to purchase products, works, and services with the aim of creating social value, and enables the achievement of a range of social objectives.” (Furneaux & Barraket, 2014; Maignan, Hillebrand, & McAlister, 2002; McCrudden, 2004).

Generally, socially responsible public procurement incorporates a number of issues, such as; fair working conditions, health and safety issues, protection of gender, racial, and religious equality, disabled workers rights, eliminating child labour, and philanthropic work (Bolton, 2006; Furneaux & Barraket, 2014; Mont & Leire, 2009).

Many developed and developing countries have used public procurement to pursue social goals, by assigning social issues as conditions in procurement contracts, for controlling the supplier ethical business practices, or developing safer working conditions for employees (Oruezabala & Rico, 2012). For example, Prier et al. (2008)

argue that the very nature of public procurement makes it a potent policy tool for social development by preferring particular suppliers to the others, through the tender criteria by giving preferences to socially responsible suppliers.

These procurement preferences can also take the form of favouring SMEs and local business, women-owned businesses, or minority-owned businesses, among others (Brammer & Walker, 2011; Worthington, Ram, Boyal, & Shah, 2008). In Switzerland, for example, equal pay between men and women is a condition of public contracts to be granted in the country (Bratt et al., 2013). In the UK, public authorities are required to give special consideration to buying goods from suppliers that employ people with disabilities (United Nations, 2008). Walker and Brammer (2009) surveyed 106 UK public sector organisations. Their findings indicate that purchasing from SMEs businesses and local suppliers are now included in local government procurement practice, as a measure to ensure diversity. Erridge (2005) also notes the UK' commitment to diversifying their suppliers by advertising the public tender in ethnic minorities' areas and circulating tender information through ethnic press and media channels. In the US, the law requires that a proportion of government contracts be awarded to Afro-American people' owned businesses (McCrudden, 2004). Further, some US states mandate purchasing products from disabled people (Cummings, Lloyd, Qiao, & Thai, 2006). In South Africa, the procurement policy promotes non-discrimination in public contracts, by race or gender (Bolton, 2006). Dickinson, McDermott, and Platten (2008) show that the local authorities in the UK use public procurement to obtain socioeconomic benefits; in particular, employment and training opportunities for unemployed and socially excluded groups such as the black people, minority ethnic groups, women, and disabled people.

There are several reasons for these preferential programmes. The preference for buying is expected to protect local products, create more jobs, and increase tax revenues. Preferential treatment for minorities and women-owned business is to address past discrimination and disadvantages to this society' segments.

The wage laws go beyond minimum wage to guarantee a decent salary so that people can get out of poverty (Cummings et al., 2006). However, some researchers criticised these preferential procurement policies, arguing that these preferences laws are inherently anti-competition, and may cause economic imbalances by favouring local businesses, that may otherwise be unsuccessful in the market without the government support (Nijaki & Worrel, 2012). Furthermore, many analysts believe that favouritism violates the basic principles of public purchasing, which are equity, equality, open competition, and the lowest price. Financially, these preferential initiatives require extra government funding for subsidies that represent higher costs for public budgets and may clash with other budgetary priorities (Cummings et al., 2006; Preuss, 2007).

Nonetheless, many governments believe that the social and political benefits from these procurement preferences are worth the cost arising from the restricted competition. Therefore, governments nowadays try to put demands on suppliers of public contracts, regarding aspects of health and safety, labour practices, and ensuring human rights in their facilities (Korkmaz, 2012; Mont & Leire, 2009).

The linkage between social responsibility and the public procurement appears to have created some interest in exploring the applicability of the social dimension within public procurement. Recently, though, there has been an increased effort to combine aspects of green and social aspects of procurement with the economic dimension. This topic will be reviewed next.



## 2.7 Economic Public Procurement

Economic development goals are fundamentally a function of public procurement (Nijaki & Worrel, 2012; Schwerin, 2014).

As stated by Oruezabala and Rico (2012), the original goal of sustainable procurement management was to avoid waste, and that did not come from environmental reasoning but an economic one.

A significant number of academic studies have focused on the economic dimension of SPP through elements such as income' generation, cost savings, and innovation (Carter, 2004; McCrudden, 2004; Oruezabala & Rico, 2012; Uttam & Le Lann Roos, 2014; Vos, 2010).

Small and Medium-sized Enterprises (SMEs) also may play an economic role in many countries (Walker & Preuss, 2008). Public policies favouring local SMEs businesses are long-dated (Cummings et al., 2006). According to Walker and Preuss (2008), enabling SME suppliers to access to the government' tender contracts can have a significant social impact. They claim that promoting SMEs could have a positive impact on employment, regeneration of the local economy, and social exclusion. Flynn, Davis, McKeivitt, and McEvoy (2012) also support this idea; they studied SMEs' access to the Irish public procurement. There, the government involves SMEs in public procurement as a tool for new job creation, and a solution to address the unemployment issues. Similarly, Knight et al. (2003) reported that countries such as Australia and Canada have preferential procurement policies for SMEs. Likewise, in India, public procurement regulation stipulates that certain goods must be purchased from small businesses, even if prices are up to 15% higher than those offered by other suppliers, as a measure to help this vital society segment (United Nations, 2008). On the other hand, while studying procurement by a range of public sector organisations

in the UK, Loader (2011) found little evidence of formal policies to encourage the use of SMEs firms as suppliers. The reason may be that public procurement in the UK is subject to EU regulations and the EU laws do not permit mandatory SME quotas.

Supporting Loader's finding, Preuss (2011) stressed that the EU states members struggle to support SMEs suppliers' in the public procurement, explaining that within the EU, the government is subject to the EU regulations, which prohibited SMEs supplier preferences, as it is argued to violate the principles of fair, open competition, and non-discrimination (Erridge, 2005). Similarly, Lehtinen (2012) and Sonnino (2009) confirmed that the regularity aspects of public procurement encompass a fundamental clash between the idea of sustainability on one side, and competitive tendering and free trade principles on the other, thus ultimately acting as a barrier for specifying SMEs suppliers in the public tenders. Even so, the importance of SMEs to the economy and employment creation have led governments to buy from them and encourage their business (Uyarra, 2013).

Another way through which procurement serves economic development purposes is by encouraging locally produced goods and services. Local suppliers' support agenda in government procurement is reflected in targeting local business initiatives, such as the US and the Australian' agenda of Buying-Local (Nijaki & Worrel, 2012; Walker et al., 2014). It has been argued that preferences for local supplier's saves energy, encourage employment, reduces food miles and waste, and supports organic farming and local economy (Lehtinen, 2012; Morgan, 2008; Otsuki, 2011; Rimmington, Smith, & Hawkins, 2006).

Lastly, a new field of literature has emerged from the interests of how public procurement can be used to promote innovation. Achieving economic development requires governments to act as a stimulus for new technologies, innovation, and

Research and Development (R&D) activities (Edler & Georghiou, 2007; Georghiou, Edler, Uyarra, & Yeow, 2013; Hommen, Rolfstam, Vasileiadis, & Telecom, 2005; Uyarra & Flanagan, 2009).

Public Procurement of Innovation (PPI) has been referred to as “the process where public organisations purchase or place an order for products, services, or goods that do not exist at the time, but which could be developed, and that requires innovative work to fulfil the demands of the public buyers.” (Uyarra et al., 2014).

It is claimed that public procurement can promote R&D, innovations, and the creation of new technologies (Aschhoff & Sofka, 2009; European Commission, 2008). This argument was confirmed by a research, collecting all innovations commercialised in Finland between 1984 and 1998. Findings revealed that 48% of the projects leading to successful innovations, were induced by the public sector procurement orders (Edler et al., 2005). Similarly, Aschhoff and Sofka (2009) conducted a quantitative study using data of 5238 firms between 2006 and 2008, from the EU member states, Norway and Switzerland, to assess the causal effect between public procurement and innovation. They found that public procurement tends to be more efficient than R&D subsidies in inducing innovation. Furthermore, the Georghiou et al. (2013) survey of 800 public sector suppliers in the UK pointed out that 25% of the innovative organisations, claimed that all of their innovations have been as a result of public procurement contracts. Also, 67% of the firms that introduced innovations acknowledged that bidding for public sector contracts had an impact on their innovation activities.

In general, a significant and positive relationship was found between innovation and public procurement, regarding holding Intellectual Property Rights

(IPR), and regarding R&D spending, making public procurement a powerful policy tool in promoting innovation.

In sum, a variety of economic, social, and environmental elements make up sustainable procurement.

Recently, there has been growing debate about how to combine aspects of green and social procurement with the economic dimension, and thereby collectively being considered as Sustainable Public Procurement (SPP).

## **2.8 Sustainable Public Procurement (SPP)**

### **2.8.1 SPP per Country**

An examination of the existing literature shows that prior research has tended to examine SPP within particular countries, mainly in the developed economies (Laryea, Alkizim, & Ndlovu, 2013).

The UK had a significant share of SPP studies. One of the first studies was the one conducted by Erridge (2005) that analysed the UK's SPP policy goals and identified progress in some aspects of the SPP practices. Another study that investigated SPP practice across the UK public sector was conducted by Walker and Brammer (2009). The quantitative and qualitative analysis indicated that a variety of SPP practices are already well embedded in the UK's public procurement practices. Likewise, Preuss (2007, 2009), explored the extent and nature of SPP in the local public authorities in the UK, uncovering a range of initiatives related to local development, environmental protection, and social equity.

In the US, Cogburn and Rahm (2005) reviewed the United States governments' experience with SPP and identified several challenges and suggested some guidelines for governments when implementing SPP operations. Similarly,

Cummings et al. (2006) investigated SPP in the US and found that the federal governments' purchasing decisions are based on sustainable factors such as purchasing from SMEs, women-owned business, and awarding procurement to a business owned by socially and economically disadvantaged individuals.

Sweden also had a considerable number of studies investigating SPP. Sporrang and Bröchner (2009) explored how SPP is perceived, planned, and achieved within Swedish municipalities. Their results show some evidence of the inclusion of sustainability-related criteria in public tenders. Carlsson and Waara (2006) also investigated SPP in the Swedish public sector and confirmed the existence of SPP practices within Swedish public procurement operations.

Lastly, in a study of SPP practices in Canada, Hartshorn et al. (2005) investigated the SPP effects on innovation. They claim that integrating economic, environmental, and social dimensions into public procurement could help achieve a competitive advantage, economic, and social gains while minimising environmental damage.

An examination of the previous literature shows that the emphasis on the SPP practices in the EU countries has been in the environmental dimensions and not social ones. In contrast, SPP frameworks in the US and Canada, have an emphasis on the social aspects such as women and minority-owned businesses.

### **2.8.2 SPP Comparison between Different Countries**

I have also identified some comparative literature that explored SPP by examining the international variation in the status of implementation. For example, Brammer and Walker (2011), conducted a survey among 280 public procurement practitioners from 20 developed countries exploring drivers and barriers of SPP. Their

results presented evidence that SPP is embedded to some degree in most of the public procurement in most of the investigated countries. However, they also indicated that there is a large variation across these countries in the level of SPP implantations.

Similarly, Walker et al. (2014) explored the variance in the sustainable policy across these countries. Their findings show that OECD countries vary in their emphasis on social and environmental policies; UK, Australia and New Zealand have the most significant sustainable policy guidance, while Turkey has none.

### **2.8.3 SPP per Sector**

It also appears that the majority of prior SPP studies focused on a sectoral perspective, such as construction, health, food, education, or transportation sectors, usually with an emphasis on how government can promote targeted sustainability goals when buying from specific industrial suppliers (Walker et al., 2014).

In the construction sector, SPP practices are directed towards pollution reduction, green and energy-efficient public buildings, and contractors' compliance with health and safety standards. For example, Hall and Purchase (2006) and Meehan and Bryde (2011) examined the UK's SPP initiatives in the public housing industry and revealed limited SPP practices in the construction operations. Varnäs, Balfors, and Faith-Ell (2009) investigated SPP practices in Sweden's construction sector, revealing that SPP considerations can have the potential to cut gas emissions, reduce energy costs, improve public health, and protect the environment. Vatalis, Manoliadis, and Mavridis (2012) study of the SPP practices in the public construction projects in Greece indicates that some sustainability considerations are incorporated in their procurement operations.

Sustainable procurement is also a recent concern in the healthcare field. Oruezabala and Rico (2012) investigated the impact of SPP on the French healthcare sector, identifying an inclusion of sustainability issues within procurement practices in public hospitals, such as green requirements and environmental performance criteria regarding medical equipment and material.

Walker and Preuss (2008) also investigated the UK's healthcare organisations sourcing from SMEs, concluding that sourcing from the local small business can contribute to sustainable development and can have benefits in terms of the health and well-being of the local population.

Another sector of interest in investigating SPP was the Information Technology (IT) sector. For example, Matthews and Axelrod (2004) employed a case study methodology to investigate public IT procurement and the role of procurement managers in managing toxic electronics wastes. The authors employed the results of this study for the development of a practical guideline to SPP in the IT operations.

The public food sector is another sector that received attention from academic research. For example, Rimmington et al. (2006) investigated public food procurement by the government of the UK to supply schools, ministries, prisons, and public hospitals. The authors employed the results of this study to develop an SPP guideline, containing key performance indicators that measure sustainability in the public sectors' procurement operations.

Similarly, Lehtinen (2012) conducted a descriptive study of SPP in the Finnish public food catering. The study was able to identify the principal evaluation of sustainable criteria of tender procurement.

In sum, synthesising prior research, sustainability encompasses environmental, social, and economic factors such as green purchasing, human rights and safety of the

worker's concerns, supporting locals and SMEs business, and creating a strong and efficient economy that promotes innovations and R&D activities. Table 1 next provides a summary of the main SPP practices as reviewed in the literature.

Table 1: Summary of SPP Practices

| SPP Practices                              |  |
|--|--|
| Environment                                | Stipulating low energy consumption products  |
|  | Buying recycled products   |
|  | Avoiding hazardous and toxic materials   |
|  | Green building designs   |
|  | Certification of ISO 14001 or EMAS   |
|  | Less volume and types of wastes  |
|  | Using alternative and renewable energy sources   |
| Social                                     | Promoting workforce welfare, such as occupational health and safety issues                             |
|  | Fair employment practices, and considering Human Rights concerns                                       |
|  | Supporting socially inclusive practices, such as jobs and training of disadvantaged or disabled groups |
|  | Supporting the use of emerging small and medium businesses   |
|  | Non-discrimination, diversity, and equality  |
|  | Local sustainability   |
| Economic                                   | The whole life cycle of a good or service costing thinking   |
|  | Improve the local suppliers' competitiveness, and capacity   |
|  | Encourage employment, job creation, and national production  |
|  | Supporting Innovation and R&D  |
|  | Financial benefits   |
| Lowering costs due to the economy of scale |  |

In order to assist the public sector organisations in the successful implementation of sustainability in procurement operations, the important question to be understood is what motivates and hinders public sector organisations in integrating sustainability practices in their procurement operations.

Providing a comprehensive overview of these driver and barrier factors would help advise both policymakers and practitioners on effective implementation of sustainability in public procurement.



## **2.9 Drivers of Sustainable Public Procurement**

A vast body of literature specifically analysed the drivers and barriers that public organisations face when engaging in SPP operations. These drivers can be either external or internal to the organisations. I will revise this literature next.

### **2.9.1 External Drivers of Sustainable Public Procurement**

External drivers of sustainable procurement have been particularly identified as the most significant factors affecting public organisations SPP practices (Ageron, Gunasekaran, & Spalanzani, 2012; Hoejmose & Adrien-Kirby, 2012). Walker, Di Sisto, and McBain (2008b), for example, conducted an exploratory qualitative case study on the UK' public and private organisations, and they found that organisations tend to face more external drivers as opposed to the internal drivers regarding their sustainable procurement operations. The studies of Ageron et al. (2012) and Hoejmose and Adrien-Kirby (2012) also seem to be supportive in this regard.

Four main external drivers were identified by reviewing the existing body of literature, namely: Government laws and Regulation, Environmental Management Systems (EMSs), the NGOs and Society Demands.

#### **2.9.1.1 Government' Sustainable Strategy and Policy**

The engagement of public sector organisations with sustainable procurement has been shown to be positively related to the presence of sustainability strategies and policies in the country (Zhu & Sarkis, 2007).

A significant body of literature supports the view regarding the positive effect of government' sustainable policies (Baden, Harwood, & Woodward, 2009; Chkanikova & Mont, 2012; Walker et al., 2008b).

The development and application of sustainability criteria in public procurement could be assumed to reflect the national sustainable agenda (Berns et al., 2009; Sporrang & Bröchner, 2009; Walker et al., 2014).

For example, a study carried out by Bouwer et al. (2006) to measure GPP implementation in EU countries by the use of environmental criteria in the call for tenders shows that 7 out of the 25-member states are advancing in the use of GPP, thanks to general sustainable policies and action plans. This argument was also confirmed by Oruezabala and Rico (2012), as they recall that the French government apply the SPP' general framework through laws, decrees and government guidelines. In particular, this legal instrument provides legitimacy to public organisations to include SPP criteria in their procurement operations.

Amann et al. (2014) sought to determine the extent to which Austria, Germany, the Netherlands, and the UK implement policy objectives regarding SPP. They provided confirmatory evidence that the SPP legislation in these countries demanded that contracting authorities procure sustainable products. Likewise, in Greece, legal and institutional frameworks set the underlying conditions in the way sustainable procurement may be undertaken by public bodies (Vatalis et al., 2012). Flynn et al. (2012) studied the case of SPP practices in the Irish local government authorities. Their findings confirm the importance of procurement policies in stimulating the uptake of sustainable procurement practices and provide evidence that central sustainable policies have the power to transude to the local government level and initiate reforms.

Similarly, Worthington et al. (2008) used a case study approach to examine both the US and UK organisations drivers to engage in ethical procurement operations; their findings suggest that government' sustainable laws are the primary driver of engaging in socially responsible procurement operations.

Equally, in Norway, many national SPP initiatives to incorporate environmental criteria were developed through a national environmental framework (Testa et al., 2012). Confirming these findings, Fet et al. (2011) asserted that because SPP is part of a nationwide strategy for sustainable development in Norway, and therefore, it has been impeded through legislation and various initiatives from the government. Similar studies have also confirmed that government legislative pressures are a key driver of sustainability (Cashore & Vertinsky, 2000; Chkanikova & Mont, 2012; Jennings & Zandbergen, 1995; Lee, 2008; Walker et al., 2008b).

Interestingly, though, the findings regarding whether government regulation is a significant driver of the SPP have been mixed (Carter & Jennings, 2002; Carter & Jennings, 2004). Empirical research by Carter, Ellram, and Ready (1998) found no significant relationship between regulation and environmental purchasing. Similarly, Carter (2004) argued that compliance with government legislation has been seen as not a significant driver of SPP. Other authors, see government regulations as a cause of dispute and conflict or can act as a barrier (Elg & Hultman, 2011; Porter & Van der Linde, 1995). For example, Min and Galle (2001) and Walton, Handfield, and Melnyk (1998) research findings suggest a positive correlation between government regulation and sustainability in procurement, but also indicate that regulation can act as a barrier to green purchasing due to the constant changes to existing regulations.

In summary, the national legal and regulatory framework seems to be a strong external driver for sustainable procurement operation. Therefore, the following hypothesis is proposed:

H<sub>1</sub>: Government' sustainable strategy and policy is related to SPP practices implementation.

### **2.9.1.2 Society and Citizens Awareness**

The deterioration in environmental conditions in the past decades caused a shift of public attention towards sustainability. The society now demands more environmentally friendly and socially conscious products (Handfield, Walton, Seegers, & Melnyk, 1997; New et al., 2002).

The literature has shown that society and citizen pressure can be a significant driver of sustainable procurement operations (Chkanikova & Mont, 2012; Min & Galle, 2001; Worthington et al., 2008). People are increasingly concerned about their rights as humans and workers, safety standards, environmental impact, and the quality of the products they receive from their governments (Carter & Jennings, 2004). As stakeholders like citizen and community residents become increasingly concerned about environmental and social issues, sustainable procurement practices are increasingly regarded by public bodies (Dickinson et al., 2008).

Hall (2001) argued that large organisation, such as public bodies, could expose their large number of the customer to high levels of environmental risk if they had inadequate environmental practices, as such, giving government more incentives to engage and invest in environmental procurement operations. Thus, as receivers of public goods and services, citizens might demand green products made from recyclable materials.

These types of demands can lead the procurement function in organisations to re-evaluate the environmental friendliness of their operations (Carter et al., 1998).

Moreover, media attention from the public and stakeholders can embarrass public organisations, and cause public organisations to re-evaluate their procurement operations to enhance the reputation of the government (Chkanikova & Mont, 2012; González-Benito & González-Benito, 2006).

For example, information about SPP has appeared in newspapers and other media in developed countries and people can access tender offers and criteria for the selection of public suppliers. So, the use of media, as a stakeholder, may raise awareness, and help promote the government's sustainable practices (Fet et al., 2011; Zhu et al., 2013). Therefore, society and citizen pressure is undoubtedly an increasingly critical force that shapes the sustainability of public sector organisations (Mont & Leire, 2009).

In sum, previous studies demonstrated that societal drivers that include growing public awareness and demands for sustainability performance are regarded as a significant external drive for SPP. Therefore, the following hypothesis is proposed:

H<sub>2</sub>: Society and citizens awareness is related to SPP practices implementation.

### **2.9.1.3 Environmental Management Systems (EMS)**

One factor that emerges strongly as having a positive influence to include sustainability criteria in procurement decisions is represented by the adoption of Environmental Management Systems (EMS), such as the Environmental Management Standards' ISO 14000, ISO 14001, and the EMAS standards (Testa et al., 2014; Walker, 2010b).

The EMS is a management tool that allows organisations of any size or type to control the environmental impact of its activities and to improve its performance by setting environmental objectives or targets (Walker, 2010b). The EMS acts like a certificate of the "environmental excellence" of any organisation, or as authentication that demonstrates that organisations have achieved their environmental objectives, or at least they keep improving them (Oruezabala & Rico, 2012).

Since the release of the ISO 14000 family of standards, there has been additional environmental pressure on organisations to use the EMS in their procurement operations (Giunipero et al., 2012). The adoption of the ISO 14000 standards and EMAS standards influence the interaction of the public sector organisation with their contractors and suppliers of different goods and services.

Literature has emphasised the role of the EMSs. For example, Appolloni, D'Amato, and Wenjuan (2011) and Handfield, Sroufe, and Walton (2005) assert that the ISO 14000 certification is a significant driver of sustainability operations in procurement. Montabon, Sroufe, and Narasimhan (2007) analysed environmental business performance and found evidence that environmental operations are becoming more vastly embedded due to the international EMSs. Conversely, a study carried out by Testa et al. (2012) did not find a very significant relationship between the implementation of ISO 14001 and GPP; this was because it was during the first years of EMS implementation in the public procurement operations. In a second study, Testa et al. (2014) demonstrated that the adoption of a certified EMS alone is not a sufficient condition to stimulate the adoption of GPP, instead it is the EMS degree of maturity that influences a sustained performance of public procurement.

Thus, it seems that EMS certified public organisations are more likely to develop SPP practices. Therefore, the following hypothesis is proposed:

H<sub>3</sub>: Environmental Management Systems (EMS) are related to SPP practices implementation.

#### **2.9.1.4 NGOs and Pressure Groups Demands**

Public awareness of organisations' burden on the environment and society caused the growth of pressure groups, such as Greenpeace and Ethical groups.

Furthermore, it allowed these groups to cause real change in organisations' practices through bad publicity, boycott, and other forms of activism (Andriof & Waddock, 2002; Winter & May, 2001; Worthington et al., 2008).

Several authors also highlight the influence of these new types of stakeholders that can affect the organisation's capacity to engage in sustainability and influence its purchasing strategy (Crespin-Mazet & Dontenwill, 2012). One important empirical study conducted by Mont and Leire (2009) collected data from Swedish public organisations; the study found that the main driver for sustainable public procurement was the Non-Governmental Organisations (NGOs) attention.

The NGOs are gaining importance as a significant driver for organisations to include sustainability issues in their business and to improve existing purchasing practices (Ageron et al., 2012; Chkanikova & Mont, 2012; Crespin-Mazet & Dontenwill, 2012; Mont & Leire, 2009). For example, Zhu and Sarkis (2007) asserted that in developed countries, non-governmental organisations can play an essential role in tracking and promoting environmental issues within governments. However, in developing countries, NGOs have limited influence. Conversely, a study by Sine and Lee (2009) offered evidence that stakeholders may present an external barrier due to lack of knowledge, or by being sceptical and withholding support (Walker, 2010b).

Meehan and Bryde (2011) confirm a negative impact of NGOs' pressures when focusing mainly on only one dimension, such as the environmental issues, thus, limiting the consideration of a broader approach of public procurement that encompass the full spectrum of sustainable development dimensions.

Overall, the literature that growing NGOs and pressure group demands for sustainability performance is an essential external motivator for public organisations' sustainability. Therefore, the following hypothesis is proposed:

H4: NGOs and pressure group demands are related to SPP practices implementation.

In summary, it is manifest that external factors are significant drivers of sustainable public procurement. However, although these external drivers are essential, they may need to be supplemented with internal factors (Hoejmose & Adrien-Kirby, 2012).

For example, external drivers may not be as powerful in non-consumer organisations. In such organisations, internal drivers will motivate the organisational progress towards sustainability (Meehan & Bryde, 2011).

### **2.9.2 Internal Drivers of Sustainable Public Procurement**

External drivers are often crucial in starting the engagement of public organisations in SPP. However, for it to become truly fruitful, specific organisational factors are needed (Grandia, Groeneveld, Kuipers, & Steijn, 2013; Hoejmose & Adrien-Kirby, 2012).

Consequently, a body of literature has identified some inter-organisation drivers of sustainable public procurement. Four main internal drivers of SPP were identified, namely: Top Management Support, Employee Initiatives, Financial Benefits, and Islamic Values and Beliefs.

#### **2.9.2.1 Top Management Support**

One primary internal driver of sustainable procurement is top management support, as managers have a strong internal influence on adopting sustainability (Giunipero et al., 2012). Previous studies have highlighted the influence of top management on SPP in association with their power over resource allocation.



These studies noted that senior management could dictate how and where resources are allocated, with their capacity to allocate the needed resources for SPP operations (Bloch & Bugge, 2013; Hoejmose & Adrien-Kirby, 2012; Lee, 2008; Park & Stoel, 2005; Walker et al., 2008a; Wan, 2014).

For example, Vachon (2007) stressed that top management influence is positively associated with the organisation's environmental performance due to their ability to allocate greater investment in pollution control and prevention technologies. Similarly, Carter and Jennings (2004) quantitative study presented evidence that top managers are a significant key driver of sustainable procurement practices, through initiating and supporting sustainable procurement programmes. In the same line, Li and Geiser (2005) argued that it was top management commitment to improving the environmental impact of the computer purchasing contracts in the US' procurement, which had led to the modification of IT procurement processes to a more sustainable one. For example, Brammer and Walker (2011) argue that if top managers supported SPP policies, and incorporate them into their plans, strategies, or goal setting of procurement project, implementation of SPP practices will be realised.

In contrast to these findings, Grandia et al. (2013) when investigating SPP in the Dutch public sector, found no support that top management can influence the degree of SPP implementation. Furthermore, a study conducted by Carter et al. (1998) claimed that it is not top management, but rather the middle management's support that is significantly and positively related to the organisation's engagement with sustainable procurement. Nonetheless, procurement managers seem to be more relevantly positioned to impact the sustainable performance of the purchasing, through product or service specification, budget allocation, supplier selection, and evaluating the performance of the supplier fulfilment of the tender contracts (Matthew, 2012).

In sum, the literature asserts that in order to integrate SPP policies and practices in the public procurement process it requires leadership and management support. Therefore, the following hypothesis is proposed:

H<sub>5</sub>: Top management support is related to SPP practices implementation.

### **2.9.2.2 Employee Initiatives**

Literature recognised employees to have an impact on organisation's sustainable procurement activities, as employees themselves can likely play a role in initiating sustainable procurement initiatives (Carter & Jennings, 2004; Khanna, 2001; Park & Stoel, 2005; Salam, 2009).

For example, Mont and Leire (2009) found evidence that a key source for developing sustainable purchasing initiatives was the employees themselves, those who were personally committed to a sustainable code of conducts. Similarly, Carter et al. (1998) gave empirical support to these findings by demonstrating a significant relationship between employees' initiatives and environmental purchasing.

This argument was also confirmed by Handfield et al. (1997), as they claim that having an entrepreneurial staff with sustainable initiatives is a necessary, although not sufficient requirement of sustainable procurement practices.

As such, the literature suggests that in order to achieve more sustainability goals, an organisation needs its employees' involvement (Sarkis & Setthasakko, 2009).

In sum, the literature found that a primary internal driver of sustainable procurement is formed by the initiatives of procurement workers themselves. Therefore, the following hypothesis is proposed:

H<sub>6</sub>: Employees' initiatives are related to SPP practices implementation.

### 2.9.2.3 Financial Benefits

Previous studies claimed that sustainability does reward financially (Hutchins & Sutherland, 2008; Porter & Van der Linde, 1995).

Public organisations are finding that embracing the broader issues of sustainability can make good business sense, because, among other reasons, opportunities for maximising value, realising cost savings, and reducing risk have been recognised with sustainable procurement (Dickinson et al., 2008).

For example, Waddock and Graves (1997) argued that corporate social performance and profitability can be significantly and positively correlated. Likewise, Stone and Wakefield (2000) studied the environmental operations of firms and their subsequent financial performance; their findings suggest that environmentally proactive firms do better financially. Equally, Meehan and Bryde (2011) empirically support these findings, suggesting that the environmental orientation of the organisation often presents financial savings.

Conway (2012) states that economic considerations drive governments to implement sustainable procurement practices, and those sustainable initiatives have been shown to create net financial savings for the economy. Other studies have identified the desire of some organisations to reduce waste and costs as an internal driver for the implementation of an environmental supply chain (Green, Morton, & New, 1996; Rao & Holt, 2005). For example, pollution creates extra expenses in the form of wasted resources and efforts, and by adopting sustainable operations, pollution and its associated costs can be reduced or be prevented (Porter & Van der Linde, 1995).

In many cases, by adopting SPP practices, public administrations can save money compared to conventional procurement.

Some greener products and services are less costly regarding their use, maintenance, and disposal than the conventional options, despite higher upfront investment costs. The price of the green option itself is the same or below that of the conventional option sometimes (United Nations, 2008).

Conclusions drawn from many good examples in SPP demonstrate that a whole-life cost assessment (purchase price, costs during the use phase, and costs for disposal), can lead to significant financial savings, as well as environmental and social gains. When looking at the whole-life cost, many items that look expensive initially can save costs (Brammer & Walker, 2011; Walker, 2010b). Such examples can be found ranging from energy-efficient light bulbs, bus services, to efficient and sustainable green buildings (Kennard, 2006).

Regarding realising cost savings for the government, Dickinson et al. (2008) named opportunities like energy-efficient public buildings and transport vehicle, reduction of waste and pollution, reduction in water, material and energy consumption, and sourcing of local materials.

Regarding reducing costs that are potentially associated with social issues, SPP can lead to a reduction of liability, fewer financial penalties, and less negative publicity linked to inappropriate practices (Fet et al., 2011).

Therefore, it seems that a strong driver for SPP is that the public bodies are finding that it may lead to financial benefits. Consequently, the following hypothesis is proposed:

H<sub>7</sub>: Financial benefits are related to SPP practices implementation.

#### **2.9.2.4 Islamic Values and Beliefs**

People ethical values and religious beliefs are other significant drivers of sustainability (Salam, 2009). Personal values of employees have been reported as one potential precursor to ethical behaviour in organisations (Carter, 2004; Tieman, Jack, & Maznah Che, 2012). Drumwright (1994) supported the causal relationship between employees' values and their sustainability initiatives, by concluding that the individual values of the employees often motivate green procurement initiatives.

Islam is regarded as one of the most important factors which shape current Arab peoples' values and beliefs (Rees & Althakhri, 2008; Yousef, 2001). As explained by Hammoud (2011) "the way we do things around here" in the Arab business organisations cannot be precisely understood in isolation from the dominant characteristics of the Arab-Islamic cultural factors and forces. For example, Tayeb (1997) demonstrated that religions in many countries play a major role in shaping and influencing the cultural characteristics of the people and their organisations, and in countries where Islam plays a dominant role, it tends to govern every aspect of life.

Similarly, McMurray et al. (2014) uncovered that procurement managers practising in Malaysian public and private sector organisations and stated that religious practice was an essential factor that influenced procurement managers to engage in sustainable practices. Likewise, Razzaque and Hwee (2002) found, through a quantitative study of Singaporean purchasing professionals, that religion had a significant influence on the purchasing managers' view of ethical issues. Yesil, Sekkeli, and Dogan (2012) argue that the religious background and beliefs of the employees have an impact on their ethics and behaviour. As a result, employees tend to reflect their religious teaching and beliefs on understanding and practising ethics in their business life.

Organisation's policies are adopted and implemented with some reference to the Islamic values held by their people (Tayeb, 1997). Abbas and Al-Kazemi (2007), studied the influence of Islamic ethics on managers in Kuwait; based on a survey questionnaire with 762 managers, their results revealed that managers have a high commitment to Islamic ethics, which then translate into their work activities and practices. Furthermore, in Muslim societies the sayings of Prophet Muhammad  $\tau$  and the Holy Quran text are an integral part of business activities. They regulate the social behaviour of Muslims, which demands that business in Islam have to rest on ethical and moral foundations (Majid & Hussaini, 2011). For example, The Quran instructs Muslims with "God hath permitted trade and forbidden usury" (Quran, 2:275). Additionally, Prophet Muhammad $\tau$  instructed Muslims to be fair and just in compensating workers. He declared, "One must give a worker his wage before his sweat dries". That is, payment for wages should be timely, fair, and adequate. In Islam, denying a worker his full wage is considered an immoral act (Ali & Al-Owaihian, 2008).

In the environmental extent, Islam condemns waste and extravagance in any form and instruct the enterprising individual to preserve natural recourses and the environment (Majid & Hussaini, 2011). Respecting the law of nature and all its components is an obligation of every Muslim (Matali, 2012).

In some countries, the influences of the religious context of procurement are formally incorporated in the rules governing suppliers-buyers relations. These rules can either be related to the supplier's workers' rights, such as work injuries compensation. They can also be linked to the choice of the resolution of contract

disputes whether the settlement of disputes takes place under the local laws that are subject to the principles of Sharia's judicial systems or the western arbitration systems.

For example, Rimmington et al. (2006) and Myers and Hassanzadeh (2013) stressed that religion dictates the buyers' choices on religious food requirements, such as Halal labelled products, especially in public sector catering systems. This is due to the fact that Sharia' Law requires Muslims to purchase products that are Halal.

Thus, Islam covers a broad area of procurement considerations, such as payments of reasonable wages, charging a fair price, take care of the environment, and religiosity (Shaari & Arifin, 2010). Therefore, procurement is viewed in Islamic thinking, as an instrument for realising religious, social, and economic goals (Ali & Al-Owaihan, 2008). For this reason, in this thesis, I argue that in a predominantly Muslim country such as Kuwait, the Islam religion influences the public sector organisation's procurement operations. Therefore, the following hypothesis is proposed:

H<sub>8</sub>: Islamic values and beliefs are related to SPP practices implementation.

In summary, the literature finds that internal and external drivers are fundamental to an organisation's commitment to SPP practices implementation. For that reason, the following hypothesis is proposed:

H<sub>a</sub>: The greatest manifestation of driver's factors in the public organisations will facilitate sustainable public procurement practices implementation.

In a similar fashion as with identifying drivers of SPP practices, many studies have analysed the barriers for public sector organisations to engage with SPP practices. I also divided the barriers of SPP into external and internal barriers. Presented next.

## **2.10 Barriers to Sustainable Public Procurement**

The SPP literature has given much attention to the identification of barriers to SPP (Grandia et al., 2013). Next, I will discuss the internal and external barriers factors that may hinder organisations from pursuing SPP operations.

### **2.10.1 Internal Barriers to Sustainable Public Procurement**

Previous research has identified costs of sustainability, lack of SPP knowledge, budgetary constraints, as barriers to sustainable public procurement.

#### **2.10.1.1 Costs of Sustainability**

The literature reveals the cost of pursuing sustainability as the primary barrier to SPP. Sustainable products are often perceived to be more expensive or require higher capital investment (Chkanikova & Mont, 2012; Nidumolu, Prahalad, & Rangaswami, 2009). The inflation of costs in hand will conflict with the public procurement objectives of obtaining goods and services at the lowest possible prices (Chari & Chiriseri, 2014; Giunipero et al., 2012).

For example, Erridge, Fee, and Hennigan (2006), stress that the main criticisms of the use of public procurement pursue sustainable policies that it increases costs. Based on an empirical survey study in US firms, Min and Galle (2001) identified barriers to sustainable purchasing operation, and cost concerns were the most significant barrier to implementing sustainable procurement. Zhu et al. (2013) found that Chinese government promoted GPP practices through environmental policies towards buying green products, even if the cost is higher than conventional alternatives, but in many cases, local governments were required to abide by lowest price bid selection.



Similarly, Lehtinen (2012) confirms that price tends to be the most important deciding factor in public purchasing, hindering the purchase of more expensive sustainable products. The previous arguments were also confirmed by Preuss (2007) and Thomson and Jackson (2007) confirming that costs are a major barrier for the UK's local government to more sustainable procurement. Similarly, Li and Geiser (2005) argue that there is a cost for changing purchasing processes, so the potentially higher prices of new sustainable products and services and other costs of SPP implementation may potentially act as restricting factors. High costs were noted as being a significant barrier as it leads to more pressure on public sector organisations to adopt lower cost option rather than SPP (Alkilani & Jupp, 2013; Kennard, 2006), and this could be used by some procurement officials as an excuse for not addressing sustainability issues in procurement strategies (Sourani & Sohail, 2011).

Price is the prime deciding factor in purchasing in many countries. Therefore, the cost of sustainability is a significant barrier to SPP in the public sector. Consequently, the following hypothesis is proposed:

H<sub>9</sub>: Cost of sustainability is related to SPP practices implementation.

#### **2.10.1.2 Lack of SPP Knowledge**

The inclusion of sustainability in public tenders requires technical expertise and know-how, that sometimes is lacking in public and government procurement staff (Uyarra et al., 2014; Zhu et al., 2013).

It has been argued in the literature that many public sector organisations lack professional procurement expertise (DEFRA, 2006). In particular, there is a lack of understanding of sustainability and its relationship to procurement.

Many top procurement officials have little knowledge of sustainability and what it means, have limited experience with sustainable operations, and how to incorporate sustainability goals into their purchasing plans (Berns et al., 2009; Michelsen & de Boer, 2009).

Empirical research demonstrates that the lack of sufficient skills of procurement professionals have a direct influence on sustainable procurement and that public buyers typically have limited experience (Bratt et al., 2013; Giunipero et al., 2012; Sporrang & Bröchner, 2009; Uyarra et al., 2014). Testa et al. (2012) found empirical evidence that the level of awareness, and the level of information on sustainable procurement within the public sector authorities, have a significant effect on the probability of adopting GPP practices in terms of percentage of green tenders within the procurement operations. Similarly, Løland Dolva (2007) analysed the perceived drivers and barriers for implementing GPP practices in Norway. The author claims that the lack of sustainability knowledge could act as a strong barrier to more GPP practices. Lacking an understanding of what the SPP is, can make it difficult to see its potential (Grandia et al., 2013). A study, carried out by Varnäs et al. (2009), revealed that one of the reasons that the limited application of GPP is the lack of expertise to formulate green criteria. Apparently, public procurement managers are inexperienced in integrating sustainability targets in public tenders. This was confirmed by Grandia et al. (2013) who stressed that if the procurement professionals lack enough expertise on sustainability, they will often interpret the acquisition information based on their old routines. On the other hand, Sourani and Sohail (2011) and Meehan and Bryde (2011) argued that the breadth and complexity of defining and measuring sustainability are likely to contribute to anxiety and confusion among those responsible for procurement decision-making.

To overcome this ‘sustainability illiteracy’, sustainability guidelines and training on how to incorporate clear criteria of sustainability throughout the procurement process, must be provided to procurement officials (Carter & Jennings, 2004; Sourani & Sohail, 2011).

In general, the lack of understanding of sustainability, coupled with inadequate training and accountability from procurement employees are significant barriers to sustainable procurement operations. Therefore, the following hypothesis is proposed:

H<sub>10</sub>: Lack of SPP knowledge is related to SPP practices implementation.

### **2.10.1.3 Budgetary Constraints**

The extent to which SPP will be a successfully implemented can be affected by the national budget framework (Perera, 2011; Qiao & Wang, 2011).

The lack of sufficient funds allocated for government departments and the restrictions imposed by the Treasury or the ministry of finance on expenditure can act as barriers to the realisation of sustainable public procurement practices.

Budgetary deficits could interfere with long-term thinking by public sector organisations and could hinder their efforts to invest in SPP operations. For example, Sourani and Sohail (2011) found evidence for this argument. Public procurers mentioned that it was a conflict to have a policy requirement to make annual savings in their budget, and at the same time, to have another policy demand integrating sustainability within procurement operations, which may lead to incurring higher costs. These findings were asserted by Preuss (2007), who argued that while public procurers may be concerned with the goals of the SPP, the pressure to reduce budget spending can lead to crowding out anything apart from cost considerations.

The empirical study of Mont and Leire (2009) based on data collected from Swedish public organisations, found that the main barriers for SPP were the lack of resources.

The allocation of budgets and types of accounting regimes within public procurement was identified as a major challenge, coupled with the division between capital and revenue budgets in public sector spending, and the inability to transfer funds between these budgets as a critical barrier (DEFRA, 2006).

In general, the lack of budget funding, coupled with weak financial stand for the country can act as barriers to sustainable public procurement operations. Therefore, the following hypothesis is proposed:

H<sub>11</sub>: Budgetary constraints are related to SPP practices implementation.

In summary, the existence of a historical trend among public officials to choose the lowest cost, in addition to the lack of knowledge, and the budgetary restrictions imposed on these officials can be discouraging factors to the adoption of SPP.

## **2.10.2 External Barriers to Sustainable Public Procurement**

### **2.10.2.1 Political Constraints**

The experience in several countries demonstrates that the SPP is a strategic concern and political project and that not having a sufficient political commitment can act as a key barrier to SPP implementation (United Nations, 2008). Fisher (2013) affirms that while appropriate laws and regulatory frameworks are necessary, achieving sustainable procurement nevertheless remains a political issue. Thus, public procurement can be described as the legal processes which are guided by political decisions and are practically implemented by local purchasers (Løland Dolva, 2007).

Sustainable development requires a radical vision, which includes consideration of human equity, social justice, and environmental protection. Such considerations require strong political leadership, that aid in the integration of SPP into the government's sustainability policies (Erridge, 2005). For example, Flynn et al. (2012) showed that SME access to the Irish's public procurement had been attributed to the interest of politicians, who enunciated a series of laws and regulation reforms focusing on facilitating SME participation in the public tender contracts. Similarly, Erridge et al. (2006) showed that the government in Ireland has only committed itself to sustainable procurement as a result of the increased influence of the elected political representatives and ministers responsible for devolving public procurement policies. Likewise, Knutsson and Thomasson (2013) argued that political support is an essential factor to accomplish a sustainable procurement agenda, by empirically demonstrating how Swedish public manager succeeded in an innovation-friendly public procurement through developing a policy that was in line with the political interests and gaining the politician's support.

Furthermore, the limited political motivation was also mentioned as a critical barrier to the up-taking of sustainable public procurement in India (Muduli & Barve, 2013). Nonetheless, some of the literature argues that the four-year parliamentary cycle, such as the one we have in Kuwait, does not generate long-term thinking for politicians or parliaments (UNEP, 2011). For example, in the UK, they underpinned their current procurement unsustainability, in part at least, to the limitations of short-term political and budgetary cycles (DEFRA, 2006). The elected government, for example, may be in charge for a few years, which is a too short period to realise many of the benefits brought by sustainability.

As a result, politicians may be reluctant to invest in more sustainable solutions, favouring thereby their short-term interests over the long-term advantage of the broader society (Sourani & Sohail, 2011).

The literature discussed above suggests that there is an influence of political parties and elections on the SPP. Therefore, for countries just starting work on SPP, there is often a need to gain political support. Consequently, the following hypothesis is proposed:

H<sub>12</sub>: Political constraints are related to SPP practices implementation.

#### **2.10.2.2 Regulation and Laws**

The public sector organisations are policy implements (Lloyd & McCue, 2004). Public organisations will look to their government for a policy mandate to incorporate sustainability issues into government procurement. Regulation refers to “the implementation of rules by public authorities and governmental bodies to influence the behaviour of private actors in the economy.” (Aschhoff & Sofka, 2009).

Regulation and laws have been previously identified in the literature as one of SPP drivers, but it can also act as a barrier. Thus, evidence of the influence of regulation on sustainability purchasing is mixed (Salam, 2009).

Some studies discussed the lack of legislation on the SPP policies as a barrier for both private and public organisations (Chkanikova & Mont, 2012; Mont & Leire, 2009). The findings presented by Min and Galle (2001) suggest a positive correlation between government regulation and green procurement, but also indicate that regulation can act as a barrier to it, due to the constant changes in the existing regulation.

Likewise, Testa et al. (2012) explained that the limited application in Italy and generally in the EU member states of GPP operations is due in large part to the lack of national legislation and policies governing the inclusion of green criteria into public procurement procedures.

Similarly, Mont and Leire (2009) claim that one of the barriers to public purchasing uptake of socially responsible purchasing in Sweden was the absence of legislation that would demand the inclusion of social and ethical criteria in procurement operations. This barrier also was confirmed, by Alkilani and Jupp (2013). The participants in their study reported that a lack of adequate policies and legislation contributed to deficiencies in the application of more sustainable procurement practices.

Furthermore, the globalisation of business has led to a complex supply chain that operates in different countries (Melissen & Reinders, 2012). Each country has its economic, environmental and social concerns, and thus different sustainability needs (Giunipero et al., 2012). In this context, a typical barrier remains the concern that SPP practices may be conceived as a trade barrier and possibly conflicting with international rules on procurement (Van Asselt et al., 2006).

The extent to which sustainable criteria may be adopted in public procurement can be constrained by the international legal frameworks in which a country operates. These agreements can prohibit discrimination in public tendering procedure, based on local suppliers favouring (Ssenoga, 2006; Van Asselt et al., 2006). For example, GPA, a multilateral agreement of the WTO, and the trade legislation within the EU state members limit the use of discriminatory procurement criteria. For example, under the EU procurement directive any preferential treatments to SMEs or local suppliers are not allowed (Knutsson & Thomasson, 2013; Thomson & Jackson, 2007).

Therefore, countries may need to modify their legislation to be able to incorporate sustainability criteria into public procurement activities. In fact, more than half of the OECD countries modified their laws to introduce green criteria into their public procurement. Most developing countries are not parties to the GPA, and, as a result, are not under international law constraints for utilising social or environmental criteria in their public procurement.

Based on the mixed assertions and findings in the existing literature, our analysis disclosed that the inadequacies of sustainability policies and legislation are a major concern for management, and can be a barrier to organisations' involvement in SPP operations. Therefore, the following hypothesis is proposed:

H<sub>13</sub>: Regulation and laws are related to SPP practices implementation.

### **2.10.2.3 Cultural and Social Factors**

Organisational policies are often adopted and implemented with some reference from the national context within which the organisations operate (Tayeb, 1997).

Alkilani and Jupp (2013) argued that this is the norm in many developing economies where procurement must be considered in the country's social context. Past research has suggested that cultural factors can affect the degree of environmental or socially responsible operations within an organisation, including SPP (Hammoud, 2011; Preuss & Walker, 2011; Salam, 2009; Sarkis & Setthasakko, 2009). As such, the decision-making process in an organisation is shaped by cultural values, beliefs, and other influences (McMurray et al., 2014).



There is an enormous impact of national culture on corporate culture in the GCC countries. These societies have developed perceptions and views of work that manifest their cultural realities (Ali & Al-Owaihian, 2008).

Moreover, these societies have certain expectations of its public sector organisations and exert influence on them, and can also influence how managers perform their tasks and implement their organisational strategies (Tayeb, 1997).

Various cultural factors may influence organisational change initiatives in the Arab and GCC countries. The tribal system is an influential factor in Arab management and practices (Rees & Althakhri, 2008). In Arab cultures, the tribalism tendency in people can be described as being “rigid, risk avoiders, impose their values and rules on others, dichotomous in their view of right and wrong, and strictly adhere to the established norms of society” (Abbas, 1998; Rees & Althakhri, 2008). Tribalism is often permitted into the political, economic, and management systems in the Arab region (Abbas, 1998; Al-Kazemi & Ali, 2002). The influence of the tribal systems of the Arab’ societies makes cultural characteristics to have an impact on organisational change and practices.

Sustainability requires new ways of thinking, practices, and attitude. Hence, it requires change (Sourani & Sohail, 2011). However, when implementing new initiatives, tribal societies often exhibit a resistance to change. This resistance can appear at all levels, within the organisations, on the supply side, or from the society as a whole. Earlier studies have suggested that public sector organisations, can exhibit cultures that are highly resistant to change, this, in turn, suggests that this may have adverse consequences for the implementation of SPP (Walker & Brammer, 2009).

Regarding the organisational change in the Arab region, planning for change will be likely to be affected by cultural variables such as Tribalism or Bedouin systems (Rees & Althakhri, 2008).

Arab culture is traditional, family oriented, male-dominated, and people are resistant to change (Rees & Althakhri, 2008).

In the Arab societies, change is often considered as a threat and people prefer the status quo because people in Arab societies have a lower tolerance for new ideas for bringing about change (Rees & Althakhri, 2008). Therefore, change in the Arab world is characterised as slow paced and centrally controlled. Any successful implementation of change in the Arab context requires strong support from senior management. In Arab societies, to implement change, the managers should highlight that the goals for change are directed towards serving the community or the society as a whole (Ali & Al-Owaihan, 2008).

In this thesis, I will investigate the role of cultural factors in the implementation of the SPP in Kuwait. Therefore, the following hypothesis is proposed:

H<sub>14</sub>: Cultural and social factors are related to SPP practices implementation.

#### **2.10.2.4 Obstacles by Suppliers**

The supplier readiness and capabilities can have an effect on the sustainability agenda of the buying organisation (Adebanjo, Ojadi, Laosirihongthong, & Tickle, 2013). Wilding et al. (2012) claim that a company is no more sustainable than the suppliers from which it sources. Therefore, it is essential to ensure that the suppliers whom the governments work with operate responsibly and meet basic standards of environmental and social performance.

It is the responsibility of the government to ensure that the suppliers' and potential suppliers' sustainability performance is assessed (Mont & Leire, 2009). Several studies supported the idea of encouraging more coordinate government-supplier relationships, which will result in an improvement in the management of the SPP issues (Fet et al., 2011; Linton et al., 2007; Maignan et al., 2002; Uttam & Le Lann Roos, 2014). In an environmental study based on chemical firms in the US, it was found that firms whose environmental strategy involves close and collaborated supply chain relations with suppliers, surpassed other businesses in environmentally friendly operations (Theyel, 2001).

The lack of suppliers of sustainable products or services is also another barrier to sustainable public procurement. The scarcity of sustainable goods and service from the local market can make it challenging to set sustainable procurement agenda, as some green or eco-friendly products might not be available locally, may not meet the government standards or specifications, or may not be cost-competitive (Kennard, 2006). For example, in a study of the US energy sector, it was noted that suppliers might present an external barrier to environmental operations (Walker, 2010b).

Similarly, in Mexico, the government required that all paper purchased by public agencies have at least 50% recycled content, but there is currently not enough local supply of such paper (United Nations, 2008).

In sum, the scarcity of sustainable product and services can make it difficult to set clear sustainable priorities, standards, and targets. Therefore, the following hypothesis is proposed:

H<sub>15</sub>: Obstacles by suppliers is related to SPP practices implementation.

In summary, the literature finds that internal and external barriers act as obstacles to SPP implementation in public organisations. For that reason, the following hypothesis is proposed:

H<sub>b</sub>: The greatest manifestation of barriers factors in the public organisations will hinder sustainable public procurement practices implementation.

Finally, sustainable public procurement is not limited to developed economies, emerging and developing countries too are increasingly implementing SPP, the next section reviews the uptake of SPP in developing countries.

## **2.11 Sustainable Public Procurement in Developing Countries**

Both developed and developing countries need a well-functioning public procurement system because countries in both developed and developing regions are using procurement to pursue sustainable development goals (Islam & Siwar, 2013; Musa et al., 2013).

The literature on SPP suggests that developing countries are lagging in the implementation of SPP policies and practices compared to developed countries (Steurer, Martinuzzi, & Margula, 2012; UNEP, 2013).

However, SPP is particularly important for developing countries, as their procurement usually accounts for a higher ratio of the total public expenditures and the GDP. Public procurement is now at historically high levels and represents an estimation of about 15% to 70% of the GDP in developing countries. For example, procurement estimated 20% in China, 30% in India, 40% in Malawi, and 70% in Uganda, compared to a global average of 10% to 20% (Agaba & Shipman, 2007; Preuss, 2009; Roos, 2012a). In the Arab world, public procurement accounts for about 60% of GDP, and as a result, it negatively affects the economic systems in a number of ways.

Moreover, opposed to developed countries, only a few developing countries have an official national plan on SPP, have a scarcity of local, sustainable products, and are lacking the technology to produce sustainable products (Roos, 2013; UNEP, 2013).

Another point of difference between the public procurement in developed and developing countries is that in most developed countries, public procurement takes place within international obligations frameworks, such as the WTO's GPA, or the EU's Procurement Directives or the NFTA agreements (Knutsson & Thomasson, 2013; Morgan, 2008; United Nations, 2008; Van Asselt et al., 2006). On the other hand, most developing countries are not parties to the GPA and as a result, are immune to pressures from international laws to utilise social or environmental criteria in their public procurement operations (Adebanjo et al., 2013).

In general, however, there is no aggregated information publicly available on the status of SPP in developing countries, this may be primarily because SPP in developing countries is still in its very early stages. Another reason might be that the international procurement community has only recently started to pay attention to this emerging issue (Islam & Siwar, 2013; UNEP, 2013).

The comparative research on the degree of SPP implementation in different developing countries is very limited. For example, Chari and Chiriseri (2014) investigate the factors affecting the adoption of SPP in Zimbabwe. Findings showed no evidence of SPP, and that the awarded tenders are based on the lowest-priced bids only. The barriers for SPP were lack of SPP knowledge and management support, unavailability and the higher costs of sustainable products. Chelangat, Ombui, and Omwenga (2015) conducted a similar study aimed at exploring factors affecting the uptake of SPP practices in Kenya.

The study results revealed that laws, regulation, and the higher costs of sustainable products affected SPP practices in Kenya. Appiah, Mohammed, and Emmanuel (2014) studied SPP in Ghana and concluded that there is a neglect of the environmental and social in the purchase process. Similarly, Alkilani and Jupp (2013) explored sustainable construction in Jordan. Their finding showed that public construction procurement is implemented based on the lowest price bids, with no adoption of any SPP methods. Further, the absence of SPP practices was due to inadequate government regulations and policies, the lack of a regulatory framework for sustainability, and a lack of performance measurement. Islam and Siwar (2013) conducted a study to compare and identify the current SPP practices, drivers, and barriers of SPP between developed and developing countries. Namely between Australia and Malaysia. The results showed that some SPP practices are evident in both countries and that the extent and nature of SPP practices vary significantly between the two countries. Interestingly, the result revealed that the Malaysian public organisations have adopted more aspects of SPP practices than the counterpart Australian public organisations.

McMurray et al. (2014) also studied SPP practices in the public and private sector organisations in Malaysia, based on data collected through the open question questionnaire with procurement managers. Their main finding illustrates the role and significance of people's religion, beliefs, and culture. China also had its share of SPP research, as the fastest growing, developing economy in the world. However, this economic growth has attributed to high levels of environmental pollution. Starting from these concerns, Ssenoga (2006) stressed that China has become aware of the need to shift to a more sustainable model, which balances economic growth with

environmental protection, and part of their strategy to achieve a sustainable model was the implementation of SPP policies and strategies.

In summary, the number of studies that investigate the role of public authorities in sustainable supply is still small. It is apparent from the literature presented in this chapter that developed countries are taking the lead in implementing SPP, and some developing countries are catching up. There remains much to learn about the level of adoption of SPP practices in the developing countries, and what are the barriers that they are facing, as well as, the driving factors the public organisations have for implementing SPP practices. To address this oversight, and to contribute to this emerging body of research on SPP, this empirical study aims to examine the uptake of SPP practices in the context of a developing country such as Kuwait.

## **2.12 Gaps in the Literature**

Sustainable public procurement is a current, fast-growing research topic, and is still an underdeveloped field of research (Meehan & Bryde, 2011; Melissen & Reinders, 2012). There has been limited academic research into the SPP, and this deficit of contemporary research has added further weight to the traditional argument that public procurement is severely neglected by academic research (Dickinson et al., 2008; Srivastava, 2007; Thai, 2001).

Further empirical studies of how sustainability is integrated into the public procurement, and what factors affecting organisation's engagement in SPP practices, are thus called for (Amann et al., 2014; Walker & Brammer, 2012).

While the rapid expansion of research in this field is admirable, there are still some methodological challenges and research gaps that need to be addressed (Walker et al., 2012). The evidence suggests that many organisations have been focused

exclusively on the environmental element of sustainable procurement practice (Meehan & Bryde, 2011).

Moreover, many researchers argue that the majority of the sustainable procurement literature has been conducted in the private sector organisations and the developed countries context (Amann et al., 2014; Walker et al., 2014; Walker et al., 2012; Zhu et al., 2013). In contrast, relatively few researchers have investigated sustainable procurement practices in the context of the public sector (Preuss, 2009; Walker & Brammer, 2009; Walker et al., 2008b). Furthermore, the subject of sustainable procurement in the public sector in developing countries is still undeveloped, and more studies would be informative (McMurray et al., 2014; Musa et al., 2013; Roos, 2012a; Walker et al., 2014).

The above sets the platform for this thesis, to extend the literature in this particular area; the thesis investigated the nature and extent of the current SPP practices in Kuwait as a developing country. Thus, our research addresses this research gap as it sought to answer the research question:

RQ1: What is the current situation of sustainable public procurement (SPP) practices in the Kuwait public sector organisations?

The degree of adoption and implementation of SPP practice may significantly vary across countries about the economic, cultural, and political conditions of the respective country (Islam & Siwar, 2013). Furthermore, what is thought to be a sustainable or socially responsible procurement practice in developed countries may not be as such in developing countries (Ogunyemi, Ayios, & Spiegler, 2016).

The main goal of our research is to improve the understanding of the factors that influence public sector organisations in Kuwait to engage in SPP activities, in an



Arab and Islamic country such as Kuwait, where the cultural and the religious context may affect the practices and regulations governing suppliers-buyers relations.

As such, this research is guided by the following research questions:

RQ2: What are the drivers and barriers to integrating sustainable public procurement (SPP) in the Kuwait public sector?

RQ3: What is the relationship between public sector organisation's sustainable public procurement (SPP) engagement and its drivers and barriers?

In conclusion, there is a lack of evidence-based research into the status, the primary drivers and barriers to the implementation of SPP by Kuwait' public sector organisation. To contribute to this area, I provide one of the first empirical and systematic investigations into identifying the state of SPP across the Kuwait public sector.

### **2.13 Conclusion**

This chapter reviewed the SPP literature and the environmental, economic, and social dimensions of SPP practices. Furthermore, a review of the drivers and barriers to implementing the SPP practices was presented.

The review continued with the identification of limitations and gaps in the existing literature to offer the justification of this research in response to these shortcomings. The following chapter reviews public procurement in the context of the State of Kuwait.

## Chapter 3: Public Procurement in Kuwait

### 3.1 Introduction

Kuwait is situated in the northeast part the Arabian Peninsula, at the head of the Arabian Gulf, bordered to the north by Iraq, to the south by Saudi Arabia, and to the east by the Arabian Gulf. Kuwait is a member of the GCC Council (Figure 3).

The constitution of the state of Kuwait was adopted in 1962, declaring that Kuwait is a sovereign, Arabic, Islamic, and democratic state. Furthermore, Islamic law ‘Shari’ah’ was declared as the primary source of law in Kuwait and defines every aspect of life in Kuwait (Asseri, 2007).



Figure 3: Map of Kuwait

### 3.2 The Kuwait Public Sector

Like other countries, the public sector plays a significant role in Kuwait’s economy. The public sector in Kuwait dominates the economy, accounting for over three-quarters of GDP, the primary employer, and the largest buyer in the Kuwait economy, thus being the most substantial potential source of business in the country.

The main goal of the government's spending in Kuwait is the improvement of living standards in the country (CSB, 2014). The total public sector expenditure was KD 21.4 billion in 2015, with a growth rate of 13% (NBK, 2015). Furthermore, in Kuwait, there is no system of taxes. Kuwait's economy is a single resource type economy depending heavily on the revenues from oil exports, which accounts for over half of Kuwait's GDP (HLB International, 2012; MOF, 2014).

In the following sections, I will review the institutional framework and administrative capacity of Kuwait's public procurement, and examine the relevant procurement laws and regulations.

### **3.3 Legislative Framework and Public Procurement System**

Kuwait's overall regulatory climate is largely defined by two key factors. The first is the public sector's dominance of the economy. The second factor is that one of the essential aims of the government is to ensure the Kuwaiti people are involved in, and benefiting from, the financial and economic developments in the country. Thus, many regulations require or encourage the participation of Kuwaitis in the local economy (HLB International, 2012).

Public procurement in Kuwait is defined as "a set of conditions and procedures laid down by the government or the public bodies, meant to obtain materials, services, or the execution of the construction projects, at the lowest prices and the highest standards of efficiency, skill, and speed, and meets the technical and administrative efficiency levels." (Nasrallah, 2007).

Kuwait public procurement objectives are (MOF, 1995, 2001):

- (1) Maximising economic efficiency, at lowest costs together with the highest quality of works and the delivery of goods and services.

- (2) The protection of public money, compliance with public laws and regulations, and good governance.
- (3) Providing a fair, equal, and maximum opportunity for qualified suppliers and contractors to participate in the procurement process.
- (4) Ensuring transparency and consistency in the tenders' evaluation and selection procedures.

In the state of Kuwait, the acquisition of goods and services has been historically based on two criteria, price and quality. Submitted tenders will be evaluated based on price, and by the technical specifications required (MOF, 1995).

In the next sections, I will present in more detail the role of the public sector organisation responsible for regulating public procurement in Kuwait.

### **3.4 Institutional Framework and Administrative Capacity**

A general review of the institutional and administrative frameworks represented by the public procuring entities responsible for Kuwait' procurement system (CTC, MOF, Department of Fatwa and Legislation, State Audit Bureau) is presented next (Figure 4).

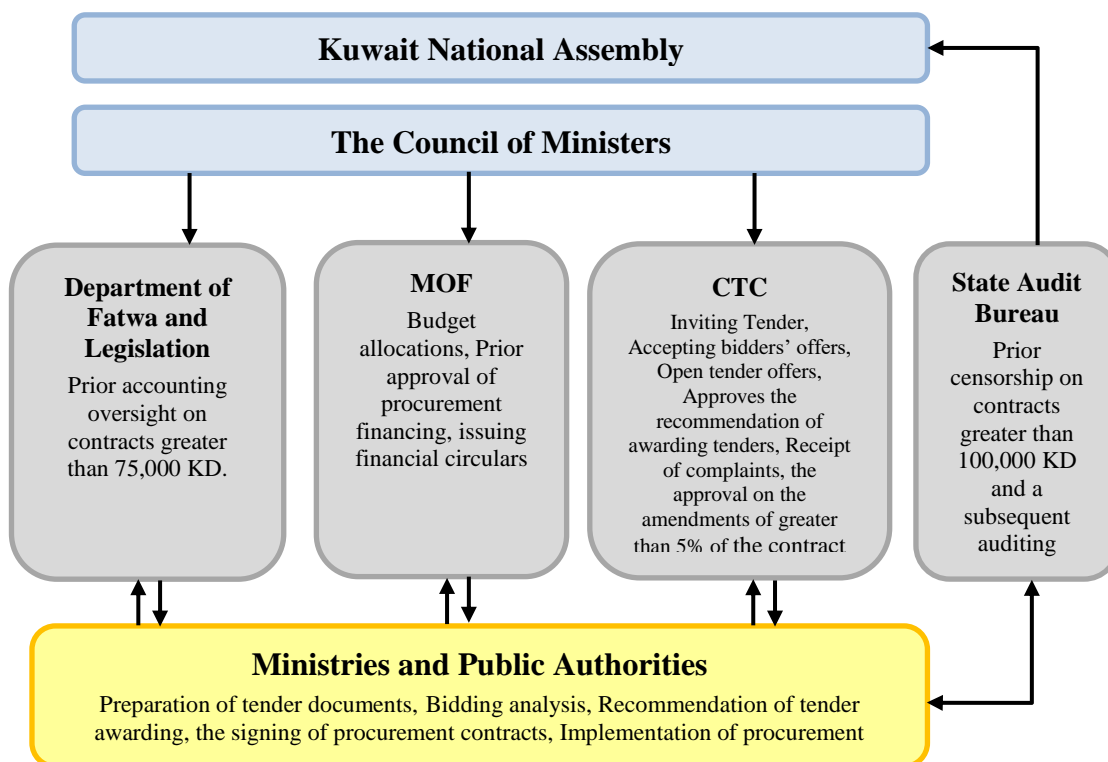


Figure 4: The Procurement System in Kuwait

### 3.4.1 The Central Tenders Committee (CTC)

The Central Tenders Committee (CTC) is a government agency attached to the Council of Ministers and is responsible for pre-qualifying firms, issuing public tenders, and awarding contracts. The CTC oversees all Kuwait's public tenders, such as tender announcements, invitations to pre-qualify, pre-tender meetings, and amendments to conditions and specification.

### 3.4.2 The Ministry of Finance (MOF)

The Ministry of Finance (MOF) is in charge of monitoring the implementation of tender contracts of all public procurement from all public sector agencies. The MOF is also the authority responsible for the development of the public procurement administrative and financial systems (MOF, 2001, 2013).

### **3.4.3 The State Audit Bureau (SAB)**

The State Audit Bureau (SAB) is an independent authority attached to Kuwait's parliament. All the ministries and public authorities are subject to the SAB financial and regular supervision. The SAB has also a subsequent auditing authority over the public sector organisation tender implementations.

### **3.4.4 Department of Fatwa and Legislation**

The Fatwa and Legislation department is the legal affairs office, attached to the Council of Ministries. The role of this authority is to draft the public laws and decrees, expressing their legal and fatwa 'Shari'ah' opinions. The authority also is responsible for legally reviewing all public tender contracts before signing these contracts.

In conclusion, in Kuwait, the CTC and other government entities regulate the public procurement system, provisions the formulation of procurement policy, assisting the enforcement of the procurement, legal framework, and providing tools for the buying agencies to carry out their functions properly in order to secure better value for money from tender contracts.

## **3.5 Challenges of Kuwait Public Procurement**

Kuwait faces a variety of social, economic, and environmental challenges shared by other developing countries in the Middle East. The rapid pace of development and economic expansion causes one of the most pressing challenges. As a developing country and an oil-dependency economy, Kuwait is facing serious environmental pollution, increasing greenhouse gas emissions, and the danger of the rapid depletion rate of reserves of oil and natural resources.

Therefore, public procurement is a valuable tool for the delivery of sustainable development objectives in Kuwait.

Many public organisations in Kuwait have come to understand the need to use SPP as a tool for economic growth, to protect society, the environment, and the natural resource. However, the general rules for participation in government tenders lacks efficiency and are not yet fully orientated towards sustainable standards (MOF, 1995). Therefore, it is important to examine how the Kuwait public sector is currently integrating sustainable development dimensions in their procurement frameworks, and what are the challenges and obstacles they have encountered in moving towards SPP practices.

In light of these observations, I propose one of the first insight, research into the state of SPP practices in Kuwait as a developing country and part of the GCC region.

The importance of the government using its procurement spending for the benefit of its sustainability agenda, especially in Kuwait, where rapid economic development is taking place, often with a negative impact on the environment, gives the rationale for conducting this research thesis.

### **3.6 Conclusion**

Chapter 3 begins by discussing the background of the Kuwait public sector in general. This is followed by a discussion of the legislative framework of government procurement. It also provides the definition and the objectives of public procurement in Kuwait. It then presents the role of the public entities responsible for regulating public procurement in Kuwait.

Finally, the chapter discusses some challenges, such as the outdated tender law, and that there is no specific provision for sustainable requirements in the process of public procurement.

The next chapter, Chapter 4, presents a detailed description of the research discipline and the conceptual model developed in this thesis.



## Chapter 4: Conceptual Framework

This chapter presents the conceptual foundation for this study. This chapter further demonstrates the application of Purchasing Social Responsibility (PSR) model to measure the dimensions, drivers, and barriers of SPP.

Sustainable procurement literature is in an ongoing state of development, not yet defined by any particular theoretical approach. Authors of SPP studies have labelled theoretical progress in this domain as exploratory and premature, proposing for more research work (Grob & Benn, 2014; Jensen & Refsgaard, 2008). Several scholars have criticised the lack of theoretical development accompanying this literature. For example, Kleindorfer, Singhal, and Van Wassenhove (2005) asserted that “We are only beginning to understand and map the territory for sustainable operations management”. It is a field without a dominant theoretical paradigm, “Thus, integrating established theories into sustainable procurement’s research is required” (Zsidisin & Siferd, 2001). Similarly, Seuring and Müller (2008) argued that “A theoretical background is often missing”. This argument was confirmed by Walker et al. (2012) as they stated that there is a need for more theory building and testing in sustainable procurement, in particular, the development of further models and conceptual frameworks to enhance our understanding of this subject.

Many issues and obstacles must be addressed if the sustainability concept is to be translated into practical implementation strategies (Rimington et al., 2006). For example, Sacaluga and Froján (2014) stress that a gap exists between the theoretical application of sustainability and the implementation in practice. Sustainability has often been referred to as a concept challenging to operationalise (Nijaki & Worrel, 2012).

Grandia et al. (2013) claim that defining and operationalising the different degrees of SPP is difficult. Measuring the impact of sustainability in a public tendering process, thus, remains challenging, as an unambiguous definition of sustainability, the criteria defining sustainability also remain unclear (Fisher, 2013; Lehtinen, 2012; Tsolas & Manoliadisand, 2010).

Recognising the previous theoretical shortcomings, this thesis aims to find out how the theoretical concept of sustainable development is translated through public procurement practices, and investigate the factors perceived to be the primary drivers and barriers to SPP practices implementation. I have developed a conceptual model, intending to contribute towards the conceptualisation and the operationalisation of the analytical concept of the SPP, which hypothesises on the relationships between the SPP practices, drivers and barriers in public procurement in developing countries. Additional details on factors development and constructs operationalisation will be presented in the next subsections.

#### **4.1 The Purchasing Social Responsibility (PSR) Model**

My conceptual framework draws on an established model of Purchasing Social Responsibility (PSR), developed by Carter and Jennings (2004). The working definition of PSR is, “Meeting the economic, legal, ethical, and discretionary responsibilities expected by society” (Giunipero et al., 2012; Musa et al., 2013; Salam, 2009).

The PSR conceptual model can be deployed as a tool to manage and measure sustainability across procurement (Steurer et al., 2012; Walker & Phillips, 2009). The PSR scale embodies a wide range of aspects of procurement that relate to the broader concept of sustainable development.

It also captures and assesses the current sustainable procurement activities through the tendering process when contracting authorities are trying to seek and select the most economically profitable, environmental protection, and social considerations tender offers.

The PSR is a sustainability measurement scale, consisting of five constructs: the environment, diversity, human rights, philanthropy, and safety (Carter, 2004; Carter & Jennings, 2004). The PSR concept was pioneered by Carter and Jennings (2004) and has been improved and modified by others (Carter, 2004; Salam, 2009; Walker & Brammer, 2009). Walker and Brammer (2009) extended the PSR model to reflect the concept of sustainable procurement in the public sector context. They included two more dimensions to reflect sustainability' diversity in the public sector organisations, namely, procurement from Small and Medium-sized Enterprises (SMEs) Suppliers, and the procurement from Local Suppliers (Brammer & Walker, 2011; Walker & Brammer, 2009).

While the above PSR model relates to the “social” and “environmental” dimension of sustainability in the public sector context, it lacks an explicit consideration of the economic criteria (Carter & Rogers, 2008). Applying the concept of sustainable development to public procurement requires governments and public organisations to consider the environmental, economic, and social aspects of their operations, with no single aspect dominating (Steurer, Margula, & Martinuzzi, 2008; UNEP, 2012).

In much of the literature on sustainability, economic aspects have not explicitly been searched for because they are assumed as being covered by previous studies (Seuring & Müller, 2008; Walker, 2010b). There are still only a small number of studies investigating all three aspects of sustainability (Walker, 2010a, 2010b).

One important emerging body of research emphasis on the public procurement' favouritism activities of local and SMEs suppliers (Lehtinen, 2012; Loader, 2011; Nijaki & Worrel, 2012; Walker et al., 2014; Walker & Preuss, 2008). The second important emerging body of research examines the role that public procurement can play as a stimulus for innovation activities (Amann et al., 2014; Brammer & Walker, 2011; Walker et al., 2012). While Walker and Brammer (2009) have extended the PSR model by including dimensions to reflect the procurement from SMEs and local suppliers (Brammer & Walker, 2011; Walker & Brammer, 2009). They're still an oversight in the literature concerning the role of public procurement as a driver of innovation in the sustainability' measurement models (Edquist & Zabala-Iturriagagoitia, 2012; Georghiou et al., 2013; Uyarra et al., 2014). In this context, previous research in this area has shown that public procurement can promote R&D, innovations, and the creation of new technologies (Aschhoff & Sofka, 2009; Edler & Georghiou, 2007). Grow (2015) stress that interests in strategic public procurement operations have also grown at the EU level, leading to the launch of the Europe's 2020 Strategy for Smart and Inclusive Sustainability, where innovation activities have been recognised as key elements for Europe's sustainable development.

Therefore, a possibility of developing the PSR framework further is by the adoption of a new dimension to the consideration that public procurement can be a lever to stimulating innovation in the economy. For this reason, I extended the PSR model, by adding a new construct to reflect an important "Economic" dimension of sustainable development, which is Innovation (Figure 5). As such, the improved and extended PSR model is best positioned to reflect the triple bottom line of economic, social, and environmental dimensions of SPP practices.

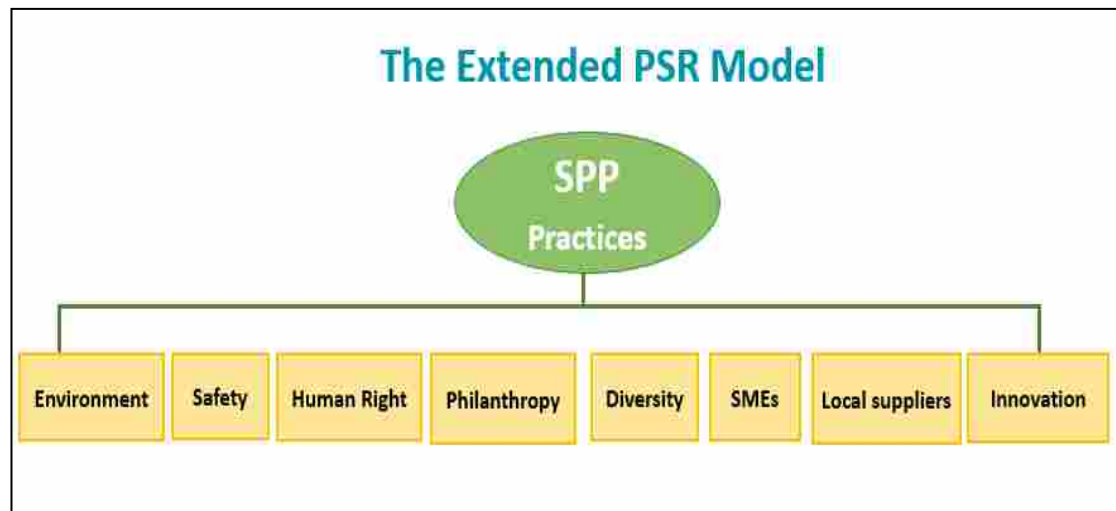


Figure 5: The Extended PSR Model

#### 4.2 Measuring SPP Practices

To investigate SPP practices, I used the sustainability scale based on the Purchasing Social Responsibility (PSR) proposed in Carter and Jennings (2004) and Walker and Brammer (2009). Applying the PSR scale has the benefits of using a scale with confirmed reliability and validity of its items in the public sector context. All the PSR dimension scales generated Cronbach's coefficients of higher than 0.70, indicating acceptable levels of construct validity and internal consistency for all seven dimensions, and the significance of the PSR scales as a practical, sustainable procurement measurement model (Carter & Jennings, 2004; Walker & Brammer, 2009). Moreover, subsequent empirical studies were conducted in several countries showing evidence of the validity and reliability of the PSR measure (Brammer & Walker, 2011; Carter, 2004; Islam & Siwar, 2013; McMurray et al., 2014; Salam, 2007, 2009). In addition, I have extended the model, by adding an additional construct to reflect an important aspect of the economic dimension of sustainable development that is Innovation.

In this paper, the PSR scale conceptualises the SPP practices through its dimensions, which encompass relevant constructs and items. A discussion of each PSR dimension follows.

#### **4.2.1 The Environment**

Environmental procurement is defined as buying products or services that have a reduced effect on the human health and the environment when compared with other products and services that serve the same purpose (Nijaki & Worrel, 2012). The environmental activities include purchasing recyclable and reusable goods, buying less toxic products, and buying energy-efficient equipment, working with suppliers to ensure that their processes and products are environmentally sound, conducting life-cycle analyses, designing products for energy efficiency, and waste minimisation (Carter & Jennings, 2004; Fet et al., 2011).

#### **4.2.2 Human Rights**

Procurement research in the area of human rights issues centres around ensuring that suppliers maintain fair and humane working conditions in their factories or facilities, ensuring compliance with labour law's requirements and working hours, and pay a reasonable wage for their workers (Carter & Jennings, 2004). The objective is to eliminate inhumane working conditions in the supply chain operations, such as child labour, forced labour, poor working conditions, long hours, low wages, labour's discrimination, the destruction of labour unions, and unfair hiring practices (Carter & Jennings, 2004; Haghandish, Ingelgård, & Larsson, 2006).

### **4.2.3 Health and Safety**

Among the priorities of the social dimension of sustainability are ensuring the public health and safety, through reducing or eliminating the negative impact of development activities, such as diseases from pollution or accident injuries (Majid & Hussaini, 2011). Safety practices aim at making sure that the operations in suppliers' factories or facilities are conducted safely, ensuring safe working conditions for the suppliers' workers, and the secure movement of products in suppliers' facilities (Salam, 2009). Process and occupational health and safety are of critical importance to public organisations, as safety leads to reduce lost in production hours and cost. Public procurement managers may inspect or monitor the safety records of suppliers, monitor the number of injuries on the job and days lost to injuries, as a way of identifying the level of health and safety.

### **4.2.4 Philanthropy**

Philanthropy is the voluntary acts in which an organisation engages, and includes activities focusing on the advancement and the well-being of the society. Philanthropy refers to "donations to philanthropic organisations, volunteers, and all sustaining activities designed specifically to support the community." (Carter & Jennings, 2004). For example, Bedey et al. (2009) stress that procurement is very much related to philanthropy, in the sense that the procurement departments can buy from suppliers that incorporate a social issue in their business. Carter and Jennings (2004) suggested that philanthropy is reflected by the social engagements of the procurement departments, such as volunteering at local charities, donating to philanthropic organisations, setting up a department of CSR, and utilising suppliers that are philanthropic, i.e. Creates training and employment for people with disabilities.

#### **4.2.5 Diversity**

Diversity draws on equity concerns and social justice dimensions of procurement, by fostering procurement opportunities at particular supplier groups that were previously geographically, ethnically, or historically disadvantaged (Nijaki & Worrel, 2012). The reasons for diversity in procurement activities usually stem from social and fairness concerns of the public policy objectives, to stimulate a new and growing market segment, such as minority groups (Carter & Jennings, 2004; Salam, 2009). Supplier diversity can be defined as a set of initiatives that aim to source a percentage of organisations' procurement of goods and services from diverse suppliers, e.g. Minority business, and women-owned enterprise (Furneaux & Barraket, 2014; Worthington et al., 2008). A woman-owned business is defined as a small business that is at least 51 per cent owned by one or more women (Coggburn & Rahm, 2005).

#### **4.2.6 Buying from Small and Medium Sized Business (SMEs)**

To reflect the concept of sustainability when applied to the context of the public procurement, Walker and Brammer (2009) added a new construct which is buying from Small and Medium Sized business (SMEs) suppliers. A company qualifies as SME if it has less than 250 employees (Karjalainen & Kemppainen, 2008; Walker & Preuss, 2008). SMEs can have a positive economic and social impact (Preuss, 2011). Accordingly, helping the SMEs' sector has the potential to reduce unemployment rates, increase output and incomes, reduce the poverty gap, and increase the tax base of the economy, which in turn provides the basis for sustainable development (Bolton, 2006; DEFRA, 2006; Karjalainen & Kemppainen, 2008; Walker, 2010b).



Procurement from SMEs is part of the governments' SPP agenda, aimed at encouraging entrepreneurship and SME growth, and increasing the well-being of the society (Preuss, 2011; Prier et al., 2008; Walker & Preuss, 2008).

#### **4.2.7 Buying from Local Suppliers**

To reflect the breadth of the concept of sustainability as applied to the context of procurement in the public sector, Walker and Brammer (2009) also added buying from local suppliers as a new construct to the PSR Model. This new concept refers to a government's tendency to favour its own domestic industry's suppliers, by giving them preferential price margin over foreign firm supplies (Ssennoga, 2006). For example, buying from local preferences have been applied in Canada, Australia, and Turkey (Ssennoga, 2006). In these countries, there is a tendency to privilege local suppliers, in the hope that this will support local economic regeneration, increase local access to the public procurement contracts, create jobs, encourage entrepreneurship, and promote innovative solutions (Karjalainen & Kemppainen, 2008; Walker & Brammer, 2009; Walker & Jones, 2012). Buying from local suppliers also reduces freight impacts, such as fossil fuel usage, pollution, reduce food miles, less road construction and road casualties (Perrini, 2007; United Nations, 2008).

#### **4.2.8 Innovation**

In the traditional public procurement, public sector organisations procure ready-made, already existing products whose characteristics are well known, for which no R&D is required (Rolfstam, 2008). Additionally, supplier selection decisions are made by readily available information about price, quantity, and past performance (Edquist & Zabala-Iturriagoitia, 2012; Rolfstam, 2008).

However, public procurement is increasingly seen as a powerful policy tool for stimulating innovation and achieving economic growth (Aschhoff & Sofka, 2009; Rolfstam, 2012; Uyarra & Flanagan, 2009). Due to the large scale of public procurement value and volume in the market, public procurement can stimulate the development of technologies and innovation (Edler & Georghiou, 2007; Edquist & Zabala-Iturriagoitia, 2012; Grandia, Steijn, & Kuipers, 2015; Wan, 2014).

Innovation refers to the generation, and implementation of new ideas, processes, products, or services (Yesil et al., 2012). For example, Nissinen, Maija, and Katriina (2012) found that the Finish government stimulated innovation in their public procurement, by requesting for advanced new technology, and tailor-made and designed products and services. In innovative public procurement, the aim is to give a push to the supplier to develop new kinds of product that do not yet exist, meet the needs of the public sector organisation, or solve societal and environmental problems (Edler et al., 2005; Edquist & Zabala-Iturriagoitia, 2012; Nissinen et al., 2012). The public procurement of innovation may lead to the delivery of better, affordable and more sustainable goods and services to the society, meet the unmet needs of the public sector, and solve various health, education, housing, and environmental challenges (Bloch & Bugge, 2013; Edler & Georghiou, 2007; Knutsson & Thomasson, 2013; Testa et al., 2014).

There are various views on the method of measurement to be employed to ascertain Innovation, such as the number of patents, new design, copyright, and trademarks (Aschhoff & Sofka, 2009; Pickernell, Kay, Packham, & Miller, 2011). In this thesis, I propose to add the Innovation scale to the PSR model, as a new variable regarding whether the public sector organisation had requested patents, copyright,

trademark, or asked for the design of the new or improved product in their procurement operations.

The next section summarises information that relates to the drivers and barriers factors to SPP in the Kuwait context.

### **4.3 Sustainable Public Procurement Drivers and Barriers**

The approach to the SPP practices is contingent on the context and upon the internal and external situations that the public sector organisations operate in (Walker & Jones, 2012). The development and application of sustainability criteria in public procurement are assumed in the literature as the outcome of a number of factors, both external and internal (Sporrong & Bröchner, 2009). For this reason, the conceptual framework was developed in the context of examining the internal and external influences on the degree to which aspects of SPP operations translate into practices.

I have conducted comprehensive research to identify drivers and barriers of SPP. Fifteen drivers and barriers to the development, adoption, and implementation of public organisational sustainable procurement operations were identified from the literature and empirical investigation (see Chapter 2).

I have adopted and adapted Walker and Brammer (2009) twenty-one item scales that were used as a proxy measurement tool for SPP drivers and barriers in Kuwait public sector context. Their scales' tested results produced evidence of Cronbach's coefficients greater than 0.70, indicating acceptable levels of reliability for all scale items (Brammer & Walker, 2011; Walker & Brammer, 2009). I have extended their work by identifying through literature reviews, the procurement document analysis, and interviewing public procurement' officials in Kuwait, other factors distinctive to Kuwait, such as, the Islamic values and beliefs as a potential driver of

SPP, and cultural norms and factors as a potential barrier of SPP in Kuwait public organisations.

Table 2 summarises the primary drivers for SPP identified through the existing body of literature in Section 2.9, and groups them into eight major categories. It also distinguishes between internal and external drivers.

Table 2: Sustainable Public Procurement Drivers

| Summary of Sustainable Public Procurement Drivers |   |
|---|---|
| Internal Drivers of SPP                           |   |
| 1   | Top Management Support                      |
| 2   | Employee Initiatives                        |
| 3   | Financial Benefits                          |
| 4   | Islamic Values and Beliefs                  |
| External Drivers of SPP                           |   |
| 5   | Government' Sustainable Strategy And Policy |
| 6   | Society And Citizens Awareness              |
| 7   | Environmental Management Systems (EMS)      |
| 8   | NGOs And Pressure Groups Demands            |

Table 3 summarises the main SPP barriers, identified through the existing body of literature in Section 2.10, and groups them into seven major categories. It also distinguishes between whether the barriers were external or internal.

Table 3: Sustainable Public Procurement Barriers

| Summary of Sustainable Public Procurement Barriers |  |
|--|--|
| Internal Barriers of SPP                           |  |
| 1  | Costs of Sustainability                  |
| 2  | Lack of SPP Knowledge                    |
| 3  | Budgetary Constraints                    |
| External Barriers of SPP                           |  |
| 4  | Political Constraints                    |
| 5  | Regulation and Laws                      |
| 6  | Cultural and Social Factors              |
| 7  | Resistance and obstacles by the Supplier |

#### 4.4 Hypotheses Development

To examine if and how certain external and internal drivers and barriers can increase SPP practices or hinder it among Kuwait's public sector organisations. Table 4 summarises the hypothesised relationships between the drivers and barriers influences on the implementation of SPP practices. The following fifteen hypotheses are constructed due to the findings of current literature and empirical investigation.

Table 4: Summary of Hypothesised Relationships

| Summary of Hypothesised Relationships |   |
|---------------------------------------|---|
| Hypotheses                            | Hypothesised relationships  |
| H <sub>1</sub>                        | Government sustainable laws and policies are related to SPP*.   |
| H <sub>2</sub>                        | Society and citizens awareness is related to SPP*.  |
| H <sub>3</sub>                        | Environmental Management Systems (EMS) are related to SPP practices*.   |
| H <sub>4</sub>                        | NGOs and pressure groups demands are related to SPP*.   |
| H <sub>5</sub>                        | Top management support is related to SPP*.  |
| H <sub>6</sub>                        | Employee initiatives are related to SPP*.   |
| H <sub>7</sub>                        | Financial benefits are related to SPP*.   |
| H <sub>8</sub>                        | Islamic values and beliefs of employees are related to SPP*.  |
| H <sub>9</sub>                        | Costs of sustainability are related to SPP*.  |
| H <sub>10</sub>                       | Lack of SPP knowledge is related to SPP*.   |
| H <sub>11</sub>                       | Budgetary constraints are related to SPP*.  |
| H <sub>12</sub>                       | Regulation and laws are related to SPP*.  |
| H <sub>13</sub>                       | Political constraints are related to SPP*.  |
| H <sub>14</sub>                       | Cultural factors and norms are related to SPP*.   |
| H <sub>15</sub>                       | Obstacles by suppliers' are related to SPP*.  |
| H <sub>a</sub>                        | The greatest manifestation of driver's factors in the public organisations will facilitate the sustainable procurement practices* |
| H <sub>b</sub>                        | The greatest manifestation of barriers factors in the public organisations will hinder the sustainable procurement practices*     |

\* Holding all else constant.

#### 4.5 Estimation Methodology

After identifying the constructs for SPP practices, and examined if and how certain external and internal drivers and barriers can increase SPP practices or hinder it among public sector organisations. I propose the following equation to the test the hypothesised propositions. Regression analysis is utilised to test the validity of the relationship between the dependent and independent variables.

A series of Multiple Regression Models (MRA) are employed to study the propensity for organisations to engage in SPP practices, according to the independent variables that were identified before.

Based on this discussion, the regression model takes the following form:

$$Y_{ij} = \alpha_0 + \beta_1 X_j + \gamma_2 Z_j + \epsilon_{ij}$$

Where  $Y_{ij}$  represents the extent of organisation  $j$ 's engagement with the SPP practices.  $X_j$  is a vector of explanatory variables which are expected to influence the public organisation' engagement with SPP practices, which are the SPP drivers and barriers. Variable  $Z_j$  refers to the control variables. Lastly,  $\epsilon_{ij}$  stands for random error terms, with the extent of the ( $j$ ) is the organisation ( $j=1, \dots, 42$ ), with the ( $i$ ) as SPP practices ( $i=1, \dots, 8$ ).

The degree of the SPP implementation may differ among organisations, depending on size, type of the organisation as public or private, and geographical location as regional or centralised and their operational sectors (Oruezabala & Rico, 2012; Walker & Brammer, 2009). As it is common when the control variables are included in empirical models, a hypothesised relationship was not stated, as the purpose of the control variable is to minimise random errors.

#### **4.6 The Initial Conceptual Framework**

By combining multiple points of view from the literature, and to guide my research study, I have developed an initial conceptual framework reflecting SPP.

The conceptual framework proposes factors that influence the degree to which public organisations implement SPP practices.

The proposed conceptual framework includes the following eight SPP practices dimensions: environment, diversity, human rights, health and safety, philanthropy, buying from SMEs, buying from local suppliers, and innovation, as well as the fifteen independent barriers and drivers' factors that are hypothesised to have a significant relationship with the SPP practices. For the purpose of analytical clarity, the conceptual framework will be listed separately in Figure 6.

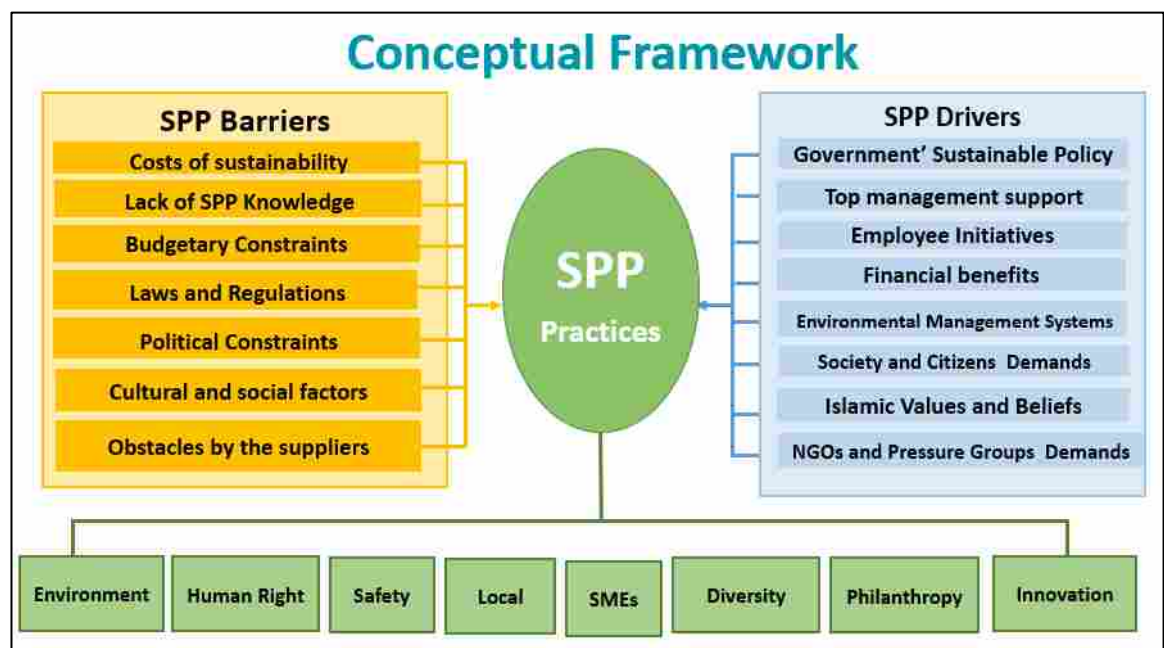


Figure 6: The Initial Conceptual Framework

The proposed initial conceptual framework will be finalised by the outcome of the procurement professional and the academic interviews, coupled with the results of the procurement and tender document analysis.

#### 4.7 Conclusion

This chapter outlined the conceptual foundation for this study. This chapter then discussed and examined the PSR Model dimensions. It then summarised information that relates to the drivers and barriers factors to SPP practices in the Kuwait context.



The discussion culminated with the establishment of fifteen testable hypotheses regarding the association between the SPP drivers and barriers with SPP practices. Then proposed an initial conceptual framework. The diagrammatic representation of the conceptual framework shows the association between variables of the conceptual framework.

Chapter 5, next, will discuss the research design and detail the methodological approach taken in the empirical work.

## **Chapter 5: Research Methodology**

### **5.1 Introduction**

This chapter identifies the methodology applied to investigate the research questions and examine the hypotheses constructed in this subject area. First, it justifies the triangulation methodology selected for the research and gives an overview of the three data collection methods, (1) Existing literature and tender document analysis (2) Semi-structured interviews, and (3) Survey questionnaires. Second, the data collection method is reviewed. It then provides information on the development and construction of the interview questions, the survey questionnaire sampling and questionnaire design and its distribution and administration. Third, information on aspects of reliability and validity of the data collection methods are also discussed in this section.

### **5.2 Research Design**

In this thesis, I investigate the sustainable development concept and paradigm through procurement practices in the Kuwait public sector organisations. This research study is conducted to examine and assess SPP practices in Kuwait as a developing country, to identify the obstacles and enabling factors that influence the SPP practices in an Arabic-Islamic context, and assess the relationship between the SPP practices and the drivers and barriers in Kuwait. I will achieve this by employing the extended version of the Purchasing Social Responsibility (PSR) Model (see Chapter 4).

This study uses a triangulation approach to collecting and analysing the data. Methodological triangulation approach in research integrates quantitative and qualitative methods of data collecting in a single research study and provides a deeper understanding of the issues under investigation (Creswell, 2013).

The underlying assumption of combining methods is that the combination would yield a better result than each method alone (Creswell, 2013). All methods have their weaknesses and strengths. Thus, methodological triangulation helps balance out any potential weaknesses in the data collection methods (Gray, 2013).

The quantitative approach of research considers that knowledge could be generated, analysed, and understood through the statistical analysis of observed reality (Brandenburg et al., 2014; Gray, 2013; Mugenda & Mugenda, 2003). Advocates of the quantitative research argue that quantitative research can increase the trustworthiness and robustness of research design, and can be used to produce unbiased data that can be statistically generalised to the broader population (Blaikie, 2000; Lewis-Beck, 2004; Neuman, 1997). Quantitative research design usually involves deductive methods such as experiments, survey, and testing of hypotheses (Blaikie, 2000; Kothari, 2004).

The quantitative research design in this study will be augmented with a qualitative part. Intangibles such as religious beliefs, cultural values, norms, and perceptions differ from individual to individual and from society to society (Cooper & Schindler, 2003). The qualitative technique is used as a mean of providing more profound insight into, and understanding of the quantitative parts, mainly, in that participants' own words are necessary to give better interpretations of the quantitative results (Creswell, 2012, 2013). Hence, the use of the qualitative method is favoured, where data are collected by using open-ended questions in surveys, and through interviews that are semi-structured (Creswell, 2012).

In sum, the initial task of any research is based on the data collection, and that the quality of research can only be delivered by adopting excellent and reliable data collection methods, and then statistically validated as proof of the research.

Therefore, instead of using one source of information, a combination of resources was chosen:

**Tenders and procurement analysis:** This approach intended to utilise the tender document to look if sustainability criteria were present in the award decisions or in the calls for bids (Nissinen et al., 2012; Nissinen et al., 2009; Parikka-Alhola, 2008; Parikka-Alhola, Nissinen, & Ekroos, 2006; Prenen, 2008). This method provides an objective way to obtain information on the SPP status. However, it is more time consuming, as some tender documents are large and very complex. Furthermore, this approach could be affected by the researcher's interpretation, if the method of analysis is not rigorous enough (Gomes, 2013).

**Interviews with public procurement officials:** This approach provides more qualitative information, and greater depth (Grandia et al., 2013; Preuss & Walker, 2011; Varnäs et al., 2009). This approach allows to get a higher response rate and to control which target respondents will answer the questions, i.e. Top management or employees. However, the number of respondents may be limited, and the responses may be biased towards the answers that are politically and socially popular. Also, certain types of respondents such as important executives may not be easily approachable by this method (Bouwer et al., 2006; Nissinen et al., 2009).

**Survey questionnaires:** Conducting questionnaire survey allows collecting information on the state of SPP practices, and different barriers and drivers that affect its implementation (Brammer & Walker, 2011; Hall & Purchase, 2006; Testa et al., 2014; Zhu et al., 2013). However, questionnaires mostly suffer from low response rates. For example, Kippo-Edlund (2005) reviewed several questionnaire studies and found that the response rate had been low on all of them.

The methods discussed above have some advantages and limitations. Starting with the assumption of an insufficient single data set, and the need for support with different sets, for these reasons, and seeking to address the research questions, this study utilises a mixed methods approach as the most appropriate research design for assessing the SPP status in Kuwait. I utilised a three-part data collection strategy that was based on primary and secondary sources: (1) Tender and procurement document analysis (2) Semi-structured interviews, and (3) Survey questionnaires.

The undertaken tasks in this study embed the following research processes that determine the investigation information and strategies as shown in the next Figure 7.

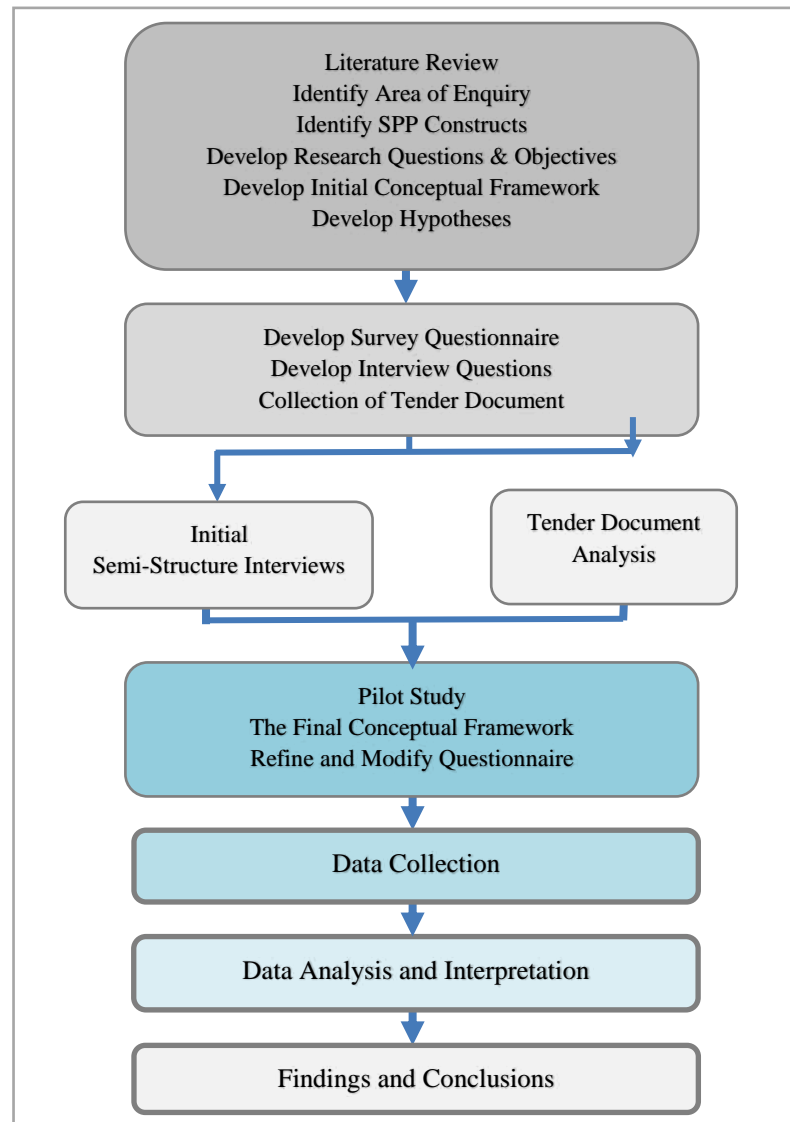


Figure 7: Overview of the Research Process

### 5.3 Analysis of Tender Documents

Previous studies concluded that an analysis of tender documents gives a good general assessment of the status of SPP (Kippo-Edlund, 2005; Nissinen et al., 2009; Parikka-Alhola, 2008). The collection and analysis of data are based on procurement documents, and it is a very time-consuming method, especially due to the high volume and variety of information within the public procurement documents.

Moreover, it is sometimes, hindered by the confidentiality requirement associated with some of the documents. Nonetheless, in comparison to interviews and survey data, the data from the procurement document analysis is less biased.

As such, it is a way to obtain data with high internal validity, which demonstrates the main advantage of this instrument (Prenen, 2008; Van Asselt et al., 2006). According to Amann et al. (2014), all public sector authorities are obliged to document essential procurement decisions. Therefore, procurement documents encompass relevant tendering and awarding criteria information. The tender document analysis gives a general picture of the status of SPP and provides data on whether environmental, social, and economic criteria are being included in procurement operations. Therefore, this part of the study aimed to investigate how often and to what extent sustainability criteria are found in the procurement contracts and documents.

Analysis of public tender contracts and document records include several tasks, such as collecting materials, examining the appearances of SPP criteria in the tender document, and lastly are recording the criteria found.

First, I searched the electronic databases, government authorities' websites, and the CTC website.

Second, at each public authority, I randomly selected procurement documents and tender contracts, procurement system and manuals, and other policy documents, which were publicly available, published by the CTC and other public authorities' databases, or directly gathered from the relevant public sector organisations, or that the interviewees offered.

Third, I checked whether there exist any environmental, social, and economic criteria in the obtained public procurement documents and tender contracts.

Furthermore, I looked for other information such as tender specifications, procurement methods, pre-qualification systems, supplier evaluation questionnaires, and administrative contract rules.

The data collection phase located seventy-one procurement documents and tender contracts related to the procurement laws, policies, objectives, procedures, and operations in the Kuwait public sector, from seventeen different public sector organisations, as listed in Table 5.

Table 5: Procurement Documents Sources

| No. | Organisation                                     | No. | Organisation                         | No. | Organisation                          |
|-----|--|-----|--------------------------------------|-----|---------------------------------------|
| 1   | The Ministry of Finance                          | 7   | Kuwait National Guard                | 13  | Ministry of Public Works              |
| 2   | Ministry of Education                            | 8   | Ministry of Information              | 14  | Ministry of Health                    |
| 3   | Ministry of Justice                              | 9   | Ministry of Electricity & Water      | 15  | Ministry of Awqaf and Islamic Affairs |
| 4   | The Kuwait Oil Company (KOC)                     | 10  | Public Authority for Youth and Sport | 16  | Kuwait Petroleum Corporation (KPC)    |
| 5   | The Supreme council for Planning and Development | 11  | The National Assembly of Kuwait      | 17  | The Public Authority for Industry     |
| 6   | Kuwait National Petroleum Company (KNPC)         | 12  | The Central Tender Committee (CTC)   |     |                                       |

#### 5.4 Semi-Structured Interviews

Using semi-structured interviews allow a degree of flexibility in questions, and allow the adjustment of the questions to interviewees as issues emerge in the course of interviews (Blaikie, 2000; Kothari, 2004; Silverman, 2010).

I have aimed at gathering qualitative data on a range of issues concerning SPP implementation in the Kuwait public sector in more depth, to understand and to assess the perceived drivers and barriers of SPP in Kuwait.

Data from the tender document analysis and PSR model scale items were used as an interview guide, and as topics to be covered during the interviews.



In this way, a comparison between different interviews is possible, allowing for generalisations. However, my interviews allow for some degree of flexibility, as the interviewed managers are expected to generate valuable new information and knowledge that are relevant to this thesis. Especially, they can offer valuable information regarding the implementation level of SPP practices, and the drivers and barriers factors.

Before conducting the interviews, I submitted the interview questions to the Ethics Committee at United Arab Emirates University (UAEU) to receive the university ethics clearance.

A sample was selected using Purposeful sampling from the population according to their role in the public sector organisation. Respondents were governmental procurement officials from the different organisation of the Kuwait public sector. Knowledge in the field of Kuwait public procurement was the critical criteria for selecting the officials who were interviewed.

The selected interviewees were high-level officers from the varied backgrounds:

- Officials from the Central Tender Committee (CTC), these officials responsible for formulating and implementing the general procurement strategy, and oversight all public procurement operations.
- Officials from the public procurement, central policy and systems divisions, these officials involved in the procurement process as training or coordinating public organisations, but do not run procurement processes.
- Officials from direct procurement departments in different public organisations.

The various backgrounds for the interviewees were chosen to generate a fuller picture, enrich the results, and provide a better understanding of the different public procurement actors and their perspectives.

More specifically, further information on how procurement policies are carried out, and the main issues faced the SPP implementation were gathered from policymakers. The CTC official oversees all public tenders and are engaged in the largest number of procurement processes, and thus provide a better understanding of the current SPP practices, conditions and specification in Kuwait public procurement. Operational procurement officials shared valuable insights on the enables factors and barriers to successful SPP implementation.

However, depending on the official position in the organisation and their procurement department or procurement' group type (Table 6). Some official gave reference to other procurement officials in their organisation that are more positioned to share more comprehensive information regarding specific sustainable procurement policies or operations concerning their field of expertise and procurement department functions.

Table 6: Details of the Interviewees

| Details of the interviewees |        |                 |                |          |                  |
|-----------------------------|--------|-----------------|----------------|----------|------------------|
| Gender                      |        | Position Level  |                |          |                  |
| Male                        | Female | Under Secretary | Senior Advisor | Director | Head of Division |
| 10                          | 4      | 1               | 1              | 7        | 5                |

Before conducting the interviews, the interviewees were informed about the significance of the study, its aims, and what it entails to participate. To encourage

openness of response the names of participating officials were anonymised, and assurance of confidentiality that information collected will not be connected to them.

They were also informed that participation is voluntary and that they can withdraw at any time without having any consequences.

The interviews were carried out face to face and were conducted on the public authority' premises, with each interview lasting for about one hour. The interviews have been recorded using notes, after obtaining the interviewee's permission. The interviews were carried out in Arabic, the native language of the respondent and the interviewer. The questions in the English language version can be found in Appendix B. A total of 14 informants officials were interviewed across nine public sector organisations, as listed in Table 7.

Table 7: Interviewees Sources

| No. | Organisation                       | No. | Organisation                       |
|-----|------------------------------------|-----|------------------------------------|
| 1   | The Ministry of Finance            | 6   | Environment Public Authority       |
| 2   | Ministry of Communications         | 7   | State Audit Bureau                 |
| 3   | Ministry of Justice                | 8   | Ministry of Electricity & Water    |
| 4   | Ministry of Commerce and Industry  | 9   | Kuwait Petroleum Corporation (KPC) |
| 5   | The Central Tender Committee (CTC) |     |                                    |

A particular focus was given in the interviews to identifying SPP drivers and barriers, mainly, as these could not be identified from document analysis. I aimed to try to get a fuller understanding of perceived drivers and barriers to the implementation of SPP in Kuwait context as an Arabic, Islamic, and a developing country.

Furthermore, I was interested to see whether these drivers and barriers may be different from what have been previously hypothesised in the literature regarding the context of developed countries.

For example, I wanted to investigate whether factors such as cultural norms and Islamic beliefs play a role as drivers or barriers to SPP.

Interview data have been complemented by requesting sources of evidence, such as tender documents, internal publications, and procurement policy documents to enhance data validity and reliability as suggested by Preuss and Walker (2011).

The interviews were transcribed and organised into categories and sub-categories using the Nvivo 10 software. The NVivo software is a tool to gather, record, transcribe, visualise, and organise quantitative and qualitative data. The qualitative data have been analysed, and are presented in details in Chapters 6 and 7 of this paper.

## **5.5 Survey Questionnaire**

A survey, in the form of a questionnaire, was conducted as part of the quantitative research approach for this study. The survey helped to collect quantitative and also some qualitative data relevant to SPP practices, drivers and barriers, from individuals expected to be representative of the population.

After undertaking an in-depth literature review of the subject of the SPP practices, I produced a draft questionnaire, by using an established, validated instrument; the extended measurement scales of the Purchasing Social Responsibility (PSR) Model.

### **5.5.1 Population and Sample**

To obtain a comprehensive view of SPP practice across the Kuwait public organisations, the targeted population for my study comprised all public procurement

employees, who are involved in the procurement function and tasks in the public sector.

Such as, employees who solicit and evaluate bids and proposals, negotiate, and contract award and administration. As these employees are directly involved with the purchasing operations in public bodies and are more able to give valuable information on public procurement activities than other employees from different functions.

For this study, I first obtained an entire list of public organisations from the Ministry of Finance (MOF). According to the MOF, there is a total of 42 public sector ministries and authorities in Kuwait. The population of the study is composed of all public procurement employees from all Kuwait's 42 ministries and public authorities.

At the moment of my study, there were 424,774 employees in the public sector, out of which 686 employees worked in public procurement departments. Out of these, 186 have a university degree, 287 have a high school degree, 106 have secondary level degrees; the remainder has less than secondary levels.

The questionnaire respondents selected should be as representative of the total population as possible (Given, 2008). To ensure a representative sample, I used random sampling to choose the participating employees and organisations. Random sampling is based on the concept that every item of the population has an equal chance of inclusion in the sample (Given, 2008). For this reason, random sampling is considered as the best technique for selecting representative samples (Kothari, 2004). In total 110 questionnaires were distributed among the employees of different public sector organisations, and 98 employees responded, and one was rejected, giving a response rate of approximately 89%. This rate of response satisfies Cooper and Schindler (2003) which states a response rate of 30% to 80% of the total sample size

can be used to represent the opinion of the entire population, indicating that the findings can thus be used for generalisation.

The sample size is an important criterion in statistical studies because it determines the accuracy of the data collection statistics (Kothari, 2004; Mugenda & Mugenda, 2003). The sample size in this study was 97 procurement staff members, which represented a percentage of about 15% of the target population. According to Mugenda and Mugenda (2003) a sample size of between 10% and 30% is a good representation of the target population, and hence the 15% is adequate for robust statistical analysis.

### **5.5.2 The Pilot Study**

The questionnaire was calibrated and perfected through interviews with academic and field professionals. Next, I asked two senior public procurement professionals from the government to review the survey instrument. Two procurement professionals with a strong background in public procurement, who both had been in senior procurement posts for more than 15 years, in two separate ministries in Kuwait, evaluated the questionnaire before it was distributed to the respondents. The two procurement professionals were asked to complete the questionnaire, and review the survey items as a way to examine the questions of bias and clarity, and to ensure the face validity and efficacy of my instrument. The questionnaire was also checked for language and questions, unclear concepts, poorly worded questions.

The survey questionnaire was developed in English and then translated into Arabic, the native language of the respondent. The questionnaire was submitted to the Ethics Committee at UAEU University before implementation to receive the university' ethics clearance. The extended version of PSR scale items was evaluated

by the expert panel of public procurers to ensure its validity in the Kuwait public sector context.

The procurement professionals provided significant feedback on the survey instrument. The results indicated that some items needed to be dropped, or revised to increase scale reliability. These items were modified in order to improve the PSR model applicability to Kuwait public sector organisations. This modification of the scale items was derived from the input of high-level procurement policy makers and officers.

At the panel and interviewees' suggestion, and to reflect the concept of sustainability, as applied to the context of the Kuwait public procurement, the Diversity construct was deleted. Correspondingly, three items were also discarded from the Philanthropy construct, (1) Volunteers at local charities, (2) Donates to philanthropic organisations, (3) Set up a department of CSR, leaving us with one item construct. Furthermore, other items were reworded to make it more specific to the Kuwait public sector context. Such as, "Ensures that supplier's comply with Kuwait' labour laws and regulation", "Ensures supplier's commitment to employ Kuwaiti Nationals for at least 10% of personnel" and "Ensures that suppliers' workers are insured against accident or liability by Kuwaiti insurance companies". Rational provided by the respondents that some factors needed to be dropped, or revised is summarised in the following subsections.

#### **5.5.2.1 The Diversity Constructs**

The reasons for Diversity in procurement activities usually stem from social justice and equity concerns (Carter & Jennings, 2004).

The Diversity scale, in the PSR Model, is a two items' construct, consisting of, (1) the purchases from women-owned business scale item, and (2) the Purchases from non-Kuwaiti owned business scale item.

Research in the diversity area of PSR has focused upon the precursors to successfully developing and managing programs of sourcing from minorities and women-owned business enterprises (Carter, 2004).

The diversity construct was dropped, due to the belief that there were no pressing diversity issues in Kuwait. There were two primary reasons given for dropping these two items. Procurement professionals interviewed during the pilot stage of the survey indicated that sourcing a share from the women-owned business was not a part of how they conducted public procurement operations in Kuwait, or that at any time they have engaged in any procurement programs dedicated to supporting women-owned business in the public procurement operations. Many procurement managers I met stressed the same fact, as one procurement director in charge of setting Kuwait's national procurement policies and framework stressed,

“There is no percentage or quota allocation to companies owned by women in public tenders”.

Another procurement official confirmed this fact by asserting that,

“There is no explicit share of public tender contracts for women in Kuwait”.

A director of public procurement also confirmed this point by declaring,

“Currently, this procurement practice is unavailable in Kuwait”.

A procurement official also sheds some light on this matter, pointing out,



“We do not use gender as a classification system in Kuwait’s procurement operations. Suppliers and contractors are classified financially, technically and administratively”.

Nonetheless, women enjoy substantial rights in Kuwait; Kuwait’ has numerous legislative and measures in favour of women. The Kuwaiti law states that a woman should receive remuneration equal to that of a man provided she do the same work.

For example, the Law No.6 of 2010 confirms the principle of equal pay for work of equal value regardless of gender and ensures gender equality and non-discrimination (MOSAL, 2010). Furthermore, under the Ministerial Decision No.190 of 2011, the National Women’s Affairs was established to create a legislative environment conducive to the social empowerment of women. This committee reviewed the current regulation, to ensure that they are free from any form of gender discrimination. This in hand, led to necessary amendments, such as the Decision No.14 of 2013, concerning the acceptance of female applicants for employment in the judiciary (ASSE, 2015; United Nations, 2015). Additionally, women in Kuwait can run and vote in the Parliament and have reached high positions in the government, like ministers, undersecretary, dean of the Kuwait University, and as public prosecutors (Kenneth, 2015).

In sum, after conducting initial interviews, and the pilot questionnaires, none of the participants confirmed that currently, buying from the women-owned enterprise is part of the procurement programs or part of Kuwait’s procurement operation. For these reasons, this construct was not to be incorporated into my model.

The literature indicates that demographic variations have driven the implementation of supplier diversity initiatives in public procurement operations

(Worthington et al., 2008). In this regards, the procurement professionals confirmed that the Kuwait society is homogeneous in culture, race, and linguistic. Moreover, it adheres to Islamic and traditional values, with no sectarian between people. Therefore, as there are no minorities in the Kuwaiti society, there is no need for any targeted governmental laws of social inclusion in procurement for any segments of the Kuwaiti society, as all Kuwaiti citizens share the same ethnic backgrounds. As voiced by a procurement director, stating that,

“The Kuwaiti society is homogeneous society, where a class or racial segregation does not exist in regards to the citizens. All companies operating in the country, without exception, have the right to apply for a government tender contract”.

For these reasons, the second item was also discarded for its lack of applicability to Kuwait’s country and public procurement context. Following the removal of the two Diversity construct’ items that were deemed unnecessary to the respondents, the study proceeded with the seven SPP procurement dimensions.

#### **5.5.2.2 The Philanthropy Constructs**

The Philanthropic dimension in procurement included four items; (1) Volunteers at local charities, (2) Donates to philanthropic organisations, (3) Set up a department of CSR, and (4) Utilises suppliers that are philanthropic, i.e. Creates training and employment for people with disabilities.

The three first items were dropped, due to the agreement among respondents indicating that these operations were not directly linked to their public procurement department responsibilities, functions, or duties in Kuwait’s public organisations.

In the initial interviews, the public procurement managers interviewed reasoned that these philanthropic activities were beyond their traditional procurement’

measurements, and argued that purchasing's involvement in donating or volunteering at local charities do not go under the general or the direct practices of the public procurement departments (MOF, 1995).

Furthermore, they cannot, under the State of Kuwait' public budget and the public administration' laws and regulation, to set up a CSR division in their hierarchy, or donate any amount of their public budget to charities or to philanthropic organisations (MOF, 1978).

Therefore, these items were dropped since these practices are not permitted under the Kuwaiti' laws governing the public sector organisations, and where the respondents felt that these philanthropic practices did not necessarily initiate SPP in Kuwait.

Nonetheless, participants agreed that the fourth item; "Utilises suppliers that are philanthropic", is relevant in the Kuwait case, as respondents felt that, there are often some cases to support this point in the public procurement operations. Accordingly, the Philanthropic dimension in public procurement was measured using a single item.

In summary, the degree of adoption and implementation of SPP practice may significantly vary across countries about the economic, cultural, and political conditions of the respective country (Islam & Siwar, 2013; Ogunyemi et al., 2016). The PSR Model initially developed by Carter and Jennings (2004), however, the model later modified and improved by others (Carter, 2004; Salam, 2007, 2009; Walker & Brammer, 2009). Consequently, this research also extended and modified the PSR model in order to improve its applicability to Kuwait public sector context.

### **5.5.3 Pilot Testing Results**

Validity and reliability are two fundamental elements in the evaluation of a measurement instrument (Given, 2008; Tavakol & Dennick, 2011). Before the questionnaire was finally administered to public sector employees, a pre-testing was carried out aimed at determining the reliability of these research tools. Cronbach's alpha is a measure used to assess the reliability, or internal consistency, of a set of scale or test items (Santos, 1999; Tavakol & Dennick, 2011).

Internal consistency describes the extent to which all the elements in a test measure the same concept or construct (Given, 2008; Tavakol & Dennick, 2011). Internal consistency should be determined before a test can be employed for research or examination purposes to assess the scale's face validity (Santos, 1999). In other words, Cronbach's alpha is one way of measuring the strength of that consistency.

The resulting Cronbach alpha ( $\alpha$ ) coefficient of reliability ranges from 0 to 1. An alpha coefficient of 0.70 or higher indicated that the gathered data are reliable, as they have a relatively high internal consistency, and can be generalised to reflect the opinions of all respondents in the target population (Lewis, Thornhill, & Saunders, 2007; Santos, 1999).

Reliability was calculated using the data from the pilot test; all the study variables were found to have a Cronbach alpha coefficient  $\alpha > 0.70$ , which shows the scales to be robust.

### **5.5.4 Designing the Questionnaire**

The outline of the questionnaire was prepared in conjunction with the purpose, aims, and objectives of this dissertation, and was supported by the literature review that was carried out in Chapter two of this thesis. The final questionnaire is composed

of eighteen questions to extract the opinions of public procurement employees regarding SPP status. For a more efficient questionnaire, some procedures for preparing the questionnaire were addressed. To minimise the common method bias that can affect a questionnaire survey, all respondents were promised anonymity, and were informed that all data collected would remain strictly confidential, and were solely for academic purposes. This measure helped to guarantee more robust and unbiased results.

Additionally, to take minimum participants' efforts in filling the questionnaire, and to get the maximum possible input from participants, designing the questionnaire's questions involved the PSR model scales of SPP practices, barriers and drivers. The questions are divided into four sections with the easy questions at the beginning (The entire questionnaire can be found in Appendix A).

The four sections concern the following issues:

1. Respondents Profiles: deals with information such as rank level, the number of service years, and educational attainment. Authority names were anonymised to encourage openness of response.
2. Procurement Practices: Measured the current procurement practices in the Kuwait public sector organisations.
3. SPP practices: Deals with the seven dimensions of the PSR Model (See Chapter 4). Each construct was measured using a 5-point Likert scale, ranging from disagree strongly (scored = 1) to agree strongly (scored = 5).
4. SPP drivers and barriers: Deals with the identification of SPP practices drivers and barriers in the Kuwait public sector context (See Chapter 4). Each of which was measured using a 5-point Likert scale, ranging from disagree strongly (scored = 1) to agree strongly (scored = 5).

Further, because our interest in assessing the extent at which drivers and barriers apply to the case of Kuwait as a developing country, open-ended questions were considered appropriate as they permit a free response from the respondents rather than limited to pre-define stated alternatives. The use of open items allows researchers to gain a better understanding of the underlying relationships identified by the respondents, and to provide a complete picture (Kothari, 2004; Yin, 1989). Therefore, three open-ended questions were included at the end of the questionnaire to uncover the public officials' perceptions of SPP drivers and barriers in Kuwait.

Self-administered questionnaires were distributed by drop and pick method; in order to increase the response rate among the targeted sample, the survey instrument was distributed to procurement managers and employees throughout their procurement departments across the Kuwait public sector organisations. In total, the survey collected 98 responses after three weeks, with a response rate of 89%, from sixteen different public bodies, as illustrated in Table 8.

Table 8: Questionnaires Sources

| No. | Organisation  | No. | Organisation                           | No. | Organisation                          |
|-----|---|-----|--|-----|---------------------------------------|
| 1   | The Ministry of Finance                             | 7   | Ministry Of Education                  | 13  | Ministry of Communications            |
| 2   | Public Authority for Applied Education and Training | 8   | Environment Public Authority           | 14  | Ministry of Commerce and Industry     |
| 3   | Ministry of Justice                                 | 9   | Ministry of Electricity & Water        | 15  | Ministry of Oil                       |
| 4   | Civil Service Commission                            | 10  | Kuwait Investment Authority            | 16  | Ministry of Awqaf and Islamic Affairs |
| 5   | Central Agency for Information Technology           | 11  | Department of Fatwa and Legislation    |     |                                       |
| 6   | State Audit Bureau                                  | 12  | Public Institution for Social Security |     |                                       |

The completed and returned questionnaires were judged useful, only one was rejected, the remaining 97 questionnaires retained for analysis. The data analysis of the questionnaire responses was performed using SPSS and Microsoft Excel, some of the most widely used software packages for statistical analysis in social sciences. The responses received from different public bodies were analysed, and are presented in details in Chapters 6 and 7 of this paper.

### 5.6 The Final Conceptual Framework

While the previously discussed process largely confirmed the usefulness of the PSR model within the Kuwait public sector context, it was strongly suggested that some factors needed to be dropped or revised to increase the model reliability.

The outcome of the literature review, coupled with the procurement professional and the academic interviews produced the final version of the conceptual framework. The final conceptual framework measures the SPP practice, drivers, and barriers in the Kuwait public sector organisation is presented in Figure 8.

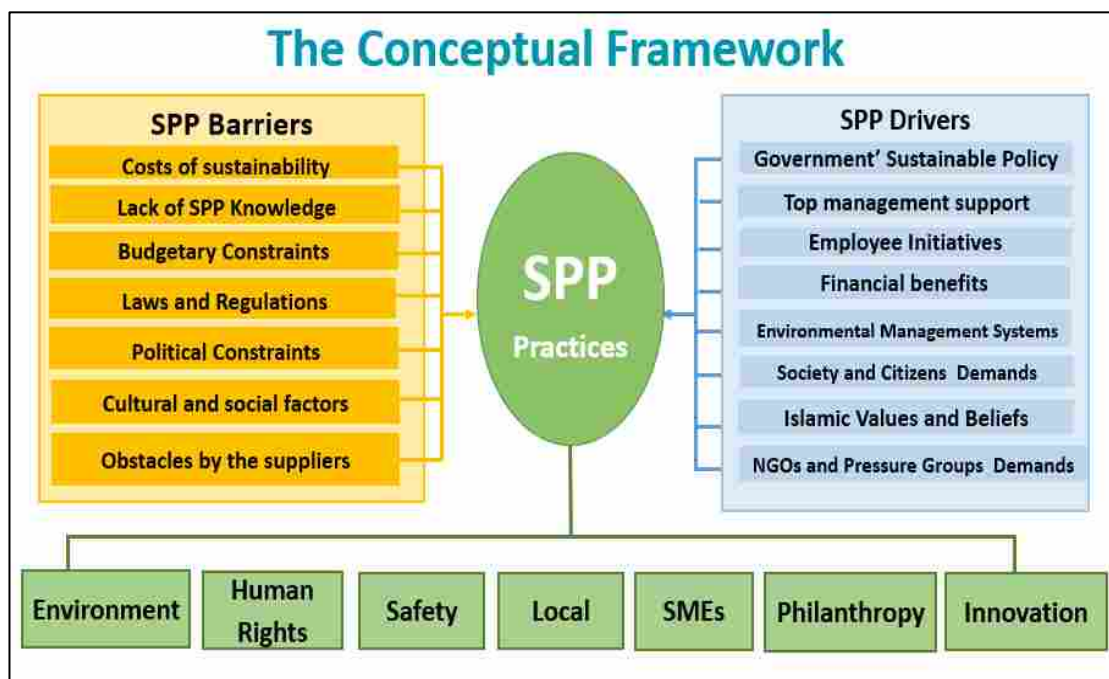


Figure 8: The Final Conceptual Framework

Operationalisation is the process of defining abstract concepts and allows them to be measurable and be empirically quantitative variables (Babbie, 2007; Cooper & Schindler, 2003; Gray, 2013). The process of operationalisation is essential in social science, as it determines how the researchers are going to measure a concept such as the SPP. Operationalisation of the SPP defines the exact measuring method used and allows other scholars to follow the same methodology.

This is a significant step towards moving from the endless debate over sustainable development and its countless definitions to a scientifically agreed upon measurements and indicators.

A full list of aspects encompassed in my operationalisation of SPP practices is provided in the following Table 9.

Table 9: Operationalisation of the SPP Practices Constructs

| SPP Practices                      | Operationalisation of the SPP Practices Constructs   |
|------------------------------------|--|
| <b>Environment</b>                 | <ul style="list-style-type: none"> <li>-Asks suppliers for ISO certification / Eco-labels.</li> <li>- Purchases of products with reduced energy use/greenhouse gas emissions.</li> <li>- Asks suppliers to commit to pollution and waste reduction.</li> <li>- Purchases of environmentally friendlier transport options.</li> <li>- Purchases of organic food/ not genetically modified.</li> <li>- Asks suppliers to commit to the reduced use of water and soil protection.</li> <li>- Purchases of recycled and re-used products.</li> </ul> |
| <b>Human Rights</b>                | <ul style="list-style-type: none"> <li>- Visits suppliers' plants to ensure labour conditions.</li> <li>- Ensures that suppliers comply with Kuwait' labour laws and regulation.</li> <li>- Asks suppliers to pay wages greater than a country's minimum wage.</li> </ul>  |
| <b>Health and Safety</b>           | <ul style="list-style-type: none"> <li>- Ensures that suppliers' facilities are operated safely.</li> <li>- Ensures safe, incoming movement of product to supplier's facilities.</li> <li>- Ensures that appropriate personal protective equipment is provided to employees.</li> <li>- Ensures that suppliers' workers are insured against accident or liability by Kuwaiti insurance companies.</li> </ul>   |
| <b>Philanthropy</b>                | <ul style="list-style-type: none"> <li>- Utilizes suppliers that are philanthropic i.e. Creates training and employment for people with special needs.</li> </ul>  |
| <b>Buying from Local suppliers</b> | <ul style="list-style-type: none"> <li>- Ensures supplier's commitment to employ Kuwaiti Nationals for at least 10% of personnel.</li> <li>- Ensures purchasing from Kuwaiti owned business enterprise suppliers.</li> <li>-Encourage local industries and services; such as freight, banks and insurance.</li> </ul>  |
| <b>Buying from SMEs</b>            | <ul style="list-style-type: none"> <li>- Purchase from SMEs suppliers (less than 250 employees).</li> <li>- Have a supplier's size classification.</li> </ul>  |
| <b>Innovation</b>                  | <ul style="list-style-type: none"> <li>-Asks suppliers for a new or significantly improved product or process solution.</li> <li>-Purchases from suppliers that undertake R&amp;D activities.</li> <li>-Require the ownership of Patents and IPR as part of the tender contract.</li> </ul>  |



## **5.7 Conclusion**

This Chapter describes how I designed the present study and the triangulation methodology used for the data collection by means of tender documents, semi-structured interviews with procurement officials, and the survey questionnaires.

This Chapter proceeds with the identification of the study population and the sampling technique. Finally, it outlines the details of the research instruments, their development, assessing the measurement reliability and validity, and how ethical issues and specific concerns of the design were handled.

The next chapter reports on the analysis of the data from the research instruments.

## **Chapter 6: Data Analysis**

### **6.1 Introduction**

The data analysis phase involves reducing the accumulated data to a manageable size, classification and tabulation, looking for patterns of relationship among data groups, and applying statistical techniques (Cooper & Schindler, 2003; Kothari, 2004). After I obtained the empirical data through questionnaires, semi-structured interviews, and tender documents, the next step is to analyse the data to answer the research questions. This chapter shows how I examined the raw data and provides detailed information about data preparation, content and thematic analysis, descriptive and inferential statistical analysis.

### **6.2 Tender Documents Analysis**

As suggested by the previous studies, the analysis of tender documents provides evidence on environmental, social, and economic criteria being included in public procurement and tender contracts. Accordingly, the aim of this part of the study has been to investigate how often and to what extent sustainability criteria are found in Kuwait's procurement contracts and documents.

Through these documents, it was possible to assess whether there is an integration of SPP criteria into public procurement practices. Furthermore, I was able to extract information regarding SPP's barriers and drivers from the analysis of tender documents, differing from what initially stipulated by the literature that only information regarding the sustainability criteria could be extracted from the tender documents.

It was also possible to confirm some of the elements that have been identified through the conceptual framework and the PSR model as barriers and drivers to the sustainability of public procurement.

### **6.2.1 Coding of Tender Documents**

Coding is essential to the process of data analysis (Given, 2008). Coding is a “systematic way in which to condense extensive data sets into smaller analysable units through the creation of categories and concepts derived from the data.” (Lewis-Beck, 2004). Coding, thus, refers to the process of reducing several data inputs into a small number of classes or categories that contain the critical information required for analysis and making conclusions (Given, 2008; Kothari, 2004).

The NVivo 10 software is a tool to gather, record, transcribe, visualise, and organise quantitative and qualitative data. It provides a general analytical tool so that researchers can code data according to their research design, and improve the rigour of the content analysis process (Given, 2008; Welsh, 2002).

Content analysis has been defined as “a research method for the interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns” (Zhang, 2009).

The procurement document data were imported into the NVivo 10 software, coded according to themes, and analysed using queries. In NVivo, coding is done through “Nodes” (themes) that may be understood as material containers or objects representing an idea or a concept, and “Free Nodes” that represented emerging themes or “Open Coding” (Lewis-Beck, 2004). Every tender document was examined slowly with the aid of Nvivo, scanning the document for the relevant SPP criteria and information to be found within Kuwait’s public procurement documents.

Hence, I utilised deductive coding; nodes were established after gathering data and prior to coding, this node phase reflected my conceptual framework (See Figure 6). Coding was used in analysing the tender document data in the following process steps:

1. Reading and re-reading the procurement and tender documents.
2. Uploading the seventy-one procurement documents and tender contracts into the NVivo 10 software.
3. Establishing SPP categories (Nodes) within the software, in which the data could be classified, these categories came from the PSR model, or newly emerged themes (Free-Nodes).
4. Analysed the raw data set to extract SPP practices identified through key terms and phrases.
5. Coding the environmental, social, and economic criteria being included in procurement documents and tender contracts within the established categories or nodes.
6. Reviewing the categories formulated, and the terms and phrases classified with them to ensure that the data were classified appropriately, and the appropriateness of the undertaken coding.

Thirteen themes were generated from the document data, which represented the SPP practices, barriers, and drivers in Kuwait. The elements are listed in Table 10 and show that public procurers are meeting some sustainability' objectives in their procurement operations.

Table 10: Sustainable Criteria in Tender Documents

| Sustainable Public Procurement | Tender Documents<br>71 | No. Organisations<br>17 | Percentage of total<br>tenders % |
|--------------------------------|------------------------|-------------------------|----------------------------------|
| Local Suppliers                | 63                     | 14                      | 88%                              |
| Health and Safety              | 45                     | 14                      | 63%                              |
| Human Rights                   | 37                     | 13                      | 52%                              |
| Environment                    | 29                     | 10                      | 41%                              |
| Innovation                     | 10                     | 5                       | 14%                              |
| SMEs Suppliers                 | 8                      | 5                       | 11%                              |
| SPP Barriers                   | 20                     | 10                      | -                                |
| SPP Drivers                    | 15                     | 8                       | -                                |

From the analysis of the tender documents, it was possible to ascertain which SPP practices most frequently occur in these tender documents. It appears from the analysis of the frequency of occurrence of SPP criteria that the majority of them contains criteria for supporting local suppliers, with a percentage of (88%) of occurrence in public tender' criteria and conditions. Followed by SPP practices regarding safety and human rights with (63%) and (52%) occurrence respectively. On the other hand, criteria regarding supporting SMEs, innovation, and environmental elements of SPP are significantly less common. The findings may suggest that SPP practices that were covered by explicit law requirements were the most frequent occurrences SPP practices in the procurement documents. The other SPP practices were presented in the calls for tenders as selection or award criteria, such as buying from SMEs suppliers and environmental criteria. For countries that have not yet developed an established SPP national framework, such as Kuwait, it thus would be prudent to incorporate the SPP practices criteria within legal sustainable procurement guidance and within tender contract award criteria and technical specification.

In summary, from analysing procurement and tender documents, it was possible to identify elements of social, economic, and environmental aspects of sustainability in procurement operation in the Kuwait public sector organisations.

### **6.3 Interviews Data Analysis**

The items of the extended PSR model were used as an interview guide, and SPP practices, drivers, and barriers factors were used as topics to be covered during the interviews.

The qualitative component provides a general understanding of the research problem and tries to explain the statistical results of the primary data sets by offering additional in-depth information.

#### **6.3.1 Interviews Data Validity**

Validity refers broadly to the goodness of study instruments and is increased by the researchers' use of specific procedures and strategies (Given, 2008). I validated the instruments of interview questions through the application of face and content validity determined by experts' judgements. The determination of face and content validity is not numeric, but subjective and judgmental by the scientific community that the indicator truly measures the construct (Chen & Paulraj, 2004; Neuman, 1997). Therefore, before conducting the interviews, it was expected that the validity of the interview questions is ensured. Based on the researcher consultation with the academic and procurement experts for the questions' structure, ambiguity, and completeness.

I also submitted the interview questions to the Ethics Committee at UAE University before conducting the interviews to receive the university ethics clearance. Moreover, interviews were carried out in a semi-structured way, from reference to the literature and by employing a set of predetermined questions from the PSR model.

This sort of structure in interview results in the possibility of comparability of one interview with another, and the analysis of structured responses obtained from different respondents providing a safe basis for generalisation (Kothari, 2004).

### **6.3.2 Coding of Interviews**

The interview data have been analysed using thematic analysis, a form of pattern recognition within the data, where emerging themes become the categories for analysis (Creswell, 2012). The theme is a structural meaningful unit of data, which is necessary for providing qualitative findings (Speziale, Streubert, & Carpenter, 2011).

Themes are extracted into codes. The process of themes extraction and coding continued until saturation of themes was attained (Creswell, 2012; Mugenda & Mugenda, 2003). Saturation of themes is reached when no new categories of SPP's practices, barriers, and drivers were generated, as evidenced by the same recurring code patterns in data (Suter, 2011). The categorisation and the coding system used was guided by the PSR conceptual framework underpinning this study. The PSR model guided the coding system for the research questions concerning what is the status of SPP practice, and the main drivers and barriers in Kuwait.

After having access to the transcribed data, and identifying the main themes or patterns, all of the interview responses were then categorised with the aid of the NVivo software into the themes of SPP practices, barriers, and drivers, with regard to the aspects within of each category. Once coding was completed for all interviews, content analysis was then carried out; data were rearranged in the summary display to allow the identification of descriptive patterns. Nodes were established after gathering data and prior to coding; this node structure portrayed the PSR Model.

During the coding process, however, additional codes were developed according to the emerging themes in each of the paragraphs of the transcript that represented new identified barriers and drivers. The purpose of this approach usually is to validate or extend a conceptual framework or theory (Zhang, 2009).

The following example illustrates the categorisation process undertaken. In NVivo, coding is done through “Nodes” (themes). A tree node was coded “SPP practices”, and the seven SPP dimensions were subcategorised into single nodes, which were coded as the environment (19), human rights (5), health and safety (4), buying from locals (8), buying from SMEs (6), philanthropy (1), and innovation (3). The figure shown in parenthesis shows the number of times each theme was cited into every single node. The same process was applied to the two other categories of SPP drivers and SPP barriers. In summary, coding was used in analysing the interview data in the following process steps:

1. Reading and re-reading the responses received from the interviewees.
2. Uploading the transcripts of the interviews into the NVivo 10 software.
3. Establishing preliminary categories (Nodes) within the software, in which the responses could be classified, these categories came from the PSR model or emerged from keywords and terms that were frequently used by the interviewees (Free-Nodes).
4. Coding the responses within the established categories.
5. Reviewing the categories formulated, and the responses classified with them to ensure that the responses were classified appropriately, and the appropriateness of the undertaken coding.

Reporting of the qualitative data was done using brief explanations, the qualitative responses are discussed in Chapter 7 in regards to the implementation level of SPP practice, and the different SPP’s drivers and barriers factors.



The qualitative data analysis process is interpretive in nature and should include the perspectives and voices of the people under study (Brammer & Walker, 2011). I have therefore included illustrative quotes from the qualitative data to support and understand in more depth the study's findings from the tender document analysis and the survey questionnaire, and I emphasised on describing SPP barriers and drivers using the respondent's terminology.

#### **6.4 The Questionnaire Data Analysis**

The survey questionnaire instrument was utilised to collect respondents' opinions on a number of questions and statements regarding the public organisation experience with SPP practices, and the identification of the drivers and barriers to SPP practices (See Chapter 5).

##### **6.4.1 Validity and Reliability Tests**

Validity and reliability are important aspects of the survey questionnaire that helps to establish the truthfulness and credibility of the findings (Given, 2008; Neuman, 1997). Internal Validity is the extent to which the measurement instrument accurately measures what it is supposed to measure or designed to measure (Mugenda & Mugenda, 2003; Pallant, 2013). External validity refers to how representative a sample of the population is (Given, 2008). The sample size in this study was 97 procurement staff, which represented a percentage of about 15% of the population, which is adequate for analysis (Mugenda & Mugenda, 2003).

Reliability is the consistency of a measure; a reliability test assesses the degree to which a research instrument yields consistent results (Given, 2008; Mugenda & Mugenda, 2003). Internal consistency describes the extent to which all the elements in a test measure the same concept or construct (Given, 2008; Tavakol & Dennick, 2011).

Cronbach's alpha is a measure used to assess the reliability, or internal consistency, of a set of scale or test items (Pallant, 2013; Santos, 1999; Tavakol & Dennick, 2011). The resulting Cronbach's alpha ( $\alpha$ ) coefficient of 0.70 or higher indicated that the gathered data are reliable, as they have a relatively high internal consistency, and can be generalised to reflect the opinions of all respondents in the target population (Lewis et al., 2007; Pallant, 2013; Santos, 1999).

Internal consistency should be determined before a test can be employed for research to assess the scale's face validity, by first using a pilot version of the survey measurement (Neuman, 1997; Santos, 1999). Therefore, before the questionnaire was finally administered to public sector employees, a draft questionnaire was first developed and administered to two procurement professionals to ensure its validity in Kuwait public sector context. In the pilot test, all variables were found to have a Cronbach alpha coefficient  $\alpha > 0.70$ , which shows the scales to be robust.

After the questionnaire was finally administered to public sector employees, testing was carried out aimed at determining the reliability of the final version of the questionnaire. As it can be seen in Table 11, SPP practices scale (obtained by averaging the scores of all seven dimensions of SPP practices) has a Cronbach's Alpha of  $\alpha = 0.94$ , which shows the SPP practices scale to be robust. The reliability of the subscales were also calculated and the subscales have Cronbach's alpha of  $\alpha = 0.94$  for the Environment construct,  $\alpha = 0.86$  for Human Rights,  $\alpha = 0.91$  for Health and Safety,  $\alpha = 0.84$  for buying from Local Suppliers,  $\alpha = 0.73$  for buying from SMEs, and  $\alpha = 0.81$  for the Innovation construct. The study variables SPP barriers and drivers were found to have a Cronbach's alpha coefficient of  $\alpha = 0.78$  and  $\alpha = 0.87$  respectively, which shows the scales to be robust.

Table 11: Reliability of Constructs

| Instrument                  | No of items | Cronbach's Alpha ( $\alpha$ ) |
|-----------------------------|-------------|-------------------------------|
| SPP Practices               | 23          | 0.94                          |
| Environment                 | 7           | 0.94                          |
| Human Rights                | 3           | 0.86                          |
| Health & Safety             | 4           | 0.91                          |
| Buying from Local Suppliers | 3           | 0.84                          |
| Buying from SMEs            | 2           | 0.73                          |
| Innovation                  | 3           | 0.81                          |
| SPP Barriers                | 7           | 0.78                          |
| SPP Drivers                 | 8           | 0.87                          |

Based on the examination of the research scales and constructs, the high value of Cronbach's alphas for all the variables under study, I can conclude that each questionnaires' items are reliable and consistent. Broadly, this analysis confirmed the reliability and validity of the dimensions of the extended PSR Model in the Kuwait public sector organisations' context.

Where the reliability analysis gives the internal consistency of the overall factors, I wanted also to complement the results of the reliability analysis with validating the theoretical dimensions or the components of the overall factors of the SPP practices constructs, which will be reviewed next.

#### **6.4.1.1 Factor Analysis**

Internal or construct validity refers to the extent to which the items in a scale measure the abstract or theoretical construct (Chen & Paulraj, 2004; Given, 2008). Testing of construct validity concentrates on finding out whether or not an item loads significantly on the factor it is measuring (Given, 2008). A factor is an underlying dimension that accounts for several observed variables (Kothari, 2004).

Factor analysis is a data reduction technique where data are summarised into a set of factors or components. Thus, it can be used to identify or evaluate the dimensions

of tests and scales (Pallant, 2013). Factor analysis allows condensing a large set of variables or scale items to a smaller and more manageable number of dimensions or factors, to identify the underlying structures or patterns of correlation of groups of closely related items (Pallant, 2013). Therefore, I have used factor analysis to identify the theoretical dimensions or factors of the SPP practices constructs.

In order to ensure that the instrument conforms to the Kuwait context usage, the construct validity of the items was established using factor analysis. Further, I have employed the Principal Component Analysis (PCA) method to extract the factors, and to validate whether the items in each section loaded into the expected categories. The principal component analysis produces a smaller number of the linear combination of the original variables (Pallant, 2013).

My results from the factor analysis of the questionnaire data are presented in Tables 12 to 17. As can be seen from these Tables, all factor loadings are high, meaning there is a strong correlation between the construct scale variables. The inter-correlation of the Environment construct' items ranges from 0.76 to 0.93. The inter-correlation of the Human Rights construct' items ranges from 0.86 to 0.89. The inter-correlation of the Health and Safety construct' items range from 0.85 to 0.93. The inter-correlation of the Buying from Local construct' items ranges from 0.84 to 0.91. The inter-correlation of both Buying from SMEs items are 0.89, and lastly the inter-correlation of the Innovation construct' ranges from 0.83 to 0.87.

The interpretation of the components was consistent with the PSR model and supports its scale items.

The results of factor analysis provide a detailed description of the factor loadings across the individual items for the SPP practices constructs, or the strength of the inter-correlation among the scale items (Pallant, 2013).

Table 12: Factor Analysis Results – Environment

| Component Matrix <sup>a</sup>  | Component: 1 |
|--|--------------|
| Uses ISO certification / Eco-labels                                      | .781         |
| Purchases products that reduce energy use/greenhouse gas emissions       | .810         |
| Asks suppliers to commit to pollution and waste reduction                | .931         |
| Purchases of environmentally friendly transport vehicles                 | .910         |
| Asks suppliers for organic food production methods                       | .902         |
| Asks suppliers to commit to the reduced use of water and soil protection | .911         |
| Purchases recycled and reuse products                                    | .759         |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 13: Factor Analysis Results – Human Rights

| Component Matrix <sup>a</sup>   | Component: 1 |
|---|--------------|
| Visits suppliers' facilities to ensure that they are not using sweatshop labour | .858         |
| Ensures that suppliers comply with Kuwait's labour laws                         | .890         |
| Requests suppliers to pay wages greater than Kuwait's minimum wage              | .895         |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 14: Factor Analysis Results – Health and Safety

| Component Matrix <sup>a</sup>  | Component: 1 |
|--|--------------|
| Ensures that suppliers comply with Kuwait's health and safety regulations                                | .852         |
| Ensures the safe, incoming and movement of product in suppliers' facilities                              | .879         |
| Ensures that suppliers provide appropriate personal protection equipment for employees                   | .930         |
| Ensures that suppliers' workers are insured against accident or liability by Kuwaiti insurance companies | .883         |

Extraction Method: Principal Component Analysis.

a. 1 components extracted

Table 15: Factor Analysis Results – Buying Locals

| Component Matrix <sup>a</sup>  | Component: 1 |
|--|--------------|
| Ensures suppliers' commitment to employing Kuwaiti Nationals at least 10%      | .837         |
| Ensures purchasing from Kuwaiti business suppliers                             | .872         |
| Encourages local industries and services such as freight, banks, and insurance | .906         |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 16: Factor Analysis Results – Buying SMEs

| Component Matrix <sup>a</sup>                           | Component: 1 |
|---|--------------|
| Purchases from SMEs suppliers (less than 250 employees) | .887         |
| Have a suppliers size classifications                   | .887         |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Table 17: Factor Analysis Results – Innovation

| Component Matrix <sup>a</sup>  | Component: 1 |
|--|--------------|
| Asks suppliers for a new or significantly improved product or process solution | .857         |
| Purchases from suppliers that undertake R&D activities                         | .867         |
| Require the ownership of Patent and IPR as part of the tender contract         | .829         |

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Examination of the results of the reliability tests and the factor loadings analysis indicates that the model factors and constructs are valid and reliable, and each item is significantly related to its underlying constructs.

In this study, the serious participation of the respondents was demonstrated by the number of additional comments provided by the respondents in the open-ended questions section at the end of the questionnaire offered for any additional comments. Broadly, this analysis confirmed the validity and reliability of the questionnaire scales and the conceptual model.

Data from the questionnaire were analysed through descriptive and inferential statistics, which will be reviewed next.

## 6.4.2 Descriptive Analysis

### 6.4.2.1 Respondents' Profile

The respondents were public sector employees in charge of public procurement functions. In the research questionnaire, questions one to four were designed to collect information about the respondent's personal and organisational background.

The information regarding the respondent's personal information is summarised in the charts next. The participating ministries and bodies and their positions are not mentioned due to the confidentiality agreement to protect their identities.

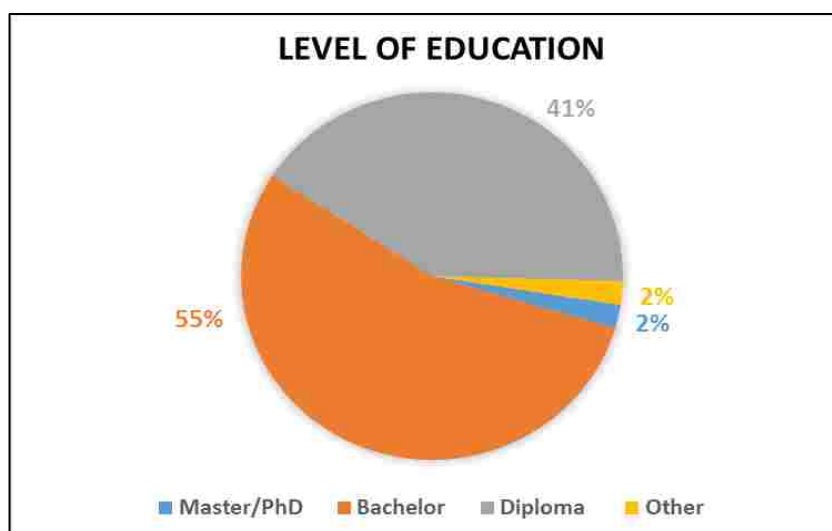


Figure 9: Respondents' Profile – Education

The findings revealed that 55% of the respondents had a Bachelor Academic Degree, while 41% of the respondents had a Diploma Degree respectively. Furthermore, 2% of the respondents indicated that they had degrees either below or above the Bachelor and Diplomas as shown in the previous Figure 9. These findings implied that the respondents were qualified to understand the nature of the study problem.

This also demonstrated that the majority of the public employees were literate, and hence had a clear understanding of the procurement function in their organisations. This in hand assists in making the information acquired more reliable.

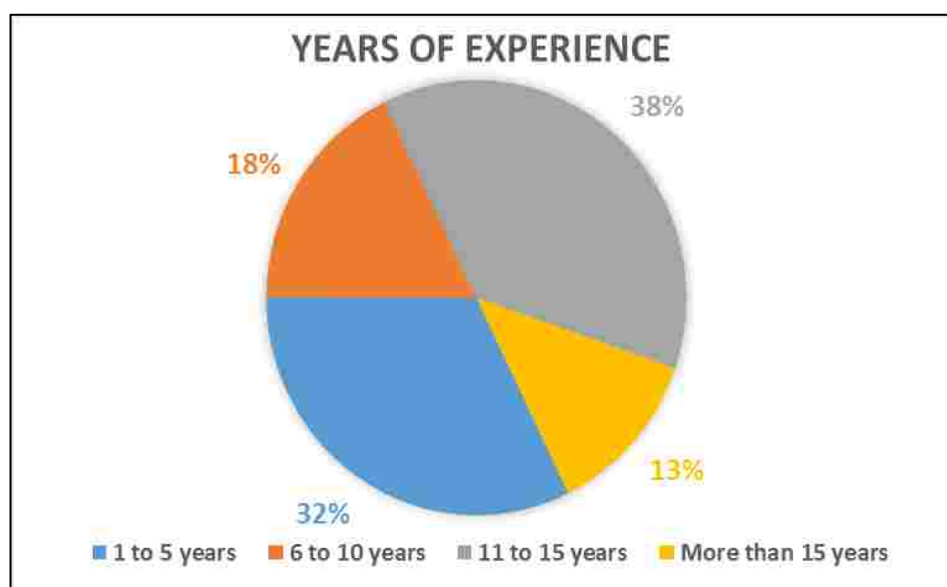


Figure 10: Respondents' Profile – Years of Experiences

The years of experience of respondents are shown in Figure 10. Around 32% had a work experience ranging from one to 5 years in public procurement, 18% had a work experience ranging from 6 to 10 years, while the remaining 50% are seniors, with more than 11 years of experience. Thus, the overwhelming majority of respondents have sufficient experience in public procurement operations and are competent to answer questions concerning Kuwait public procurement operations.

The following Figure 11 shows the size of the public organisations in relation to the number of employees in the procurement department in which they work.

The results indicate that, in terms of the number of employees, a total of 17% of the respondents are from small public organisations with less than 5 employees, while most of the respondents 70% are of a medium-sized public organisation with up to 35 employees.



Finally, 13% are from big sizes of public organisation with more than 35 employees. The sample of respondents provides a reasonable representation of Kuwait's public organisations in terms of public organisation's size.

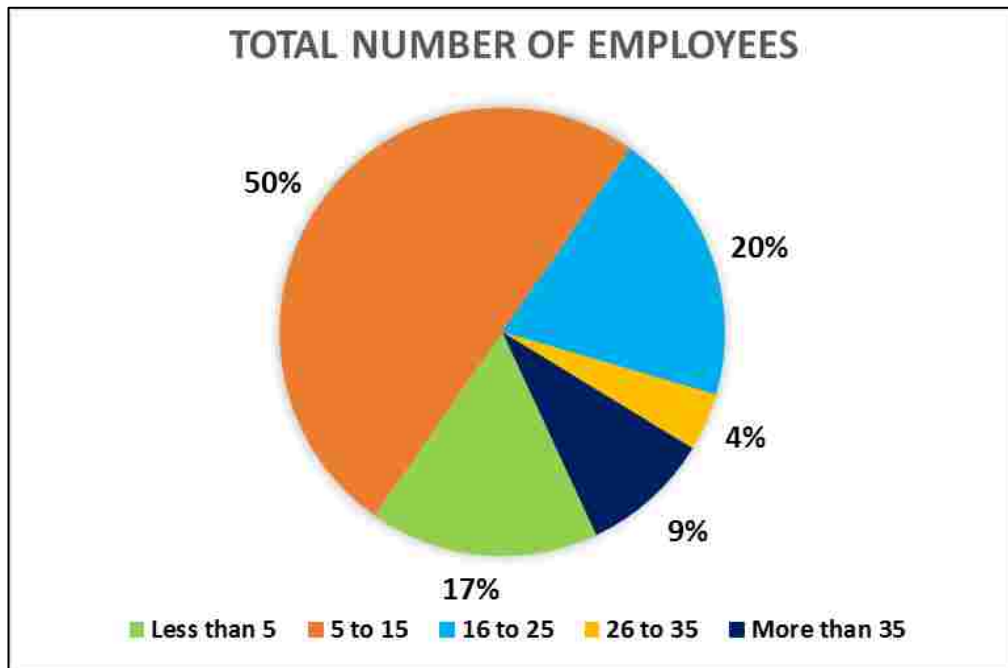


Figure 11: Organisational Information – Number of the Employees

#### 6.4.2.2 Procurement Processes and Practices

Questions five to seven of the questionnaire were designed to gain information about the respondents' organisational experience with public procurement operations. With regard to the operational sector, it can be seen from Figure 12 below that 30% of the respondents operate under the General Services sector, while the Social Service sector accounts for 40% of the respondents. The remaining 30% accounts for the Economic sector.

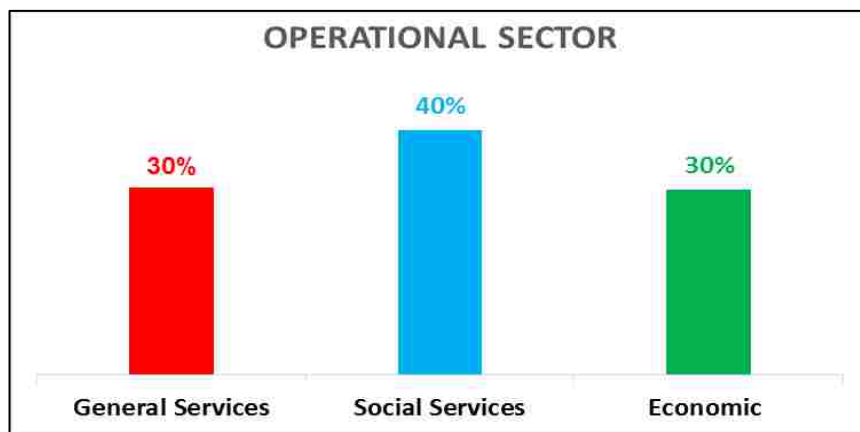


Figure 12: Procurement Practices – Operational Sectors

Figure 13 shows the contracting methods used when procuring for public works and services. It can be seen from the table that the three top contracting methods are used somehow equally, with direct purchasing as the most used methods (86%), followed by public quotations (75%). These numbers confirm my expectations, as these methods of procurement do not need to be conducted through or have the approval of the CTC. The contracting method “Others” was used around 15%, and reported by the respondents to be the auction, collective buying, and limited tenders. Limited tendering is where bids are invited only from a short list of suppliers.

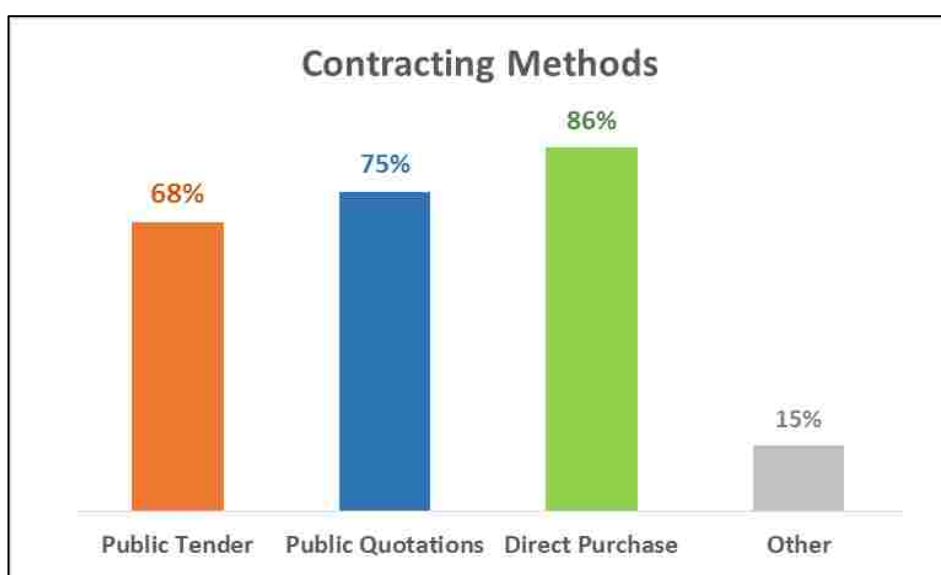


Figure 13: Procurement Practices – Contracting Methods

The next question is the starting point to get the participants involved in the survey purpose, by asking a basic question to know if participants have knowledge of the subjects of sustainable development, green or sustainable procurement. The results are presented in Figure 14. Roughly, about 30% of the respondents were familiar with the concept of sustainable development, and exactly 36% of the participants know about sustainable and green procurement. The responses suggest that around 70% of procurement officials do not know what is sustainable development or sustainable procurement. This indicates that in the Kuwait public sector, there is a lack of awareness of the concept of sustainability and its relationship to procurement; much public procurement staff does not have the adequate knowledge of what is SPP.

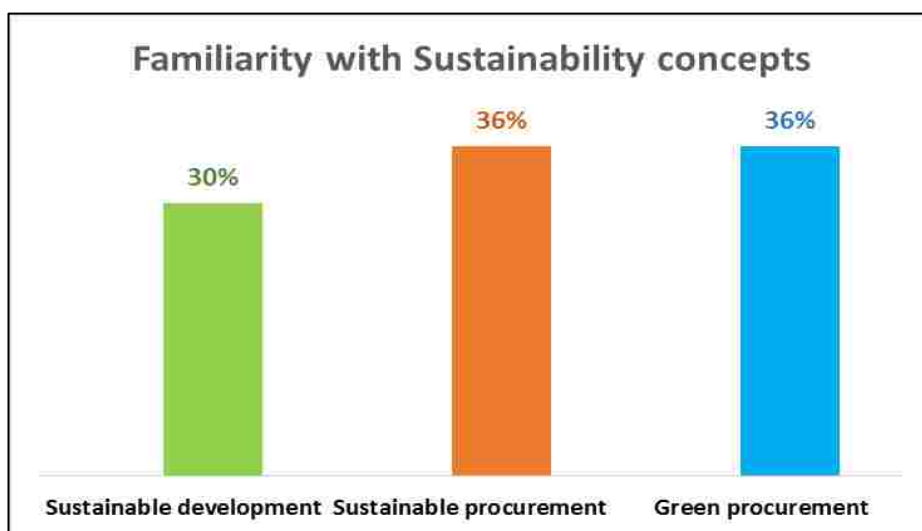


Figure 14: Procurement Practices – Familiarity with Sustainability Concepts

Lastly, public organisations in Kuwait adopt different tender selection criteria, often by weighing them against the tender objectives. The respondents were asked to indicate how often their public organisations consider the various aspects of tender evaluations within procurement operations.

This question was measured using a 5-point Likert scale, ranging from Never (scored=1) to Always (scored=5). The corresponding survey results are presented by their Means, Medians, and Modes in Table 18, and the frequency percentages' Table can be found in Appendix D.

Table 18: Factors of Tender Evaluation

| Factors in Tender Evaluation                  |      |        |      |          |
|---|------|--------|------|----------|
| Mechanisms                                    | Mean | Median | Mode | Std. Dev |
| Lowest Price Bid                              | 4.18 | 4.00   | 5.00 | 1.090    |
| Quality of goods and services                 | 4.03 | 4.00   | 4.00 | 0.871    |
| Health & Safety standards                     | 3.67 | 4.00   | 5.00 | 1.214    |
| Suppliers management and technical capability | 3.60 | 4.00   | 4.00 | 1.187    |
| Suppliers financial standing                  | 3.55 | 4.00   | 4.00 | 1.199    |
| Environmental criteria                        | 3.55 | 4.00   | 4.00 | 1.146    |
| Social corporate responsibility reputation    | 3.52 | 4.00   | 4.00 | 1.182    |
| Innovation and R&D activities                 | 3.25 | 3.00   | 3.00 | 1.223    |

The Lowest Price criteria were the dominant factor in selecting the winning bid in the participants' organisations with Mean=4.18 and Mode=5.00; roughly 86% of the respondents reported that they more frequently or always consider price as the most important factor in tender selection. About 73% of the respondents reported that the Quality of the Procured Goods and Services was the second most frequently chosen factor to be considered, with a Mean=4.03 and Mode=4.00. This may indicate that the price and quality of the tenders constitute, on average, the most decisive factors in awarding public tender contracts. This is not surprising, given that these traditional criteria are highly valued in the national tender frameworks. According to the directives of Kuwait's public tender law, public tender contracts must be awarded to the bidder who offers the lowest price, provided his bid conforms to technical and quality requirements in the tender specifications.

The results also show that the Health & Safety standards had a Mean=3.67 and Mode=5.00. Approximately, 60% of the respondents reported that they consider health & safety standards in tender selection. This can be explained by the fact that the Kuwaiti law and regulations ensure adequate protection for the supplier's workers.

On the other hand, both the criteria that represent the supplier's capabilities (Suppliers' Management and Technical Capacity with Mean=3.60 and Mode=4.00, and Suppliers Financial Standing with Mean=3.55 and Mode=4.00) had close frequent considerations in the participant organisation's selection criteria. About 60% of respondents reported that they frequently or always consider the supplier's capabilities in tender selection evaluation. The apparent logic behind this is the fact that the selection criteria are used to evaluate whether the bidders have the capacity and the ability to perform the tender contract. Kuwait's tender law only allows suppliers that have adequate financial and technical resources. The results also indicated that some of the prominent aspects of SPP had a low priority; for example, only 50% of respondents reported that they consider SPP factors when evaluating tender offers.

For example, Environmental Criteria had a Mean=3.55 and Mode=4.00, and Suppliers' Social Corporate Responsibility Reputation had a Mean=3.52 and Mode=4.00. These findings correspond with my research finding from the interviews and the tender documents that many important aspects of a strategic sustainable procurement were lacking.

Lastly, the inclusion of the Innovation and R&D Activities in tender evaluation demonstrates its moderate importance with Mean=3.25 and Mode=3.00. Only 43% reported that they take into account Innovation factors, and 33% consider them occasionally. These findings may reflect the relative applicability of the innovative aspects of SPP to the broader PSR Model in the public sector procurement.

However, it should be noted that the more critical the tender evaluation factor is to a public organisation, the higher weighting it should be given in the tender evaluation to make its priority clear to bidding suppliers.

In sum, awarding procurement tenders are based on a combination of factors. In traditional public sector procurement, the award of contracts are based merely on a comparison of tender prices. Nowadays, the selection procedures for the allocation of public tender contracts include the assessment of both price and non-price criteria, such as those related to SPP targets and goals.

#### **6.4.2.3 SPP Practices**

The third part of the survey, consisting of questions 8 to 14 asks the participants about their organisation's experience with SPP. The participants have been invited to indicate if their procurement function considers the SPP constructs when purchasing. Table 19 provides a representation of the degree to which the aspects of SPP practices are embodied in the current Kuwait public sector procurement.

The questions phrased as: "Currently our purchasing function", which were measured using a five-point Likert scale, ranging from disagree strongly (scored = 1) to agree strongly (scored = 5).

The figures presented in Table 19 are the Means, Medians, and Modes of the respondents' responses, and a frequency percentages' Table can be found in Appendix D.

Table 19: SPP Practices in Kuwait

| SPP Practices  | Mean        | Median      | Mode        | Std. Dev    |
|--|-------------|-------------|-------------|-------------|
| <b>Environment</b>   | <b>3.04</b> | <b>3.00</b> | <b>3.00</b> | <b>1.00</b> |
| Uses ISO certification / Eco-labels  | 3.11        | 3.00        | 3.00        | 1.298       |
| Purchases products that reduce energy use/greenhouse gas emissions   | 3.06        | 3.00        | 3.00        | 1.126       |
| Asks suppliers to commit to pollution and waste reduction  | 3.09        | 3.00        | 3.00        | 1.146       |
| Purchases of environmentally friendly transport vehicles   | 3.02        | 3.00        | 3.00        | 1.136       |
| Asks suppliers for organic food production methods   | 2.94        | 3.00        | 3.00        | 1.144       |
| Asks suppliers to commit to the reduced use of water and soil protection   | 3.21        | 3.00        | 3.00        | 1.181       |
| Purchases recycled and reuse products  | 2.85        | 3.00        | 3.00        | 1.176       |
| <b>Human Rights</b>  | <b>3.35</b> | <b>3.67</b> | <b>4.00</b> | <b>1.03</b> |
| Visits suppliers' facilities to ensure that they are not using sweatshop labour                                  | 3.18        | 3.00        | 4.00        | 1.127       |
| Ensures that suppliers comply with Kuwait's labour laws  | 3.49        | 4.00        | 4.00        | 1.191       |
| Requests suppliers to pay wages greater than Kuwait's minimum wage   | 3.38        | 3.00        | 3.00        | 1.194       |
| <b>Health and Safety</b>   | <b>3.66</b> | <b>3.75</b> | <b>4.00</b> | <b>0.99</b> |
| Ensures that suppliers comply with Kuwait's health and safety regulations  | 3.81        | 4.00        | 4.00        | 1.064       |
| Ensures the safe, incoming and movement of product in suppliers' facilities                                      | 3.78        | 4.00        | 4.00        | 1.111       |
| Ensures that suppliers provide appropriate personal protection equipment for employees                           | 3.51        | 4.00        | 4.00        | 1.165       |
| Ensures that suppliers' workers are insured against accident or liability by Kuwaiti insurance companies         | 3.55        | 4.00        | 4.00        | 1.146       |
| <b>Philanthropy</b>  | <b>3.15</b> | <b>3.00</b> | <b>3.00</b> | <b>1.05</b> |
| Utilises suppliers that are philanthropic, i.e. it creates training and employment for people with special needs | 3.15        | 3.00        | 3.00        | 1.054       |
| <b>Buying From Locals</b>  | <b>3.86</b> | <b>4.00</b> | <b>5.00</b> | <b>0.91</b> |
| Ensures suppliers' commitment to employing Kuwaiti Nationals at least 10%  | 3.92        | 5.00        | 4.00        | 1.106       |
| Ensures purchasing from Kuwaiti business suppliers   | 3.84        | 4.00        | 4.00        | 1.017       |
| Encourages local industries and services such as freight, banks, and insurance                                   | 3.84        | 4.00        | 4.00        | 1.007       |
| <b>Buying From SMEs</b>  | <b>3.44</b> | <b>3.50</b> | <b>3.00</b> | <b>0.80</b> |
| Purchases from SMEs suppliers (less than 250 employees)  | 3.30        | 3.00        | 3.00        | 0.868       |
| Have a suppliers size classifications  | 3.58        | 4.00        | 4.00        | 0.945       |
| <b>Innovation</b>  | <b>3.25</b> | <b>3.33</b> | <b>3.00</b> | <b>0.94</b> |
| Asks suppliers for a new or significantly improved product or process solution                                   | 3.20        | 3.00        | 3.00        | 1.057       |
| Purchases from suppliers that undertake R&D activities   | 3.27        | 3.00        | 3.00        | 1.046       |
| Require the ownership of Patent and IPR as part of the tender contract   | 3.30        | 3.00        | 3.00        | 1.200       |

The results provide an overall average across all the public organisations surveyed and therefore offers insight into which SPP practices are most commonly embedded in the current practice in the Kuwait public sector organisations.

The highest average found concern Buying from Local practice with Mean=3.86 and Mode=5; around 58% of the respondents agreed to the inclusion of preferences to local suppliers in their procurement operations. The finding reflects the fact that existing Kuwaiti laws and regulation give priority to the national products in government procurement. Concerns related to the Health and Safety had a Mean=3.66 and Mode=4.00; around 50% of respondents reported adopting aspects of health and safety in their procurement operations. This result is strongly aligned with the Kuwait public procurement laws that ensure the protection for the workers. The Human Rights practice had a Mean=3.35 and Mode=4.00; around 32% of the participants indicate that they include human rights criteria within their procurement operation, which means it has somewhat a moderate implementation. The Buying from SMEs practice had a Mean=3.44 and Mode=3.00; around 40% of the respondents agreed with this question and around 47% of respondent were unsure or did not know if their procurement function included aspects of buying from SMEs. The least embedded practices are the ones related to the Innovation practice with a Mean=3.25 and Mode=3.00. Only 27% of the respondents agreed to require innovative and R&D activities from their suppliers, and 52% were unsure or did not know about such activities. The Philanthropy practice had a Mean=3.15 and Mode=3.00; around 37% agreed to have their procurement function currently utilises suppliers that are philanthropic, and around 40% were unsure about their function providing employment and training to people with special needs.

The Environment practice came the last impeded dimension of SPP practices with Mean=3.04 and Mode=3.00; only 22% of the respondents agree and the majority, about 40% of the respondents do not know or are not certain if their procurement operations include environmental criteria.



In sum, the findings revealed that the majority of the participating organisations adopted some aspects of SPP practices. However, they are only in the initial stage and still have a long way to go. My finding suggests that buying from locals, health and safety, and human rights aspects are the most commonly embedded SPP practices, while the environmental practice is the least-embedded SPP.

#### 6.4.2.4 SPP Barriers and Drivers

The fourth part of the survey is regarding the identification of the drivers and barriers to SPP practices in the public sector context. The participants have been invited to indicate the level of agreement of the drivers and barriers factors affecting the implementation of SPP practices in their organisation. Fifteen questions reflecting the external and internal drivers and barriers of the SPP practices, each of which was measured using a five-point Likert scale, ranging from disagree strongly (scored=1) to agree strongly (scored=5). Table 20 is the Means, Medians, and Modes of the respondents' responses, a frequency percentages' Table can be found in Appendix D.

Table 20: The SPP Barriers

| Sustainable Public Procurement Barriers |      |        |      |        |
|---|------|--------|------|--------|
| SPP Barriers                            | Mean | Median | Mode | Std. D |
| Budgetary constraints                   | 3.63 | 4.00   | 4.00 | 1.064  |
| Lack of SPP knowledge                   | 3.48 | 4.00   | 4.00 | 1.032  |
| Costs of sustainability                 | 3.30 | 3.00   | 4.00 | 1.062  |
| Legislation and Regulations             | 3.29 | 3.00   | 3.00 | 0.989  |
| Political constraints                   | 3.19 | 3.00   | 3.00 | 1.102  |
| Resistance and obstacles by suppliers   | 3.12 | 3.00   | 3.00 | 1.102  |
| Tribalism and cultural norms            | 2.82 | 3.00   | 3.00 | 1.061  |

Table 20 shows that the mean values for most of these barriers are smaller than Mean=3.5.

The results indicate that Kuwait's public procurement personal only moderately agreed with the SPP barriers listed in the questionnaire. The highest score obtained from the respondents was for the barrier of Budgetary constraints (Mean=3.63, Mode=4.00); around 64% of the respondents agreed that budgetary constraints are a major obstacle, and only 13% disagreed that lack of budget is a barrier. Regarding Lack of SPP knowledge (Mean=3.48, Mode=4.00), about 53% of the participants agreed that lacking knowledge about SPP was a major barrier, and only 15% disagree that lack of knowledge was an obstacle to them. The Costs of sustainability (Mean=3.30, Mode=4.00); about 46% of the respondents agreed that the high costs of green products are a major barrier for SPP, and 35% were unsure about it.

The inadequate Legislation and Regulations (Mean=3.29, Mode=3.00); around 42% of the respondents agreed that laws and regulations act as a barrier to SPP implementation. However, 41% of respondents were unsure regarding the effect of government regulations on their SPP practices. The lowest scores were given to the factors of Tribalism and cultural norms (Mean=2.82, Mode=3.00); only 22% of respondents agreed that cultural norms were a major barrier for their SPP operations, and 34% disagreed that it can act as an obstacle, while 44% of the respondents were unsure or neutral. Resistance and obstacles by suppliers (Mean=2.82, Mode=3.00); about 38% of participants agreed that suppliers do have an effect on their SPP adaptation, and the remaining spared between 34% disagree that suppliers may be an obstacle to including SPP operations in their function, and 28% were neutral. Lastly, Political constraints (Mean=3.19, Mode=3.00); around 34% of participants agreed that political constraints as a barrier to SPP operations, 47% were unsure about it, while only 18% disagreed.

Thus, it is clear from Table 20 that procurement officials reported that the most critical barriers to the implementation of SPP are in essence financial, which corresponds with the previous findings of Islam and Siwar (2013), Walker and Brammer (2009), and McMurray et al. (2014). Most of the respondents felt that sustainable options might cost more than conventional options, and the perceptions of inability to offset these higher costs by sufficient budget allocations are the main barrier to their SPP practices. The lack of sustainability knowledge factor also appears to be a hindrance for establishing an SPP approach in public procurement. This is in line with my previous findings that only one-third of the surveyed procurement employees had indicated that they know about the concept of sustainability and its relationship to procurement operations (See Figure 14).

The public procurement employees agreed with the SPP drivers factors listed in the questionnaire. Table 21 presents the Means, Medians and Modes of the respondents' responses, and a frequency percentages' table can be found in Appendix D.

Table 21: The Sustainable Public Procurement Drivers

| Sustainable Public Procurement Drivers |      |        |      |          |
|--|------|--------|------|----------|
| SPP Drivers                            | Mean | Median | Mode | Std. Dev |
| Financial benefits                     | 3.73 | 4.00   | 4.00 | 0.995    |
| Society and citizens awareness         | 3.73 | 4.00   | 4.00 | 0.930    |
| The Islamic values and beliefs         | 3.69 | 4.00   | 4.00 | 0.894    |
| Employee initiatives                   | 3.65 | 4.00   | 4.00 | 1.031    |
| Governments sustainability strategy    | 3.62 | 4.00   | 4.00 | 1.005    |
| NGOs and pressure groups demands       | 3.59 | 4.00   | 4.00 | 0.910    |
| Environmental Management Systems (EMS) | 3.58 | 4.00   | 4.00 | 0.998    |
| Top managements support                | 3.51 | 4.00   | 4.00 | 1.042    |

Table 21 shows that all the mean values for these opportunities are larger than Mean=3.5. The highest score obtained from the respondents was for the driver of Financial benefits (Mean=3.73, Mode=4.00); around 67% of participants agreed that financially benefiting from the engagement in SPP practices is a major driver.

Only 10% of the participants disagree about financial benefits. Society and citizens awareness (Mean=3.73, Mode=4.00); about 62% of the respondents agreed that social awareness regarding sustainability is a driver for the implementation of SPP operations, only 6% disagree with the fact that awareness of citizens and the society is related to the choice of implementing SPP practices in their function. Islamic values and beliefs (Mean=3.69, Mode=4.00); around 58% of the respondents agreed that Islamic values and beliefs are an important factor that encouraged them to engage in SPP practices; only 4% disagreed that Islamic values led to the integration of sustainability into their procurement function. Employee initiatives (Mean=3.65, Mode=4.00); around 60% of respondents agreed that the initiatives of the employees motivated the uptake of SPP practices in their organisations, 10% disagreed, and around 30% were neutral about this driver. Government's sustainability strategy (Mean=3.62, Mode=4.00); around 57% of the respondents agreed that government regulations are the main reason and driver for implementing SPP practices. However, 33% were unsure whether government regulations are related to SPP implementation. Top management's support (Mean=3.51, Mode=4.00); the majority of the participants, 53% agreed that their senior management's support was a driver for their sustainable procurement practices. Environmental Management Systems (EMS) (Mean=3.58, Mode=4.00); about 55% of the respondents agreed that the EMS certification drives the engagement of SPP activities, 9% disagreed, and around 36% were neutral about this driver.

Lastly, NGOs and pressure groups demand (Mean=3.59, Mode=4.00); around 54% of the respondents agreed that external pressure from NGOs influenced the incorporation of SPP practices in their organisations.

In summary, the respondents highlighted that financial benefits, social awareness, and Islam act as strong drivers for SPP practices in the Kuwait public sector. These findings coincide with the findings of McMurray et al. (2014).

### **6.4.3 Inferential Analysis**

A multivariate analysis was conducted on the statistical data, providing a useful complement to the descriptive investigation presented previously. The next section will be for statistically determining the relationship between the SPP barriers and drivers, and the SPP practices, which was conducted through regression analysis.

#### **6.4.3.1 The Research Variables**

##### The Dependent Variables

The dependent variables in the proposed model reflect the degree to which sustainability criteria are embedded in public procurement practices. To capture this, I utilised the PSR scale and subscales items consisting of the seven dimensions of SPP practices (Brammer & Walker, 2011; Carter, 2004; Carter & Jennings, 2004; McMurray et al., 2014; Walker & Brammer, 2009).

All of the dependent variables are interval-level variables measured using a 5-point Likert scale, ranging from disagree strongly (scored = 1) to agree strongly (scored = 5).

1. The SPP Dimensions: identified as the sub-questions of questions' 8 through 14 of the questionnaire, addressed the seven constructs of PSR sub-scales.

- a. Environment: environmental practices were measured as the mean score for sub-questions of question 8. The dependent variable “Environment” was designated as  $Y_1$ .
  - b. Human Rights: human rights practices were measured as the mean score for sub-questions of question 9. The dependent variable “Human Rights” was designated as  $Y_2$ .
  - c. Health and Safety: health and safety practices were measured as the mean score for sub-questions of question 11. The dependent variable “Health and Safety” was designated as  $Y_3$ .
  - d. Buying Locals: buying local practices were measured as the mean score for sub-questions of question 12. The dependent variable “Buying from Locals” was designated as  $Y_4$ .
  - e. Buying from SMEs: buying from SMEs practices were measured as the mean score for sub-questions of question 13. The dependent variable “Buying from SMEs” was designated as  $Y_5$ .
  - f. Innovation: innovation practices were measured as the mean score for sub-questions of question 14. The dependent variable “Innovation” was designated as  $Y_6$ .
  - g. Philanthropy: philanthropy practice is a one-item scale identified as the answer to question 10. The dependent variable “Philanthropy” was designated as  $Y_7$ .
2. SPP Practices: identified as questions 8 through 14 of the questionnaire, addressed the seven constructs of PSR scale. An overall SPP practices scale was created by averaging the scores for the SPP practices sub-scales items following the previous studies of Carter & Jennings, 2004, McMurray et al., 2014, and Salam, 2007, 2009.

### The Independent Variables

In social research studies, usually, there are several explanatory variables for the phenomenon under investigation (Keller & Gaciu, 2012). As such, several single factors have a collective impact on the implementation of SPP operations in the public organisation. I have fully discussed the barriers and drivers of sustainability in details in the literature review when overviewing SPP (See Chapters 2 and 4).

All of the dependent variables are interval-level variables measured using a 5-point Likert scale, ranging from disagree strongly (scored=1) to agree strongly (scored=5).

1. Barriers of SPP: identified as answers to question 16 of the questionnaire, addressed the seven identified barriers of SPP. An overall barriers scale was created by calculating average scores based on all the SPP barriers items (7 items) (Islam & Siwar, 2013; McMurray et al., 2014).
2. Drivers of SPP: identified as answers to question 18 of the questionnaire, addressed the eight identified drivers of SPP. An overall drivers scale was created by calculating average scores based on all the SPP drivers items (8 items) (Islam & Siwar, 2013; McMurray et al., 2014).

#### **6.4.3.2 SPP Cross - Sectoral Variation**

The implementation of SPP practice may vary systematically across the public operational sector (Walker & Brammer, 2009). Consistent with this, an analysis of variance (ANOVA) was used to quantify the operational sectoral variation in the engagement with SPP in the Kuwait public sector organisations. The main purpose of an ANOVA technique is to test the significance of the difference between the means of two samples. As such, one can draw inferences about whether the samples have been drawn from populations having the same mean (Keller & Gaciu, 2012; Kothari, 2004).

In order to provide an overview of the operational cross-sectoral variation in the engagement with SPP with the Kuwait public sector organisation, Table 22 separates the sample according to three relevant operational sectors that particular public organisations are attributable to, which represent the dependent variables in the ANOVA analysis.

The results in Table 22 reveal Mean values of the dependent variables on a 5-point Likert scale, ranging from disagree strongly (scored=1) to agree strongly (scored=5). The descriptive analysis of the mean values shows that, overall, the public sector organisations do not differ in their engagement with SPP practices, and that SPP practice regardless of the operational sectors, have moderate implementations.

To test if these results are statistically significant, I conducted a One-Way ANOVA.

Table 22: SPP Cross-Sectoral Variation

| <b>Mean values of public organisation sectors</b> |                                  |                                   |                                  |              |
|---|----------------------------------|-----------------------------------|----------------------------------|--------------|
| <b>SPP practices</b>                              | <b>Social Services</b><br>N = 29 | <b>General Services</b><br>N = 38 | <b>Economic Sector</b><br>N = 30 | <b>Total</b> |
| Environment                                       | <b>2.87</b>                      | <b>3.07</b>                       | <b>3.15</b>                      | <b>3.04</b>  |
| Human Rights                                      | <b>3.58</b>                      | <b>3.21</b>                       | <b>3.30</b>                      | <b>3.35</b>  |
| Health and Safety                                 | <b>3.57</b>                      | <b>3.64</b>                       | <b>3.76</b>                      | <b>3.66</b>  |
| Buying from Locals                                | <b>3.90</b>                      | <b>3.90</b>                       | <b>3.76</b>                      | <b>3.86</b>  |
| Buying from SMEs                                  | <b>3.50</b>                      | <b>3.55</b>                       | <b>3.23</b>                      | <b>3.44</b>  |
| Philanthropy                                      | <b>3.27</b>                      | <b>3.09</b>                       | <b>3.43</b>                      | <b>3.25</b>  |
| Innovation  | <b>3.24</b>                      | <b>3.21</b>                       | <b>3.00</b>                      | <b>3.15</b>  |

#### Assumptions of One-Way ANOVA

There is some general assumption that applies to all of the parametric techniques such as the One-Way ANOVA (Pallant, 2013).



For parametric techniques, it is assumed the populations from which the samples are taken are normally distributed, and that each of these populations has the same variance (Kothari, 2004; Pallant, 2013).

However, in a lot of social sciences research, the dependent variables are not normally distributed. Nevertheless, most of the statistical techniques are reasonably robust and tolerate violation of this assumption. With a large enough sample size (30+), the violation of this assumption should not cause any major problems (Pallant, 2013).

Thus, even though ANOVA is generally considered suitable for continuous dependent variables, many studies have successfully used ANOVA for ordinal type data such as from the Likert scales (De Winter & Dodou, 2010; Karim, Smith, Halgamuge, & Islam, 2008; Samson & Ford, 2000; Sharma & Ruud, 2003).

The normality assumption can best be checked graphically with a histogram and a fitted normal curve (Pallant, 2013). First, I examined the normality of the dependent variables. I can check normality graphically with a Q-Q Plot (Appendix D). The plots show a normal distribution. Normality can also be assessed by obtaining a skewness value of -1 to +1. Second, I perform a test on the skewness of the continuous variables; the results in Table 23 indicate that all values are within the requirement for the skewness of -1 to +1. Consequently, the study used the One-Way ANOVA analysis to compare the differences between the public sector organisation's SPP practices.

Table 23: Descriptive Normality Tests

| Operational Sector | Skewness  |            |
|--------------------|-----------|------------|
|                    | Statistic | Std. Error |
| Social Services    | .892      | .245       |
| General Services   | .451      | .245       |
| Economic Sector    | .838      | .245       |

In an ANOVA, one of the test's assumptions is the Homogeneity of Variance (HOV) assumption (Kerr, Hall, & Kozub, 2002; Kothari, 2004). Thus, I perform a test on the assumption that treatment variances are equal.

$$H_0 : \sigma_1^2 = \sigma_2^2 = \dots = \sigma_a^2.$$

If the p-values (p-value  $\leq \alpha$ ), I reject  $H_0$  and conclude the variances are not all equal. To validate the HOV assumption; a common hypothesis test is the Levene's Test (Pallant, 2013).

The following Table 24 provides the Levene's Test results from the analysis of variance in SPSS. The p-values for Levene's Test are all (p-value above 0.05). As a result, I cannot reject the null hypothesis, and I assume that the variances are equal between the groups with variations. Therefore, the HOV assumptions are reasonably met, and the model does not violate the assumptions for the One-Way ANOVA.

Table 24: Test of Homogeneity of Variances

| <b>Test of Homogeneity of Variances</b> |                          |              |
|---|--------------------------|--------------|
| <b>SPP Practices</b>                    | <b>Levene' Statistic</b> | <b>Sig.</b>  |
| Environment                             | <b>0.536</b>             | <b>0.587</b> |
| Human Rights                            | <b>0.187</b>             | <b>0.830</b> |
| Health and Safety                       | <b>0.144</b>             | <b>0.866</b> |
| Buying from Locals                      | <b>0.564</b>             | <b>0.571</b> |
| Buying from SMEs                        | <b>1.524</b>             | <b>0.223</b> |
| Innovation                              | <b>0.311</b>             | <b>0.734</b> |
| Philanthropy                            | <b>1.333</b>             | <b>0.269</b> |

Table 25 represents the ANOVA results of the study's variables. Mathematically, the ANOVA splits the total variance into explained variance (between groups) and unexplained variance (within groups) (Kothari, 2004; Pallant, 2013). The F-value, which is the critical test value that I need for the ANOVA is defined as:

$$F\text{-value} = \frac{\text{Variance between treatment}}{\text{Variance within treatments}}$$

This ratio is used to judge whether the difference amongst sample means is significant (Kothari, 2004). It tests the null hypothesis that the sample mean scores are equal (Pallant, 2013). Results show the p-values for the One-Way ANOVA F-tests of significance are all (p-value above 0.05). Thus, I cannot reject the null hypothesis and state that I can assume the mean scores to be equal.

This implies that the differences in SPP practices implementation are statistically insignificant across the social services, general services, and economic sectors. This suggests that sustainability issues are commonly part of the public sector national policy framework regarding SPP, and are not a point of differentiation in public organisation' operational sectors.

Table 25: The One-Way ANOVA Results

|                          |                | Sum of Squares | Mean Square | F     | Sig. |
|--------------------------|----------------|----------------|-------------|-------|------|
| <b>Environment</b>       | Between Groups | 1.198          | .599        | .589  | .557 |
|                          | Within Groups  | 95.649         | 1.018       |       |      |
|                          | Total          | 96.847         |             |       |      |
| <b>Human Rights</b>      | Between Groups | 2.432          | 1.216       | 1.145 | .323 |
|                          | Within Groups  | 99.872         | 1.062       |       |      |
|                          | Total          | 102.305        |             |       |      |
| <b>Health and Safety</b> | Between Groups | .547           | .273        | .272  | .762 |
|                          | Within Groups  | 94.459         | 1.005       |       |      |
|                          | Total          | 95.005         |             |       |      |
| <b>Support Locals</b>    | Between Groups | .400           | .200        | .238  | .789 |
|                          | Within Groups  | 78.879         | .839        |       |      |
|                          | Total          | 79.278         |             |       |      |
| <b>Support SME</b>       | Between Groups | 1.867          | .934        | 1.457 | .238 |
|                          | Within Groups  | 60.261         | .641        |       |      |
|                          | Total          | 62.129         |             |       |      |
| <b>Innovation</b>        | Between Groups | 1.921          | .961        | 1.098 | .338 |
|                          | Within Groups  | 82.250         | .875        |       |      |
|                          | Total          | 84.172         |             |       |      |
| <b>Philanthropy</b>      | Between Groups | 1.054          | .527        | .469  | .627 |
|                          | Within Groups  | 105.626        | 1.124       |       |      |
|                          | Total          | 106.680        |             |       |      |

### 6.4.3.3. The Research Propositions

The following Table 26 summarises the hypothesised relationships between the dependent and the independent variables under investigation in this study, holding all else constant. These fifteen hypotheses are constructed due to the findings of current literature and from the empirical investigation.

Table 26: Summary of Hypothesised Relationships

| Summary of Hypothesised Relationships |  |
|---------------------------------------|--|
| Hypotheses                            | Hypothesised relationships   |
| H <sub>1</sub>                        | Government sustainable laws and policies are related to SPP*.  |
| H <sub>2</sub>                        | Society and citizens awareness is related to SPP*.   |
| H <sub>3</sub>                        | EMS certificates is related to SPP*.   |
| H <sub>4</sub>                        | NGOs and pressure groups demands are related to SPP*.  |
| H <sub>5</sub>                        | Top management support is related to SPP*.   |
| H <sub>6</sub>                        | Employee initiatives are related to SPP*.  |
| H <sub>7</sub>                        | Financial benefits are related to SPP*.  |
| H <sub>8</sub>                        | Islamic values and beliefs of employees are related to SPP*.   |
| H <sub>9</sub>                        | Costs of sustainability are related to SPP*.   |
| H <sub>10</sub>                       | Lack of SPP knowledge is related to SPP*.  |
| H <sub>11</sub>                       | Budgetary constraints are related to SPP*.   |
| H <sub>12</sub>                       | Regulation and laws are related to SPP*.   |
| H <sub>13</sub>                       | Political constraints are related to SPP*.   |
| H <sub>14</sub>                       | Cultural factors and norms are related to SPP*.  |
| H <sub>15</sub>                       | Obstacles by suppliers' are related to SPP*.   |
| H <sub>a</sub>                        | The greater manifestation of driver's factors in the public organisations will facilitate the sustainable procurement practices* |
| H <sub>b</sub>                        | The greater manifestation of barriers factors in the public organisations will hinder the sustainable procurement practices*     |

\* Holding all else constant.

The degree of the SPP implementation may differ among organisations, depending on size, public or private, regional or centralised administration, and operational sectors (Carter, 2004; Carter & Jennings, 2004; Oruezabala & Rico, 2012).

Kuwait is a small country in both area and population, as such, has no local or regional government (Asseri, 2007). This research also investigates only the public sector organisation's implementation of SPP practices in Kuwait.

The analysis of variance (ANOVA) in the previous section was used to quantify the operational sectoral variation in the engagement with SPP in the Kuwait public sector organisations, with results indicating no statistical significant SPP' implementation variation across the operational sectors. Accordingly, this research moved with one control variable, which is the Organisational Size.

The literature argues that organisational size is a significant predictor of SPP implantation. It is possible that organisational size may explain some of the variances in an organisation' SPP practices, with larger organisations more likely to engage in sustainable procurement than smaller organisations (Michelsen & de Boer, 2009; Min & Galle, 2001; Walker & Jones, 2012). For this reason, I included the organisation size, as measured by the natural logarithm of the organisation's number of employees, as a control variable. As it is common when the control variables are included in empirical models, a hypothesised relationship was not stated, as the purpose of the control variable is to minimise random errors.

Having defined the research hypothesis, a series of Standard Multiple Regression Models (MRA) are utilised to test the validity of the relationship between the dependent and independent variables, which is presented next.

#### **6.4.3.4 Multiple Regression Analysis**

The multiple regression analysis is a statistical method, with a mathematical model depicting relationships amongst variables, which used to determine how much of the variance in the dependent variable is explained by the set of predictors or independent variables (Hair, Black, Babin, & Anderson, 2013; Kothari, 2004; Pallant, 2013).

### Assumptions of Multiple Regression

Most parametric techniques or statistical tests rely upon certain assumptions about the variables used in the analysis (Osborne & Waters, 2002; Pallant, 2013). Specifically, regression analysis assumes linearity, no multicollinearity, homoscedasticity, and normality of the residuals (Keller & Gaciu, 2012), which will be reviewed next.

### Multicollinearity Tests

Multicollinearity is the extent to which independent variables are correlated with each other (Kerr et al., 2002). Multicollinearity concerns occur when inter-correlations between the explanatory variables are very high. This may also indicate that the variables are measuring the same thing. A value above  $r=0.90$  between variables is considered as high multicollinearity which can impact on statistical analysis (Burr, 2014; Pallant, 2013). Correlation analysis was conducted to assess for multicollinearity. A correlation matrix for all the independent variables used in the regression analysis is presented in Table 27.

Table 27: Correlation Analysis

|    | B1     | B2     | B3     | B4     | B5     | B6     | B7    | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|----|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| B1 | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B2 | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B3 | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |    |
| B4 | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |    |
| B5 | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |    |
| B6 | .110   | .435** | .258*  | .547** | .573** | 1      |       |        |        |        |        |        |        |        |    |
| B7 | .213*  | .287** | .364** | .402** | .237*  | .482** | 1     |        |        |        |        |        |        |        |    |
| D1 | -.025  | .170   | .061   | .044   | -.045  | .108   | .175  | 1      |        |        |        |        |        |        |    |
| D2 | -.107  | .070   | .110   | -.039  | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |    |
| D3 | -.103  | .029   | .054   | .113   | .108   | .185   | .124  | .641** | .463** | 1      |        |        |        |        |    |
| D4 | -.002  | .206*  | .026   | .112   | .210*  | .249*  | .044  | .504** | .459** | .466** | 1      |        |        |        |    |
| D5 | -.066  | .153   | .039   | .181   | -.007  | .165   | .195  | .571** | .703** | .379** | .563** | 1      |        |        |    |
| D6 | -.011  | .342** | .226*  | .129   | .034   | .197   | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
| D7 | .065   | .043   | .187   | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
| D8 | .091   | .188   | .130   | .044   | .165   | .133   | .195  | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |

- Significance levels: \* p<0.05, \*\* p<0.005.

- B1-B7 represent the SPP barriers: B1-The costs of sustainability, B2-Lack of legislation or regulations, B3-Lack of SPP knowledge, B4-Political constraints, B5-Budgetary constraints, B6-Obstacles by suppliers, B7-Tribalism and cultural norms.

- D1-D8 represent the SPP drivers: D1-Top management support, D2-Governments sustainability strategy, D3-Employee initiatives, D4-Financial benefits, D5-Society and citizen awareness, D6-NGOs and pressure groups demands, D7-The Islamic values and beliefs, D8-Environmental Management Systems.

An examination of the correlation matrix determines whether the independent variables are significantly correlated. The pattern of correlation among the variables suggests that multicollinearity is not likely to present any serious statistical problems; as most of the correlation coefficients are, lower than 0.7. However, multicollinearity can still exist even when none of the bivariate correlation coefficients are very large. For this reason, a formal assessment of a possible significant multicollinearity issue is conducted through the calculation of Variance Inflation Factors (VIFs) (Hair et al., 2013). The VIF indicates whether a predictor has a strong linear relationship with other predictors, and is calculated using the formula:  $VIF_i = \frac{1}{1-R_i^2}$ , for each variable (Pallant, 2013).

As Table 28 shows, the VIFs of all the independent variables used in the regression analysis are lower than four ( $VIF < 4.00$ ), and are thus, below the accepted thresholds at which multicollinearity is likely to cause analytical difficulties, indicating no strong linear relationship between the independent variables.

The other value given by the following multicollinearity statistics table is the Tolerance; the reciprocal of the VIF. It is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model. If this value is very small (i.e.  $Tolerance < 0.10$ ) it indicates that the multiple correlations with other variables are high, suggesting the possibility of multicollinearity (Pallant, 2013). The tolerance values for each of my independent variables are larger than 0.10. Therefore, the collinearity statistics provided in Tables 28 and 29 indicate that there is no violation of the multicollinearity assumption, which could pose a problem when interpreting the multiple regression results.

Table 28: Multicollinearity Statistics

| Model |                                     | Collinearity Statistics |       |
|-------|-------------------------------------|-------------------------|-------|
|       |                                     | Tolerance               | VIF   |
| 1     | The costs of sustainable products   | .817                    | 1.225 |
|       | Lack of legislation or regulations  | .507                    | 1.971 |
|       | Lack of SPP knowledge               | .599                    | 1.670 |
|       | Political constraints               | .509                    | 1.963 |
|       | Budgetary constraints               | .447                    | 2.237 |
|       | Obstacles by suppliers              | .454                    | 2.203 |
|       | Social and cultural norms           | .611                    | 1.638 |
|       | Top managements support             | .327                    | 3.061 |
|       | Governments sustainability strategy | .264                    | 3.782 |
|       | Employee initiatives                | .465                    | 2.152 |
|       | Financial benefits                  | .471                    | 2.121 |
|       | Society and citizen awareness       | .289                    | 3.458 |
|       | NGOs and pressure groups demands    | .363                    | 2.751 |
|       | The Islamic values and beliefs      | .618                    | 1.618 |
|       | Environmental Management Systems    | .533                    | 1.876 |

<sup>a</sup>. Dependent Variable: Uses ISO certification / Eco-labels.



### Normality Distributions Tests

Regression assumes that the dependent variables have normal distributions of its residuals (Keller & Gaciu, 2012; Osborne & Waters, 2002). In a lot of social sciences research, the variables are not normally distributed. However, the regression statistical techniques are reasonably robust and tolerate violation of this assumption (Osborne & Waters, 2002). Furthermore, with large enough sample size (30+), the violation of this assumption should not cause any major problems (Kerr et al., 2002; Pallant, 2013).

The data obtained from the questionnaire are from 5-point Likert scales and was assumed to be normally distributed in order to run a parametric test on it. Thus, the data was checked to verify whether the assumption of multivariate normality would be fulfilled. The normality assumption means the residuals should be normally distributed for the predicted dependent variable (Pallant, 2013).

There are several ways to check the distribution for normality; visual inspection of data plots, skewness value of -1 to +1, kurtosis, and the Kolmogorov-Smirnov tests (Hair et al., 2013; Osborne & Waters, 2002).

The square root transformation and reflection were used due to a negative skew of the data, which caused problems with the residuals (heteroscedasticity) (Garson, 2012). This treatment will give the same standard deviation, and thus, no difficulties to interpret the results (Collis & Hussey, 2013). The test for normality of the variables was performed after transformation to check whether that the data are normally distributed.

Table 29 shows that all skewness values for the standardised residuals are between -1 and +1.

Moreover, the K-S tests aimed to test the normality of the residuals give a P-values larger than 0.05. Thus, I can conclude that all the tested variables indicated a normal distribution.

Table 29: Variables Normality Tests

| Model               | Skewness  |            | Kurtosis  |            | Kolmogorov-Smirnova |      |
|---------------------|-----------|------------|-----------|------------|---------------------|------|
|                     | Statistic | Std. Error | Statistic | Std. Error | Statistic           | Sig. |
| SPP Practices*      | .596      | .245       | 1.148     | .485       | .087                | .066 |
| Environment*        | -.418     | .245       | 1.633     | .485       | .074                | .200 |
| Human Rights*       | .089      | .245       | 1.262     | .485       | .083                | .100 |
| Health and Safety*  | -.063     | .245       | .268      | .485       | .066                | .200 |
| Buying from Locals* | -.075     | .245       | -.315     | .485       | .056                | .200 |
| Buying from SMEs*   | .024      | .245       | 1.071     | .485       | .065                | .200 |
| Innovation*         | -.021     | .245       | 1.310     | .485       | .066                | .200 |
| Philanthropy*       | -.243     | .245       | -.186     | .485       | .075                | .200 |

\*Standardized Residual

Next, I have graphically inspected the normality assumption of the residuals. The normality assumption of the error term with both the Normal P-P plot, the Q-Q Plot, and the histogram of the distribution of the residuals is checked (See Appendix D). The results show that the scatters of the residuals points lie in a reasonably straight diagonal line from bottom left to top right, indicating a normal distribution of residuals for all the variables. In this study, thus, all the dependent variable met the requirement of linearity using the analysis of the normal plots.

### Variables Linearity

Standard multiple regression can only accurately estimate the relationship between the dependent and independent variables if the relationships are linear in nature (Osborne & Waters, 2002; Pallant, 2013). The residual should have a straight-line relationship with the predicted dependent variable (Pallant, 2013). A preferable method for linearity detection is an examination of residual plots of the standardised residuals as a function of standardised predicted values (Osborne & Waters, 2002).

An examination of residual scatter plots is employed to test the assumption of linearity as suggested by Pallant (2013). The result of the testing linearity through scatter plot diagrams and the P-P Plot is shown in Appendix D. Which shows no evidence of a nonlinear pattern to the residuals.

### Homoscedasticity

Homoscedasticity means that the variance of the errors is the same across all levels of the independent variables (Osborne & Waters, 2002). This assumption can be checked by a visual examination of a plot of the standardised predicted values against the standardised residuals (Osborne & Waters, 2002; Pallant, 2013). If there is no clear relationship between the residuals and predicted values, the assumption of homoscedasticity should be met.

In this study, residual scatter plots as shown in Appendix D indicates that there was no clear relationship between the residuals and the predicted values and that residuals are randomly scattered around the horizontal line providing relatively even distribution. Therefore, the results suggest that the assumption of homoscedasticity should be met in this study.

### Outliers

Multiple regression is very sensitive to outliers (very high or very low scores) (Pallant, 2013). Outliers can be identified either through visual inspection of scatter plots, frequency distributions or by converting data to z-scores (Osborne & Waters, 2002). Outliers can be defined as cases that have a standardised residual (as displayed in the scatter plots) of less than  $-3.3$  or more than  $+3.3$ . With large samples, it is common to find a number of outlying residuals. If researchers find only a few, it is not necessary to take any action (Osborne & Waters, 2002; Pallant, 2013).

Outliers of the dependent variables can be identified from the standardised residual plots and the z-scores table for the dependent and the independent variables (See Appendix D). A visual inspection of the data revealed that the data were free from outliers; not any standardized residuals of more than 3.3 or less than -3.3 was found from the inspection of Box Plots or obtained from the converted Z-scores data Table.

In sum, no violations of the assumptions of MRA were found, and this allows the drawing of trustworthy and robust conclusions from data (Osborne & Waters, 2002).

#### **6.4.3.5 Multiple Regression Analysis of SPP' Dimensions**

Multiple regression analysis results determine the overall predictive power of the set of independent and control variables on the dependent variable. Additionally, MRA results give the direction and size of the effect of each independent variable on a dependent variable. This is especially valuable for testing conceptual models that state that multiple independent variables affect one dependent variable (Kerr et al., 2002).

A series of standard multiple regression analyses were conducted to assess the relationships between the SPP barriers and drivers and the seven dimensions of SPP. The analysis allows us to evaluate the importance of barriers and drivers for particular elements of SPP practices, thereby provides insights into the trade-offs influences of the independent variables on a particular SPP dimension. Hence, provides insights into managerial strategies to advance SPP implementation in these practices.

The specific regression model I estimate takes the following form:

$$Y_{ij} = \alpha_0 + \beta_1 X_j + \gamma_2 Z_j + \epsilon_{ij} \quad (1)$$

Where  $Y_{ij}$  represents the extent of organisation  $j$ 's engagement with the  $i$ 's sustainability dimensions of SPP:  $Y_{1j}$  environment,  $Y_{2j}$  human rights,  $Y_{3j}$  health and safety,  $Y_{4j}$  buying from locals,  $Y_{5j}$  buying from SMEs,  $Y_{6j}$  philanthropy, and  $Y_{7j}$  innovation.  $X_j$  is a vector of explanatory variables which are expected to influence the public organisation' engagement with SPP practices, which are the SPP drivers and barriers. Variable  $Z_j$  refers to the control variable, the organisation size, measured by the natural logarithm of the organisation's number of employees. Lastly,  $\epsilon_{ij}$  stands for random error terms.

A series of standard multiple regression analyses were computed in the SPSS. This analysis is presented in Table 30.

Table 30: SPP Dimensions' Multiple Regression Analysis

| Independent Variables         | Model 1<br>Environment  | Model 2<br>Human Rights | Model 3<br>Safety       | Model 4<br>Buying Locals | Model 5<br>Buying SMEs  | Model 6<br>Innovation   | Model7<br>Philanthropy  |
|-------------------------------|-------------------------|-------------------------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|
| (Constant)                    | .804<br>(2.962)         | .914<br>(3.060)         | 1.77<br>(3.871)         | 1.240<br>(6.971)         | 1.211<br>(4.925)        | 1.045<br>(4.188)        | 1.181<br>(5.815)        |
| Barriers                      |                         |                         |                         |                          |                         |                         |                         |
| Costs of sustainability       | -.055<br>(-1.407)       | -.057<br>(-1.307)       | -.103*<br>(-2.347)      | -.067*<br>(-2.601)       | -.067<br>(-1.892)       | -.038<br>(-1.043)       | -.031<br>(-1.065)       |
| Laws and Regulations          | -.041<br>(-.771)        | -.035<br>(-.596)        | -.007<br>(-.111)        | -.017<br>(-.470)         | .039<br>(.809)          | -.039<br>(-.800)        | -.045<br>(-1.130)       |
| Lack of SPP knowledge         | .132**<br>(2.788)       | .085<br>(1.636)         | .018<br>(.334)          | .076*<br>(2.460)         | .072<br>(1.675)         | .063<br>(1.460)         | .049<br>(1.381)         |
| Political constraints         | -.014<br>(-.282)        | -.052<br>(-.978)        | -.065<br>(-1.215)       | -.058<br>(-1.857)        | -.013<br>(-.294)        | -.044<br>(-.998)        | -.007<br>(-.204)        |
| Budgetary constraints         | -.058<br>(-1.091)       | -.087<br>(-1.496)       | -.002<br>(-.027)        | -.021<br>(-.599)         | -.083<br>(-1.725)       | .049<br>(1.001)         | .078*<br>(1.967)        |
| Obstacles by suppliers        | .085<br>(1.670)         | .012<br>(.213)          | .063<br>(1.099)         | .038<br>(1.137)          | -.038<br>(-.820)        | -.075<br>(-1.596)       | -.040<br>(-1.040)       |
| Cultural norms                | -.114*<br>(-2.512)      | .041<br>(.820)          | -.073<br>(-1.440)       | -.064*<br>(-2.139)       | -.010<br>(-.244)        | -.081*<br>(-1.947)      | -.020<br>(-.598)        |
| Drivers                       |                         |                         |                         |                          |                         |                         |                         |
| Top management support        | -.163*<br>(2.567)       | -.123<br>(-1.766)       | -.126<br>(-1.772)       | -.037<br>(-0.891)        | .122*<br>(2.120)        | -.094<br>(-1.613)       | -.081<br>(-1.704)       |
| Governments policy            | .060<br>(.816)          | .138<br>(1.714)         | .043<br>(.531)          | -.015<br>(-.323)         | -.045<br>(-.673)        | -.024<br>(-.354)        | .171**<br>(3.133)       |
| Employee initiatives          | .018<br>(.338)          | -.044<br>(-.749)        | -.006<br>(-.105)        | .017<br>(.475)           | -.082<br>(-1.682)       | .051<br>(1.024)         | -.048<br>(-1.184)       |
| Financial benefits            | .135*<br>(2.437)        | .140*<br>(2.299)        | .092<br>(1.488)         | .016<br>(.446)           | -.049<br>(-.984)        | .103*<br>(2.032)        | .087*<br>(2.113)        |
| Society awareness             | -.106<br>(-1.408)       | -.046<br>(-.549)        | -.059<br>(-.696)        | .082<br>(1.660)          | .046<br>(.678)          | -.055<br>(-.799)        | -.149*<br>(-2.638)      |
| NGOs demands                  | .041<br>(.593)          | .056<br>(.743)          | .074<br>(.962)          | .023<br>(.501)           | .101<br>(1.617)         | .029<br>(.463)          | .064<br>(1.235)         |
| The Islamic values            | .148**<br>(2.765)       | .069<br>(1.162)         | .134*<br>(2.234)        | .119**<br>(3.394)        | .047<br>(.959)          | .170**<br>(3.449)       | .092*<br>(2.303)        |
| EMSs                          | .168**<br>(3.248)       | -.080<br>(1.411)        | .083<br>(.651)          | .025<br>(.724)           | -.013<br>(-.286)        | .110*<br>(2.323)        | .064<br>(1.664)         |
| Control Variable              |                         |                         |                         |                          |                         |                         |                         |
| Organisation Size             | 0.25<br>(0.802)         | -0.007<br>(0.945)       | -0.085<br>(0.509)       | 0.021<br>(0.758)         | 0.044<br>(0.605)        | -0.049<br>(0.558)       | -.001<br>(0.995)        |
| <b>F Value</b>                | <b>4.164</b><br>(0.000) | <b>2.829</b><br>(0.001) | <b>1.978</b><br>(0.027) | <b>4.966</b><br>(0.000)  | <b>2.160</b><br>(0.015) | <b>4.420</b><br>(0.000) | <b>3.337</b><br>(0.001) |
| <b>R</b>                      | <b>0.660</b>            | <b>0.586</b>            | <b>0.518</b>            | <b>0.692</b>             | <b>0.535</b>            | <b>0.671</b>            | <b>0.618</b>            |
| <b>R<sup>2</sup></b>          | <b>0.435</b>            | <b>0.334</b>            | <b>0.268</b>            | <b>0.479</b>             | <b>0.286</b>            | <b>0.450</b>            | <b>0.382</b>            |
| <b>Adjusted R<sup>2</sup></b> | <b>0.331</b>            | <b>0.222</b>            | <b>0.133</b>            | <b>0.383</b>             | <b>0.153</b>            | <b>0.348</b>            | <b>0.267</b>            |

Note: Significance levels: \* p<0.05, \*\* p<0.01.

The previous seven models describe each regression analysis for each dependent variable. The models indicate the t-ratios and the level at which the t-ratios are significant.

All of the variables show an acceptable amount of variance being explained by the model, in accordance with the previous findings of McMurray et al. (2014) ( $R^2=33\%\sim 55\%$ ), and Brammer and Walker (2011) ( $R^2=12\%\sim 26\%$ ).

#### Model 1: The Environment

My analysis reveals a coefficient of regression analysis of  $R^2$  of 0.435 ( $F=4.146$ , at  $p\text{-value}<0.001$ ), which implies that these variables jointly accounted for about 44% of the observed variance in the environmental dimension. Lack of SPP knowledge ( $p\text{-value}<0.01$ ), cultural norms ( $p\text{-value}<0.05$ ), top management support ( $p\text{-value}<0.05$ ), financial benefits ( $p\text{-value}<0.05$ ), Islamic beliefs ( $p\text{-value}<0.01$ ), and EMS ( $p\text{-value}<0.01$ ) were all-significant, holding all others constant, as indicated the t-ratio of each of these variables. The result supports hypothesis number 3, 5, 7, 8, 10 and 14.

#### Model 2: Human Rights

Results revealed a coefficient of regression analysis of  $R^2$  of 0.334 ( $F=2.829$ , at  $p\text{-value}<0.001$ ), which implies that these variables jointly accounted for about 33% of the observed variance in the human right dimension. Only financial benefits were significant at  $p\text{-value}<0.05$  level, assuming the constancy of the other independent variables, as indicated by the t-ratio of each of these variables. The result supports hypothesis number 7.

#### Model 3: Health and Safety

Results revealed a coefficient of regression analysis of  $R^2$  of 0.268 ( $F=1.987$ , at  $p\text{-value}<0.05$ ), which implies that these variables jointly accounted for about 27% of the observed variance in the health and safety dimension.

Costs of sustainability and Islamic beliefs are significant at  $p\text{-value} < 0.05$ , when other variables are assumed constant, thus confirming the assumptions in hypothesis number 8 and 9.

#### Model 4: Buying from Local Businesses

Results revealed a coefficient of regression analysis of  $R^2$  of 0.479 ( $F=4.966$ , at  $p\text{-value} < 0.001$ ), which implies that the dependent variables jointly accounted for about 48% of the observed variance in the buying from the local business dimension. Costs of sustainability, lack of SPP knowledge, cultural norms, and Islamic beliefs were significant with the correct hypothesised relation. As indicated the t-ratio of each of these variables at  $p\text{-value} < 0.05$  and  $p\text{-value} < 0.01$  levels. The result supports hypothesis number 8, 9, 10, and 14.

#### Model 5: Buying from SMEs Businesses

Results revealed a coefficient of regression analysis of  $R^2$  of 0.286 ( $F=2.160$ , at  $p\text{-value} < 0.05$ ), which implies that the dependent variables jointly accounted for about 29% of the observed variance in the buying from SMEs dimension. Only top management's support was significant at  $p\text{-value} < 0.05$  level, keeping all others constant, as indicated the t-ratios. The result supports hypothesis number 5.

#### Model 6: Innovation

Results revealed that a coefficient of regression analysis of  $R^2$  of 0.450 ( $F=4.420$ , at  $p\text{-value} < 0.001$ ), which implies that the dependent variables jointly accounted for about 45% of the observed variance in the innovation dimension. Cultural norms ( $p\text{-value} < 0.05$ ), the financial benefits ( $p\text{-value} < 0.05$ ), Islamic values ( $p\text{-value} < 0.01$ ), and EMSs ( $p\text{-value} < 0.05$ ) were significant in this sample as indicated the t-ratio of each of these variables.



Hence, the result supports hypothesis 3, 7, 8, and 14.

#### Model 7: Philanthropy

Results revealed that a coefficient of regression analysis of  $R^2$  of 0.382 ( $F=3.337$ ,  $p\text{-value}<0.001$ ), which implies that the dependent variables jointly accounted for about 38% of the observed variance in the philanthropy dimension. Government sustainable strategy ( $p\text{-value}<0.01$ ), the financial benefits ( $p\text{-value}<0.05$ ), society awareness ( $p\text{-value}<0.05$ ), and Islamic values ( $p\text{-value}<0.05$ ) are all significant variables when other variables are held constant, as indicated the t-ratio of each of these variables. Thus, the result supports hypothesis 1, 2, 7, and 8.

In sum, the results of the series of multiple regressions provide support for several of the hypothesised relationships in this study. In my discussion of the results in Chapter 7, I will attempt to illuminate the possible reasons for these occurrences.

#### **6.4.3.6 Multiple Regression Model of SPP Practices**

A standard multiple regression analysis was used to determine whether there is a significant relationship between the summary SPP practices scale as the dependent variable and SPP drivers and barriers as the independent variables. The standard multiple regression model takes the following form:

$$Y_j = \alpha_0 + \beta_1 X_j + \gamma_2 Z_j + \epsilon_j \quad (2)$$

Where  $Y_j$  represents the extent of organisation' j's engagement with the SPP practices. An overall SPP practices scale was created by averaging the scores for the SPP practice subscales items (the environment, human rights, philanthropy, safety, buying from SMEs, buying from locals, and Innovation) following the previous studies of (Carter & Jennings, 2004; McMurray et al.,2014; Salam, 2007,2009).

$X_j$  is a vector of explanatory variables which are expected to influence the organisation's engagement with SPP practices, namely the drivers and barriers in my study.  $Z_j$  refers to the control variable, the size of organisation  $j$ , measured by the natural logarithm of the organisation's number of employees. Lastly,  $\varepsilon_j$  stands for random error terms. To the extent of the ( $j$ ) is the organisation ( $j=1, \dots, 16$ ).

Table 31 illustrates the results output of the MRA model, whereby the various influences upon Kuwait public sector organisation's propensity to be involved in SPP practices are evaluated simultaneously.

Table 31: SPP Practices' Multiple Regression Analysis

| Independent Variables |  | Beta Coefficients | t       | Sig.   |
|-----------------------|--|-------------------|---------|--------|
| 1                     | (Constant)                             | 2.497             | -18.870 | .000   |
|                       | Barriers of SPP                        |                   |         |        |
|                       | Costs of sustainability                | -.039             | -1.998  | .049*  |
|                       | Lack of Legislation and Regulations    | -.019             | -.713   | .478   |
|                       | Lack of SPP knowledge                  | .057              | 2.425   | .018*  |
|                       | Political constraints                  | -.030             | -1.249  | .215   |
|                       | Budgetary constraints                  | -.019             | -.718   | .475   |
|                       | Resistance and obstacles by suppliers  | .016              | .639    | .524   |
|                       | Tribalism and cultural norms           | -.053             | -2.323  | .023*  |
|                       | Drivers of SPP                         |                   |         |        |
|                       | Top managements support                | -.069             | -2.174  | .033*  |
|                       | Governments sustainability strategy    | .049              | 1.341   | .184   |
|                       | Employee initiatives                   | -.005             | -.168   | .867   |
|                       | Financial benefits                     | .061              | 2.215   | .030*  |
|                       | Society and citizens awareness         | -.043             | -1.144  | .256   |
|                       | NGOs and pressure groups demands       | .027              | .781    | .437   |
|                       | The Islamic values and beliefs         | .099              | 3.689   | .000** |
|                       | Environmental Management Systems (EMS) | .064              | 2.459   | .016*  |
|                       | Control Variable                       |                   |         |        |
|                       | Organisation Size                      | -.021             | -.240   | .811   |
|                       | <b>F Value</b>                         | 5.269             |         | .000   |
|                       | <b>R</b>                               | 0.703             |         |        |
|                       | <b>R<sup>2</sup></b>                   | 0.494             |         |        |
|                       | <b>Adjusted R<sup>2</sup></b>          | 0.400             |         |        |

-Dependent variable: SPP practices.

-Significance levels: \*  $p < 0.05$ , \*\*  $p < 0.001$ .

### Evaluating the MRA Model

Table 31 indicates that the MRA analysis yielded an R-value of 0.703,  $R^2$  of 0.494, and  $R^2_{\text{Adjusted}}$  of 0.400, this means the explanatory power of the framework is considered sufficient (Pallant, 2013). The ANOVA was used to assess the statistical significance of the results, the findings of the calculated F-value  $(15, 81) = 5.269$  confirmed the regression model is valid. The findings revealed that the linear relationship is highly significant; the p-value for the F  $(15, 81) = 0.000$  (sig. P-value $<0.05$ ), and demonstrates that the null hypothesis that the multiple R in the population is equal to ZERO (no effects), is rejected. In other words, all of the coefficients of the independent variables are equal to ZERO is rejected.

Thus, the full model containing all variables was statistically significant; indicating that the model adequately fits the data and that the variables as a group were important in explaining the determinant factors of SPP practices.

### MRA Model: The Testing of Hypotheses

The explanatory variables associated with Kuwait's SPP practices are also shown in Table 31. There is a sufficient evidence at the 5% and 1 % significant level that factors such as, costs of sustainability (p-value $<0.05$ ), lack of SPP knowledge (p-value $<0.05$ ), tribalism and cultural norms (p-value $<0.05$ ), top management's support (p-value $<0.05$ ), the financial benefits (p-value $<0.05$ ), Islamic values and beliefs (p-value $<0.01$ ), and EMS (p-value $<0.01$ ). All these variables have significant effects on the Kuwait SPP practices.

In this model, further, there is not enough evidence to conclude that each of the following variables has a significant effect on SPP practices in Kuwait:

Lack of legislation and regulations, political constraints, budgetary constraints, obstacles by suppliers, government's sustainability strategy, employee initiatives, society and citizens awareness, and NGOs and pressure group's demands.

Additionally, some of the signs of the estimated coefficients, such as lack of SPP knowledge, top management support, and social awareness is not similar to the conceptual or prior expectations. In my discussion of the results in Chapter 7, I will attempt to illuminate the possible reasons for these occurrences.

In summary, the results of the multiple regression provide support for several of the hypothesised relationships in this study.

I also have considered the size of an organisation as a control variable in my model, represented by the natural logarithm of the organisation's number of employees; respondents were asked for the number of employees in their organisation. My analysis indicates there is no significant relationship between the organisation size and the engagement with SPP practices ( $B = -.021$ ,  $t(96) = -.240$ , ns).

Therefore, the findings of my model are in line with previous results concerning the no current influence of the organisation size on the SPP operations in public organisations (Brammer & Walker, 2011; Carter & Jennings, 2004; Testa et al., 2014; Walker & Brammer, 2012).

This means that, contrary to what is generally proclaimed, organisation size is no barrier to, or facilitator of, public organisation's engagement with SPP in Kuwait. This is maybe caused by the fact that even with the larger availability of financial resources to be spent on public procurement by the larger administrations, the problem that remains to overcome, is that the tender selection criterion is usually based on the lowest price.

This means that larger public organisations do not seem to utilise their huge budget to advance a wider set of sustainable agenda or develop a sustainable purchasing strategy in Kuwait, and hence, represent an opportunity misused by public procurers. This also shed the light that engaging in SPP practices is rather a complex phenomenon that involves multi-dimensions organisational issues. Results of hypothesised relationships are presented in the following Table 32.

Table 32: Results of Hypothesised Relationships

| Summary of Hypothesised Relationships |   |           |
|---------------------------------------|---|-----------|
| Hypotheses                            | Hypothesised relationships  | Results   |
| H <sub>1</sub>                        | Government sustainable strategy is related to SPP*                  | Rejected  |
| H <sub>2</sub>                        | Society and citizens awareness is related to SPP*                   | Rejected  |
| H <sub>3</sub>                        | Environmental Management Systems (EMS) is related to SPP practices* | Supported |
| H <sub>4</sub>                        | NGOs and pressure groups demands are related to SPP*                | Rejected  |
| H <sub>5</sub>                        | Top management support is related to SPP*                           | Supported |
| H <sub>6</sub>                        | Employee initiatives are related to SPP*                            | Rejected  |
| H <sub>7</sub>                        | Financial benefits are related to SPP*                              | Supported |
| H <sub>8</sub>                        | Islamic values and beliefs are related to SPP*                      | Supported |
| H <sub>9</sub>                        | Costs of sustainability are related to SPP*                         | Supported |
| H <sub>10</sub>                       | Lack of SPP knowledge is related to SPP*                            | Supported |
| H <sub>11</sub>                       | Budgetary constraints are related to SPP*                           | Rejected  |
| H <sub>12</sub>                       | Regulation and laws are related to SPP*                             | Rejected  |
| H <sub>13</sub>                       | Political constraints are related to SPP*                           | Rejected  |
| H <sub>14</sub>                       | Cultural norms are related to SPP*                                  | Supported |
| H <sub>15</sub>                       | Obstacles by suppliers are related to SPP*                          | Rejected  |

\* holding all others constant

### Multiple Regression Analysis of SPP Practices – Supplementary Model

A supplementary regression analysis was conducted in order to explore the relationship between the summary of the SPP practices scale and the summary of SPP drivers and barriers scales. The regression model takes the following form:

$$Y_j = \alpha_0 + \beta_1 X_j + \beta_2 K_j + \gamma_3 Z_j + \epsilon_j \quad (3)$$

Where  $Y_j$  represents the summary of the SPP practices scale and is calculated by averaging the scores for all the SPP practices subscales items (Carter & Jennings, 2004; McMurray et al., 2014; Salam, 2007, 2009). Explanatory variable  $X_j$  is calculated by averaging the scores for all SPP barriers items ( $B_1, \dots, B_7$ ) (Islam & Siwar, 2013; McMurray et al., 2014).

Explanatory variable  $K_j$  is calculated by averaging the scores for all SPP drivers items ( $D_1, \dots, D_8$ ) (Islam & Siwar, 2013; McMurray et al., 2014).

Variable  $Z_j$  refers to the control variable, the organisation size, represented by the natural logarithm of the organisation's number of employees. Lastly,  $\epsilon_j$  stands for random error terms.

Table 33 illustrates the results of the supplementary model. The results give us an overall indication of the predictive power of the drivers and barriers of SPP practices in the Kuwait context.

The estimated result fulfilled the following criteria for good results. Firstly, the signs of the estimated coefficients are similar to the prior expectations. Secondly, the summary measure of goodness of fit test showed that all the predictor variables explained around 30% per cent variation of the SPP practices, which is reasonably accepted in cross-sectional data (McMurray et al., 2014).

Lastly, study findings indicated that the fitted regression model is valid and significant as evidence of  $F(2,94)=11.680$  with  $P\text{-value}=0.000$  (sig.  $P\text{-value}<0.05$ ).

Table 33: SPP Practices' Multiple Regression Analysis – Supplementary Model

| Independent Variables                 | Beta Coefficients | t      | Sig.  |
|---------------------------------------|-------------------|--------|-------|
| 1 Constant                            | 1.640             | 10.576 | .000  |
| Barriers of SPP                       | -.099             | -3.201 | .002* |
| Drivers of SPP                        | .126              | 4.127  | .000* |
| Control Variable<br>Organisation Size | -.029             | -.640  | .524  |
| <b>F Value</b>                        | 11.680            |        | .000  |
| <b>R</b>                              | 0.523             |        |       |
| <b>R<sup>2</sup></b>                  | 0.274             |        |       |
| <b>Adjusted R<sup>2</sup></b>         | 0.250             |        |       |

-Dependent variable: SPP practices.

-Significance levels: \* p<0.01.

Thus, from my analysis, the SPP barriers variables as a group (B=- 0.099, t(96)=-3.201, P-value<.05) was statistically significant, indicating that the SPP barriers scale items identified in this study have a significant negative effect on the public sector organisation propensity to implement SPP practices.

Furthermore, the SPP drivers variables as a group (B=.126, t (96)=4.127, P-value<.05) was statistically significant, indicating that the SPP drivers scale items identified in this study have a significant positive effect on the public sector organisations propensity to implement SPP practices.

The results also indicate that the drivers' factors have a stronger effect on SPP practices than the barriers, as evident from the coefficients. This confirms my previous finding (See Tables 20 and 21), where the public procurement' personals agreed with the SPP drivers factors listed in the questionnaire with a Mean=3.64 and Mode=4.00. The results further indicate that Kuwait's public procurement personal only moderately agreed with the SPP barriers listed in the questionnaire with a Mean=3.26 and Mode=3.00.

My analysis also indicates that there is no significant relationship between the organisation size and the engagement with SPP practices ( $B = -.029$ ,  $t(96) = -.640$ , ns), in line with previous results (See Tables 30 and 31).

In summary, the results of the multiple regression provide support for the hypothesised relationships in this study, as presented in Table 34.

Table 34: Results of Hypothesised Relationships

| Summary of Hypothesised Relationships |  |           |
|---------------------------------------|--|-----------|
| Hypotheses                            | Hypothesised Relationships   | Results   |
| H <sub>a</sub>                        | The greater manifestation of driver's factors in the public organisations will facilitate the sustainable procurement practices* | Supported |
| H <sub>b</sub>                        | The greater manifestation of barriers factors in the public organisations will hinder the sustainable procurement practices*     | Supported |

\* Holding all others constant

#### 6.4.3.7 Correlation Analysis

Pearson correlation analysis between the dependent variable and each of the independent variables was conducted to ascertain the direction of the relationship between the variables. Pearson correlation analysis was conducted first on the summary measures (created by averaging the scores for the PSR model scales) of SPP practices, drivers of SPP, and barriers to SPP.

One-tailed significance tests were performed due to the limited sample size, with the output from the correlation analysis shown in Table 35.

The results revealed that SPP practices are significantly and positively correlated with the SPP drivers scale, and are significantly and negatively correlated with the barriers scale.



Table 35: Correlations between SPP Practices, Barriers, and Drivers

|                        |      | SPP            | Barriers      | Drivers  |
|------------------------|------|----------------|---------------|----------|
| <b>SPP</b>             | R    | <b>1</b>       |               |          |
|                        | Sig. |                |               |          |
| <b>Barriers of SPP</b> | R    | <b>-.356**</b> | <b>1</b>      |          |
|                        | Sig. | .000           |               |          |
| <b>Drivers of SPP</b>  | R    | <b>.434**</b>  | <b>-.226*</b> | <b>1</b> |
|                        | Sig. | .000           | .013          |          |

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

Furthermore, correlation matrix analysis was performed among the SPP practices scales; this analysis tested whether SPP practices have a positive correlation with the SPP drivers' variables and negative correlation to the SPP barriers' variables. The results are shown in Table 36.

The correlation matrix results in Table 36 suggest that the SPP practices were negative and significantly correlated with the barriers variables (P-value  $\leq 0.05$ ), and that the SPP practices were positive and significantly correlated with the drivers' variables (P-value  $\leq 0.05$ ). In addition, none of the independent variables strongly correlated with the dependent variable.

Overall, the Pearson correlation result shows evidence regarding the association between the SPP practices and the public organisational drivers and barriers factors, with Environmental Management Systems (EMS) ( $r=0.52$ , P-value=0.000) and Islamic values and beliefs ( $r=0.41$ , P-value=0.000) drivers had a relatively higher relationship with the SPP practices than the other drivers and barriers factors.

Table 36: Correlation Matrix

|     |      | SPP     | B1     | B2      | B3     | B4     | B5     | B6      | B7     | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|-----|------|---------|--------|---------|--------|--------|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|----|
| SPP | R    | 1       |        |         |        |        |        |         |        |        |        |        |        |        |        |        |    |
|     | Sig. |         |        |         |        |        |        |         |        |        |        |        |        |        |        |        |    |
| B1  | R    | -.245** | 1      |         |        |        |        |         |        |        |        |        |        |        |        |        |    |
|     | Sig. | .008    |        |         |        |        |        |         |        |        |        |        |        |        |        |        |    |
| B2  | R    | -.227*  | .145   | 1       |        |        |        |         |        |        |        |        |        |        |        |        |    |
|     | Sig. | .013    | .078   |         |        |        |        |         |        |        |        |        |        |        |        |        |    |
| B3  | R    | -.112   | .275** | .402**  | 1      |        |        |         |        |        |        |        |        |        |        |        |    |
|     | Sig. | .136    | .003   | .000    |        |        |        |         |        |        |        |        |        |        |        |        |    |
| B4  | R    | -.237** | .157   | .390**  | .415** | 1      |        |         |        |        |        |        |        |        |        |        |    |
|     | Sig. | .010    | .063   | .000    | .000   |        |        |         |        |        |        |        |        |        |        |        |    |
| B5  | R    | -.292** | .210*  | .509**  | .308** | .432** | 1      |         |        |        |        |        |        |        |        |        |    |
|     | Sig. | .002    | .020   | .000    | .001   | .000   |        |         |        |        |        |        |        |        |        |        |    |
| B6  | R    | -.245** | .110   | .435**  | .258** | .547** | .573** | 1       |        |        |        |        |        |        |        |        |    |
|     | Sig. | .008    | .141   | .000    | .005   | .000   | .000   |         |        |        |        |        |        |        |        |        |    |
| B7  | R    | -.348** | .213*  | .287**  | .364** | .402** | .237** | .482**  | 1      |        |        |        |        |        |        |        |    |
|     | Sig. | .000    | .018   | .002    | .000   | .000   | .010   | .000    |        |        |        |        |        |        |        |        |    |
| D1  | R    | .202*   | .025   | -.170*  | -.061  | -.044  | .045   | -.108   | -.175* | 1      |        |        |        |        |        |        |    |
|     | Sig. | .024    | .404   | .048    | .278   | .333   | .330   | .145    | .043   |        |        |        |        |        |        |        |    |
| D2  | R    | .326**  | .107   | -.070   | -.110  | .039   | .036   | -.090   | -.230* | .654** | 1      |        |        |        |        |        |    |
|     | Sig. | .001    | .149   | .248    | .142   | .353   | .362   | .190    | .012   | .000   |        |        |        |        |        |        |    |
| D3  | R    | .192*   | .103   | -.029   | -.054  | -.113  | -.108  | -.185*  | -.124  | .641** | .463** | 1      |        |        |        |        |    |
|     | Sig. | .030    | .158   | .390    | .301   | .136   | .146   | .035    | .113   | .000   | .000   |        |        |        |        |        |    |
| D4  | R    | .276**  | .002   | -.206*  | -.026  | -.112  | -.210* | -.249** | -.044  | .504** | .459** | .466** | 1      |        |        |        |    |
|     | Sig. | .003    | .491   | .021    | .399   | .137   | .019   | .007    | .335   | .000   | .000   | .000   |        |        |        |        |    |
| D5  | R    | .300**  | .066   | -.153   | -.039  | -.181* | .007   | -.165   | -.195* | .571** | .703** | .379** | .563** | 1      |        |        |    |
|     | Sig. | .001    | .261   | .067    | .352   | .038   | .473   | .053    | .028   | .000   | .000   | .000   | .000   |        |        |        |    |
| D6  | R    | .336**  | .011   | -.342** | -.226* | -.129  | -.034  | -.197*  | -.205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
|     | Sig. | .000    | .457   | .000    | .013   | .104   | .371   | .027    | .022   | .000   | .000   | .000   | .000   | .000   |        |        |    |
| D7  | R    | .410**  | -.065  | -.043   | -.187* | -.143  | -.075  | -.050   | -.162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
|     | Sig. | .000    | .262   | .337    | .034   | .081   | .232   | .314    | .057   | .000   | .001   | .000   | .214   | .000   | .000   |        |    |
| D8  | R    | .490**  | -.091  | -.188*  | -.130  | -.044  | -.165  | -.133   | -.195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |
|     | Sig. | .000    | .188   | .032    | .102   | .336   | .054   | .097    | .028   | .000   | .000   | .012   | .005   | .000   | .000   | .001   |    |

\*\* . Correlation is significant at the 0.01 level (1-tailed).

\* . Correlation is significant at the 0.05 level (1-tailed).

## **6.5 Conclusion**

This chapter presented the data analysis, summarising the essential features and the relationships between variables. In this study, the qualitative data analysis process involved content and thematic analysis, and both deductive and inductive coding approaches. The quantitative data collected from a questionnaire disseminated to Kuwait's public employees were analysed through descriptive and inferential statistics. Descriptive statistics, such as the means, mode, standard deviations, frequency counts, and percentages of data and variables were computed. Furthermore, I applied inferential statistics through factor analysis, correlation analysis, and multiple regressions.

Chapter 7 discusses the results of the study in more details.

## **Chapter 7: Research Results**

### **7.1 Introduction**

This chapter discussed the findings of my research and informs about the evidence found to support the hypothesised relationships between the SPP practices, barriers and drivers in the Kuwait public sector context.

### **7.2 SPP Practices in Kuwait's Public Organisations**

In the next section, a discussion of the evidence found through tender analysis, interviews, and questionnaires in order to answer the research question: What is the current situation of sustainable public procurement (SPP) practices in the Kuwait public sector organisations?

#### **7.2.1 The Environment**

There is much national legislation concerned with environmental protection and pollution prevention, which apply to Kuwait's public procurement practices (EPA, 1998). For example, under the general rules for public budgets, the implementation of any new public project must be accompanied by studies related to the environmental, social, and economic impacts of this public project.

Table 37 contains some of the environmental criteria found through the analysis of Kuwait's public tender document.

Table 37: Environmental Criteria Found in the Sampled Tenders

| <b>Environmental Criteria</b>  |
|--|
| <b>Environmental Regulation</b>  |
| The contractor shall perform the tender contract in compliance with Kuwait environmental guidelines and regulations.                                   |
| Public authorities must meet and refer to Kuwait' EPA regulations when contracting.  |
| <b>Recycling/ Reusing Materials</b>  |
| The use of recycled materials and requesting the recycling of any used materials.  |
| The use of environmentally friendly materials, with the least amount of waste and low toxicity.  |
| Recycling and reuse of construction debris, road surfacing, and building materials.  |
| <b>Reduce the use of energy/resources</b>  |
| The use of alternative, cleaner, and sustainable resources of energy.  |
| Encourage reducing fuel, energy, and water consumption.  |
| The use of solar systems, groundwater, and reusing rainwater.  |
| <b>Pollution and waste reduction</b>   |
| The contractor shall ensure that all contract works are carried out with due diligence to the preservation of air, water, soil, animal and plant life. |
| Avoid using harmful chemical substances, and reduce CO <sub>2</sub> and hazardous gas emission.  |
| Sustainable waste management plans, where disposal of untreated sewage, oil spills, and chemicals are not permitted.                                   |
| <b>Environmental Management Systems (EMS)</b>  |
| ISO 14001 or EMAS certifications are requested in public tenders.  |
| Contracting for green buildings according to the international LEED certified rating standards.  |
| <b>Eco-friendly products</b>   |
| Procuring for star certified equipment and appliances.   |
| Procuring for green and eco-buildings' flooring, carpets, and curtains.  |
| Procuring for energy-saving, high-quality, environmentally compatible lighting, heating, ventilation systems   |

In the process of reviewing procurement and tender contracts, the list of sustainability criteria found in some of them were quite extensive. The green criteria found in the tender documents included some essential environmental aspects, such as energy efficiency, water and waste rationalisation, materials reusing and recycling, and reducing greenhouse gas emissions. Similarly, the questionnaire findings revealed that the higher scores for the items of the environmental dimension were related to the reduction of energy usage, pollution, wastes, and water consumption. These criteria are usually associated with the requirements of “Green Buildings”.

Many public sector procurement officials reported that they have recently tendered for their public building to be converted into green one, in accordance with the Leadership in Energy and Environmental Design (LEED) certificate.

For example, one procurement official explained the importance of such green certificates, and how they are working to obtain them, stating that,

“We are currently seeking to meet all the requirements of LEED; a certification is given for high environmental performance buildings, through tendering our new green building, which will save energy, and reduces water consumption and gas emissions”.

This was confirmed by another procurement director, who stated that the criteria of energy and water saving, and pollution and waste reduction in their procurement, were, in fact, to convert their public building into a high-performance green one,

“We are converting our public building into an environmentally friendly one, according to the standards of LEED. Thus, all our procurement contracts include green requirements, such as energy-saving and low-emission lighting and air-conditioning equipment, green furniture and carpets, and green maintenance and service contracts”.

Furthermore, the results of procurement analysis showed that about 40% of the documents collected contained specific environmental criteria, and in total, it revealed that around 50% of the sample organisations considered environmental aspects of their procurement operations. On the other hand, the analysis of the tenders surprisingly revealed that many important aspects of a strategic environmental procurement perspective were lacking. Examples of missing aspects are (1) Food & Catering: Purchase of organic and local food, animal welfare standards, less processed and GMOs food and minimising food waste. (2) IT Products: Recycled toner and inkjet cartridges, lead and mercury free computers and environmental monitors. (3) Vehicles:

electric or hybrid vehicles, vehicles that operate on non-contaminating fuels, such as biofuels, eco-friendly tyres, and lower CO<sub>2</sub> and noise emissions.

Many procurement managers I met stress that they currently at no time procured for any sustainable food choices, as one official stressed, “We never had any requirements for organic food within our supply contracts”. A procurement official also stressed on the absence of eco-friendly vehicles voicing that, “Currently there are no environmental criteria in regards to tendering for green transportations”. Another official voiced the lack of IT environmental preferences,

“We usually tender for regular goods and services, such as office furniture, stationery, and IT, none of which has any green criteria or specifications”.

As such, several product groups did not have apparent green criteria. Given the nature of the product groups, the absence of green criteria is rather alarming, and there is still a long way to go regarding environmental sustainability in Kuwait.

The low implementation of environmental criterion corresponds with my finding from the questionnaire, in which, among all of the dimensions of SPP, the environmental construct was the least embedded within the operation of Kuwait’s public procurement (See Table 19). These findings also relate to the outcome of my interviews; many officials I met and converse with stress that they currently at no time procured for any green products. For example, one procurement official commented, “We never tendered for any green products or services”. Likewise, another official pointed out, “Usually we do not ask for environmental specifications in our public tenders”. On the other hand, other procurement’ officials did confirm that they are attentive to including green criteria and standards in their procurement operations.

For example, one official gave details of their green procurement,

“We are very committed to the procuring of green goods and services, all our office consumables such as office papers and pens are green products. Even the gifts that we offer in our environmental awareness campaigns, or hand out in our various activities are environmentally friendly products”.

In summary, the survey results, tender document analysis, and the outcomes of the interviews, all confirm the presences of environmental practices. The overall impression is that environmental criteria of the procured work, products and services were somewhat covered; one can conclude that at least some environmental considerations are on the agenda of several public bodies. However, it is evident that many important aspects of green criteria were lacking, and that several important product groups did not have any green or environmental criteria.

### **7.2.2 Human Rights**

Kuwait is committed to protect, promote, and the safeguard of Human Rights at the national, regional, and international levels. The basic principles of human rights are included in Kuwait's 1962 Constitution, in the national laws and regulations, as well as a series of international treaties (United Nations, 2015; US Department of State, 2015).

The Kuwaiti constitution has referred to the principle of equality, as one of the pillars of the Kuwaiti society. For example, article No.7 of the Constitution stipulates, “Justice, freedom, and equality are the pillars of society”. Similarly, article No.22 stipulates “The law regulates social justice rules, the relationship between employees and employers”. Article No.35 also guarantees freedom of religious belief and liberty to practice religion “Freedom of belief is absolute” (Kuwait Constitution, 1962).



Table 38 shows a list of human rights criteria included within Kuwait's tender documents.

Table 38: Human Rights Criteria Found in the Sampled Tenders

| <b>Human Rights Criteria</b>  |
|---|
| <b>Human Rights Laws and Regulation</b>   |
| Suppliers are committed to the provisions of the National Labour Law No. 6 of the year 2010.  |
| Suppliers shall perform the contract in accordance with sound industry practices, and relevant labour standards and regulation.   |
| <b>Labourers Wages</b>  |
| Suppliers commitment to the Council of Ministers Decisions No.843 of the year 2008 concerning workers' wages.   |
| Setting the minimum wage for suppliers' workers, according to the national minimum wage law, that is sufficient to support themselves and their families at a subsistence level.  |
| Suppliers are obliged by law to submit the monthly workers' salary disclosure and payroll to the MOSAL, and the continued commitment to this obligation for all duration of the tender contract.  |
| <b>Labour Conditions</b>  |
| Setting the standard workweek for the suppliers' workers 48 hours, with 30 days of annual leave, and all designated annual national holidays  |
| The government bodies reserve the right to visit the suppliers' sites, to verify the conditions of suppliers' establishments' appropriateness and suitability to the workers.   |
| Suppliers should offer improved welfare- i.e. Housing, food, and living conditions- for his workers to improve their capability to do their work as best as possible  |
| <b>Labour Rights</b>  |
| Suppliers are committed to providing transportation means for their employees to places of worship, mosques, and on religious occasions.  |
| Suppliers shall bear all expenses of annual vacations for their employees, and their travel expenses. In addition, Suppliers shall bear all costs of any emergency or sick leaves, while paying employees their full end of service benefits. |
| Suppliers' workers have the right to visit their native countries, and the contractor must not refuse this request and must provide an alternative for the absent workers.  |

The questionnaire findings revealed that the highest embedded practice item in the human rights construct was for Ensuring that suppliers comply with Kuwait's labour laws item (Mean=3.49, Mode=4.00).

Around 54% of the respondents agreed that they make sure that suppliers meet the terms of Kuwait's human rights laws regarding their employees. These findings show that relevant legislation and laws enforcement influence positively on the implementation of SPP practices. For example, the Kuwait labour law ensures adequate protection for the workers, covering all the aspects of human rights

protections, the minimum workers' wages, the employment of women, the prohibition of the employment of juveniles, and the criminalisation of forced labour.

The second to follow item concerned Requesting from the suppliers to pay wages higher than Kuwait's minimum wage (Mean=3.38, Mode=3.00). The national minimum wage law requires employers receiving government tender contracts to pay their workers a wage that is sufficient to support themselves and their families at a subsistence level. A procurement official I interviewed confirmed this information, stating,

“Certainly, the Kuwaiti law is keen to secure the rights of labour in regards to their salaries, labour affairs and residences. It is necessary that the suppliers' employees receive their adequate salaries on a regular basis, and it is one of the essential requirements for tendering public contracts”.

In an agreement, another procurement official stressed,

“We follow-up with the suppliers periodically in regards to paying appropriate salaries to their employees”.

The item Visiting the suppliers' facilities to ensure that they are not using sweatshop labour registered a Mean=3.18 and Mode=4.00. Only 44% of the respondent agreed that they visit public suppliers' facilities and locations for inspections. The finding reflected the different standpoint, I received from the procurement officials I interviewed concerning visiting their suppliers' facilities.

Some of the officials confirmed the vitality of this SPP act voicing,

“We visit the suppliers' facilities and the workers' residences that the suppliers have prepared for them, to make sure of their appropriateness and on the workers' general conditions”.

On the other hand, another official regarded these visits as beyond their responsibility as a procuring function,

“We monitor suppliers’ workers, in regards to the quality of clothes and food provided to them and their general condition. However, this is limited to the boundaries of our public institution. We do not conduct visits to their facilities, as we consider this act out of our tendering authorities”.

In sum, Kuwait is committed to the protection and safeguard of human rights, and fundamental principles of human rights are included in Kuwait’s constitution and regulations. This fact was apparent in the affirmative and binding tender conditions regarding human rights. However, it is somewhat at odds with the outcomes from the questionnaires, where the respondents only reported a moderate level of implementation for this SPP practice. The reason for this discrepancy may be that public procurement employees may have limited knowledge of SPP regulations, which might lead to noncompliance. To increase the level of SPP practices, there should be an increase in awareness initiatives for the procurement professionals, in regards to understanding the degree of interaction between the public tenders and the suppliers’ labour rights standards and regulations.

Furthermore, although the national laws adopted by Kuwait safeguard and promote human rights, however, some aspects do need further improvement. For example, the Kuwaiti laws prohibit discrimination in employment based on race, gender, and disability. Nevertheless, no laws prohibit labour, discrimination based on language or nationality. For instance, I found from analysing tender documents that tender pricing is calculated based on salary ranges offered to the national labour, and in the case of the absence of Kuwaiti labour, the tender contract value is reduced by 30%, as foreign workers do not enjoy the same salaries provided for the Kuwaiti

workers. Furthermore, some tender conditions specifically prefer Arabic labour to any other non-Arabic labours in employment positions or prohibit non-Arabic from being employed in some procured public tenders.

### **7.2.3 Health and Safety**

Kuwaiti law and regulations ensure adequate protection for the workers' health and safety by virtue of the fact that it was drafted in light of the provisions of relevant international conventions (United Nations, 2015). For example, the labour law stipulates that: "The State shall concern itself with public health and prevention and treatment of diseases and epidemics", and "It is the contractor's full obligation to protect his workers from health hazards and occupational diseases".

Table 39 shows some of health and safety criteria included in the tender and procurement documents.

Table 39: Health and Safety Criteria Found in the Sampled Tenders

| <b>Health and Safety Criteria</b>  |
|--|
| <b>Laws and Regulation</b>   |
| Suppliers shall adhere strictly to Kuwait's laws and regulation concerning workplaces requirements and conditions to protect workers against occupational hazards, and the requirements of health and safety protection in workplaces.   |
| Suppliers shall bear the burden of health insurance and warranties stipulated in Law No.1 of 1999, and the Ministerial Decision No.126 of 2000, issued in these regards, against the dangers of work and work-related injuries.  |
| Suppliers are required to abide by the Council of Ministers Decree No. 157 of the year 2005 concerning working hours outdoors between 12:00 PM and 4:00 PM during the summer months.   |
| <b>Safety of Suppliers' Facilities</b>   |
| Contractors' companies must be OHSAS 18001 certified.  |
| Suppliers shall maintain the order, cleanliness, safety and security of the work sites so that the movement of personnel or equipment does not block and hinder or put them at risk.   |
| Contractors shall provide the necessary on-site medical services, registered and assigned health team, and must maintain data records of work-related injuries and illnesses.  |
| The contractor is entirely responsible for providing the necessary transportation means for his tools, materials, and equipment, and for loading and unloading them properly.  |
| Suppliers shall protect the workers from the dangers of collapse, falling objects, fragments, sharp objects, inflammable, explosives, acids, and toxins among other things.  |
| <b>Employees' Health and Safety</b>  |
| Suppliers shall conduct a periodic medical examination for his labour, and submit the medical reports to the tendering governmental bodies.  |
| Suppliers shall provide the necessary means of vocational safety to protect workers during the work from all injuries arising from using work tools; comprising among other things machines, gears, lifting and transport equipment.   |
| Suppliers shall provide all necessary Personal Protection Equipment (PPE) in the work sites and all protective hardware and clothing, provide fire extinguishers and fire-fighting equipment, and adequate protection for the public including road signs, warning lights, and barricades. |

The questionnaire findings revealed that the Health and Safety construct of SPP practices is significantly implemented into the Kuwait public sector practices with Mean=3.66 and Mode=4.00.

This level of agreement confirms the previous finding concerning health and safety having a higher weight on the supplier selection criteria (See Table 18).

The highest embedded item found in the health and safety construct was for Ensuring that suppliers comply with Kuwait's health and safety regulations with Mean=3.81 and Mode=4.00. Around 71% of the respondent has agreed that they make sure the suppliers meet Kuwait's regulations regarding labours' health and safety.

The suppliers are required to abide by the Kuwaiti laws regarding safeguarding labours' health, protecting workers from risks of injuries, and from occupational hazards in workplaces. Supporting this view, one procurement official stated that,

“The Kuwaiti law requires the rights of the labour to be protected, and to take all the necessary measures not to expose their lives to risks, and to safeguard their health and safety”.

The public organisations in Kuwait place great emphasis on occupational health and safety aspects of the procurement operations and require that the suppliers adhere to the highest standards of sound industry practices during the implementation of the public tender. Per se, other health and safety items also had high scores, such as; Ensuring safe, incoming and movement of product in suppliers' facilities, and Ensures suppliers provide appropriate personal protective equipment for employees both with Mode and Median=4.00.

The majority of the respondents agreed that they ensure that the requirements of safety standards in the supplier's facilities are followed.

A procurement official confirmed this fact by stressing that,

“We place a huge emphasis on safety and health requirements; it is a fundamental part of our procurement contract. We also conduct field visits to inspect the contractor's work sites, facilities, and building periodically, to ensure his compliance with the health and safety regulations. Furthermore, we make sure he provides his employees, with all protective clothes, uniforms, helmets, and equipment”.

Lastly, the item Ensuring that the suppliers' workers are insured against accident or liability by Kuwaiti insurance companies had also a high score of

Mean=3.55 and Mode=4.00. Around 58% of the respondents confirmed asking suppliers to bear the burden of health insurances against the dangers of work and work-related injuries for their labours. According to the public procurement rules, the suppliers are entirely responsible for providing the necessary insurances for all their employees, and that these insurance certificates are valid throughout the tender project.

In sum, it appears that the Kuwait public organisations place a strong emphasis on occupational health and safety protection aspects of SPP practices, and require that the suppliers adhere and actively pursue the highest standards of health and safety performance. My findings also show that relevant legislation and law enforcement have a positive impact on the degree of implementation of this SPP practice.

#### **7.2.4 Philanthropy**

The Philanthropy construct is a one item-factor, which asks the questionnaire respondent whether their procurement function Utilises suppliers that are philanthropic, i.e. Whether they create training and employment for people with special needs and this item registered a Mean=3.15 and Mode=3.00.

The questionnaire findings revealed that around 37% of the respondent agreed that their procurement function prioritises philanthropic suppliers. However, 40% were unsure or neutral, and 22% disagreed with this statement.

This moderate agreement also reflects the same argument in the pilot phase, where there was an agreement among respondents that philanthropic operations may not directly be linked to Kuwait's public procurement operations, functions, or practices. Similarly, procurement managers I interviewed in the current research argued that these philanthropic activities were beyond their traditional procurement operations, and do not take place under the direct functions of public

procurement departments in Kuwait. Furthermore, I was unsuccessful in identifying any explicit philanthropic' criteria through the process of Kuwait's tender document analysis (See Table 8). However, the tender law allows public bodies to use the "Direct-Order Purchase" procurement method, which is of an exceptional nature, in philanthropic practices. The Direct-Order tendering method does not require drawing competitive bids from a number of bidders. The permits are offered for suppliers that are philanthropic or of a social nature, such as, those that sell products made by people with disabilities, special needs, and prison inmates. There is also a disability law in Kuwait that imposes penalties on employers who refrain without reasonable cause from hiring workers with disabilities. The government, generally, enforced these social provisions.

Nevertheless, the enforcement of these provisions in the tender contracts in regards to the supplier's labours needs more affirmation.

In sum, both the questionnaire respondents and procurement officers I met and interviewed had a moderate agreement regarding the implementation of the philanthropic practices in Kuwait public procurement operations.

### **7.2.5 Buying from Locals**

Table 40 includes some criteria regarding buying from locals, as found in the Kuwait public tender contracts and documents.



Table 40: Buying from Locals criteria found in the sampled tenders

| <b>Buying from Locals Criteria</b>  |
|---|
| <b>Laws and Regulation</b>  |
| Suppliers shall adhere to the provisions of all laws and regulation concerning the Protection of Local Products and the Protection of Local Industries.   |
| Suppliers shall adhere to the provisions of the Decision No. 6 of the year 1987 regarding the supplier's commitment to purchase what is needed in the implementation of the contract of materials, devices, machines, tools, or goods from local products or products that of a national origin.                                    |
| Suppliers shall comply with laws and regulation regarding the national Kuwaiti labour quotas in non-government organisations.   |
| Suppliers shall be committed to the laws and regulation regarding the training of Kuwaitis' technical cadres.   |
| <b>Buying National Products</b>   |
| All government organisations must secure their purchase requirements from the national products or the products of national origin, including all agricultural, animal, and industrial products in its preliminary form or at any stage of production or manufacture, considering the conditions of pricing, quality, and delivery. |
| By law, foreign companies cannot sell directly to the government in Kuwait, nor can they participate in public tenders except through a Kuwaiti agent or partner.   |
| National products are given preference in prices over similar foreign products, by a 10 % margin. National origin products enjoy a price preference of 5 %. In the case of non-availability of national product, the products of the national origin will be given preference of 10 % over similar foreign goods.                   |
| Suppliers shall only buy what they need from oils and fuel products necessary for their cars, vehicles, and machines from the National Oil Company (NOC), and the Kuwait National Petroleum Company (KNPC).   |
| <b>Supporting Kuwaiti Nationals</b>   |
| Contractors are obliged to employ a number of Kuwaiti employees, especially in supervision positions, set off as 10% for service tenders.   |
| Contractors must submit a certificate of the employment of the required percent of Kuwait national quota with their tender offers. Otherwise, they will not be eligible to bid for the tender contract.   |
| Suppliers shall compel with providing training courses for the Kuwaiti employees appointed by the procuring government agency for the duration of the contract.   |
| The law makes it compulsory that some functions such as guard and nutrition administrators shall only be occupants by Kuwaiti personals, and the tender bidder who not adhere to this requirement will not be accepted.   |
| <b>Buying from National Industries</b>  |
| Contractor shall only issue life insurances policies against the dangers of work and work-related injuries to all his employees in one of the accredited Kuwaiti insurance companies.   |
| Suppliers shall use the national airline of the State of Kuwait, in the event of air travel of the contractor's personnel, or the airfreight of the goods and equipment required for the implementation of the tender contract.   |
| Suppliers shall use in the shipment of goods and materials the Kuwait Oil Tanker Company (KOTC).  |
| Suppliers shall make insurance policies for all of their tender materials, equipment, furniture, and buildings, in any accredited Kuwaiti national insurance company.   |
| Suppliers shall submit their initial security bond issued only from accredited Kuwaiti bank.  |

From the review of Kuwait's tender documents, it seems that the prime objective of the Kuwait public procurement is to support and stimulate the growth of national industries, through giving them priority and price preference in the acquisition of works, supplies, and services from local suppliers and contractors.

The questionnaire findings revealed that the construct Buying from Locals was the most embedded SPP practice in Kuwait public procurement, with a Mean=3.86 and Mode=5.00. This coincides with previous findings reporting buying from locals as priority aspects of SPP practices in some countries (Islam & Siwar, 2013; McMurray et al., 2014).

All the procurement officials I interviewed stressed about giving priority to buying from the locals. For example, one procurement official stated that,

“Bidding for public tender is open to everyone; however, the preference is always for the domestic products and local suppliers”.

The highest embedded item found for the buying from locals construct was for Ensuring that the suppliers are committed to employing Kuwaiti Nationals with at least 10% of their workforce (Mean=3.92, Mode=5.00). Around 66% of the respondents agreed to make sure that suppliers shall adhere to employing the required percentage of Kuwaiti workers.

The tender bidders have to comply with regulations regarding creating job opportunities for Kuwaiti nationals, aiming primarily at solving the nationals' unemployment problem.

In this case, public tenders bidders have to submit a certificate confirming their employment of the required percentage of Kuwaiti workers, before signing any tender contract, otherwise, they will be disqualified.

The item Encouraging local industries and services such as freight, banks, and insurance followed in rank with a Mean=3.84 and Mode=4.00; around 61% of the respondents agreed that they provide support to financial and service-oriented local industries in order to promote and stimulate these industries. The suppliers shall only make insurances for his equipment and workers in one of the accredited Kuwaiti

insurance companies. Additionally, public suppliers shall only use Kuwait's national airlines and naval shipping companies, in the event of the travel of the suppliers' personnel, or the shipment of the goods and materials required for the implementation of the public tender contracts.

Lastly, for Ensuring the procurement from Kuwaiti suppliers' item a Mean=3.84 and Mode=4.00 was obtained; the majority of the respondents, 65% agreed to ensure buying from national products and products of national origin (Kuwait owns not less than 51% according to the certificate of origin). Suppliers' attention is always invited to the importance placed by the government on buying from local suppliers, which is, in fact, one of the main criteria used for the evaluation of the public bids. Procurement policy-maker I interviewed confirm this fact stating that,

“The law stipulates that the supplier for public contracts must be Kuwaiti, the non-Kuwaiti supplier must have a local agent, and this is a huge support for the domestic sector”.

The public tender law also states that local suppliers have a price advantage over others in public tender contracts.

Goods made in Kuwait may be priced up to 10% higher than comparable items made abroad, and be deemed the lowest priced, confirming this, one procurement official stated that,

“According to the tender law, the domestic products have up to 10% price advantage over other foreign products”.

In sum, the existing laws and regulation achieved comprehensive legal support in giving priority to the locals in public procurement operations. It is a common belief that if local firms were encouraged, they would not only supply to the government at

competitive prices but also export to foreign markets. This would translate into increased employment and improved quality of life to the people (Ssenoga, 2006).

However, the relatively high focus on procurement from local businesses may also suggest “favouritism” or “nationalism” in procurement, and this has been associated with the procurement inefficiency in prior research (Brammer & Walker, 2011; Ssenoga, 2006). Kuwait is characterised by limited diversity in the economic activities, export-concentration of oil, and small-sized firms. The Kuwait preferential price margin for national products might contribute to the lack of capacity of local businesses to compete in international markets. Thus, with the absence of foreign competition and with artificially high prices offered by the government for local suppliers, there has been little incentive for local companies to invest in new technology, reflected in the quality of local suppliers’ products and services.

#### **7.2.6 Buying from SMEs**

Although the tender procedures are the same for all public procurement contracts, the criteria for awarding certain tender contracts to certain suppliers depend on the suppliers’ size (AlHamad, 2011; CTC, 1964).

Table 41 shows a list of encouraging buying from SMEs’ criteria found in Kuwait’ public tender documents.

Table 41: Buying from SMEs Criteria Found in the Sampled Tenders

| <b>Buying from SMEs Criteria</b>  |
|---|
| <b>Laws and Regulation</b>  |
| Suppliers shall adhere to the provisions of the public tender law regarding the financial and technical classification of the contractors.                      |
| <b>Supporting buying from SMEs</b>  |
| The bidder must be registered in the lists of classified contractors within the CTC, and are specialised in the same Workgroup as on the tender contract field. |
| The bidder must be classified by the CTC as a third-class contractor (i.e. Local and Medium Sized Company) in the tender group.                                 |
| The bidder must be classified by the CTC as a fourth-class (i.e. Local and Small Sized Company) contractor in the tender group.                                 |
| Tender is divisible to subgroups contractors.   |

The questionnaire findings revealed that the construct Buying from SMEs indicate moderate implementation within Kuwait public procurement practices. The construct item Having a suppliers size classifications registered a Mean=3.58 and Mode=4.00.

The public tender law has ensured that the bidders are economically classified, and this in hand allows contractors to take part in the tenders, provided it complies with their technical, financial, and size capacity (CTC, 1964). Many public procurement executives I interviewed confirmed they are abiding by the classification law requirements. For example, one commented that,

“Bidding for tenders is subject to pre-classification; suppliers are classified into the big, medium, and small companies and each supplier group are allowed to participate in the tender that corresponds to its classification”.

As stressed by another public procurement official,

“Currently, there is suppliers’ classification in regards to construction works, roads, and electrical work, where companies are classified according to their financial solvency and administrative situation”.

Furthermore, the tender law sets maximum and minimum limits of the tender participation for each category.

The role of these limits is to prevent large companies from competing against and crowding out SMEs in the public tenders contracts, and that SMEs companies do not get involved in tenders that are beyond their capacity (Nasrallah, 2007).

The item Purchasing from SMEs suppliers did not obtain the same level of agreement from the respondents (Mean=3.30 and Mode=3.00). Only 40% of the respondents agreed that they procure from SMEs suppliers, and around 47% were unsure if they were engaged in procurement operations with SMEs suppliers. This result can be attributed to many reasons, such as the lack of any law enforcement or any national strategy supporting buying from SMEs in public procurement.

Public officials I interviewed stressed the lack of preference policies for buying from SME's in public tendering operations. As one official asserted,

“There is no text in the tender law to allocate a certain percentage of the tenders to SMEs bidders”.

This fact was confirmed by another interviewee, who said that,

“Unfortunately, there is no support for SMEs in public tenders; for this to happen, we need the support of the legislator”.

Further, I could not find any explicit criteria within the tender documents related to buying from the SMEs in public procurement. Supporting SMEs business in public procurement is reflected within the public tenders' conditions, by limiting the bidders eligible to bid to only SMEs companies.

In sum, Kuwait' government is providing some support for SMEs businesses in the public procurement operation. However, there is a long way to go to SMEs businesses can play a crucial role as suppliers for public sector organisations.

### 7.2.7 Innovation

Table 42 shows a list of innovation criteria found in Kuwait' public tender documents. Further, public procurement operations were specified based on the extent to which they support the diffusion of new technologies, promote innovation and R&D activities.

Table 42: Innovation Criteria Found in the Sampled Tenders

| <b>Innovation Criteria</b>   |
|--|
| <b>Laws and Regulation</b>   |
| The public tender bidder must undertake the full implementation of all the regulations and rulings regarding the "Offset Programme".   |
| Contracting public authorities shall adhere to the Council of Ministers Resolution No.16 of the year 1984, regarding the revitalisation of the economic cycle in their procurement operations.                                 |
| <b>Innovative Procurement</b>  |
| The priority in awarding public tender shall be given to innovative ideas and to innovative methods of conducting governmental' functions.   |
| The tender contract for the design of a new public project shall include innovative practices, applications, and new technologies.   |
| Tendering of the design and construct of new governmental buildings shall only be awarded to offers that include advanced technological process.   |
| <b>Intellectual Property Rights (IPR)</b>  |
| The government shall have full and unrestricted ownership of the Intellectual Property Rights (IPR) of the tender project. Upon completion, the contractor shall transfer all IPR to the relevant public authority.            |
| The contracting authority shall own all patents, copyrights, discoveries, and innovations; the supplier shall not exploit them commercially unless obtaining prior approval from the public authority.                         |
| The contractor shall be obliged not to breach the IPR, and take full responsibility towards what may arise from rules, fines, or liabilities due to the breach of IPR.   |
| <b>Research and Development (R&amp;D)</b>  |
| The procuring authority shall support scientific research, to obtain the best-advanced solutions for the delivery and the development of public works.   |
| The procuring authority or any other government agencies shall provide contractors with all the needed information, data, and other facilities to undertake the necessary studies, designs, and research.                      |
| All goods designed and developed for the tender contract shall be considered as government property, the contractor shall submit the original prototype to the contracting public authority.                                   |
| The financial returns resulting from the exploitation of the invention shall be distributed between the contractor and the government through a mutual legal agreement.  |
| All the tender documents, research studies, inventions, programmes, data, and results developed or invented by the contractor in the execution of the tender contract shall all become the property of the public authorities. |

According to the special conditions in the tender and procurement contracts, contractors who propose innovative ideas shall be given priority in the awarding of some of the public tenders.

This was much evident when analysing tender documents for some public organisations, such as the Ministry of Health, the Ministry of Education, and the Public Oil Organisation. The questionnaire findings revealed that the Innovation dimension of SPP practices had an average implementation in the Kuwait public procurement. The highest embedded item found in the innovation construct was Requiring the ownership of patents and IPR as part of the tender contract item (Mean=3.30, Mode=3.00); around 46% of the respondents agreed on requesting the ownership of patents and IPR as a tender condition. There are some provisions in the sample tender contracts that describe clearly that the patent and IPR obtained upon designing and producing innovative products, shall be owned by the procuring public authority.

For example, a public tender's term clearly indicates,

“The government shall have full and unrestricted ownership of the Intellectual Property Rights (IPR) of the tender project. Upon completion of the tender, the contractor shall transfer all IPRs to the relevant public authority”.

The Purchasing from suppliers that undertake R&D activities item with Mean=3.27 and Mode=3.00 followed in the second rank; around 43% of the respondents agreed on prioritising innovative and R&D undertaking suppliers.

The procurement officials I met have confirmed these answers. As one executive commented,

“There are some provisions in the tender law regarding requesting the suppliers to carry out R&D activities, or the development of new ideas, goods, and services”.



I have noticed that the innovative procurement practices, especially in environmental or green technology industries, were stimulated through collaboration with universities and scientific research institutes, such as the Kuwait Institute for Scientific Research (KISR).

Collaborations between public procurement departments and research institutions on green technology were evident in the sample public tender documentation. For example, procuring a new green public building was conducted through a collaboration with KISR. A procurement manager I interviewed gave further insights regarding this tender,

“In tendering our new green building, the KISR institute served as a liaison between the LEED organisation and us. We benefited from KISR expertise and their scientific know-how in this public environmental project. For example, the use of environmentally friendly energy sources in our building was due to an environmental research project in collaboration with KISR”.

Lastly, the item Asking suppliers for a new or significantly improved product or process solution scored a Mean=3.20 and Mode=3.00; only 40% of the respondents agreed that they request innovative goods and services in their tenders, and around 21% disagreed to asking for new products. The tender analysis showed that a particular focus was given in some public tenders awarding conditions for innovative products. For example, a public tender’s term clearly indicates,

“High priority will be given in public tender awarding for innovative ideas and new methods in the conducting of the public sector operations”.

Similarly, one official shared his insights on effectively enabling new technology and innovation through public procurement, expressing,

“Asking for innovative products and services expresses the economic dimension of the SPP, where suppliers submit ideas for new goods and services to enhance the public sector performance”.

On the other hand, some of the officials I met expressed that they restrain from including innovations' criteria in their tendering operations, claiming that it will lead to complications with suppliers, or they think it will violate the public tender law. For example, one public official procures mentioned that,

“We are cautious in asking for new products or services that are not readily available in the Kuwaiti market. It is not allowed to put the specification in tenders that are only provided by certain companies; this caused problems with some suppliers that legally complaint against us under the pretext that these tender conditions are favouring a particular supplier”.

Confirming this fact, another procurement executive stressed that,

“We faced opposition from the suppliers regarding setting SPP criteria in the public tenders because these products are provided by a very limited number of suppliers in the Kuwaiti market. They think that the government encourages monopoly in public tenders, or give some suppliers an advantage in bidding over others”.

In sum, the results of my research have offered evidence of the inclusion of innovation criteria in public procurement processes, especially for green technology. The public sector, through public procurement, creates opportunities for the private sector to engage in innovation activities and to develop new products or services. However, currently, innovative solutions are not stimulated enough, and state-of-the-art technology within many product groups was poor or not discussed. In this regard, the government could promote the generation of R&D activities through collaboration with universities and scientific research institutions.

In summary, the findings in this section reported the results on the extent to which sustainable practices are being implemented within Kuwait public procurement. Regarding the nature and the degree the dimensions of SPP practices are embedded within the Kuwait public organisation, my study revealed that the majority of the investigated public organisations are adopting some aspects of SPP practices. Additionally, SPP practices in Kuwait seem to be skewed towards buying from local suppliers. The socioeconomic goals of the government could be the reason for assigning the priorities of SPP practices within the national procurement operations (Islam & Siwar, 2013).

Kuwait is also committed to protect, promote, and the safeguard of human and labour rights and worker's health and safety at all levels. The protection of the employees and the principles of human rights' protection, working hours, wages are included in Kuwait's constitution, and in the national laws governing and guiding public procurement.

I can conclude that government authorities have implemented a wide range of operations to address sustainable development through their procurement, which involved economic, social, and environmental aspects.

Next, I will provide a review of the identified barriers and drivers of SPP in the state of Kuwait in order to answer the research question: What are the drivers and barriers to integrating sustainable public procurement (SPP) in the Kuwait public sector?

### **7.3 SPP Barriers in Kuwait**

In the next section, I provide the evidence I found regarding the barriers to the implementation of SPP in Kuwait public procurement operations.

### 7.3.1 Budgetary Constraints

The reduction of funding for public organisations is a major barrier to the SPP agenda (Nijaki & Worrel, 2014; Preuss, 2007; Sourani & Sohail, 2011). In the face of falling oil prices and shrinking budgets, governments realise the need to cut expenses and savings in the procurement system. Hence, about 65% of the respondents to the survey expressed their agreement that the Budgetary Constraints are the biggest barrier they face in their SPP practices, with Mean=3.63 and Mode=4.00.

This coincides with previous findings reporting the lack of budget and resources as the main barrier to adopting SPP practices (Islam & Siwar, 2013; Preuss, 2007; Walker & Brammer, 2009).

Procurement officials I met expressed a mixed opinion regarding the budgetary constraints. Some officials conveyed that not having enough budget indeed is a huge barrier for SPP projects, and it did lead to excluding SPP options. One procurement official clarified this by stating,

“The budget is a major factor in setting the tender specifications; we have difficulties in approving our tenders, due to the lack of budget allocations”.

Another procurement executive pointed out that,

“We had several green initiatives, and they were all rejected because sustainable products require larger budget allocations, and after the reduction in our budget in light of falling oil prices, we find it difficult to support these initiatives with this limited budget”.

Likewise, one procurement official emphasised,

“Green goods and products are expensive commodities; these higher costs cannot be covered by the current public budget allocations”.

On the other hand, other procurement officials reported that they did not at all think budgetary constraint stood in the way as one procurement official claimed,

“We never had any budgetary constraints to our SPP initiatives. We have unlimited support from the top leadership in the organisation regarding all additional budgetary allocation for our green or sustainable projects and tenders”.

Similarly, another official noted that,

“The prices of environmental goods may be higher than the price of other conventional goods, and this requires the consolidation of the budget allocated for procurement. In this regard, there has been a huge understanding and support from our senior management for the need to adopt these sustainable choices”.

The budget allocation under which public institutions operate can hinder the implementation level of SPP practices with the whole-life cycle lower costs, but with a higher upfront cost.

In Kuwait, however, whole-life cycle costs are typically not used in evaluating tender offers that may justify procuring a higher priced tender instead of granting the bidder with the lowest prices. Consequently, public procurers could use this as an excuse for not addressing sustainability in their procurement strategies. Thus, sufficient budgetary flexibility would make engaging in SPP more attainable (Perera, 2011). Multi-year accounting and budget frameworks could offer the needed flexibility to integrate whole-life costing into procurement practices. Such budgetary frameworks are, unfortunately, rarely considered in public sector accounting (Perera, 2011).

### 7.3.2 Lack of SPP Knowledge

The familiarity with the concept of sustainable development and its extension in the procurement operations is an important factor to implementation of SPP practices (McMurray et al., 2014; Powell et al., 2006).

The outcome of surveying the public procurement employees regarding their knowledge about sustainability revealed that only one-third of them know about the concept of sustainable development or SPP (See Figure 14). The implication is that the more procurement personnel are unfamiliar with the concepts of the SPP, the less likely they will implement sustainability in their procurement practices. Furthermore, 53% of the survey respondents agreed that the lack of SPP knowledge (Mean=3.48 and Mode=4.00) hinders their efforts to implement the SPP within their procurement practices.

Correspondingly, the public procurement executives I met and interviewed varied in their knowledge on the subject of sustainability. For example, one procurement executive responded to the enquiry regarding sustainability with,

“What do you mean by sustainable development? I do not know such a concept”.

While another official commented that,

“I do not know if we have SPP practices in our organisation, I am not sure”.

Other officials had a common misunderstanding or misconception between the concept of “Sustainable” and the word “Durable” or “Systematic”. They often refer to the procurement of durable goods as sustainable procurement or refer to their systematic procurement as sustainable procurement. For example, some typical responses from procurement official were,

“Sustainable purchases means the purchases we conduct on a regular basis.”,  
Or, “The purchases we conduct periodically”.

On the other hand, some officials expressed their strong knowledge regarding the matter of sustainability and its importance. For example, a procurement official remarked that,

“We are very committed to adopting the principles of SPP and transforming our organisation into a green and environment-friendly one, and we also have our vision regarding the community service and social responsibility”.

Where one procurement employee enthusiastically expressed that,

“We are very keen to attend and participate in international conferences in the field of sustainable development, and share our experience with them in the fields of the SPP, environmental protection, alternative energy progress, and social responsibility accomplishment”.

In sum, my mixed outcomes show that there is a need for more clarification on what SPP means of awareness-raising initiatives, especially, in regards to its benefits for the public sector organisations and the whole society.

### **7.3.3 Costs of Sustainability**

Cost considerations can be a major barrier to the selection of green or sustainable products (Zhu et al., 2013). Thus, the cost of sustainability can be a barrier to the selection of green tenders or for environmentally friendly products. The questionnaire respondents agreed that green products are more expensive than conventional products, and the high costs of sustainability influenced negatively on the implementation of SPP practices. As such, based on the questionnaire, this item registered a Mean=3.30 and Mode=4.00.

Interviewed officials also highlighted that there is a desire to reduce costs, confirming the previous findings. For example, one official commented,

“The lowest price requirements of the public tender, limits the selections of green tenders, as green goods and products are more expensive than the conventional ones”.

Similarly, one stated,

“Green products are expensive commodities; the available public budget cannot cover these higher costs”.

In the same line, an official explained,

“There is a preference for low prices, top management imposed on us to accept lower standard tenders just because of the low price considerations”.

These findings coincide with previous studies finding that cost concerns are the most serious obstacles to taking environmental factors into account in the public procurement process (Giunipero et al., 2012; Helen Walker et al., 2008).

In a publicly funded organisation, it is challenging to justify the additional cost of purchasing, as the sustainable option usually carries higher costs. Consequently, this leads to the refinement of sustainable products with whole-life cycle lower costs, but with higher upfront costs.

In Kuwait, however, products' whole-life costs are typically not used in evaluating tender offers that may justify for public bodies procuring higher priced products instead of granting the bidder with the lowest prices.

In this regard, there is a need to develop and update the prices for sustainable goods and services database and increase the collective-buying methods of public procuring to achieve economy of scale in the Kuwaiti market. This move will improve the estimation of the costs for public tenders and decreases the budget allocation



required for SPP. Besides, the public purchaser's decisions need to go beyond price considerations dominance, and are focused on more qualitative priorities such as labour' health and safety, working conditions, social welfare, and the impact of the supply activities of the society and the environment as a whole (Carter & Rogers, 2008; Crespin-Mazet & Dontenwill, 2012).

#### **7.3.4 Legislation and Regulations**

The legislation and regulations provide legitimacy to public organisations for including SPP in their tenders (Sporrong & Bröchner, 2009; Zhu & Sarkis, 2007).

Questionnaire respondents, however, only moderately agreed that the lack of relevant legislation and law enforcement influence negatively on the implementation of SPP practices. As such, based on the questionnaire, this item registered a Mean=3.29 and Mode=3.00. The primary sources of laws and regulations related to Kuwait's public procurement are contained in the very old 1964' public tender law. Furthermore, the current public tenders' legal framework does not include a comprehensive policy regarding SPP; while some government regulations and laws are in place to assist in implementing SPP (e.g. Supporting locals, safety, and human rights), most remain optional.

The officials I interviewed reported a lack of policies and legislation governing SPP, and that the current tender law is outdated, which results in major deficiencies in the implementation of SPP practices. An official state that,

“There are no clear and explicit SPP policies, but you can find them indirectly in some of the tenders criteria or specifications that are so-called SPP”.

In the same way, one official stated that,

“Currently the tender law does not include many aspects of the SPP, such as requirements for the preservation of the environment and consolidated the social accountability.”

Similarly, an official specified that,

“There is no clear policy in regards to adopting green or SPP standards, and I think that the EPA should play a major role in this area, and take the initiative by setting binding laws for the public bodies to adopt green standards in public procurement, and this eventually needs a government decision or a bill.”

An official gave further explanations, by stressing that,

“There is no general strategy for SPP. Moreover, the public tender law is old and dates back to 1964, and it does not match the modern requirements of Kuwait”.

Likewise, many procurement officials voiced their opinion regarding how the outdated tender law can act as a barrier for them. For example, one expressed that,

“One of the biggest obstacles we face is the old procurement laws”.

One public official detailed how the old public procurement hinders their efforts with,

“The Public tender law is very old, and do not serve in achieving the objectives of sustainable development nowadays”.

Therefore, as well as acting as an enabler, legislation and regulation can inhibit the implementation of the SPP. To some degree, legislation sometimes appeared to act as a barrier for Kuwait’s public sector procurement, as officials felt that for a real implementation of SPP practices, it must be made mandatory by legislation.

At present, there is no national legislation acting as an umbrella or a guiding rule to an SPP framework for Kuwait public procurement.

### 7.3.5 Political Constraints

Political support is an essential factor to realise a national sustainable procurement agenda (Fisher, 2013; Løland Dolva, 2007). However, due to election cycles and political disputes, SPP policies may not gain politicians' interest or their support (Sourani & Sohail, 2011).

Respondents were somewhat unsure or did not know regarding whether political constraints act as a barrier, with only 34% of the respondent agreed that political conflicts or instability could act as a barrier to sustainable public procurement. Having registered a Mean=3.19 and Mode/Median=3.00 in the questionnaire. The results show that either the respondents were not involved in tender projects that faced delays due to the political conflicts between the government and parliament or they do not want to share this information.

Political disputes between the government and parliament in Kuwait have prevented the implementation of several major development projects and laws.

As stressed by the CTC General Secretary,

“Political disputes between the cabinet and the parliament had an effect of delaying new procurement projects, especially in periods of parliamentary elections”.

For instance, one of the main procurement projects delayed by political conflicts is the new public tender law. The new law proposed by the government addresses SPP through public procurement practices. However, the parliament has blocked the new law for years because of concerns regarding some of its conditions and clauses. A Procurement' official I met clarified the importance of the new tender law stating,

“The draft of the new tender law stipulates that the public authorities shall conduct SPP practices that take into account the economic, social, and environmental aspects”.

The public officials I interviewed offered more insight regarding the role of the political issues between the government and parliament in Kuwait, acting as a barrier to the development of SPP practices. As expressed by an official,

“The instability of the political situation in the country, and the dissolution of the parliament several times in previous years had a negative impact of the amendment of the tender law”.

Similarly, another official also voiced that,

“The attempts to modify the tender law has been stalled by the dissolution of the parliament. Also, the intervention of the parliament members and the many changes they have made to the proposed law caused the law texts to amplify without being ratified”.

Likewise, another official also confirmed these comments by stating that,

“Political issues are the most important obstacles facing the enactment of the new procurement law. Furthermore, the parliament proposed their own tender law, and that is an intervention by the legislative sector with the public procurement and the executive functions”.

### **7.3.6 Obstacles by Suppliers**

The suppliers can act as a barrier to SPP when public organisations are trying to comply with sustainable agenda and look for suppliers able to provide sustainable offerings, but may face poor suppliers’ sustainable performance (Kennard, 2006; UNEP, 2013; Walker, 2010b).

The respondents were unsure or did not know whether obstacles by suppliers can act as a barrier. This item registered a Mean=3.12 and Mode=3.00 in the questionnaire. As such, only 38% of the respondents agreed that suppliers are a barrier to the public sector' SPP practices.

On the other hand, many public procurement officials I met shared their negative experience with the local suppliers, especially in what relates to SPP practices.

A procurement director described their experience with suppliers as follows,

“A major problem we face is that there is a shortage in the local market in providing green products. For example, for green office paper, only two local companies are providing this commodity with a very high price margin to other conventional papers. Some suppliers also have fabricated the environmental or Eco specifications to claim falsely that these are green products to benefit from the price margin for these types of commodities”.

Another procurement official expressed a comparable view, stating that,

“We have faced many obstacles from the local suppliers; some of the green products we needed to buy to convert our organisation' building into a green one, are just not available in the local market”.

Moreover, giving further explanation, a procurement staff stated that,

“There is a weakness in the domestic market in the quality and quantity of green and sustainable goods and services available; this is an additional burden to us”.

Not only the green or eco-friendly products are scarce in the Kuwait local market, but also they often do not meet the SPP specifications. Other procurement officials pointed out that sustainable service is also scarce, which makes it challenging

to set SPP standards in public tenders. One procurement official shared his experience with local suppliers stating,

“The potential of the Kuwaiti market in the field of SPP services is very weak. The private sector still lacks the capabilities of recycling waste. Thus, they resolve to bury waste and this exacerbates the problem of pollution”.

Another official shared her sustainable food catering service experience,

“We are suffering from the poor quality of food and catering services provided by our local suppliers, as they do not offer green or organic products within the catering or food supply contracts.”

Thus, the local supply of green products is not well industrialised in Kuwait, with only a few green product groups locally supplied. Moreover, some suppliers illegally exploit eco-label symbols, resulting in suppliers selling non-green products to the government as green products.

In sum, although the majority of the survey respondents were unsure regarding the role the supplier can play in enabling or hindering the SPP practices, the public procurement officials I interviewed voiced their insightful experience with local suppliers. In order to overcome the challenges of the environmentally unindustrialised local market, I recommend the government to set up an action plan to subsidise national green production and promote the local green industry.

### **7.3.7 Tribalism and Cultural Norms**

Previous studies have suggested that cultural factors can affect the degree of environmental or socially responsible operations within an organisation, including SPP (Hammoud, 2011; Preuss & Walker, 2011; Salam, 2009; Sarkis & Setthasakko, 2009).

Among the respondents of the questionnaire, 21% agreed that tribalism and cultural norms are barriers to SPP practices, 44% remained neutral, and 34 % disagreed with the barrier. This barrier factor registered a Mean=2.82 and Mode=3.00, the least score from the entire barriers factors presented in the survey.

The procurement officials I met also voiced mixed opinions regarding the role of cultural norms. For example, one executive considers tribalism as a driver for sustainability,

“I think the traditions we have been a good thing... I cannot imagine they can be a barrier to sustainability”.

On the other hand, another procurement official gave a different perceptiveness in this regard, pointed out where they have to overcome some cultural considerations when procuring,

“In tendering the service of court janitor, we previously did not discriminate based on nationalities. However, we faced resentment and complaints from angry members of the community regarding the wrong pronunciation of their Arabic names by foreigners or Asian janitors, as they consider this as an insult and disrespect. Therefore, we now always set conditions for any positions that will deal directly with the Kuwaiti people have proficiency in Arabic language and to be of Arabic nationalities in any tender providing the ministry with labour services.”

In summary, the respondents highlighted that the most critical barriers to the implementation of SPP practices were financial considerations. The majority of the questionnaires respondents and procurement personnel felt that environmental products cost more than conventional ones, and they were unable to offset these costs with lacking budget allocations to go ahead with their planned SPP projects. On the other hand, concerns with cultural, political issues, and obstacles by suppliers have

ranked relatively low. Respondents had mixed opinions or they did not have enough experience to consider these factors as significant barriers to their SPP operations. Finally, barriers tend to be context-dependent and are likely to vary with the stakeholder and region in question (UNEP, 2013). To facilitate more implementation of SPP practices, governments need to focus on the barriers that are specific to their region, culture, and of concern to their society.

#### **7.4 SPP Drivers in Kuwait**

In the next section, I present my findings regarding the drivers for SPP practices in Kuwait public procurement operations.

##### **7.4.1 Financial Benefits**

In many cases, SPP operations can save money compared to procuring conventional products (Dickinson et al., 2008; McMurray et al., 2014).

The questionnaire results revealed that respondents agreed that financial benefits are the main driver for implementing SPP practices. This driver factor registered a Mean=3.73 and Mode=4.00, around 76% of the respondents agreed that financial benefits are a driver for to the public sector' SPP practices. One procurement official explained how the tender assessment based on the whole-life costs of products, not only the upfront costs at the point of acquisition, make procuring sustainable products financially more rewarding than the conventional products, stating that,

“We always use the products whole-life cost studies, which is a comparison between the costs of conventional and sustainable products. This is done by calculating the value of the products during the whole life cycle. For example, in a tender to replace the lighting from the traditional into an energy-saving one, we calculated the total costs of the two commodities regarding price, carbon emissions, and the content



of harmful substances such as mercury. We also took into consideration the amount of energy consumption and energy costs, maintenance, and the replacement of both products. After calculating the rate of savings in energy consumption and the corresponding number of barrels of oil we save and the amount of profit gained from the sale of these barrels of oil, in the end, we had a 70% per cent budgetary surplus in favour of the sustainable commodity”.

In the whole-life costing assessment, there can be a significant financial saving due to SPP practices. When using a whole-life cost of products or services, not only the upfront cost at the point of acquisition, many items that initially look expensive can eventually prove to be cost saving.

#### **7.4.2 Society and Citizens Awareness**

Public organisations are facing increasing pressure from people and local communities pertaining to their development agenda and operations (New et al., 2002; Zhu et al., 2013).

Accordingly, the government is increasingly widening its sustainability efforts to meet their citizens’ sustainability expectations.

Questionnaire respondents agreed that social and citizens’ awareness is the main driver for implementing SPP. This item obtained a Mean=3.73 and Mode=4.00. Around 62% of the respondent agreed that this factor is a driver for the public sector’ SPP practices. Many of the officials interviewed felt that society’ awareness and demands for sustainability is a response to the environmental and social challenges and issues facing them today. As one procurement official explains,

“There is a high awareness in the Kuwaiti society on aspects of the environment, and we have sensed great attention from members of the community in

the implementation of the new environmental laws, and also on the level of response to our environmental initiatives as a public organisation”.

Thus, public attention and support are necessary for governmental’ sustainable programmes and is helpful for promoting SPP practices. In Kuwait, it seems that society has had an increasing demand for sustainability.

### **7.4.3 Islamic Values and Beliefs**

Religious practice is an essential factor that influenced procurement managers to engage in sustainable practices (McMurray et al., 2014).

The questionnaire respondent agreed that Islamic beliefs and values (Mean=3.69 and Mode=4.00) are the main drivers for implementing SPP practices in their procurement operations.

Around 58% of the respondent agreed that the Islamic values and beliefs are a driver for the public sector’ SPP practices.

This coincides with the findings of McMurray et al. (2014) that identified religious practices as an important driver for SPP implementation. The Islamic religion defines Sharia’ law that governs financial transactions (Maddi et al., 2014). In Kuwait, public procurement entities usually summon and refer to Islamic principles when tendering in the absence of specific legislative provisions in the Kuwaiti law (World Bank, 2009). Some of the policy-makers I interviewed and some of the tender contracts I analysed have confirmed this connection between Islam and the public procurement’ financial transactions.

For example, one procurement official pointed out that,

“We are in the process of developing public procurement processes that respect Islamic financing requirements, and we are considering how to take advantage of Islamic banks to finance public procurement and public tenders.”

Furthermore, many government organisations are requiring the financial aspects of their public tenders to be compatible with the Sharia’ law. For instance, some tender contracts I analysed necessitate that the procured financial service must be in accordance with the Islamic principles of equity and fairness. For example, requesting for Islamic “Takaful insurance” or “Cooperative insurance”, which is considered the alternative to conventional insurance. The main purpose of insurance in Islam is the dissemination of risks and sharing the financial burden, hence, achieve social safety through cooperation between Muslims. Moreover, any investment transaction opportunities raised by the public tender contract should also be in accordance with Islamic laws. For example, a public tender I analysed stipulates that any speculative stock market transactions of the tender funds should be compatible with Islam, and free from betting or gambling.

In addition, the public tenders stipulate that suppliers shall be liable in accordance with the Islamic jurisprudence regarding the health and safety of their employees and pay them the “Diyah” or “Blood Money”, which is a financial compensation given to employees in the cases of injury or physical harm. According to the Sharia laws, if a person causes injury to someone else, such as accidentally or intentionally, he has to pay Diyah. The Diyah is also a mean of protecting and safeguarding the human rights of the suppliers’ employees.

In sum, the various above mentioned finding highlighted that Islamic beliefs extended to the ethical and societal welfare obligations of Kuwait’s public procurement.

#### **7.4.4 Employee Initiatives**

Entrepreneur's employees can act as drivers for SPP practices (Carter & Jennings, 2004; Salam, 2007; Walker et al., 2008b).

The questionnaire respondent agreed that employee initiatives (Mean=3.65 and Mode=4.00) are a driver for sustainability in Kuwait procurement. About 60% of the respondents agreed to the presence of this driver in their organisation's procurement operation.

As appeared to be the case with the officials I met, many of those in top management stressed that the main motivation to implement green procurement initiatives came from their employees. As one procurement director stated,

“The best green initiatives in our organisation came from our employees”.

Similarly, another procurement official accredited their SPP operations to employees' initiatives stating,

“Many of the ideas of sustainable procurement and green requirements in the tender contracts came from our employees”.

On the other hand, procurement employees also confirmed that they proposed SPP initiatives, by highlighting that,

“Many sustainable procurement initiatives came from us- the employees”.

#### **7.4.5 Governments Sustainability Strategy**

Many organisations will look to their national government for a policy mandate to incorporate sustainability issues into their public procurement operations (Amann et al., 2014; Flynn et al., 2012; Thomson & Jackson, 2007).

The questionnaire respondent agreed that the government's sustainable policy is the main driver for implementing SPP practices. This driver factor obtained a

Mean=3.62 and Mode=4.00. Around 57% of the respondents agreed that the government's sustainable policies are drivers for the public sector's SPP practices.

My findings regarding SPP practices revealed that the majority of the dimensions implemented within the Kuwait public organisations stemmed from a supportive legal framework. For example, the procurement officials I met stress that they are required by the tender law to buy and support local products and suppliers. As one official conveyed,

“All governmental bodies must abide by the public rules and regulations that give priority in public procurement to local products”.

Furthermore, the national sustainable laws influenced positively on the implementation of the human right practices. As an official confirmed;

“The Kuwaiti law is keen to secure the human rights of labour and is one of the most important requirements for tendering public contracts”.

Similarly, the Kuwaiti law and regulations ensure adequate protection for the workers in Kuwait.

Suppliers are particularly required to abide by the national laws regarding health and safety protection, as one procurement official stated,

“The rights of the supplier's labour are secured by the Kuwaiti law, which ensures the safeguarding of their health and safety”.

Additionally, many countries are challenged when implementing SPP practices, by conflicting with international public procurement rules or being discriminated between domestic and foreign suppliers (Van Asselt et al., 2006). As a member state, Kuwait did not sign the WTO' government procurement agreement (GPA), thus Kuwait's sustainable policies are not contradicting any international trade agreements on non-discrimination in public tendering procedures between the

domestic and foreign suppliers. At the onset, Kuwait SPP practices have benefited from a national policy framework that favour locals, and provides adequate protection for human rights and health and safety considerations.

#### **7.4.6 NGOs and Pressure Groups Demands**

The literature has often stressed the influence of NGOs and pressure groups on the firm's capacity to engage in SPP practices, due to their capacity to represent the society and manifest broader social movements (Zailani et al., 2012; Zhu et al., 2013).

The questionnaire respondent agreed that NGOs and pressure groups' demands are a driver for implementing SPP practices (Mean=3.52 and Mode=4.00). Around 53% of the respondent agreed that the NGOs and pressure group's demands are a driver for the public sector' SPP practices.

One way NGOs can support SPP initiatives is through developing collaborative partnerships with public organisations offering them the environmental, scientific, and legal expertise (Crespin-Mazet & Dontenwill, 2012).

Similarly, some successful experiences in Kuwait concerning SPP practices were facilitated through the partnership of the government with certain NGOs who have worked proactively in SPP operations. For example, one procurement official stated,

“We have cooperated with several NGOs and civil society institutions to spread environmental awareness”.

Another stressed the role of another important group,

“Unions have a strong role in raising awareness towards sustainable development issues and requirements in public procurement”.

SPP practices, thus, involves some changes in the structure of the supply network' relationships by relying more on the cooperation and partnerships with NGOs and working closely together to achieve sustainable operations (Amann et al., 2014; Walker & Phillips, 2009). However, the role of civil society organisations in support of the public procurement system is still weak (World Bank, 2009). Therefore, their role in monitoring public procurement system should be more facilitated and enhanced.

#### **7.4.7 Environmental Management Systems (EMS)**

The implementation of a certified EMS like ISO 14001 and EMAS can provide a good start for developing and monitoring sustainable or green procurement practices (Testa et al., 2012; Zhu et al., 2013). The questionnaire respondent agreed that EMSs is a driver for implementing SPP practices (Mean=3.58 and Mode=4.00). Around 55% of the respondent agreed that the EMSs is a driver for SPP practices. One procurement official I met stress the importance of EMSs for them and their supplier stating,

“We are very keen on requesting the ISO certificates on environmental management performance from our suppliers and contractors”.

Another official also stressed the importance of such certificates claiming that,

“In the past few years, our top management was very keen that our contractors are ISO 14001 certificated”.

Another procurement director gave his affirmation to the EMS role stating,

“We have worked for six years with the ISO organisation to obtain our ISOs certificates. We are subject to annual oversight from the ISO organisation to evaluate our work. Thus, we appreciate the meaning and value of this certification, and we deem it necessary to consider them as one of the requirements to qualify our suppliers.”

Likewise, obtaining the LEED environmental building standard has motivated a series of green procurement operation in some of Kuwait's public organisations. For example, one official commented in this regard voicing that,

“We started the project to convert our building in accordance with the requirements of LEED, and the application of international standards in the energy saving and in sustainable buildings was a driving factor”.

On the other hand, an official stressed the importance of the environmental standards, but acknowledged that there is a shortcoming in this aspect in Kuwait, by stating that,

“The concept of SPP requires applying many of the environmental standards and requirements, and these standards are currently not locally available in Kuwait”.

As mentioned above, EMS is a very effective way to stimulate the adoption of SPP practices, which can strongly influence public organisations in their procurement decisions and operations.

It would, therefore, be beneficial to promote and highlight the links between EMS and public procurement as a key determinant and a facilitator for the adoption of SPP practices.

#### **7.4.8 Top Management Support**

Top Management has power over resource allocation, support sustainable procurement policies, and incorporate it into their plans, strategies, or goal setting, leading to a successful implementation of sustainable procurement (Brammer & Walker, 2011; Giunipero et al., 2012).

The questionnaire respondent only moderately agreed that top management support is a driver for SPP practices (Mean=3.51 and Mode=4.00). Around 53% of the



respondent agreed that top management's support is a driver for the public sector's SPP practices. For example, concerning the importance of senior management support, one official commented that,

“The SPP initiatives had the support in the implementation and the allocation of the necessary budget by the senior management in our organisation”.

Similarly, procurement officials specified their top management role is sustainability, stating that,

“Our top and senior management are very enthusiastic about the environmental aspects and integrating them into our procurement operations”.

Likewise, one procurement official claimed that,

“Senior management for sure is driving force, they have a great desire to develop the work, and to convert the organisation's operations into green ones”.

Here, top management support was the lowest ranked from the drivers' factors. A survey where respondents were asked to identify the factors that drove the adoption of SPP in their country (UNEP, 2013). There were some notable differences between the drivers that governmental respondents selected compared to the non-governmental respondents surveyed. The former placed more emphasis on legislation and political factors and placed less emphasis on leadership.

In summary, the respondents highlighted that financial benefits, social awareness and Islam act as strong drivers for SPP. On the other hand, contradictory to previous expectations, top management support ranked last. Respondents seem not to consider that senior management in the public organisations has much influence on their procurement operation, which in fact is an interesting finding.

In the next section, I present the results of a series of multiple regression analyses conducted in order to answer the research question: What is the relationship

between public sector organisation's sustainable public procurement (SPP) engagement and its drivers and barriers?

## **7.5 Regression Analysis Results**

The statistical analysis of the data provides a useful complement to the interviews and descriptive results presented previously. In this section, I present the results of a series of multiple regression analysis conducted to statistically determine the relationship between SPP practices as the dependent variable and the independent variables, which are the SPP drivers and barriers.

### **7.5.1 Results of SPP Dimensions' Multiple Regressions Analysis**

The statistical results of the SPP dimensions' multiple regression analysis, where I explored the relationships between the SPP barriers and drivers and each of the seven dimensions of the SPP, revealed that the costs of suitability are a significant barrier to health and safety and buying from local practices ( $p\text{-value} < 0.05$  for all). The results suggest that, given the other factors are kept constant, the higher the costs of green products, the less the public organisation is to develop or engage in SPP practices. Lack of knowledge regarding sustainability has a significant impact on the environment and buying from locals dimensions ( $p\text{-value} < 0.05$  for both).

The positive association may be attributed to the fact that in the organisations with a high degree of SPP practices implementation, the procurement officers are more aware of the challenges imposed by SPP and feel a lack of competence in dealing with such complexity. As a result, often SPP initiatives are singled out for criticism and removal from tender operations (Dickinson et al., 2008).

As explained by Meehan and Bryde (2011) the knowledge about the imposition of sustainability issues within procurement may create this negative connotation, that

is attributable to a risk reduction attitude from management. Salam (2009) also claim that sustainability issues created greater management challenges for procurement officials, by increasing their role stress and role ambiguity. Cultural norms were an important barrier to the environment, buying from locals, and innovation dimensions (p-value<0.05 for all).

Top management support, given the other factors, is kept constant, had a significant impact on the environment and buying from SMEs suppliers dimensions of SPP (p-value<0.05 for both).

Previous studies have highlighted the influence of top management on SPP in association with their power over resource allocation, as top management has the ability to allocate the needed resources to fund the sustainability operation. However, in Kuwait some top procurement management I met stress that they did not have any role in planning, designing, or putting the SPP specification for their public tenders, either due to the lack of knowledge on sustainability, or because they outsourced the purchasing of construction-related services to other governmental entities. As one official pointed out that,

“Our current building is under the ownership of another governmental entity; therefore, we did not have any parts in setting the SPP standards or specifications of our building”.

Similarly, another procurement official noted,

“Our public building is commissioned by the ministry of public works. We did not participate in the design, specifications, or setting SPP criteria of the tender contracts, our only responsibility lies in signing the tender contracts with winning contractors”.

Furthermore, top management support as a driver ranked last from the identified drivers in this study (See Table 20). It may be because questionnaire respondents did not consider senior management to have much influence on their SPP operations as other factors such as financial considerations (financial benefits, SPP costs, and budget constraints) and Islamic values and beliefs. Financial benefits are a significant factor in the environment, human rights, innovations, and philanthropy dimensions of SPP ( $p\text{-value}<0.05$  for all). The results have revealed that demands from NGO and pressure groups are important drivers for the philanthropic activities of the SPP ( $p\text{-value}<0.05$ ). The findings also showed that the level of social awareness and knowledge regarding sustainability in Kuwait was just low, and this could have negative implications for SPP practices attainment, leading that social pressure was a non-significant driver in almost all SPP dimensions and negatively affected the philanthropy dimension. This result coincides with the previous finding that pressure from the society when they have a narrow focus, it can create an external barrier to the holistic approach of TBL of SPP' dimensions (Meehan & Bryde, 2011). In response, raising the general level of awareness in the society for all aspects of SPP practices, in general, may have a great role. Lastly, Islamic beliefs has a significant role in the environmental ( $p\text{-value}<0.05$ ), health and safety ( $p\text{-value}<0.05$ ), local support ( $p\text{-value}<0.01$ ), innovation ( $p\text{-value}<0.01$ ), and philanthropy ( $p\text{-value}<0.05$ ). Thus, our analysis supports the claim that Islamic beliefs play an important role in shaping SPP practices in Kuwait.

### 7.5.2 Results of SPP Practices Multiple Regression Analysis

In this subsection, I discuss the results of the regression analysis on the SPP practices, where I explored the relationships between the SPP barriers and drivers and the overall SPP practices scale (See Table 28).

The results revealed that the costs of sustainability ( $B = -0.039$ ,  $t(96) = -1.998$ ,  $P\text{-value} < .05$ ), assuming that the other variables in this model are held constant, play a critical role in shaping SPP in the Kuwait public organisations. This coincides with previous studies finding that cost concerns are the most serious obstacle for considering environmental factors in the public procurement process (Bouwer et al., 2006; Brammer & Walker, 2011; Fet et al., 2011; Zhu et al., 2013). Furthermore, the Kuwait procurement officials interviewed commented that the high costs of sustainable products are a major barrier to the selection of more sustainable options. A public organisation funded by the government's public budget, makes it difficult for the public procurer to select expensive green products.

Tribalism and cultural norms also showed a significant and meaningful negative effect ( $B = -0.053$ ,  $t(96) = -2.323$ ,  $P\text{-value} < .05$ ), assuming the constancy of the other variables. One reason for such outcome could be that SPP encompasses various sustainability guidelines and rules, and for many in Kuwait, these rules are certainly new, and therefore challenge existing behaviour and norms among procurement officials. Financial benefits were also significant ( $B = .061$ ,  $t(96) = 2.215$ ,  $P\text{-value} < .05$ ), keeping the other variables fixed. This suggests that financial considerations, whether as the financial costs or financial gains are primary determinants of the extent to which the public sector engages in SPP practices.

Top management support, when other variables are constant, is significantly related to SPP practices ( $B = -.069$ ,  $t(96) = -2.174$ ,  $P\text{-value} < .05$ ).

The negative sign of the coefficient is contradictory to the prior expectation of top management being a driving factor of SPP practices. This is an example of a missed opportunity for SPP practices in Kuwait.

For example, some Kuwait's top officials I met, refused the inclusion of SPP criteria in their practices as they were not convinced of the benefits of SPP practices, or view SPP with suspicion because of a risk-averse attitude, as illustrated through one' official statement,

“We as management do not consider SPP to be positive; we are not willing to buy commodities that are very complex, sensitive, and difficult to use, which may cause disturbance and delays in our procurement operations”.

The literature also sheds some lights on this occurrence. Carter et al. (1998) indicated that middle management support rather than top management is significantly related to implanting SPP, as they are more involved with suppliers, society, and employees. Other studies claim that the top of the management support is only vital at the beginning of the SPP process, not when SPP practices are fully integrated into the procurement operations. Here, their intervention may negatively affect SPP implementation (Dickinson et al., 2008).

Additionally, other studies showed that SPP initiatives from leaders did not always positively cascade down through public procurement to those responsible for tender contracts (Dickinson et al., 2008; Grandia et al., 2013). Salam (2009) shed some further light on this phenomenon, stressing that the form of management support is very important, and that behind-the-scenes, low-profile support was preferable to support that is more visible. Middle managers and employee regarded that supervisors are imposing their sustainability initiatives and ideas on them, which were then negatively received.

Hence, future studies may consider mediation or interaction factors for the top management support variable, such as SPP knowledge, the stage of SPP implementation in the organisation, top management capacity over resource allocation, and management's attitude towards SPP practices.

The hypothesised relationships that political constraints ( $B = -.030$ ,  $t(96) = -1.249$ , ns), and budgetary constraints ( $B = -.019$ ,  $t(96) = -.718$ , ns) are affecting public sector's engagement with SPP, were not found, while it held the correct hypothesised association sign. Therefore, I cannot extract any conclusive results.

Interestingly, my analysis indicates that there are no significant legal barriers or facilitators to the public sector engagement with SPP, keeping the other independent variables constant, in line with the findings in Carter and Jennings (2004) and Meehan and Bryde (2011). These results indicate that government officials who have a greater knowledge of sustainability regulations might be more reluctant to implement SPP practices, due to the complexity of SPP operations in comparison to the lowest bid criteria, which is usually used. This also may be attributable to the fact that from the standalone areas of the SPP, government regulation might act as a barrier in one sustainability dimension, for example, in the case of environmental aspect, but as a driver for certain socially responsible activities, such as buying from locals and SMEs (See Table 30).

On the other hand, it may be further evidence of the failure to translate policy into procurement practices. However, these findings should in no way be interpreted as downplaying the importance and role of government's regulations in SPP implementation, as the officials I met, argued that public organisations are policy implementers, and regulation gives them the legitimacy of legal compliance to conduct SPP practices.

The empirical results showed that public procurer believes there is a shortage of local suppliers of green products in Kuwait, or that the capacity of them to satisfy the public sector's SPP tender requirement. However, the statistical analysis indicated that obstacles by suppliers ( $B=.016$ ,  $t(96)=-.639$ , ns) were not a significant determinant in Kuwait public sector' SPP practices, assuming that the other independent variables are constant. This result mostly indicates that the local suppliers have not shown resistance to the green requirements in public tenders, or that the shortage in the domestic market was compensated by inflows from foreign sources due to the highly globalised supply chain operations. Furthermore, my model also indicates that Environmental Management Systems (EMS) such as the ISO 14001 and EMAS are significant factors to the development of SPP practices in the public sector ( $B=.064$ ,  $t(96)=2.459$ ,  $P\text{-value}<.05$ ), assuming the constancy of the other independent variables. This suggests that the adoption of a certified EMS by public organisations can imply a successful development of SPP practices, in accordance with the findings of Swanson et al. (2005). The result shows that Islamic values and beliefs do have a positive significant effect on SPP ( $B=.099$ ,  $t(96)=3.689$ ,  $P\text{-value}<.01$ ), assuming that the other variables in this model are held constant. My results are in accordance with the findings of McMurray et al. (2014), who stated that religion influences positively the sustainable actions of procurement officials in the private and public sector organisations. This in hand suggests that employees' values can facilitate the establishment of SPP practices, as suggested by Carter and Jennings (2004) and Testa et al. (2014). Lack of sustainability knowledge ( $B=.057$ ,  $t(96)=2.425$ ,  $P\text{-value}<.05$ ) has a significant effect in shaping involvement with SPP, holding all other variables constant, consistency with Brammer and Walker (2011), McMurray et al. (2014), and Preuss (2007) findings.



Correspondingly related to my previous findings that only one-third of the surveyed procurement employees had indicated that they know about the concept of sustainability and its relationship to procurement operations (See Figure 13). The knowledge of SPP consists of experience, and the insights of managers and employees in public organisations (Carter & Rogers, 2008). As such, learning and training in regards to sustainability can have a strong positive influence on SPP implementation. The positive association may be attributed to that the knowledge of sustainability issues in procurement may also give insight into new challenges that public procurers feel a lack of competence in dealing with such complex and multidimensional issues.

Finally, some of the insignificant findings are suggestive. For example, the insignificance of the variable NGOs and pressure group's demands may be due to low stakeholder power and demands from NGOs and pressure groups, making them not a sufficient condition to foster the adoption of SPP practices in Kuwait.

### **7.5.2 Results of SPP Practices Multiple Regression Analysis (Supplementary)**

Next, I discuss the statistical results of the supplementary Model of the SPP practices multiple regression analysis, where I explored the relationships between the summary variables of SPP practices, barriers, and drivers.

The results showed that the SPP barriers variables as a group was statistically significant, indicating that the SPP barriers scale items identified in this study have a significant negative effect on the public sector organisation propensity to implement SPP practices. Furthermore, the SPP driver's variables as a group were statistically significant; indicating that the SPP drivers scale items identified in this study have a significant positive effect on the public sector organisation propensity to implement SPP practices.

## 7.6 Questionnaire' Open-Ended Questions Results

Qualitative data from open-ended questions can provide rich information about the respondents' opinion regarding SPP experiences.

The qualitative data collected can be important to contextualize more quantitative responses and to add depth to them (Given, 2008).

In the present research, two open-ended questions were included at the end of the questionnaire. These questions aimed at capturing the respondents' opinions regarding the barriers and drivers they faced when implementing SPP in their organisations. The data were analysed using thematic analysis guided by the PSR conceptual framework. The themes were extracted and coded until saturation of categories was attained, and no further categories occurred (Creswell, 2013).

The qualitative data are summarised and included in Table 43.

Table 43: Open-ended Questions Responses

| <b>SPP Barriers</b>              | <b>SPP drivers</b>                     |
|----------------------------------|--|
| Laws and Regulation              | Sustainability Laws and Strategies     |
| Procurement Process              | Top Management Support                 |
| Lack of Sustainability Knowledge | Environmental Management Systems (EMS) |
| Budgetary Constrains             | Procurement Employees                  |
| Costs of Sustainability          |  |

The analysis of the responses provides an insight into the most perceived barriers and drivers encountered when implementing SPP practices. The qualitative responses confirmed the quantitative results of the questionnaire that financial constraints are the main barriers to engaging in SPP practices in Kuwait. The perceptions that sustainable products are more expensive coupled with difficulties to allocate the budget needed to finance the procurement of sustainable goods and services are hindrances to their SPP efforts.

Respondents also revealed that the current procurement laws and regulations negatively affect the implementation of their SPP agenda.

Regarding the main drivers, the questionnaire respondents revealed that the enforcement of sustainable strategies and laws will give the public authorities the legal umbrella to include SPP criteria in their tender operations. Respondents also recognised the importance of top management support to their sustainability initiatives, the need to encourage procurement employees' SPP initiatives, and the importance of EMS standards and certifications adaptations in facilitating SPP practices in their public procurement operations.

## **7.7 New Identified Barriers and Drivers**

The next section will provide a review of some new barriers and drivers of SPP in Kuwait, identified from interviewing the public procurement managers, and through empirical findings from the survey and tender document analysis. The additional identified new factors are Best Practices, Supplier's Monopoly, Arbitration, and the Bureaucratic Procurement Process.

### **7.7.1 Best Practices**

As a concept, the best practices refer to successful cases of any practice leading to positive results (Wickenberg, 2004).

Senior public procurement managers from Kuwait validated the desire to lead best practices as a driver for their SPP operations. For example, one procurement official reported that,

“When we began tendering to convert our building into a green one, we looked for the world's best practices, and especially the American experience. For this reason, we selected the US' green building standards”.

Likewise, another official stressed that,

“Our organisation had the opportunity to be acquainted with the US government’s experience in the field of SPP, and we witnessed how they were keen on having a representation of all spectrums of society, and allow them the opportunity to have a share in the US public tenders. For example, Spanish and African suppliers were allocated a share of public tender as a way to address racial discrimination issues”.

Thus, it may be that public procurer could go beyond the policy framework of their country, to emulate sustainability best practices in other countries. However, the best practice is sensitive to cultural factors of the source and the context where it is to be implemented (Balasubramanian, 2012). Nonetheless, SPP best practices might be a valuable source to demonstrate the possibilities available in SPP operations, and an inspiration to developing countries.

### **7.7.2 Suppliers’ Monopoly**

A new barrier obtained from the interviews conducted with Kuwait’s procurement executives was “Supplier’s Monopoly” in public tenders since it has not been mentioned in the literature before. The SPP criteria included in some public tenders might lead to favouring certain suppliers in the local market, giving an unfair competitive advantage for a few local suppliers.

One procurement official explained as such,

“There is a monopoly in the automotive and telecommunications tenders, were only a few numbers of suppliers can bid. In these tenders even setting the SPP specifications require the agreement of these monopoly suppliers beforehand”.

Another public official shared his experience stressing that,

“The local suppliers objected sustainable specifications that have been included in public tenders, claiming that these SPP criteria give an advantage to some suppliers over others, which means that the government encourages suppliers’ monopoly”.

As confirmed by another procurement official sharing his experience,

“We planned on supporting SMEs businesses in our public tenders. However, there are certain large suppliers that hold a monopoly in certain public tenders and eliminate all types of competition”.

Similarly, a procurement official commented that,

“The suppliers’ monopoly in the Kuwaiti market is a huge obstacle we face in our SPP operations”.

Accordingly, for SPP to be thoroughly implemented, a strong legal and administrative framework has to be established, which creates fair competition in the local market, and that would lead to greater competition among suppliers.

### **7.7.3 Arbitration and Legal System**

The public tender contract is concluded and signed in Kuwait, hence shall be governed by the Kuwaiti laws. Many procurement officials voiced that some legal conditions within public tender contracts act as a strong barrier for suppliers to bid for SPP tenders. For example, one of the procurement officials explained,

“The government have the right to cancel the public tender without giving any justifiable reasons for this cancellation, even after signing the tender contract”.

Another remarkable response was that,

“Kuwait’ arbitration system in dispute settlement between the public sector and the suppliers, act as a strong barrier and causes many suppliers to refrain from bidding for public tenders”.

Thus, reforming the legal framework of public procurement is a necessity to eliminate any possible legal barriers that could limit the implementation of SPP practices.

#### **7.7.4 Bureaucratic Procurement Process**

As a developing country, Kuwait suffers from weaknesses in government procurement systems. Furthermore, the public procurement process in Kuwait is associated with complexity, delays, and chronic bureaucracy (World Bank, 2009).

Some of the procurement officials I met to consider that the bureaucratic process in procurement is a barrier for their SPP operations. As one of them stressed,

“The procurement process often requires a lengthy documentations cycle, leading to delays in awarding the public tenders and in tender’ prices inflation”.

Furthermore, an official explained how such an obstacle is hindering the government SPP’ efforts, pointing out that,

“Kuwait’s public procurement process is lagging compared to other GCC countries. Kuwait’ procurement documentary-cycle currently accounts for around 500 procedures, hindering our efforts to implement SPP initiatives”.

In addition, another procurement manager, worded that,

“We are suffering from the length of bureaucratic procurement procedures in public tenders. This is one of the main obstacles we face in our efforts to set SPP criteria in our tenders”.

The length and the delays of the procurement process and procedures can lead to acquiring higher costs, making tendering for green products more difficult, as they are more expensive. As stressed by one procurement official,

“The length of and the inefficiency of the procurement processes caused the public tender’s costs to usually ends up higher than estimated, and hindering the chances of buying costly sustainable products with the available budget”.

Thus, the inefficiency and incompetence of the procurement function in the Kuwait public sector contribute to overspending and in tender delays. Thus, implementing SPP may necessitate the need to review and reform the procurement process and procedures, in order to simplify them and make them more efficient.

## **7.8 Conclusion**

This chapter discussed the findings of my research. This chapter further informs about the existence of empirical evidence to support the hypothesised relationships between the SPP practices and the barriers and drivers in the Kuwait public sector context.

The next chapter, Chapter 8, summarises the study, gives a recommendation for the advancement of SPP practices and discusses the limitations of this research, as well as further research directions.

## **Chapter 8: Conclusions and Recommendations**

Each county has its own economic, social, cultural, and political environment and each country's public procurement practitioners face different types of challenges (Kioko & Were, 2014). The general objective of this thesis was to investigate how the public sector organisations in Kuwait are implementing SPP, and assess the factors affecting the engagement of SPP in the government. This study is conducted in a developing country, therefore, bridges a research gap and adds knowledge to the under-investigated field of SPP (Meehan & Bryde, 2011; Melissen & Reinders, 2012).

This study first reviewed the literature on SPP to bring forward a conceptual framework for SPP management. This framework primarily focuses on SPP practices and the associated barriers and drivers in developing countries. This study contributes to both the theoretical and practical issues underpinning SPP by extending and validating the measurement instrument of Purchasing Social Responsibility (PSR), developed by Carter and Jennings (2004), and by Walker and Brammer (2009), that critically assess the determinants of the sustainability constructs in public procurement.

In order to validate the framework in a real-life context, I conducted a tender document analysis, semi-structured interviews, and developed a questionnaire in order to operationalise my instruments. The whole process refined the conceptual framework and helped to identify the driving conditions and factors that hinder the implementation of SPP in Kuwait public sector organisations.

Analysing data from a combination of quantitative and qualitative resources yielded important findings. These results will be summarised in the next subsections.



## **8.1 Summary of Findings**

The findings were sought via triangulation methods, using primary and secondary data sources. I have located 71 procurement documents and tender contracts from 17 different public sector organisations, and I have interviewed a total of 14 informants and high-level procurement officers from varied background across nine public sector organisations. I have also collected data through survey questionnaires, in total 110 questionnaires were distributed among the procurement employees from 16 different public sector organisations. A total of 97 employees responded, giving a response rate of approximately 89%.

### **8.1.1 Findings Regarding SPP Practices**

The research findings revealed that the majority of the participating organisations adopted some practices of the SPP, but some areas of sustainability are relatively neglected. Aspects of SPP practices, such as buying from local suppliers, supporting human rights, and ensuring safe practices in public procurement are the most widely implemented by the Kuwait public sector organisations. The Kuwait government supports local suppliers' business and promotes local service industries such as freight, banks, and insurance through public procurement operations. There is also a strong emphasis on Kuwait's public procurement on the safeguard and promotion of human rights and health and safety considerations. The public sector' suppliers have to comply strictly with Kuwait's health and safety regulations in their operations. 'In addition, the constitution and national laws adopted by the government of Kuwait prohibits discrimination based on race, gender, and disability.

Moreover, Kuwait' public tender law has ensured that public bidders are economically classified, so that big contractors do not crowd out small contractors. This allows SMEs companies to take part in public tenders.

The research findings also offered evidence of the inclusion of innovation criteria in Kuwait's public procurement operations. The government, through public procurement, created opportunities for suppliers to engage in innovation activities and to develop new products or services. Furthermore, in some tender contracts, the priority in awarding public tenders is for innovative ideas or for the development of new and innovative ways to supply and conduct the governmental' functions and services.

Kuwait aims at becoming a Financial and Commercial Hub, by 2035. The Kuwait 2035 Economic Vision requires an economy that is based on higher value-added activities, and a dynamic knowledge-based economy (MOP, 2010). In this context, public procurement can emerge as a powerful instrument to spur innovation, to stimulate economic growth, and to increase and enhance the capabilities of the local business and industries. However, currently, innovative practices have an only moderate implementation of Kuwait public procurement practices. In this regard, the government could promote new technology and R&D activities through a national innovation policy or framework. For example, a study by Grow (2015) analysed the state of SPP implementation in EU member states, revealing that innovation procurement ranks the least is the most institutionalised types of SPP practices, with 1% of the total procurement operations. The findings indicate that because innovation procurement is a newly introduced SPP aspect and is conducted as a voluntary practice, it could benefit from supportive directives and policies.

On the other hand, the environmental aspects of the SPP are only moderately established. Some environmental criteria of the procured work, products, and services were somewhat covered, such as the categories regarding the reduction of energy usage, pollution, waste, and water consumption, in other words, the criteria that are usually associated with the requirements of the green buildings. However, my findings indicate that many important aspects of strategic green public procurement operations were lacking (Zhu et al., 2013). This is perhaps due to the fact that environmental considerations are still not a part of a sustainable national policy framework; engaging with green procurement remains a voluntary option, not guided by explicit laws or regulations. As demonstrated in the literature, that a strong and sustainable national policy framework coincided with higher uptake results (Bouwer et al., 2006; Grow, 2015; Musa et al., 2013). Additionally, the perception that the green and eco-products are more expensive, and the lack of knowledge about green or sustainable procurement concepts contributed to less adoption of environmental considerations in Kuwait's public procurement. Thus, in order to boost the uptake of green procurement in Kuwait, Kuwait's government and policymakers should try to establish and enforce green procurement policies, stimulate demand for green products to enlarge the local Kuwaiti market of environmentally friendly products and services, and lower the prices for green products for the whole economy through economies of scale.

In sum, the research findings revealed that most widely implemented aspects of SPP practices are those supporting local businesses and aspects concerning sustainable labours' safety and human rights practices, while the environmental dimension is the least-embedded SPP practice. These findings coincide with the findings of McMurray et al. (2014), Islam and Siwar (2013), Walker and Brammer (2009), and Brammer and Walker (2011).

Hence, Kuwait's public sector seems currently focused on the social and economic rather than environmental aspects of SPP; this may reflect the relative importance of these aspects of SPP to the broader public sector agenda in Kuwait. The socioeconomic goals of the government could be the reason for assigning the priorities of SPP practices within the national procurement operations (Islam & Siwar, 2013).

As a sovereign nation, there is a real tendency and synergy of all national efforts by the government in Kuwait to support and encourage nationals and the use of national products, by requiring all government agencies to implement the decisions relating to giving priority in public procurement for local suppliers and domestic products. Rees and Althakhri (2008) have suggested that oil revenue has been employed to develop and enhance the public sector in the GCC region, which in turn has enabled governments to provide relatively well-paid employment to the Nationals' workforce. As a consequence, locals prefer to work in the public sector rather than to work in private sectors. On the other hand, the private sector prefers foreign labour, as it is cheaper. This situation has led Kuwait to adopt Kuwaitisation or nationalisation strategies in public procurement to encourage the private sector to employ locals, using Kuwaiti's quotas imposed on suppliers. The bidders shall give priority to Kuwaiti citizens when employing who are needed to fill jobs required to fulfil the public tender contract.

In summary, while some SPP practices are being promoted and embedded in Kuwait's public procurement operations, engagement with SPP is still in its infancy, as many important aspects of sustainable procurement operations are still lacking.

### **8.1.2 Findings Regarding SPP Barriers and Drivers.**

This study identified drivers and barriers that are internal and external to the public sector organisation from literature and empirical research. The empirical analysis also led to the identification of a number of new drivers and barriers. Among the additional identified new factors are best practices, supplier's monopoly, arbitration, and the bureaucratic procurement process.

#### **8.1.2.1 SPP Barriers**

My study revealed that financial considerations regarding budgetary constraints and the costs of sustainability, coupled with a lack of knowledge of the concepts of sustainability and its benefits, were identified as the underlying causes for hindering the efforts to integrate sustainability into Kuwait's public procurement operations in line with previous findings in the literature (Chari & Chiriseri, 2014; McMurray et al., 2014; Testa et al., 2014; Walker & Brammer, 2009).

These barriers should be addressed by public sector organisations by reducing budgets and financial barriers. For example, providing whole-life costing procedures in the tender evaluations and sufficient budgetary flexibility would make engaging with SPP more attainable. In addition, the results obtained also highlighted a lack of knowledge about what sustainable procurement is and how to achieve it. This result suggests that a great effort on awareness raising, information, and training about what sustainable procurement is and how to achieve it would support a more knowledgeable procurement leadership and employees to support SPP development in Kuwait. In this regard, the capacity building of public procurement staff should be available on a regular basis and on a large scale.

Furthermore, my findings showed that tribalism and cultural norms are significant barriers to engagement with SPP practices in Kuwait. The geographical location of Kuwait is in the Arabian Peninsula. Thus, Kuwaitis are of an Arabic origin, and this confirmed in the constitution. Furthermore, the origin of Kuwait's modern-day native population, are tribes who moved from the south-west, the north, and north-west more than 200 years ago (Asseri, 2007).

In Kuwait, the family or tribe is the centre of society. In this sociological background of the society, the businesses and the decision-making process in an organisation is shaped by cultural norms and considerations. To facilitate more implementation of SPP practices, governments need to focus on the barriers that are specific to their region culture concern specific to their society. Barriers are context-dependent and are likely to vary with the culture and region in question (UNEP, 2013). Alkilani and Jupp (2013) argued that this is the norm in many developing economies where procurement must be considered in the country's social context. This research has confirmed that cultural factors can affect the degree of sustainability operations within in Kuwait organisations in line with previous empirical findings (Hammoud, 2011; Preuss & Walker, 2011; Salam, 2009; Sarkis & Setthasakko, 2009). The results obtained regarding the influence of the cultural systems on SPP practices, highlights the need to explore further the impact of the Arab culture of the successful implementation of the SPP, and the need for research that investigates the influence of tribalism and cultural norms on the procurement employees and SPP operations.

On the other hand, the procurement directors and senior managers, we interviewed emphasised on insufficient regulation and laws, and the procurement process is some main barriers to engaging with SPP from their experience.

Thus, a lack of competence and a lack of efficient procurement process combined with an outdated regulatory framework discourage the realisation of SPP in the government sector of Kuwait. This confirms the argument that developing countries tend to face barriers specific to their context. Unlike developed countries, developing countries often lack a modern procurement infrastructure and national SPP laws and regulations (UNEP, 2013).

The legislation and the legal framework of Kuwait's public procurement system was designed in the sixties and seventies of the twentieth century. Although it certainly met the needs and circumstances of that earlier era, it no longer satisfies the needs of the modern government (World Bank, 2009). For SPP to thrive, a legal framework has to promote the consideration of environmental, innovation, and supporting SMEs criteria throughout the procurement process. Public officials will not seriously integrate these sustainability issues into their procurement operations if they realise that regulations in these regards are lacking or voluntary.

On the other hand, the procurement process exhibits largely chronic delays, which significantly affect the achievement time, and lead to raising the overall costs on a regular basis. In this regard, the role of the CTC should be confined to projects with high risks and costs only. This will reduce the burden on the CTC in reviewing public tenders and will accelerate public procurement operations, by reducing time, effort, and delays in the documentary-cycle of public procurement. The current procedures of the public procurement system suffer from a huge documentation-cycle, lacks a full and comprehensive presentation for all procurement methods, and the ambiguity in how authorities choose the appropriate procurement method for each tender contract.

These shortcomings should be addressed by the efficient development of standardised documentation for all kinds of public tenders and procurement groups, and to standardise the evaluation criteria of sustainable procurement to be used and utilised by all government agencies (UNEP, 2012, 2013).

#### **8.1.2.2 SPP Drivers**

In terms of drivers for implementing SPP, my findings have shown that financial benefits are an important and significant driver for SPP. There can be significant financial savings and gains for the Kuwaiti government. By taking the cost of sustainable products and services over their whole-life costs into consideration, the SPP would ensure value for money and create financial savings over the long-term perspective. The method of assessment analyses based on the whole-life cost of products or services, not only the upfront cost at the point of acquisition, when considered in this manner, many items that look expensive initially can save costs, as they are assessed throughout their life-cycle (Brammer & Walker, 2011; Dickinson et al., 2008).

The religious commands of Islam were also identified as an important factor that influences public procurers to engage in SPP practices. The Islamic religion is the fundamental basis for the life and system in Kuwait. Islam represents the primary source of the value system in Kuwait (Al-Fare, 2000). Here, Muslims' values related to respect for and protection of social and ethical issues in procurement practices. Hence, SPP practices are not only dependent on policies and planned strategies organised by the administration, but they are primarily determined by the values and beliefs of individuals within the organisation.



As a result, the degree of sustainability behaviour of public procurers largely depends on their personal and religious beliefs.

The research highlighted that ethical guidelines in procurement operations viewed in the light of the religious teaching of Islam are a great necessity for sustainable procurement, especially in Muslim countries.

Interestingly, my statistical analysis indicates that top management support is significantly related to SPP, however, the negative sign of the coefficient is contradictory to the prior expectation of top management is a driving factor of SPP (Brammer & Walker, 2011; Conway, 2012; Giunipero et al., 2012). This is an example of a missed opportunity for SPP in Kuwait. Hence, in order to provide a more comprehensive understanding regarding the role of top management in supporting SPP practices, top management role should be considered simultaneously with other internal or external factors, such as, executives' SPP knowledge, the stage of SPP implementation in their organisation, top management capacity over resource allocation, and management's risk aversion attitude towards SPP. Nonetheless, the findings regarding top management should in no way be interpreted as downplaying the importance and role of top management in SPP implementation, as some officials I met stress the important role of senior management support on the implementation of SPP practices in their organisations.

An important external driver identified through tender document examination and from interviewing procurement directors was the government's sustainability strategies. The public sector organisations are policy implementers. Public procurement is one of the highly legislated and regulated fields in the government (Lloyd & McCue, 2004).

Public sector organisations will look to their national government for a policy mandate to incorporate sustainability issues into their public procurement operations. The results indicated that SPP practices in Kuwait have benefited from a national policy and sustainability framework that favour locals, and provides adequate protection for human rights and health and safety considerations.

My results inform about a new driver that was not yet mentioned in the SPP literature. Public procurement managers, we interviewed validated the desire to lead best practices as a driver of SPP. Thus, it would be beneficial if entrepreneurial public procurement officers went beyond the policy guidance of their country, to emulate successful sustainability initiatives in other countries. As such, best practices might be a valuable source to demonstrate the possibilities available with public procurement to realise sustainable development goals and a source of inspiration for developing countries.

Lastly, I tried to investigate if the structural and organisational size could favour the development of SPP operations. Yet, I found that neither the size of the public organisations, nor their operational sectors were able to influence the implementation of SPP practices.

## **8.2 Recommendations**

Based on the findings of this research, I make the following recommendations to the external and internal environment of Kuwait public sector organisations.

### Recommendations regarding external factors:

- Political commitment: High level of political commitment is a key factor that leads to the success of SPP implementation.

- Procurement process reform: simplifying the public procurement process through a reduction of administrative burden for contracting authorities standardised tendering procedures and cost savings.
- Policy and legislative reforms: While some policies aimed at promoting SPP have been implemented in Kuwait, many of SPP practices are largely optional. The government needs to enforce existing SPP legislation, and also develop and mandate new SPP policies, such as encouraging and enhancing innovation, the inclusion of SMEs businesses, and environmental protection.
- Creating an SPP action plan: A plan should be put in place and institutionalised through written codes or policies. Further, this action plan should be aligned with the public organisations' strategies, and supported by the top management.
- Establish an SPP National Committee with the participation of competent public organisations, sustainability experts, market representatives, relevant consumers, and civic group members. The role of this committee would be to coordinate and draft relevant SPP policies and guidelines, establish the SPP tasks for public authorities, build government SPP tracking and report system, evaluate the implementation, issue SPP information handbook and to promote SPP activities.
- Collective Buying: Joint procurement by public bodies can increase bargaining power and help reduce prices associated with more expensive sustainable products, as well as, administrative costs per contract. This is of practical importance, as at the moment, collective procurement lack any criteria and specifications for green or sustainable products.

- Best Practices: employing SPP best practice and successful examples will motivate public organisations to implement SPP, and generate an awareness of SPP goals and standards.
- Address the impact of Arab culture and norms: There is a clear need to promote a culture of sustainability for procurement personnel regarding SPP since many employees lack an understanding of sustainable development and procurement principles. The study further recommends disseminating information on SPP implications and benefits for society and the environment.
- Stimulating Innovation: Innovation policies should be encouraged and enhanced by identifying research needs specific to Kuwait, promoting and subsidising R&D, and setting up innovation partnerships with universities, research institutions, and industry.

Recommendations regarding internal factors:

- Collaboration with NGOs: Enhanced collaboration with NGOs and pressure groups on SPP issues is beneficial.
- Top management support: Top management needs to support the adoption of the SPP system into its procurement procedures and integrate them into the public organisation's overall goals. They should also provide all the financial support that is necessary for the adoption of SPP.
- Training for employees: Public organisations should provide adequate training to enhance their procurement staff's skills and knowledge, and to broaden the competencies of the procurement staff regarding SPP practices.
- Budget systems and accounting practices reforms: A sufficient budgetary reforms would make engaging in SPP more attainable.

For example, the ability to carry funds from one fiscal year to the next instead of single-year budgeting would counter the focus on lowest price tenders and adopting a whole-life cycle system.

- Involving suppliers: Suppliers should be engaged in the development of more sustainable products and services. Suppliers should also demonstrate their capacity and track record in sustainable production, practices, and technologies.
- Philanthropy Authorisation: Public organisations need to consider how officially encourage philanthropic activities within their SPP practices. Moreover, it would be beneficial if the government would play a greater role in encouraging philanthropic' sustainability through its procurement operations.
- Realising religious link to the SPP: Because the religious practice was an essential factor that influenced Kuwait's public organisations to engage in sustainable practices, Islamic centres could take part in raising the level of awareness regarding sustainable development across the whole society.
- Encourage the adoption of EMS: Encourage the use of green standards and eco-labels to facilitate SPP operations and decisions, or be used directly as a requirement for public tenders.

### **8.3 Research Implications**

This thesis provides academic and managerial insights, useful for both policymaking and procurement officers.

#### **8.3.1 Theoretical Implications**

Research into sustainable procurement in the public sector is a small but growing area of academic inquiry.

This study contributes to the literature in sustainable procurement by addressing sustainability in the public sector in the context of a developing country.

Firstly, the majority of prior studies have mainly explored sustainable procurement in developed countries and the private sector. This study is among the few addressing SPP in the public sector in the context of a developing country, which should lead to more insight and understanding for both practitioners and researchers.

Secondly, the majority of previous research on sustainable procurement has focused on environmental or the social issues only, with economic issues being the subject of significantly less research (Seuring & Müller, 2008; Walker, 2010b). Thereby, this study offers an integrated conceptual and empirical treatment of all sustainable development dimensions.

Thirdly, this research also contributes to the literature by synthesising existing literature, and by conducting a quantitative and qualitative analysis of data obtained through reviews of procurement documents, semi-structured interviews and survey questionnaires. As a result, my study was able to extend the SPP' measurement instrument of Purchasing Social Responsibility (PSR) Model, by adding the new "Innovation" construct to put forward an improved SPP model, which contribute to the theoretical development of SPP practices.

Lastly, my study explored the factors that influence the development of SPP practices among Kuwait's public organisations. The investigation led to the identification of new barriers and drivers of SPP in the context of an Arab and Islamic country such as Kuwait, where the cultural and the religious factors demonstrated to have an effect on SPP practices. This thesis thus provides more insights into factors that may influence SPP implementation in developing countries, which reflects their own histories, cultural, and religious beliefs.

### **8.3.2 Managerial Implications**

As far as managerial implications are concerned, this study offers a starting point for raising awareness among public procurers as to what sustainability means, and as to how governmental policies regarding sustainability can be implemented in the context of Kuwait's public procurement.

In terms of practical contribution, this study provides a framework for policymakers in public organisations for integrating the SPP determinants when formulating procurement policies that adhere to SPP practices. Policy makers in developing countries can use my extended PSR Model as an SPP benchmark, to assess their organisation's SPP performance, and to identify whether some areas of sustainability are currently being neglected in their procurement practices.

Moreover, I highlighted the nature and extent of the current SPP practices in Kuwait' public sector organisations and the factors that facilitate or hinder the further development of the SPP. My findings may be applied in public entities across Kuwait by identifying which elements have a greater impact on the effective implementation of SPP practices. These elements could be transformed into a set of strategies that can be employed in overcoming the identified barriers and further advance the opportunities.

Finally, while this study focuses on Kuwait' public sector organisations, the observations are relevant to other developing countries as well, in particular, to other GCC countries. As the Kuwait procurement process shares characteristics with other developing economies, it is expected that the findings of this thesis will be of interest to professionals in the government procurement operations attempting to initiate sustainable public procurement.

## 8.4 Limitations

This study has been operationalised thoroughly according to the generally accepted research guidelines. However, it is important to bear in mind some of its limitations when interpreting its findings.

The first limitation of the thesis that it was a cross-sectional study conducted in the Kuwait public sector. Thus, it would be interesting to extend this study in other industries, sectors, and other Arabic and Muslim countries for comparison.

The second limitation of this study is that this study employed a standard multiple regression as the major statistical analysis tool, and this requires a large number of respondents in many locations (Keller & Gaciu, 2012; Kline, 2005). A particularly appropriate next phase would hence be to increase the sample size, as larger samples could add greater precision through statistical power.

In addition, some possible explanatory variables are not included in the research survey questionnaires. Due to the limitation in time, minimising the respondent burden that may lead to lower response rates, and giving more emphasise in the questionnaire on questions regarding SPP practices, barriers, and drivers. However, the PSR model and questionnaire could benefit from the inclusion of explanatory variables like organisation budget, missions of public organisation, administration structure, field and scope of responsibilities and work of the public organisation to ascertain their effects and generate practical and theoretical information.

Finally, the study applies the positivism paradigm; future research needs to explore different paradigms and philosophical stances. For example, using qualitative and case study techniques could help add more depth to the PSR Model, and discover new dimensions or factors about SPP practices.



## 8.5 Future Research Directions

An interesting avenue for future research would be to explore the differences between Kuwait's public and private sector organisations in the level of sustainable procurement implementation and to compare the influencing factors.

Internationally, sustainability practices are changing rapidly, and sharing learning across regions will benefit all. Another interesting avenue of research would be to examine and compare the commitment to SPP across the GCC countries.

Moreover, while SPP practices involve buyer-supplier relationships, the collected data are based on procurement data obtained from Kuwait' public sector organisations, which only reflect the buying perspective of this relationship. Consequently, future research may extend the investigation to include the suppliers' side within public tendering procedures.

Further, the analysis performed in this thesis was cross-sectional. The cross-sectional nature of the research design implies that true causal relationships between the research constructs cannot be inferred. In future work, one could perform a longitudinal analysis of changing SPP practices, in order to follow the SPP' implementation and progress over time. Therefore, a longitudinal study would be more informative in terms of ascertaining the impact of the determinant factors on SPP practices.

In addition, some possible mediating effects among the predictor variables were not accommodated in my research model. Future studies could investigate the role of possible mediating effects among the predictors during the planning stage of the study and the development of the PSR conceptual framework.

Investigation of such mediating effects may give further insight into how these effects of SPP drivers on the SPP outcome are mediated by the SPP barriers.

Currently, there is no existing literature on how to develop the mediating pathways among the SPP drivers and the barriers. Future studies may consider when developing a conceptual framework of the SPP model to accommodate possible mediating effects among the SPP drivers and the barriers.

My results show some conflicting and surprising results. For example, there are a number of unexpected results, which show variables having an opposite effect on the hypothesised relationships between SPP and its drivers and barriers. The cause of this outcome needs further evaluation and investigation.

Finally, despite the growing interest in sustainable procurement, in practice, there is little understanding regarding the implementation of SPP practices in public organisations (Chen & Paulraj, 2004; Grob & Benn, 2014).

The theory and practice of SPP need to be further developed. Future directions might include integrating established theories into SPP research, or the beginning of a theory building process to enhance my understanding of this subject.

In conclusion, this study attempts to set an empirical contribution to the growing area of research on the SPP practices. Future studies are encouraged to make use of this study for further investigation of sustainable public procurement.

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## Appendices

### Appendix A: Sample of Questionnaire

|  |   |
|--|---|
|  | <p><b>UAEU</b> College of Business<br/>and Economics</p> <p><b>Sustainable Public Procurements<br/>In The Kuwait Public Sector</b></p> <p>By: <a href="#">Fatima Al Maraghi</a></p> <p>For more information, contact:</p> <p><b>Fatima Al Maraghi</b><br/>Doctorate Students<br/><b>UAEU University</b><br/><b>College of Business and Economics</b></p> <p>Tel: +965-99839948<br/>Fax: +965-2482318<br/>E-mail:<br/><a href="mailto:fatimaalmaraghi@hotmail.com">fatimaalmaraghi@hotmail.com</a><br/><a href="mailto:201290022@uaeu.edu.ae">201290022@uaeu.edu.ae</a></p> <hr/> <p><b>Disclaimer</b><br/>We think of Sustainable Public Procurement (SPP) as a powerful policy tool to bring about major economic, environmental and social benefits to the society.</p> <p>When answering this survey, please consider the situation of your procurements department. Answer questions as accurately as possible. We assure you full anonymity. In addition to contributing to valuable research, we offer you first hand access to the results and conclusions of this study. If interested, please note my e-mail address on this cover page. Any feedback or comments may also be noted here. They will be handled separately from the survey responses and in no way connected.</p> |
|--|---|



# Survey Questionnaire

The questions are divided into four themes:

1. Information about the participant and the organization/department that he or she represents.
2. Scope of procurement, processes and practices.
3. The organizations' experience with sustainable public procurement.
4. Perceptions, barriers and drivers regarding sustainable public procurement.

## 1 Personal Information

### 1. What is your current employment position?

|                                |  |
|--------------------------------|--|
| Ministry / Authority / company |  |
| Division or Department         |  |
| Title of current position      |  |

(Please indicate your answer by crossing **X** in the box  provided.)

### 2. What is your highest level of education?

- Post-Graduate/Master/PhD
- Bachelor Degree
- Diploma
- Secondary
- Other

### 3. What is the total number of employees in the procurement department?

- Less than 5
- 5 to 15
- 16 to 25
- 26 to 35
- More than 35

### 4. How many years of experience do you have in the Kuwait public procurement sector?

- 1 to 5 years
- 6 to 10 years
- 11 to 15 years
- More than 15 years

## 2 Procurement Processes and Practices

**5. Which contracting method your organization uses for procurement?**

- Public Tender
- Public Quotations
- Direct Purchase
- Other

(please specify):-----

**6. Indicate how often your organization considers the following factors when selecting suppliers.**

| Mechanisms                                    | Never rarely occasionally frequently very frequently |   |   |   |   |
|---|--|---|---|---|---|
|   | 1  | 2 | 3 | 4 | 5 |
| Lowest bid                                    |  |   |   |   |   |
| Quality of goods and services                 |  |   |   |   |   |
| Health & Safety standards                     |  |   |   |   |   |
| Suppliers management and technical capability |  |   |   |   |   |
| Suppliers financial standing                  |  |   |   |   |   |
| Environmental criteria                        |  |   |   |   |   |
| Social Corporate Responsibility Reputation    |  |   |   |   |   |
| Innovation and R&D activities                 |  |   |   |   |   |
| Other:-----                                   |  |   |   |   |   |

**7. Are you familiar with the following concepts?**

| Concepts                                      | Yes | No |
|---|-----|----|
| Sustainable development                       |     |    |
| Sustainable procurement                       |     |    |
| Environmental procurement / Green procurement |     |    |

### 3 Organization's Experience with Sustainable Public Procurement (SPP)

“ Note: Please indicate the extent of your agreement / disagreement with the following statements regarding the current procurement mechanism at your organization.”.

#### I. Environment

8. Indicate if your organization considers the following factors when purchasing. Currently, our procurements function:

| Statements   | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--|-------------------|----------|----------------------------|-------|----------------|
|  | 1                 | 2        | 3                          | 4     | 5              |
| Uses ISO certification / Eco-labels                                  |                   |          |                            |       |                |
| Purchases products that reduce energy use / greenhouse gas emissions |                   |          |                            |       |                |
| Asks suppliers to commit to pollution and waste reduction            |                   |          |                            |       |                |
| Purchases environmentally friendly transport vehicles                |                   |          |                            |       |                |
| Asks suppliers for organic food production methods                   |                   |          |                            |       |                |
| Asks suppliers to commit to reduced use of water and soil protection |                   |          |                            |       |                |
| Purchases recycled and re-use products                               |                   |          |                            |       |                |

#### 2. Human Rights

9. Indicate if your organization considers the following factors when purchasing. Currently, our procurements function:

| Statements  | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|-------------------|----------|----------------------------|-------|----------------|
|   | 1                 | 2        | 3                          | 4     | 5              |
| Visits suppliers' facilities to ensure that they are not using sweatshop labour |                   |          |                            |       |                |
| Ensures that suppliers comply with Kuwait's labour laws                         |                   |          |                            |       |                |
| Requests suppliers to pay wages greater than Kuwait's minimum wage              |                   |          |                            |       |                |

#### 3. Philanthropy

10. Indicate if your organization considers the following factors when purchasing. Currently, our procurements function:

| Statements   | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--|-------------------|----------|----------------------------|-------|----------------|
|  | 1                 | 2        | 3                          | 4     | 5              |
| Utilizes suppliers that are philanthropic, i.e. it creates training and employment for people with special needs |                   |          |                            |       |                |

## 4. Health and Safety

11. Indicate if your organization considers the following factors when purchasing. Currently, our procurements function:

| Statements   | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--|-------------------|----------|----------------------------|-------|----------------|
|  | 1                 | 2        | 3                          | 4     | 5              |
| Ensures that suppliers comply with Kuwait's health and safety regulations                                |                   |          |                            |       |                |
| Ensures the safe, incoming and movement of product in suppliers' facilities                              |                   |          |                            |       |                |
| Ensures that suppliers provide appropriate personal protection equipment for employees                   |                   |          |                            |       |                |
| Ensures that suppliers' workers are insured against accident or liability by Kuwaiti insurance companies |                   |          |                            |       |                |

## 5. Local suppliers

12. Indicate if your organization considers the following factors when purchasing. Currently, our procurements function:

| Statements   | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--|-------------------|----------|----------------------------|-------|----------------|
|  | 1                 | 2        | 3                          | 4     | 5              |
| Ensures suppliers' commitment to employ Kuwaiti Nationals at least 10%         |                   |          |                            |       |                |
| Ensures purchasing from Kuwaiti business suppliers                             |                   |          |                            |       |                |
| Encourages local industries and services such as freight, banks, and insurance |                   |          |                            |       |                |

## 6. Buying from SMEs

13. Indicate if your organization considers the following factors when purchasing. Currently, our procurements function:

| Statements  | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|-------------------|----------|----------------------------|-------|----------------|
|   | 1                 | 2        | 3                          | 4     | 5              |
| Purchases from SMEs suppliers (less than 250 employees) |                   |          |                            |       |                |
| Have a suppliers size classifications                   |                   |          |                            |       |                |

## 7. Innovation

14. Indicate if your organization considers the following factors when purchasing. Currently, our procurements function:

| Statements   | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--|-------------------|----------|----------------------------|-------|----------------|
|  | 1                 | 2        | 3                          | 4     | 5              |
| Asks suppliers for new or significantly improved product or process solution |                   |          |                            |       |                |
| Purchases from suppliers that undertake R&D activities                       |                   |          |                            |       |                |
| Require the ownership of Patent and IPR as part of the tender contract       |                   |          |                            |       |                |

## 4 Barriers and drivers regarding SPP.

15. Indicate the extent of your agreement / disagreement with the following statements regarding the obstacles and barriers facing the implementation of SPP in your organization.

| Statements                                      | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|---|-------------------|----------|----------------------------|-------|----------------|
|   | 1                 | 2        | 3                          | 4     | 5              |
| Sustainable products are more expensive         |                   |          |                            |       |                |
| Lack of legislation or regulations              |                   |          |                            |       |                |
| Lack of information and knowledge about SPP     |                   |          |                            |       |                |
| Political constraints                           |                   |          |                            |       |                |
| Budgetary constraints                           |                   |          |                            |       |                |
| Resistance and obstacles generated by suppliers |                   |          |                            |       |                |
| Tribalism and cultural norms                    |                   |          |                            |       |                |

16. From your perspective, what prevent Sustainable Procurement in your organization?

17. Indicate the extent of your agreement / disagreement with the following statements regarding the main drivers for the implementation of SPP in your organization.

| Statements   | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--|-------------------|----------|----------------------------|-------|----------------|
|  | 1                 | 2        | 3                          | 4     | 5              |
| Top managements support  |                   |          |                            |       |                |
| Governments strategy of sustainable development                        |                   |          |                            |       |                |
| Employee initiatives   |                   |          |                            |       |                |
| Financial benefits   |                   |          |                            |       |                |
| Society and citizens' awareness of social and environmental issues     |                   |          |                            |       |                |
| NGOs and pressure groups demands                                       |                   |          |                            |       |                |
| The Islamic values and beliefs of individual employees                 |                   |          |                            |       |                |
| Environmental Management Systems, such as ISO 14000 and EMAS standards |                   |          |                            |       |                |

18. From your perspective, what enable Sustainable Procurement in your organization?

19. Any other comments.

**Thank you very much for your assistance and co-operation in participating in this research.**

## Appendix B: Sample of Interview Questions

### Interview Questions

**Guideline:**

Introduce myself, and explain the topic of the thesis - sustainability in the public sector procurement, and the aim of the study.

Obtain the interviewees' permission in case of recording.

**Note:**

The interview will take a Semi-structured interviews form, based on the SPP Model Scale items, we prepared a list of themes that we wanted to discuss, but also we will be able to adjust the order of questions depending on the conversation and on what topics would be of particular interest.

**The Questions:**

#### Organizations' Experience with Sustainable Public Procurement (SPP):

1. What means SPP to you?
2. How would you describe the general attitude of your organization towards SPP practices?
3. What do you think of the current General Tenders Law in Kuwait?
4. In terms of management level (top, middle, lower, procurement) who initiated, and who supported the project?
5. Could you give few examples of current sustainable Projects? And, Could you share some procurement documents for these projects?

#### Sustainable Public Procurement (SPP) Practices:

##### I. Environment

6. Does your organization buy environmentally friendly products? If so, Can you give examples of these products?
7. Are you certified by ISO 14001, EMAS, etc.?

##### II. Diversity

8. Have you had a project designed to help women of social needs, or women in general? If so, what were the barriers that you encountered in this project?



### III. Human Rights

9. Is there a general code of conduct for suppliers?
10. How do you describe the level of awareness among local suppliers in integrating environmental and social factors into their operations?

### IV. Philanthropy

11. Does your organization donate to philanthropic organizations? If so, what are the main drivers for donating? (e.g. religion commands, the right thing to do, moral obligations, social obligation,..etc).

### V. Safety

12. What are the measures implemented to ensure employees' health and safety are well taken care of?

### VI. Buying from SMEs and Local suppliers

13. What do you think about the procurement policy supporting purchases from Kuwaiti owned business and SME's suppliers?

### VII. Innovations

14. How do you see the role of public procurement in Kuwait in promote innovation activities, such as R&D and the design of new technology and products?

### Sustainable Public Procurement (SPP) Barriers and drivers:

15. From your perspective, what are the most important barriers or obstacles you encountered when implementing sustainable procurement?
16. From your perspective, what are the most important drivers in implementing sustainable procurement within your organization?
17. Other comments and viewpoints that you would like to convey about Kuwait SPP practices.

\*In Human Rights practices suppliers must perform the contract in accordance with good industry practices (or codes of conducts) these codes of conducts represent all HR items in regarding working hours, wages, minimum wages and overtime.



## Appendix C: Participants Informed Consent

Page 1 of 3

### Social Sciences Research Ethics Committee - Consent to Participate in a Research Study-

---

**Please read carefully before signing the Consent Form!**

[Sustainable Public Procurements in the Kuwait Public Sector]

*You will be asked to provide or deny consent after reading this form.*

#### **Topic of the research, the researcher(s) and the location**

You have been invited to take part in a study to investigate [ Sustainable Public Procurements in the Kuwait Public Sector].

This study will be conducted by [Fatima Al Maraghi ] in [ UAE University].

The study will take place at [Kuwait public authorities] located at [Kuwait].

Participation in this study will take [ 30 mins] – [10 minutes for set-up/explanation, and around 20 minutes for the questionnaire itself].

#### **Benefit of the research**

Sustainable Public Procurement (SPP) is increasingly implemented as a policy instrument to support national, regional and international policies and programmers such as wealth creation, stimulation of local economies and employment, sustainable development strategies, and of innovation and development of new technologies.

The main objective of this doctoral thesis is to investigate how SPP is currently reflected in the procurements policies and practices in Kuwait public sector organization. And, to identify the drivers and barriers of SPP, to provide a set of recommendations for procurements' mangers and policy makers on why and how SPP can be reflected in government's procurement operations, and guide it practical application. Public sector officials and policy makers of the Kuwait public procurements will both would find these information useful to know.

Your participation is important for us to understand the view and perception of procurement officers among all relevant public procurement authorities about the current status, main drivers, and key barriers of sustainability-oriented procurement in Kuwait public sector organizations. You will provide us with a valuable insight on factors that influence government sustainability procurement process.

In addition to contributing to valuable research, we offer you first hand access to the results and conclusions of this study.

#### **Procedure/setting**

(survey questionnaire/ Interviews) in an (office)

### **Safety Information**

There are no perceived risks associated with participation. Your responses will contribute to the understanding of a number of factors that are important in government procurement activities to bring about major economic, environmental and social benefits to the society.

If you are unduly concerned about your responses to any of questions or participation in the project, please find attachment a letter from the DBA office approving this graduating project, and contact information of the Vice Dean and DBA Director, they will haply answer any questions or concerns you have regarding this project.

### **Confidentiality and Privacy Information**

We assure you full anonymity. Your privacy and confidentiality will be strictly maintained in such a manner that you will not be identified in the thesis report or any related publication. Any information that you provide can be disclosed only if you provide the researcher with written permission. Data will be only seen by my supervisors and examiners who will also protect you from any risk.

### **Right to Withdraw**

As a participant of this survey, you have the right to withdraw your participation at any time. Further, you also have the right to have any questions answered at any time.

**For more information, please contact me:**

### **Fatima Al Maraghi**

Doctorate Students

**UAEU University**

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201290022@uaeu.edu.ae

## Informed Consent

---

1. I confirm that I have read and understood the above information sheet and have had the opportunity to ask questions.
2. I understand that my participation is voluntary and that I am free to withdraw.
3. I understand that my data will be kept confidential and if published, the data will not be identifiable as mine.

I agree to take part in this study:

\_\_\_\_\_  
(Name and signature of participant)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Name and signature of person taking consent)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Name and signature of witness (if participant  
unable to read/write))

\_\_\_\_\_  
(Date)

Monday, 19 October 2015

**Subject: Permission to Conduct Research**

To Whom It May Concern:

This is a letter of support for Ms. Fatima Al Maraghi, ID number 201290022, who is enrolled in the Doctorate of Business Administration program at UAE University and is beginning to conduct research as part of her graduation requirements.

Ms. Fatima Al Maraghi would like to conduct a research study. Her thesis is entitled:  
*Sustainable Public Procurements in the Kuwait Public Sector.*

The aim of the research is to uncover the extent of sustainable public procurement (SPP) practices in public sector organizations in Kuwait and to identify sustainable procurement drivers and barriers that exist in Kuwait public sector organizations.

Your approval to conduct this study would be greatly appreciated. I would be happy to answer any questions or concerns you may have regarding the research. My contact email is [mmadi@uaeu.ac.ae](mailto:mmadi@uaeu.ac.ae) and my phone number is 03 713 6504.

Respectfully,



Mohamed Madi, Ph.D  
Vice Dean and DBA Director

## Appendix D: Descriptive and Inferential Analysis Results

### Descriptive Analysis Results

Table A: Factors of Tender Evaluation

| Factors of Tender Evaluation  |       |        |              |            |        |
|-------------------------------|-------|--------|--------------|------------|--------|
| Mechanisms                    | Never | Rarely | Occasionally | Frequently | Always |
| The lowest bid                | 7%    | 1%     | 5%           | 40%        | 46%    |
| Quality of goods and services | 1%    | 2%     | 24%          | 39%        | 34%    |
| Environmental criteria        | 6%    | 10%    | 30%          | 30%        | 24%    |
| Financial standing            | 7%    | 13%    | 21%          | 35%        | 24%    |
| Management competence         | 7%    | 12%    | 18%          | 39%        | 24%    |
| Health and Safety standards   | 7%    | 9%     | 24%          | 29%        | 31%    |
| CSR reputation                | 6%    | 15%    | 22%          | 34%        | 23%    |
| Innovation and R&D            | 13%   | 10%    | 33%          | 27%        | 16%    |

Table B: Summary of SPP Practices

| SPP Practices      | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--------------------|-------------------|----------|----------------------------|-------|----------------|
| Buying from Locals | 2%                | 9%       | 31%                        | 38%   | 20%            |
| Health and Safety  | 7%                | 5%       | 38%                        | 36%   | 13%            |
| Human Rights       | 10%               | 7%       | 51%                        | 26%   | 6%             |
| Buying from SMEs   | 3%                | 9%       | 47%                        | 37%   | 3%             |
| Innovation         | 8%                | 13%      | 52%                        | 22%   | 5%             |
| Philanthropy       | 8%                | 14%      | 40%                        | 27%   | 9%             |
| Environment        | 9%                | 28%      | 41%                        | 16%   | 5%             |

Table C: Summary of SPP Barriers

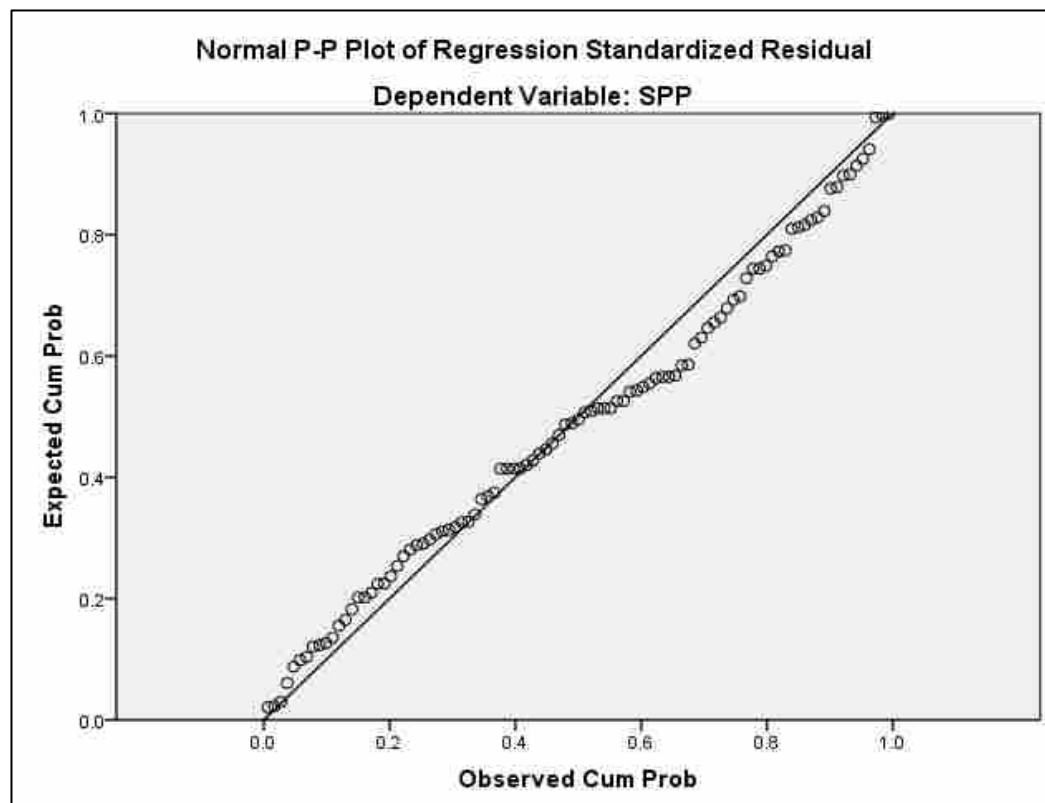
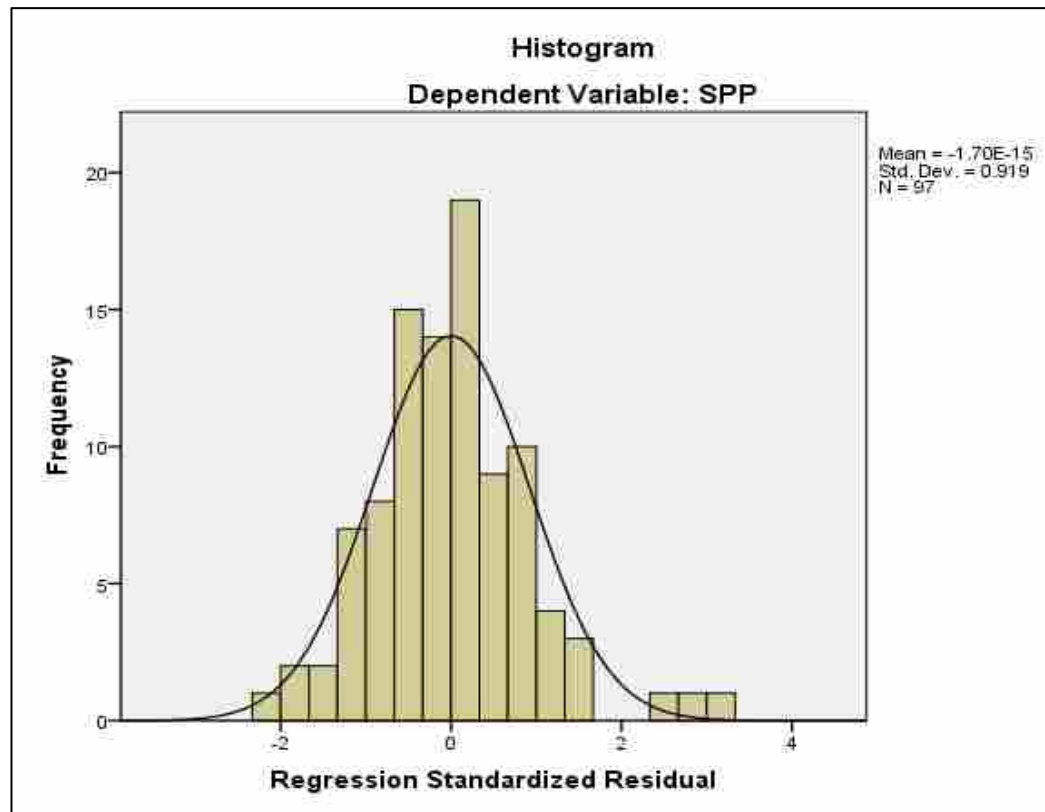
| SPP Practices                | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|------------------------------|-------------------|----------|----------------------------|-------|----------------|
| Costs of sustainability      | 8%                | 10%      | 35%                        | 36%   | 10%            |
| Legislation and Regulations  | 6%                | 10%      | 41%                        | 33%   | 9%             |
| Lack of SPP knowledge        | 5%                | 9%       | 33%                        | 37%   | 15%            |
| Budgetary constraints        | 6%                | 7%       | 23%                        | 45%   | 19%            |
| Obstacles by suppliers       | 8%                | 20%      | 34%                        | 28%   | 10%            |
| Tribalism and cultural norms | 12%               | 22%      | 44%                        | 14%   | 7%             |
| Political constraints        | 10%               | 8%       | 47%                        | 21%   | 13%            |

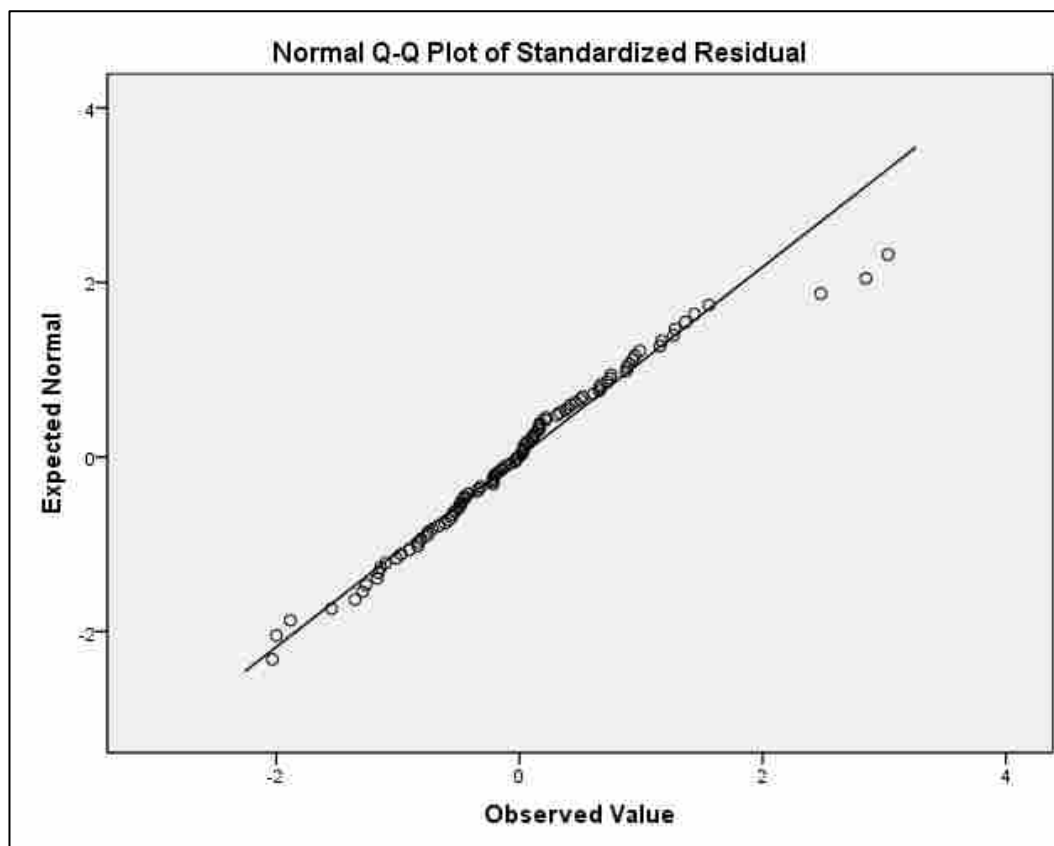
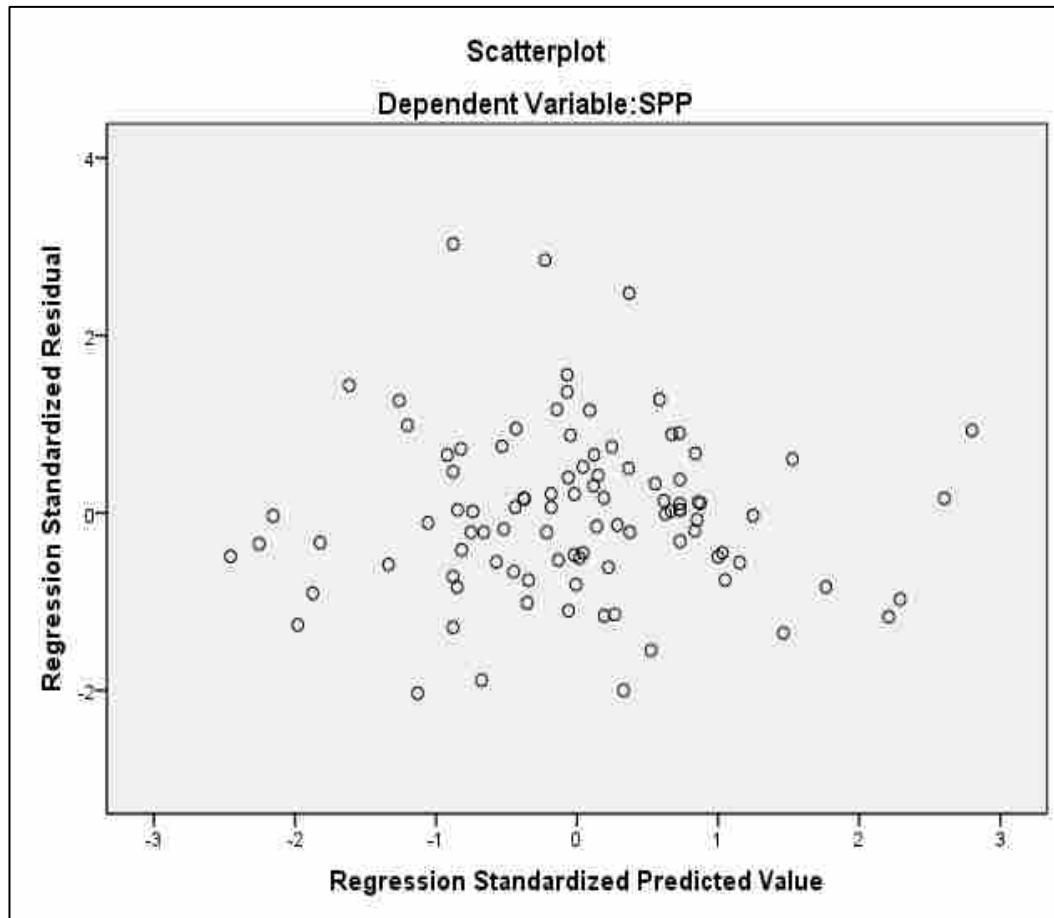
Table D: Summary of SPP Drivers

| SPP Practices                          | Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|--|-------------------|----------|----------------------------|-------|----------------|
| Top managements support                | 4%                | 11%      | 32%                        | 35%   | 18%            |
| Governments sustainability strategy    | 4%                | 6%       | 33%                        | 37%   | 20%            |
| Employee initiatives                   | 5%                | 5%       | 30%                        | 39%   | 21%            |
| Financial benefits                     | 4%                | 6%       | 23%                        | 46%   | 21%            |
| Society and citizens awareness         | 3%                | 3%       | 32%                        | 41%   | 21%            |
| NGOs and pressure groups demands       | 3%                | 4%       | 39%                        | 38%   | 15%            |
| Islamic values and beliefs             | 3%                | 1%       | 38%                        | 39%   | 19%            |
| Environmental Management Systems (EMS) | 5%                | 4%       | 36%                        | 37%   | 18%            |

Inferential Analysis Results

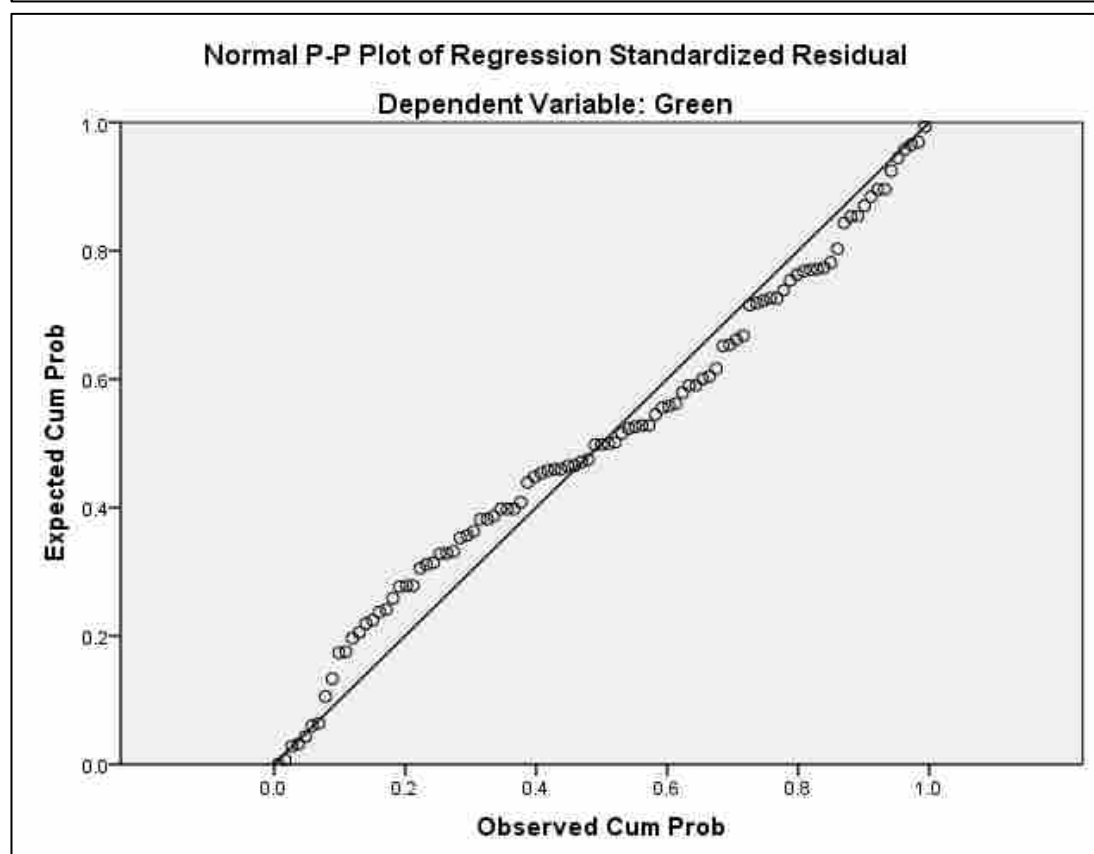
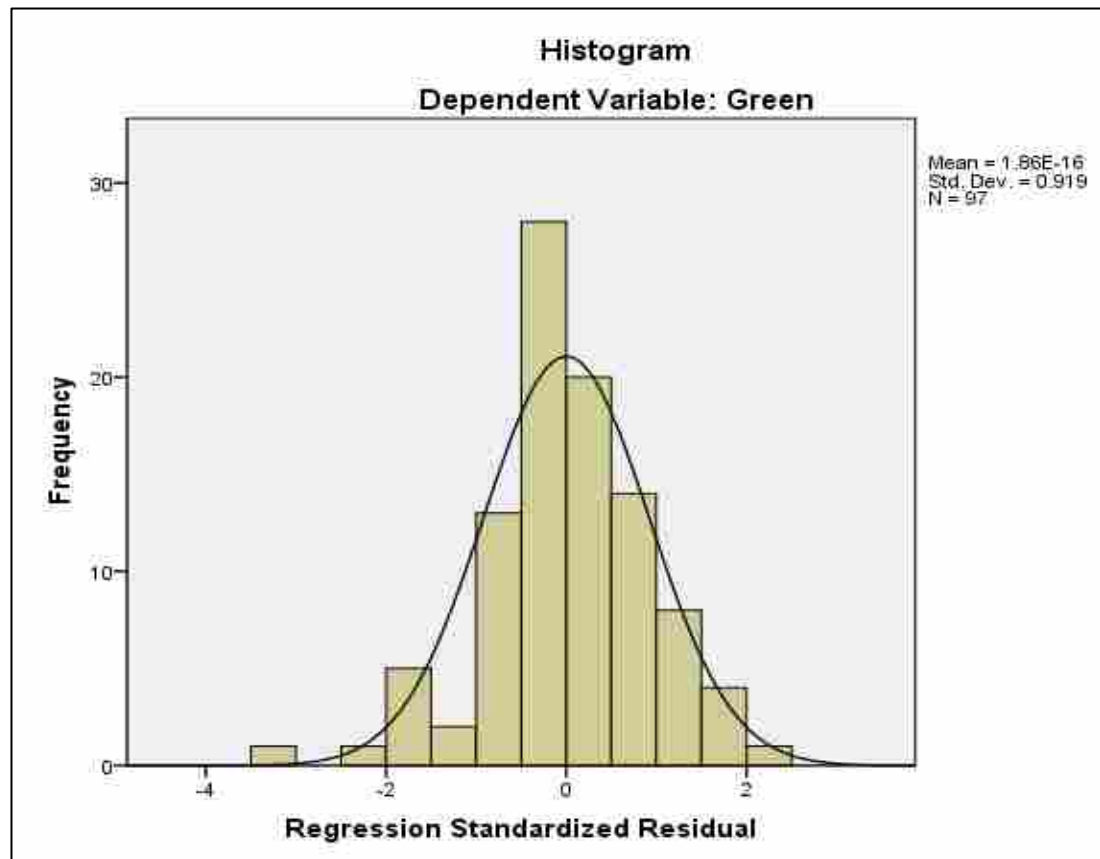
## 1- SPP Model:

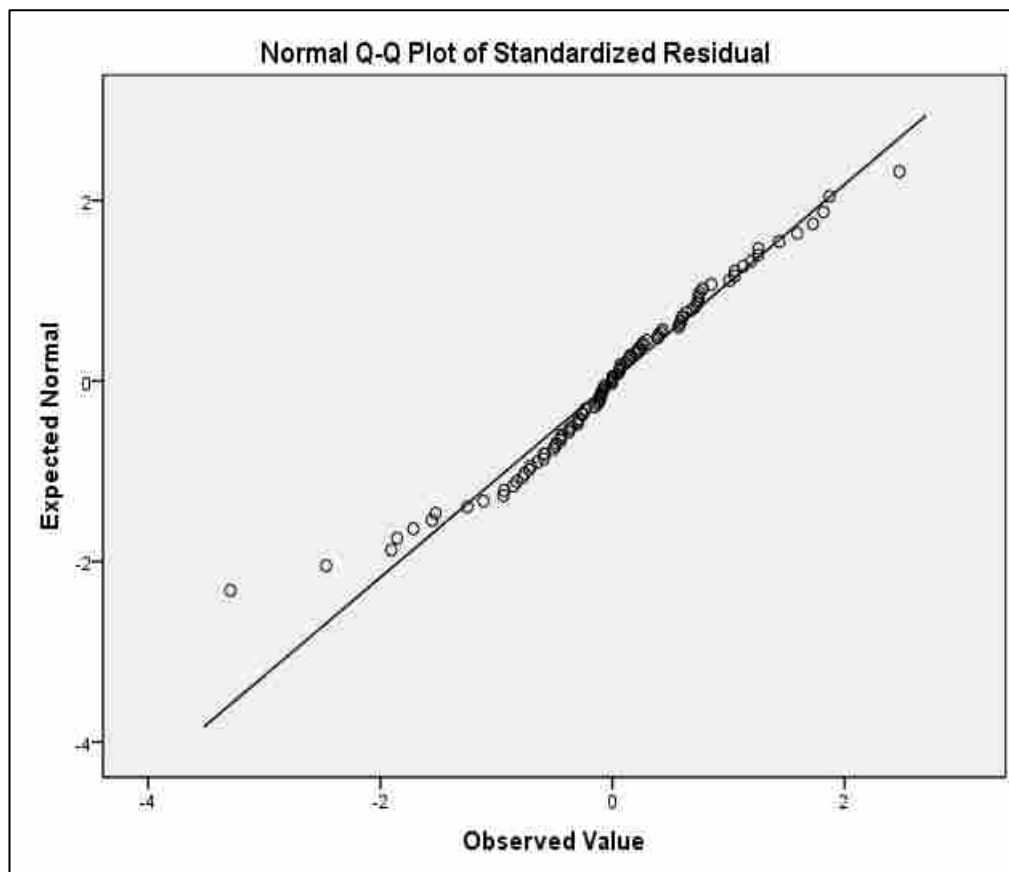
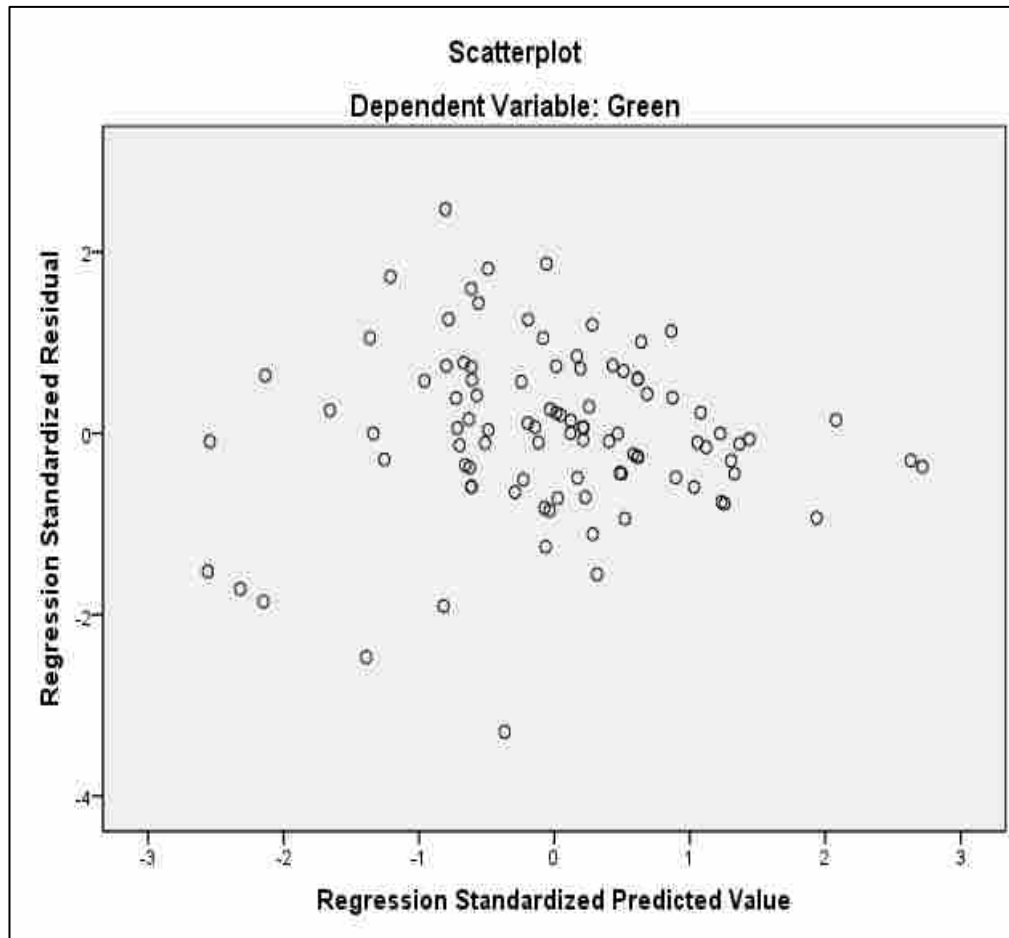




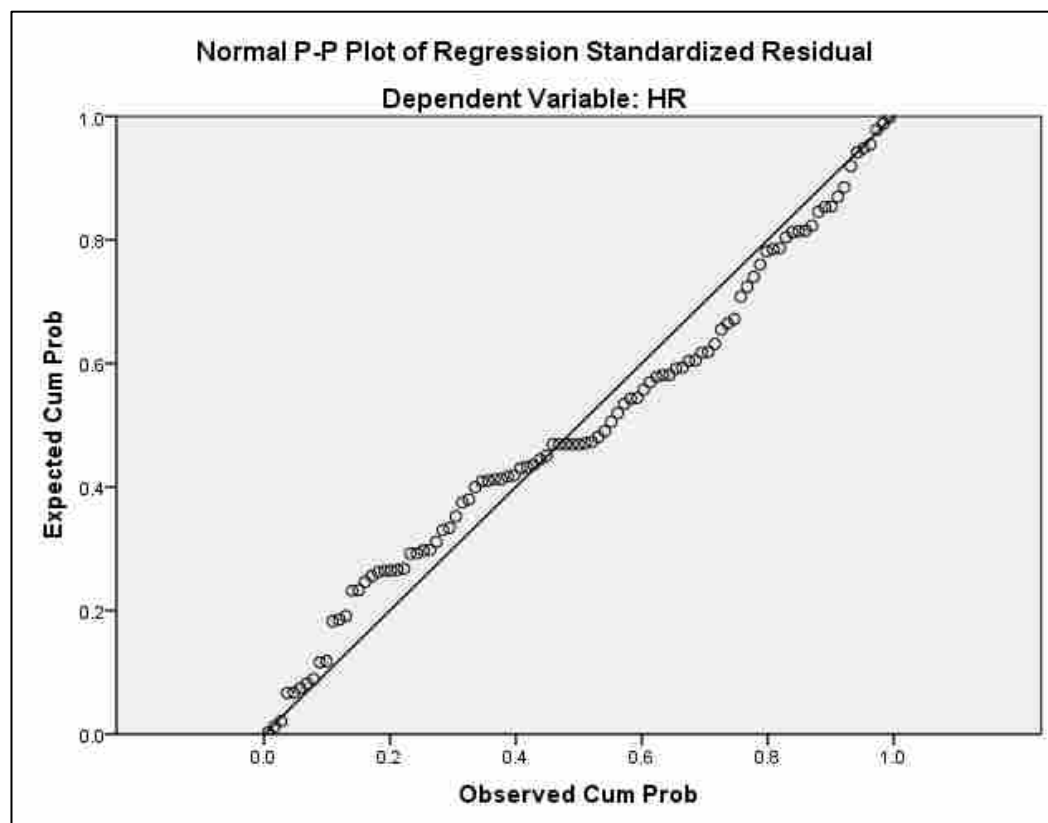
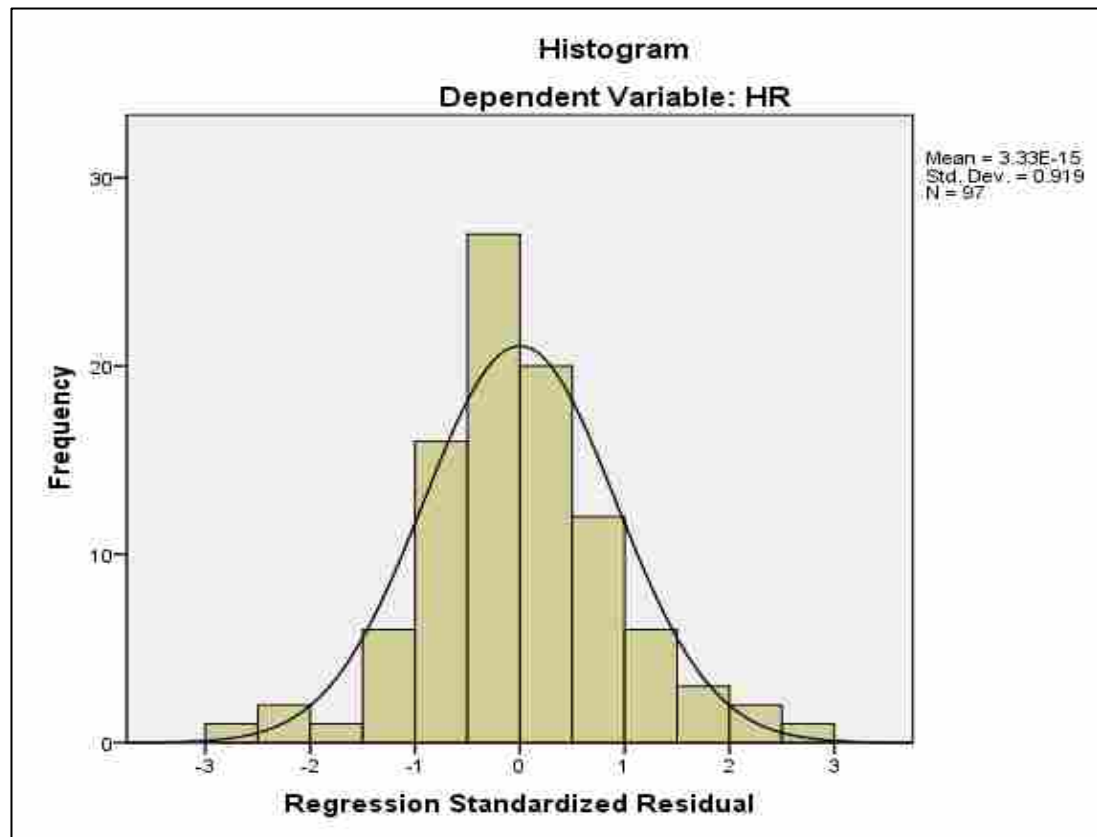


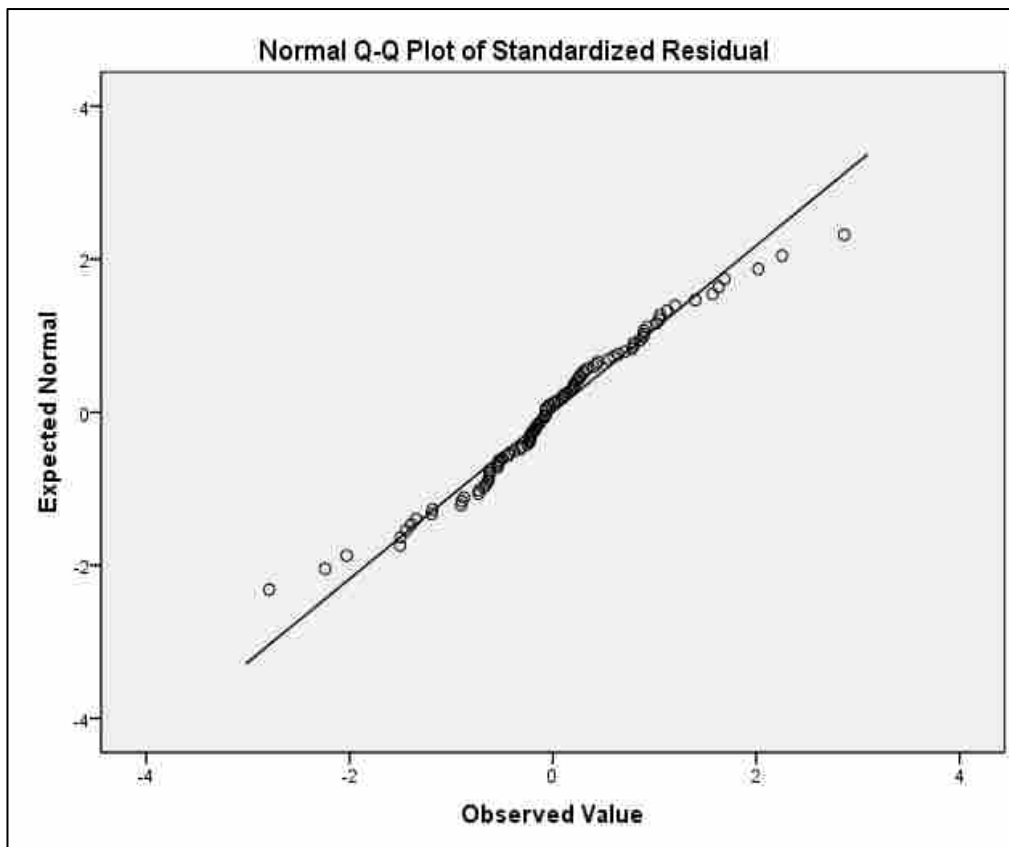
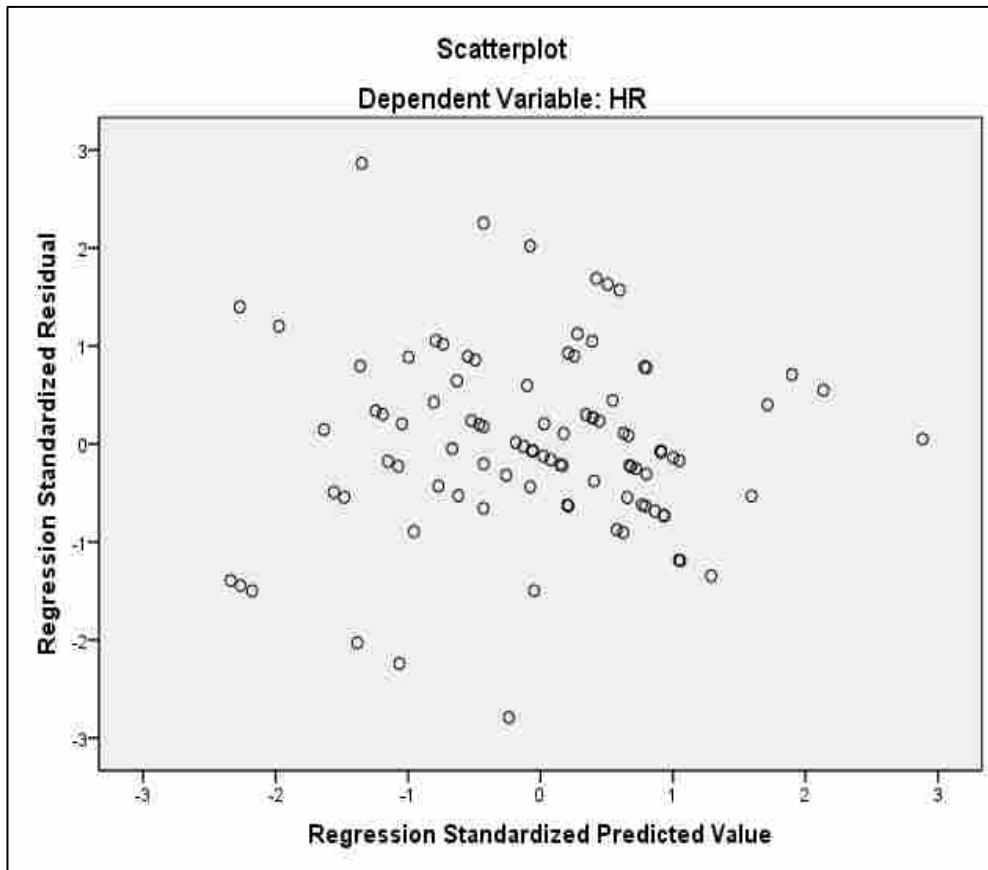
## 2- Green Model:



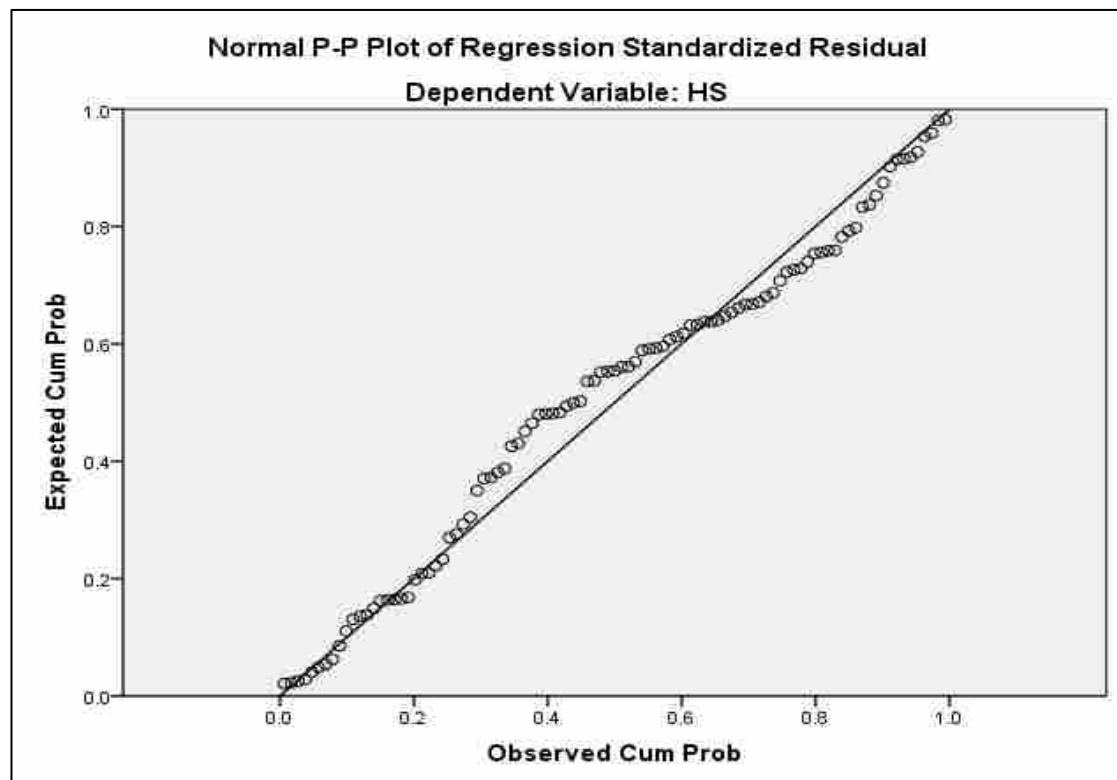
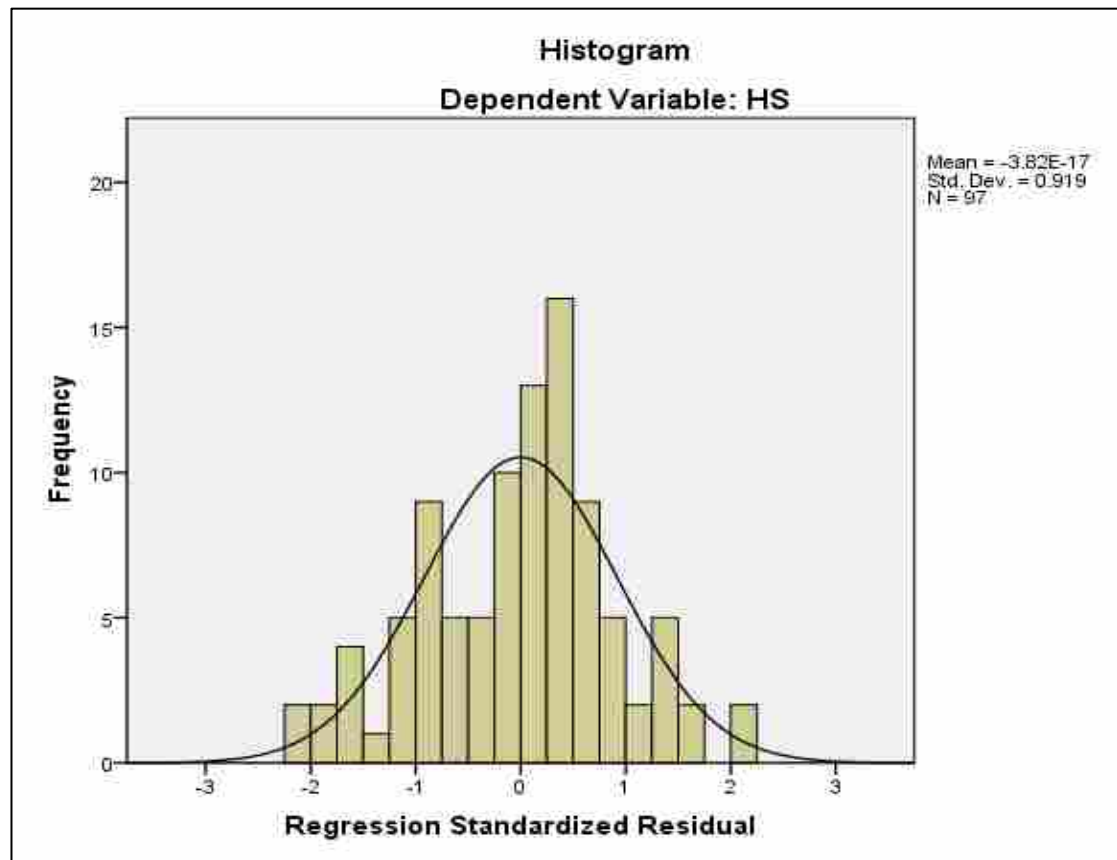


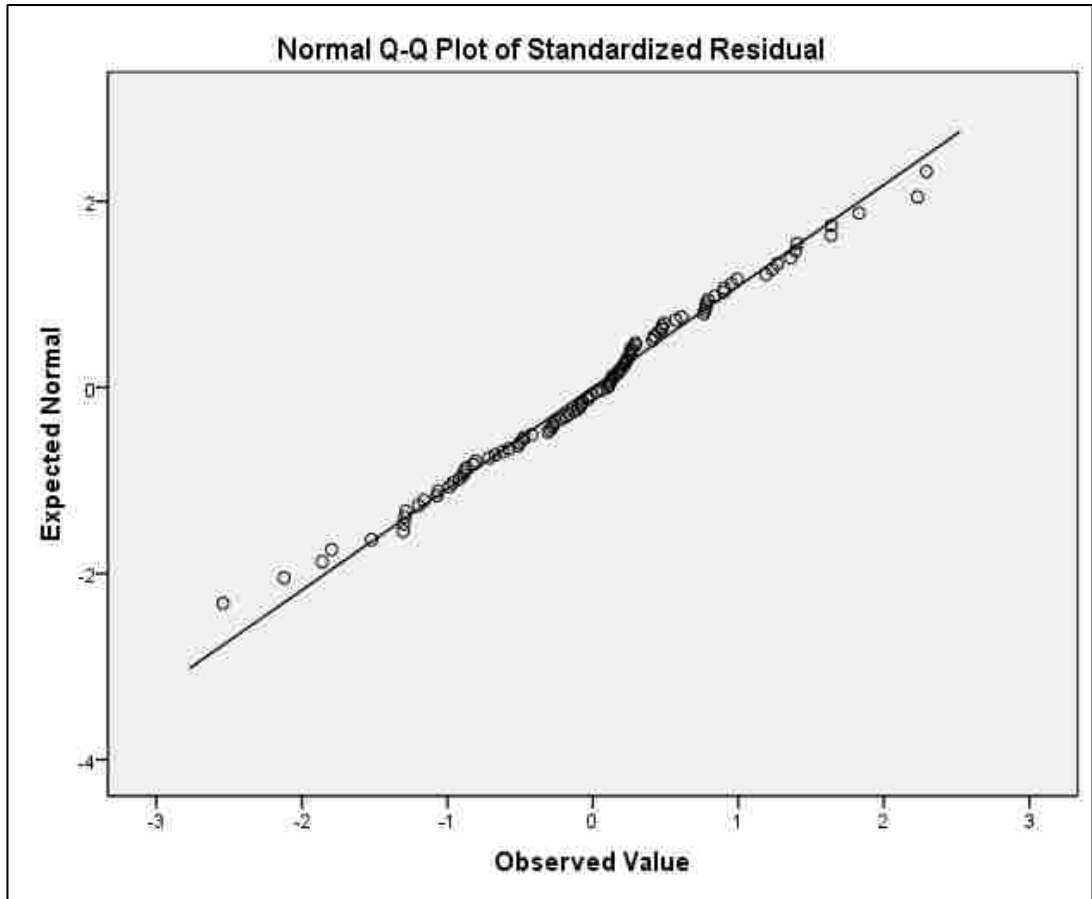
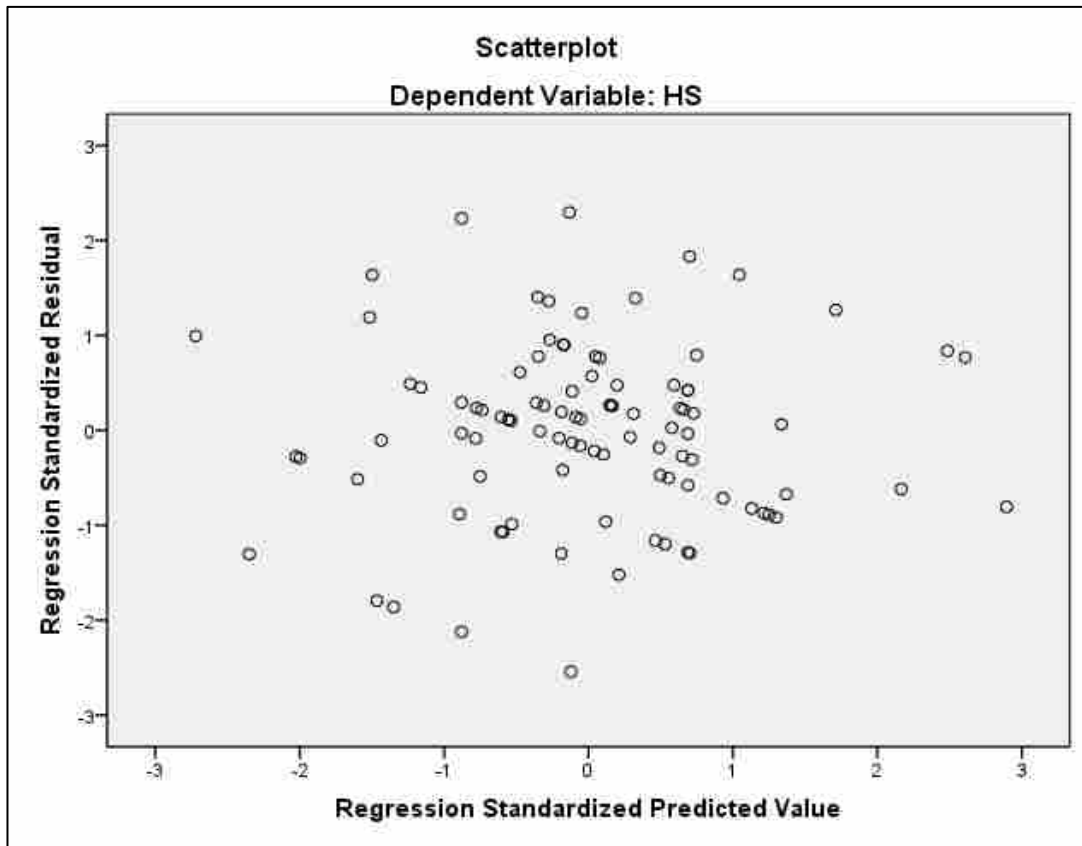
## 3- Human Rights Model:



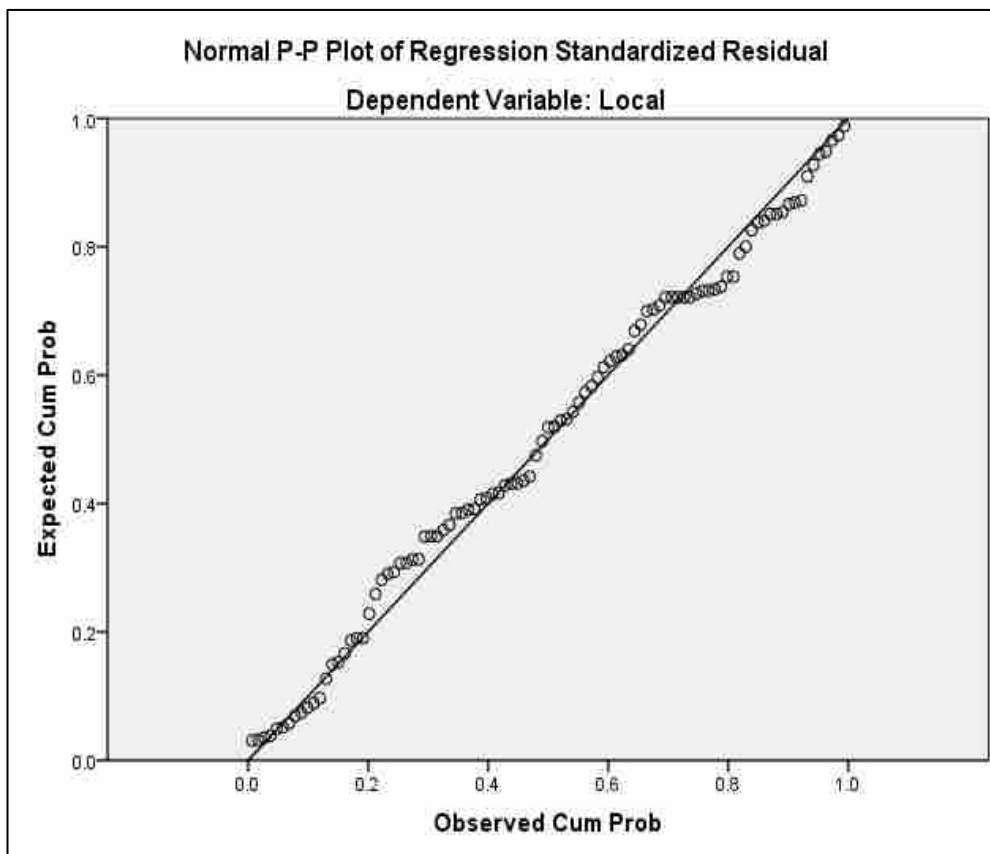
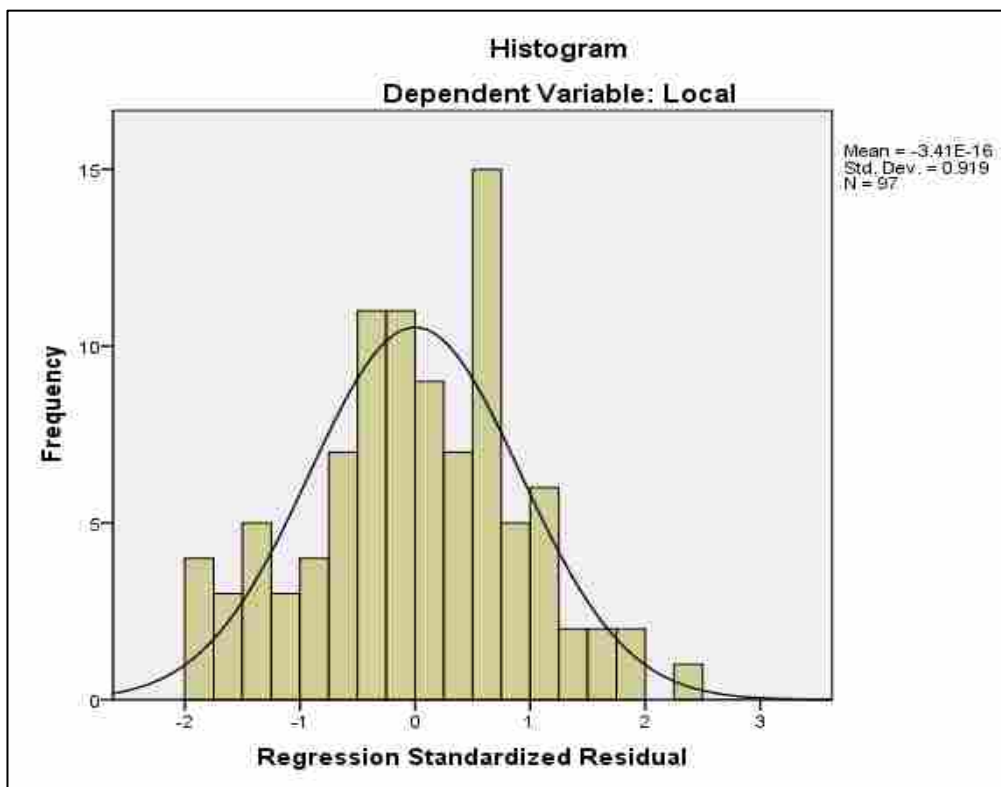


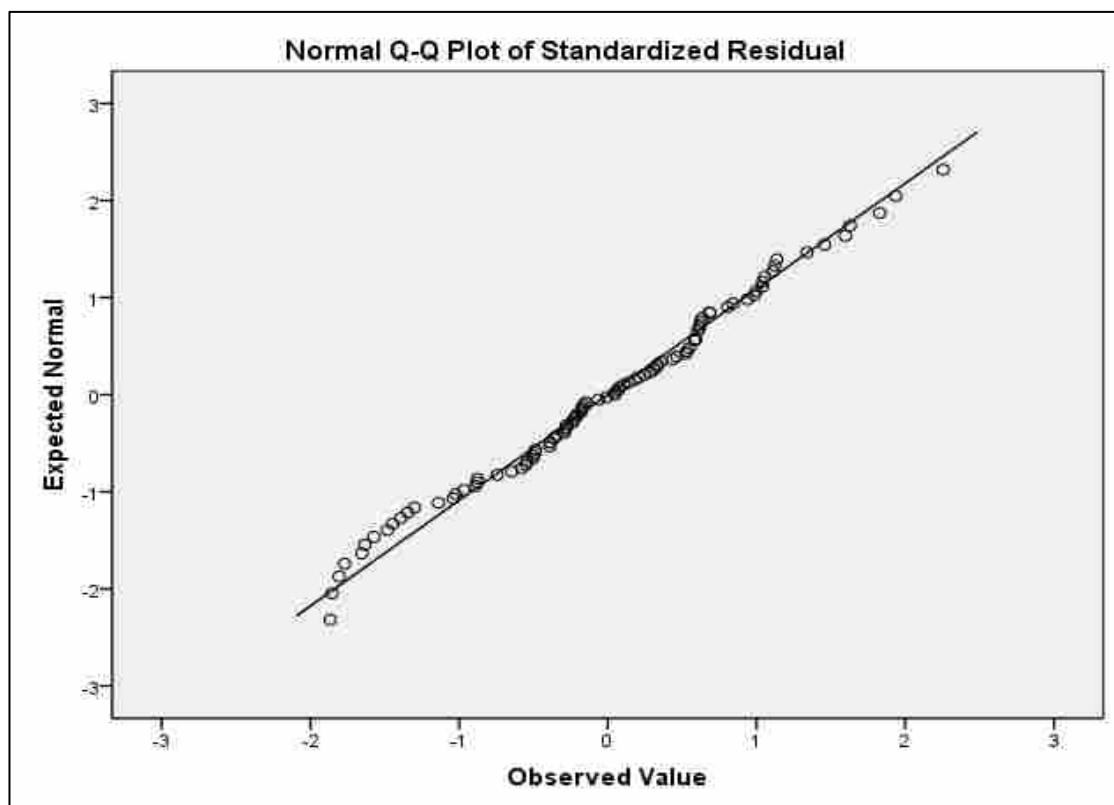
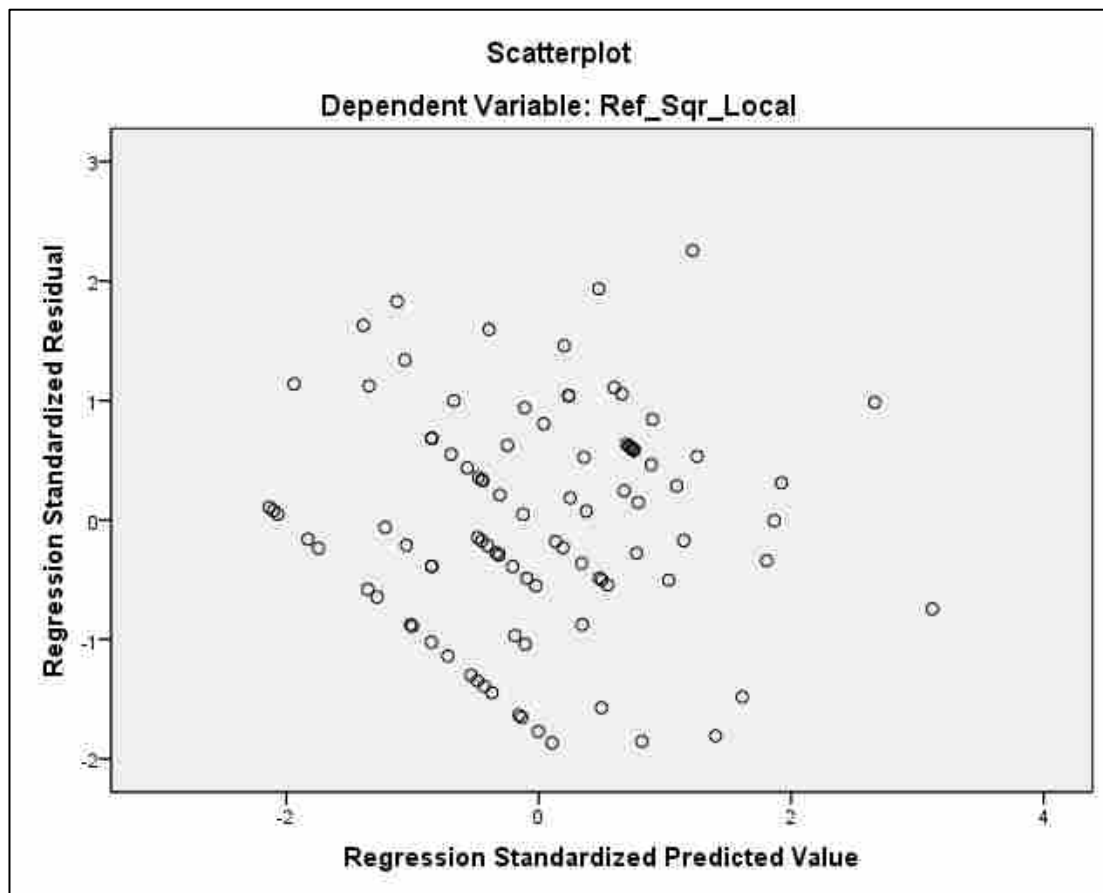
## 4- Health and Safety Model:





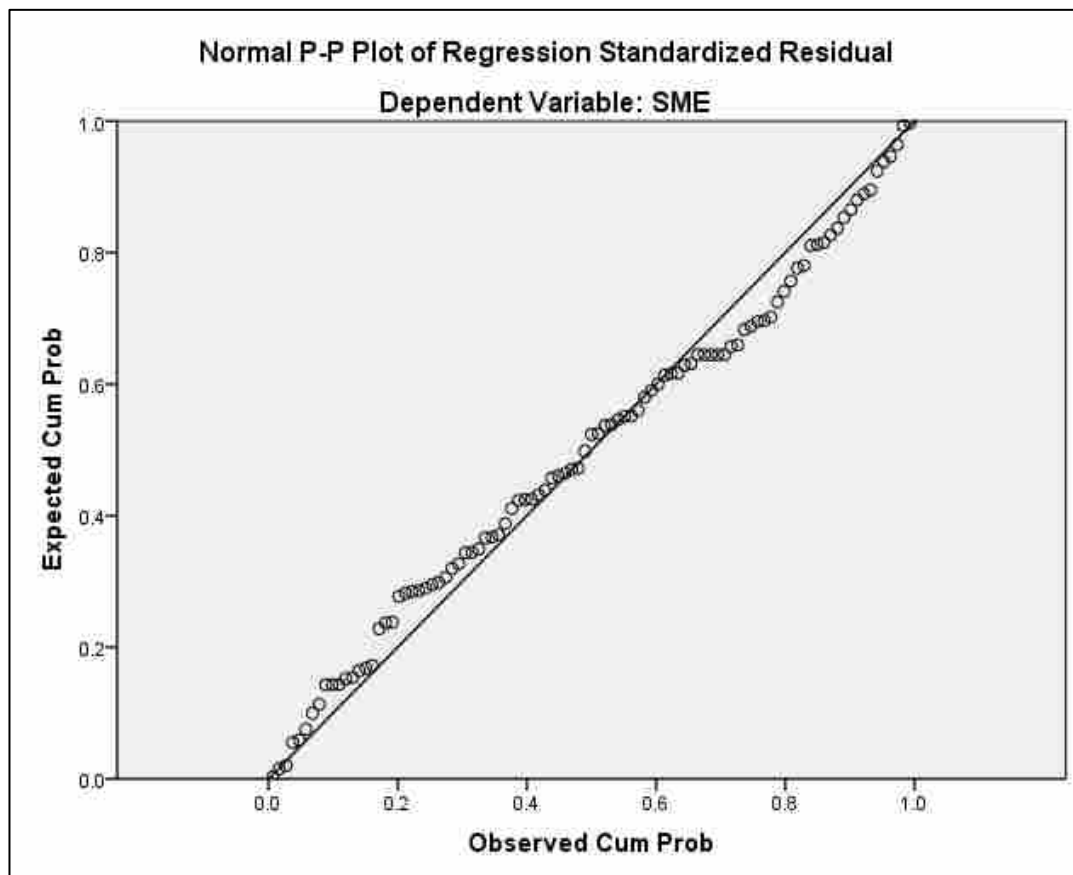
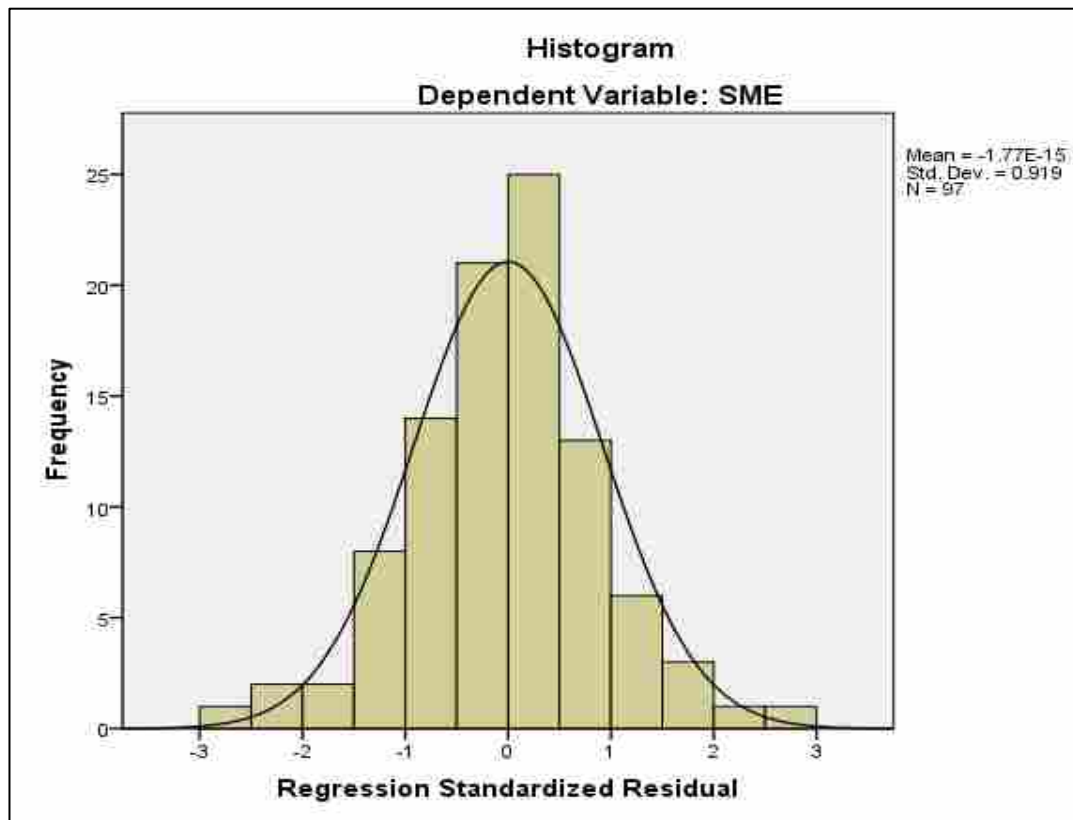
5- Buying from Locals Model:

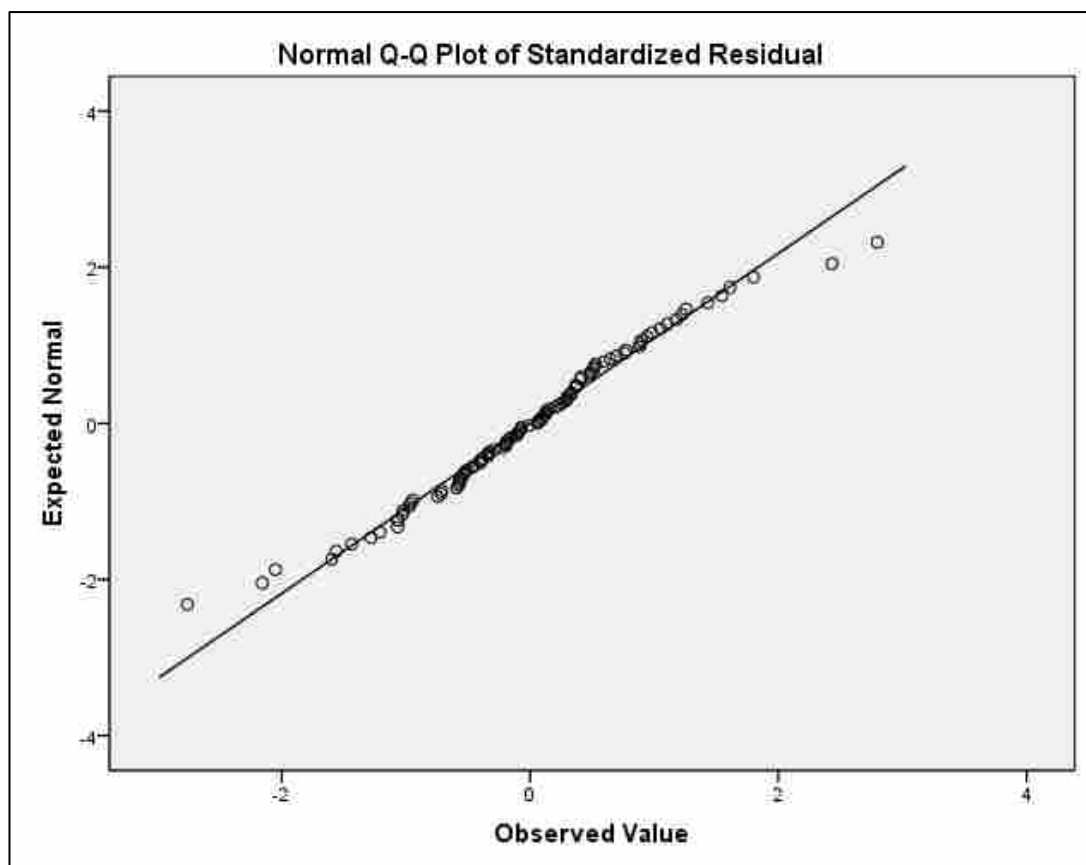
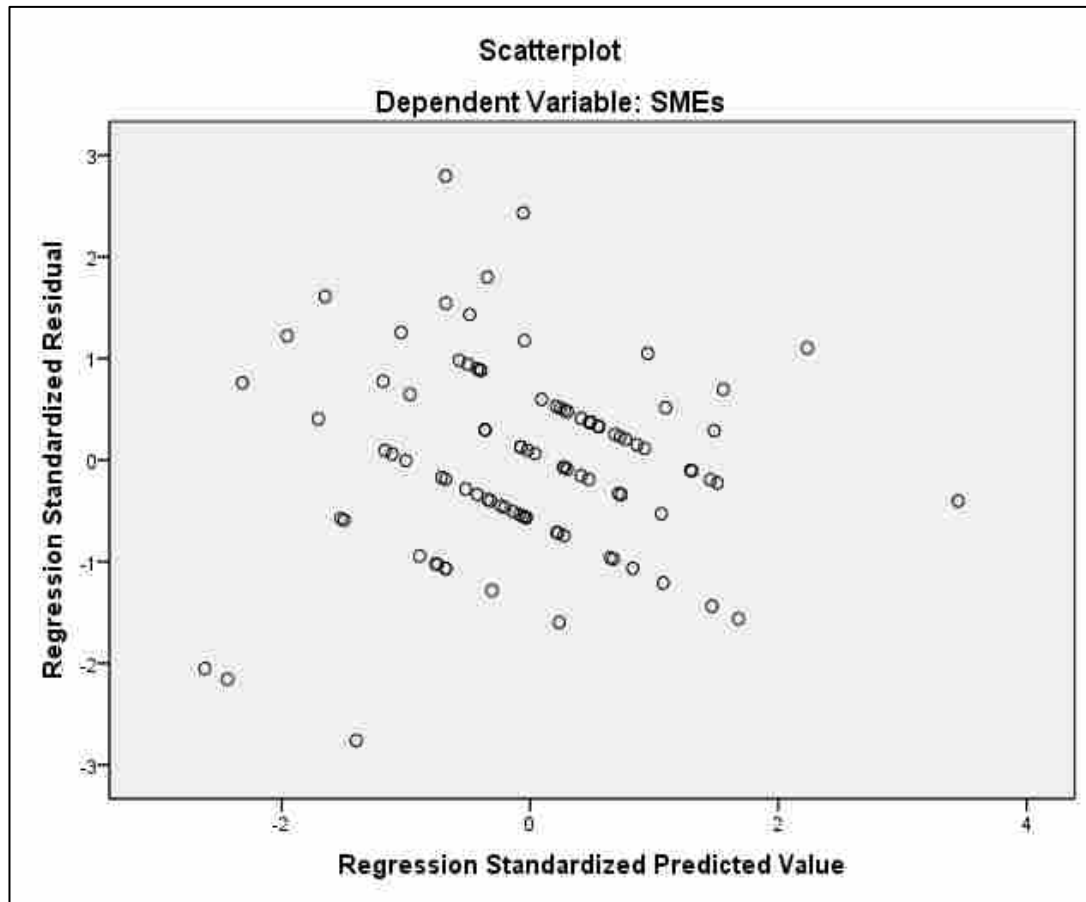




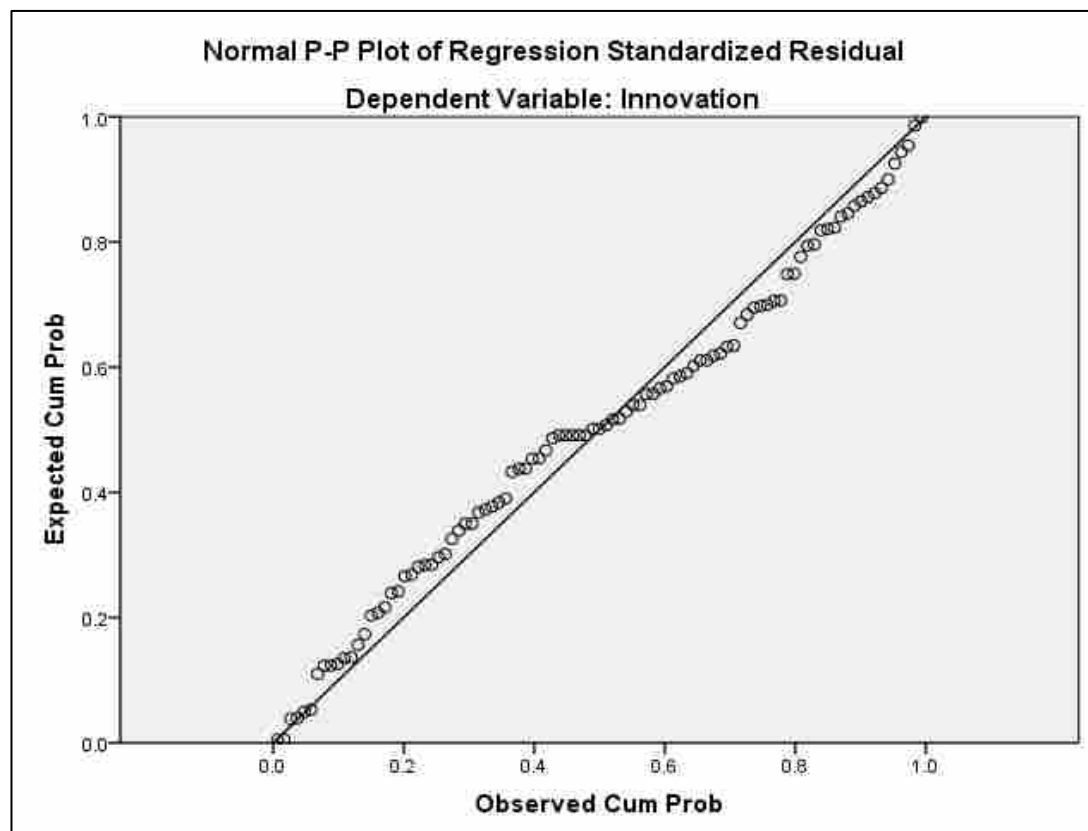
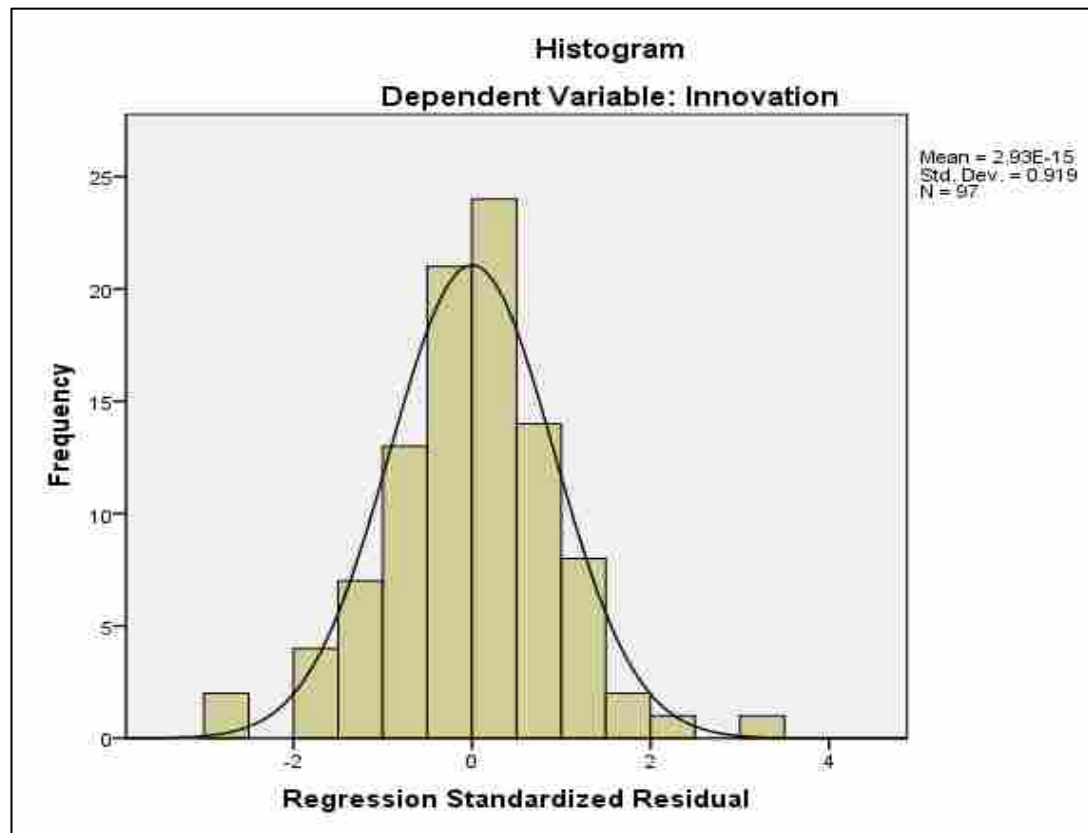


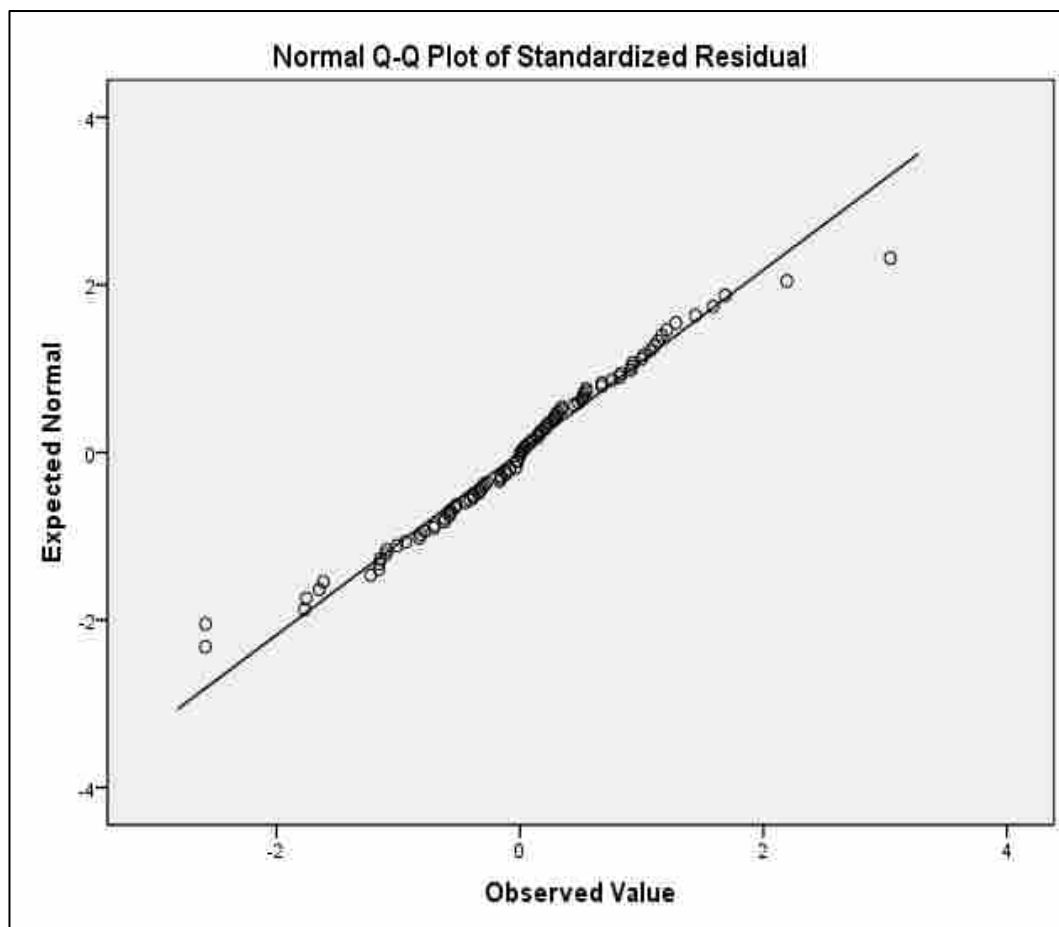
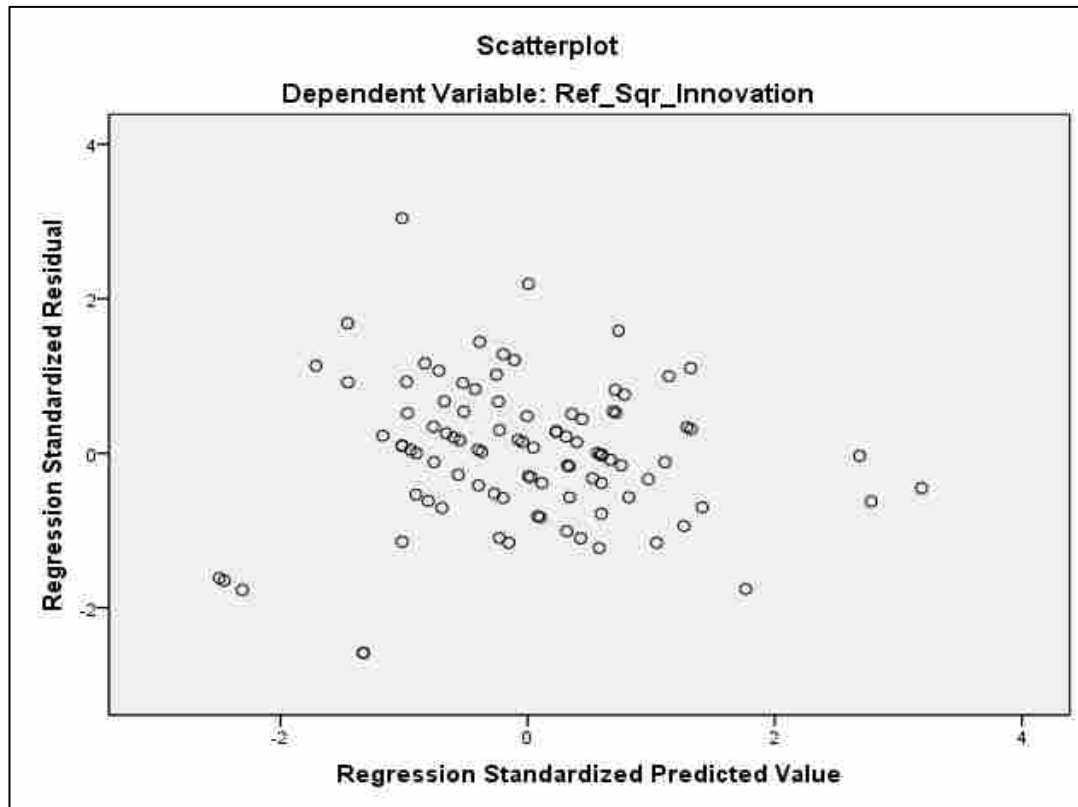
## 6- SME Model:



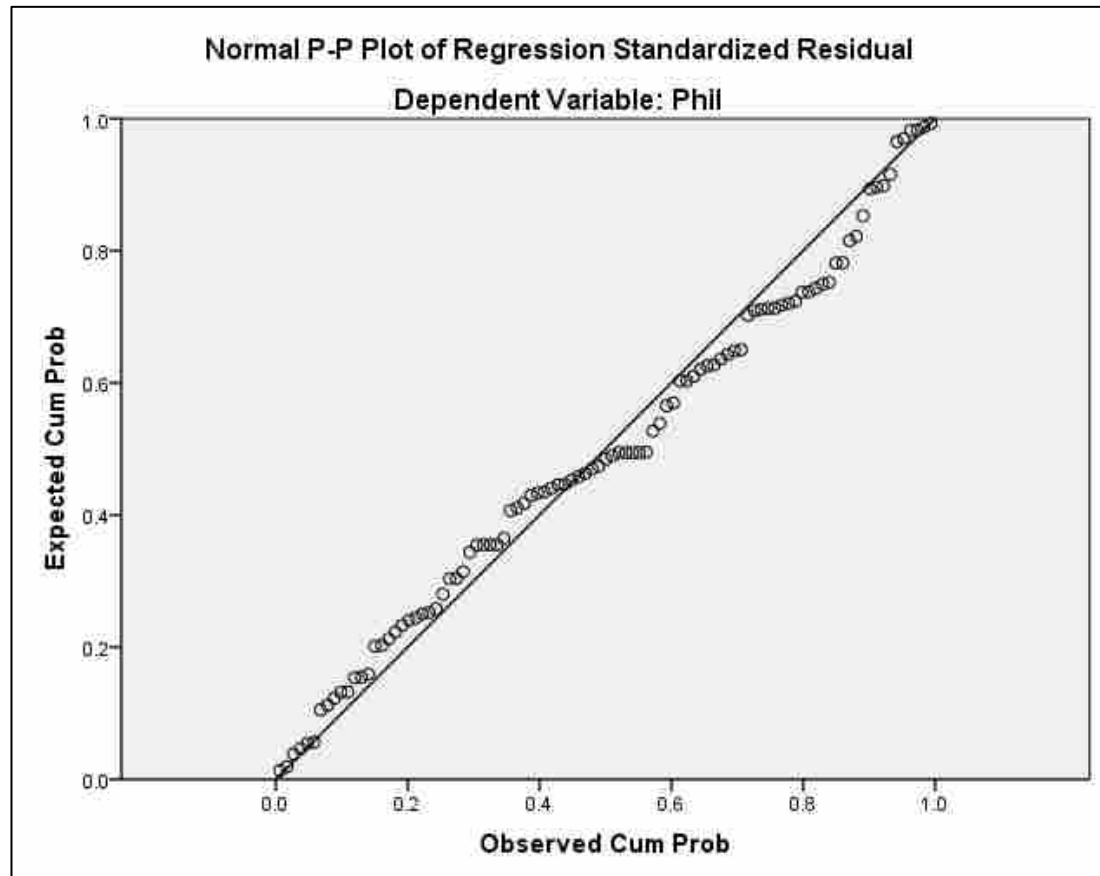
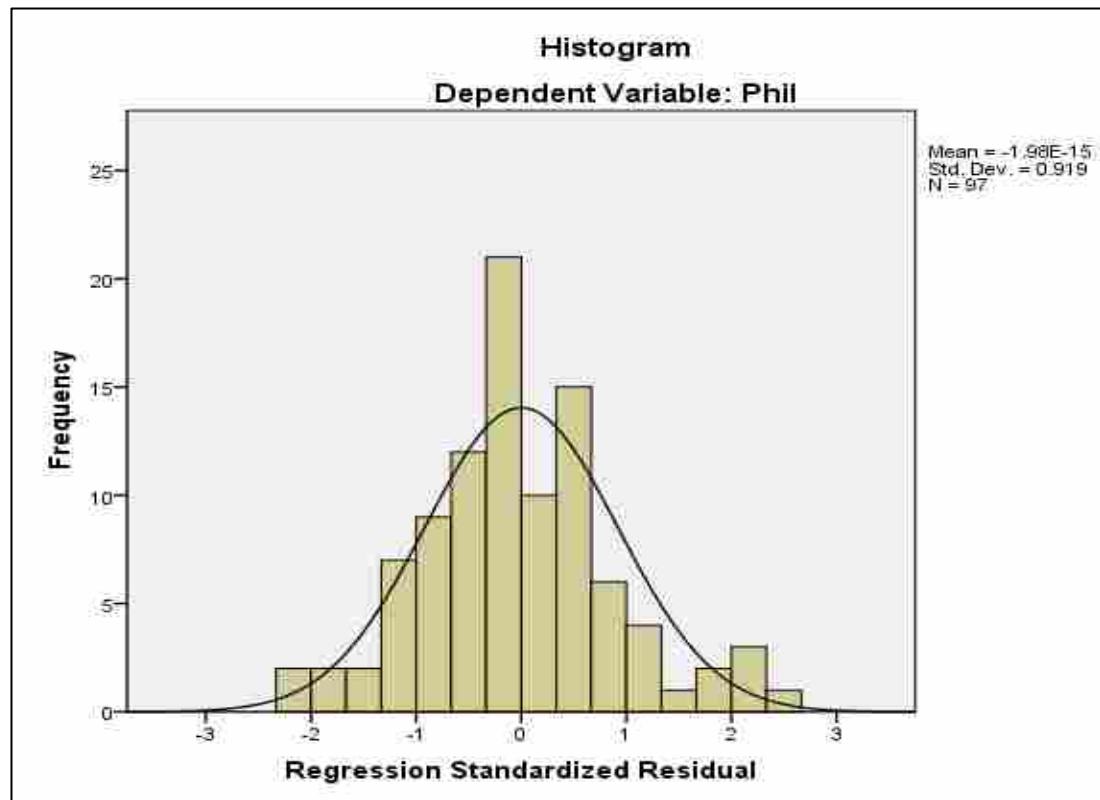


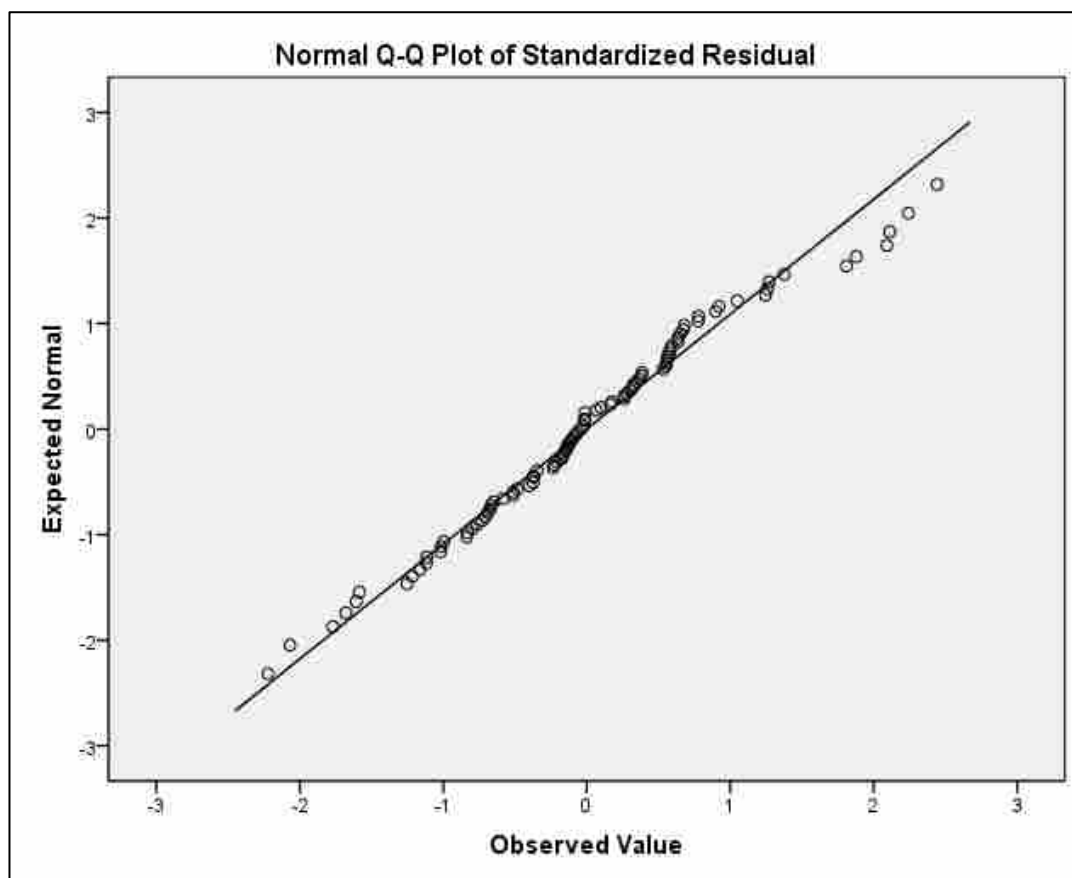
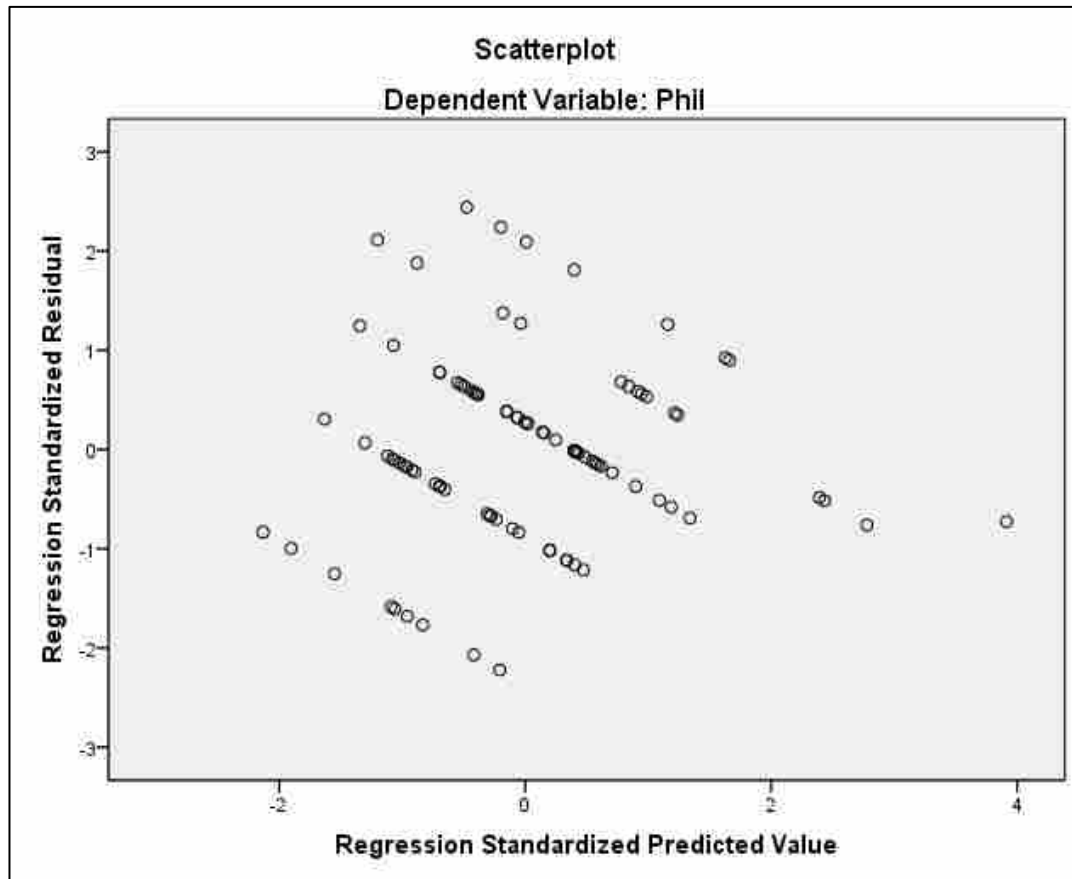
## 7- Innovation Model:



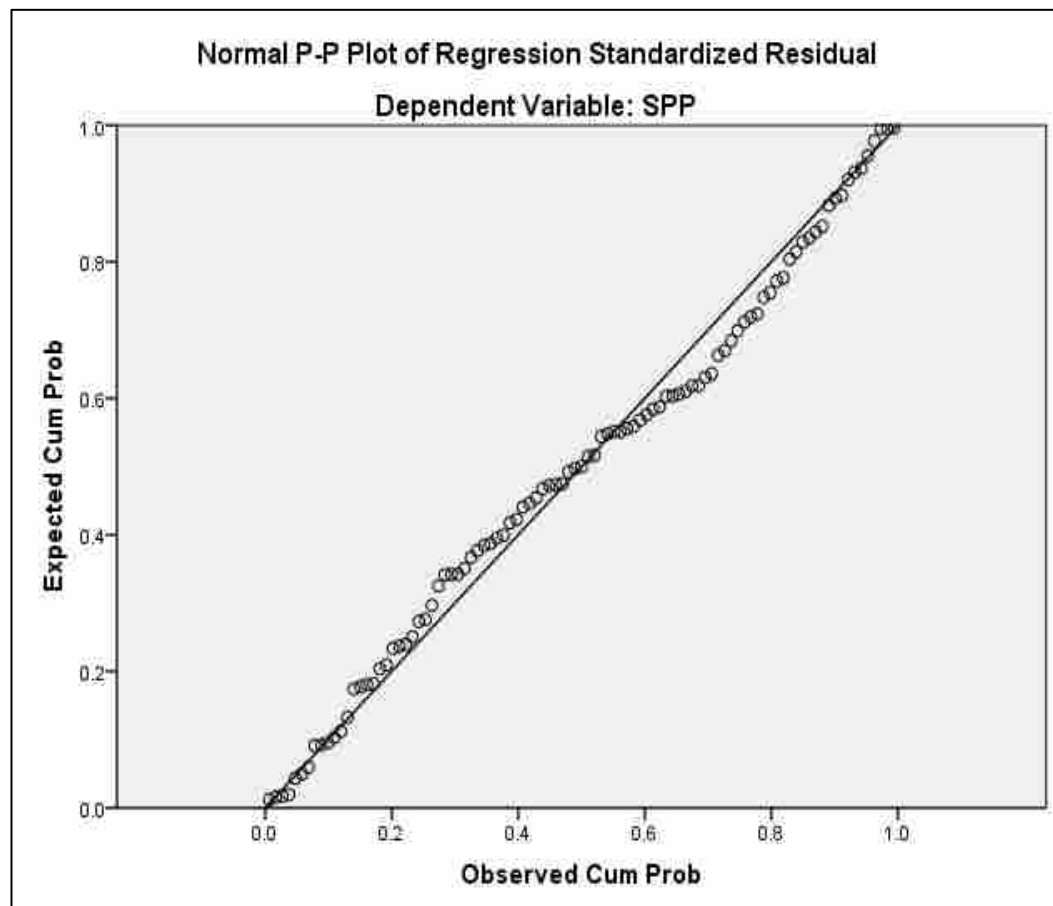
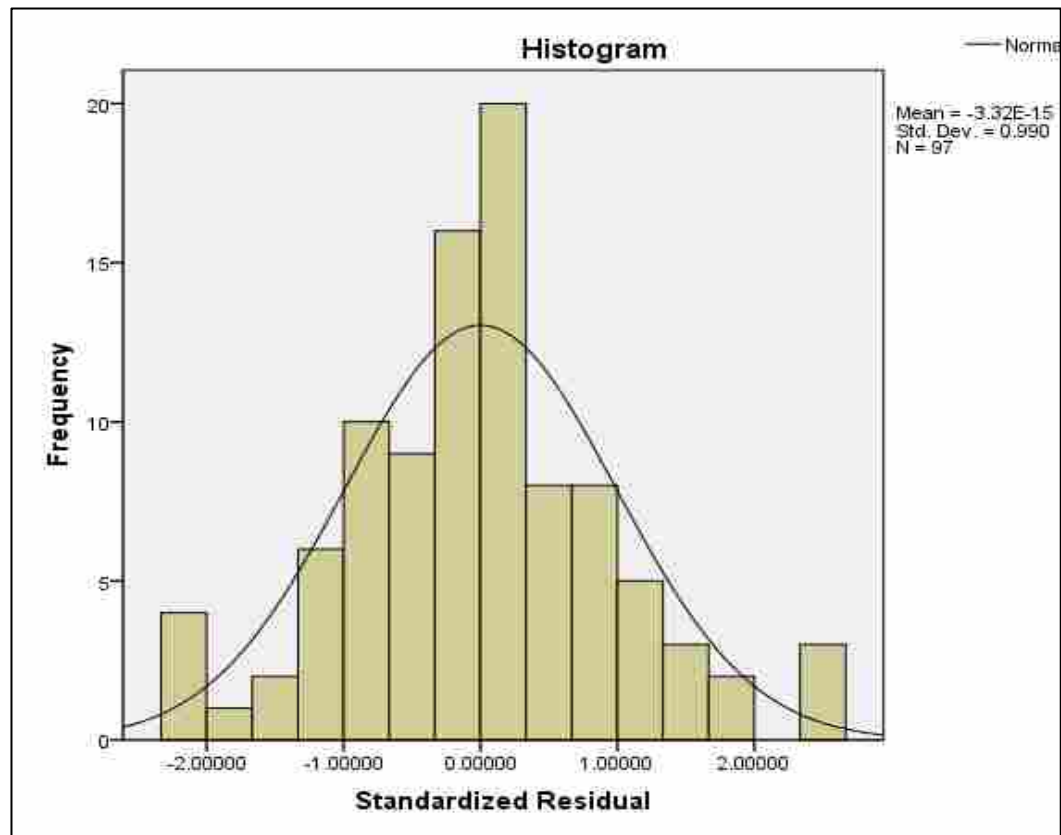


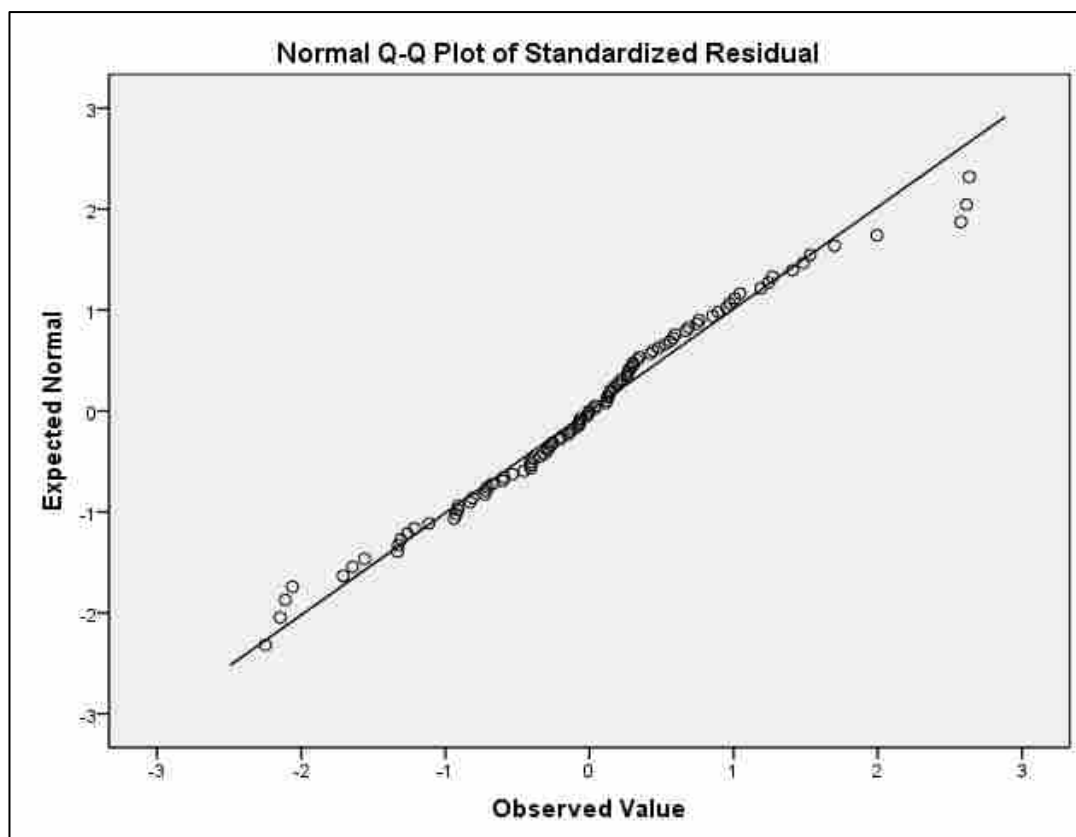
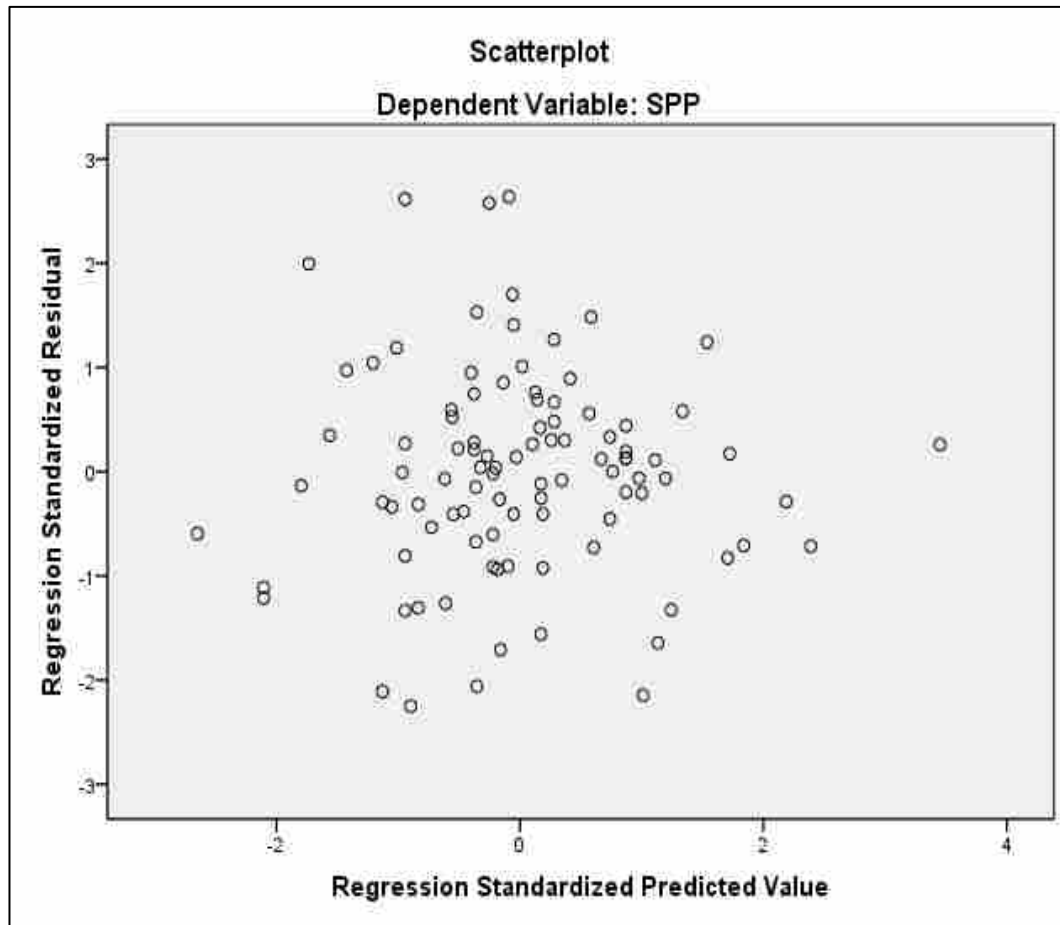
## 8- Philanthropy Model:





## 9- SPP Practices Model – Alternative Model:





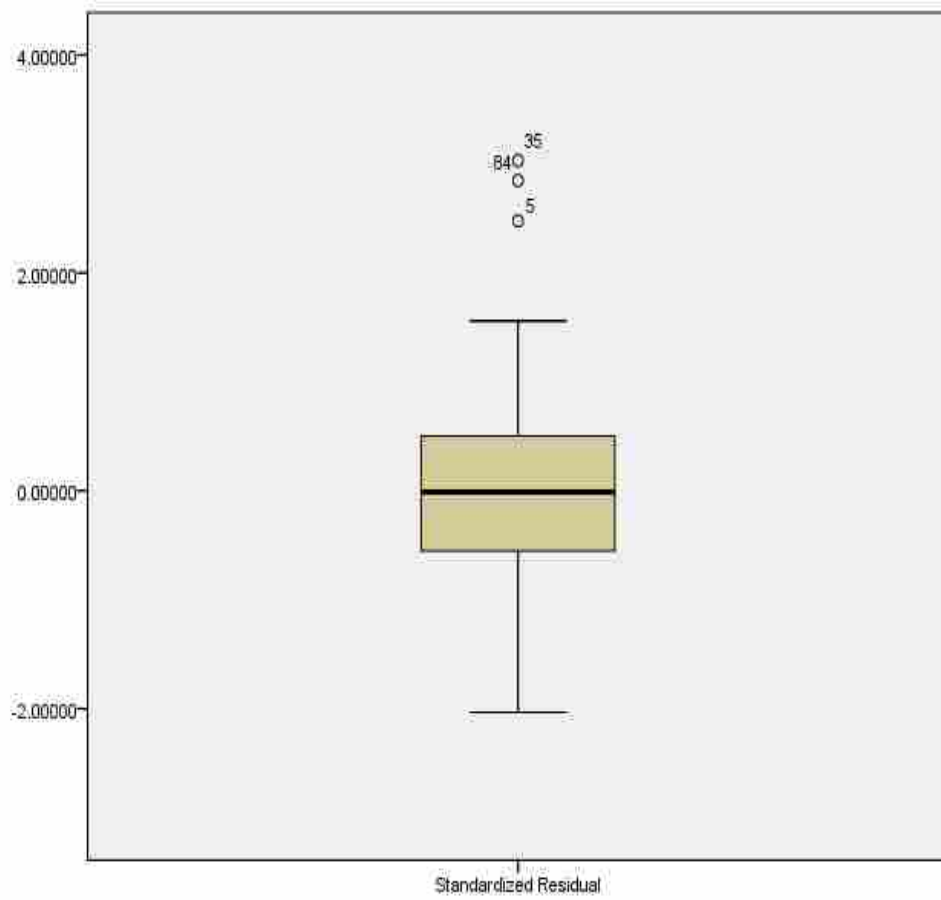


## 10- Outliers:

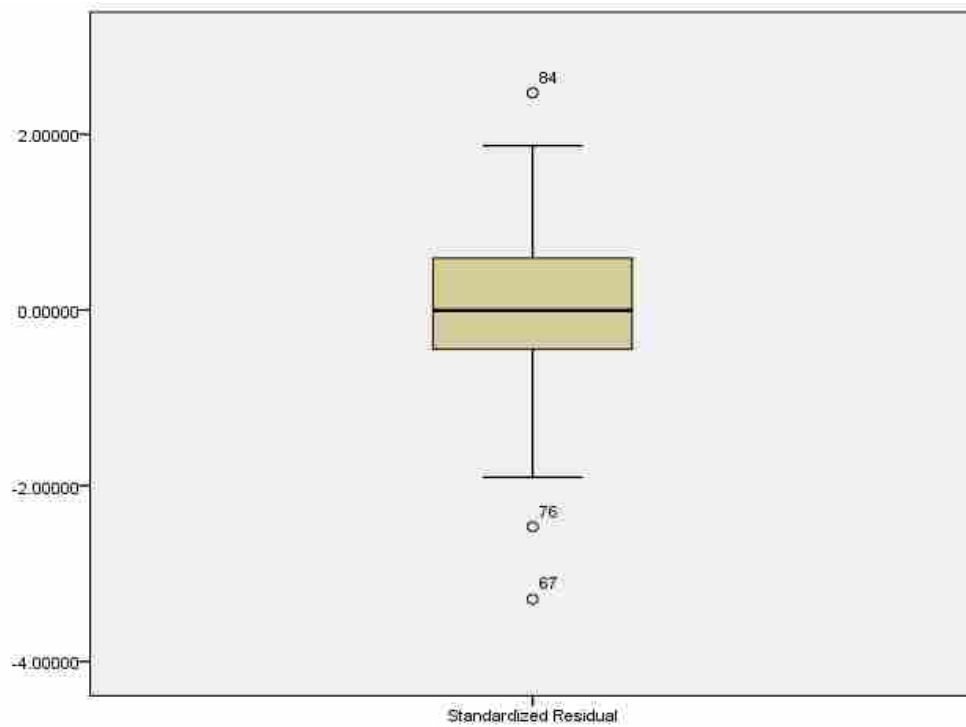
| Z-scores   | Minimum  | Maximum |
|------------|----------|---------|
| SPP        | -2.60077 | 1.73544 |
| Green      | -2.93451 | 1.49173 |
| HR         | -2.60077 | 1.73544 |
| HS         | -1.99325 | 1.85908 |
| Local      | -1.39320 | 2.61652 |
| SME        | -3.28815 | 2.20954 |
| Innovation | -2.97857 | 1.77497 |
| Phil       | -2.02964 | 1.79529 |
| B1         | -2.16419 | 1.60130 |
| B2         | -2.31389 | 1.73021 |
| B3         | -2.40768 | 1.46858 |
| B4         | -1.98262 | 1.64595 |
| B5         | -2.47122 | 1.28891 |
| B6         | -1.92770 | 1.70311 |
| B7         | -1.72022 | 2.05066 |
| D1         | -2.40402 | 1.43450 |
| D2         | -2.60655 | 1.37511 |
| D3         | -2.56934 | 1.30966 |
| D4         | -2.74585 | 1.27449 |
| D5         | -2.93758 | 1.36348 |
| D6         | -2.84341 | 1.55198 |
| D7         | -3.00985 | 1.46456 |
| D8         | -2.58176 | 1.42513 |

## 11- Pox Plots:

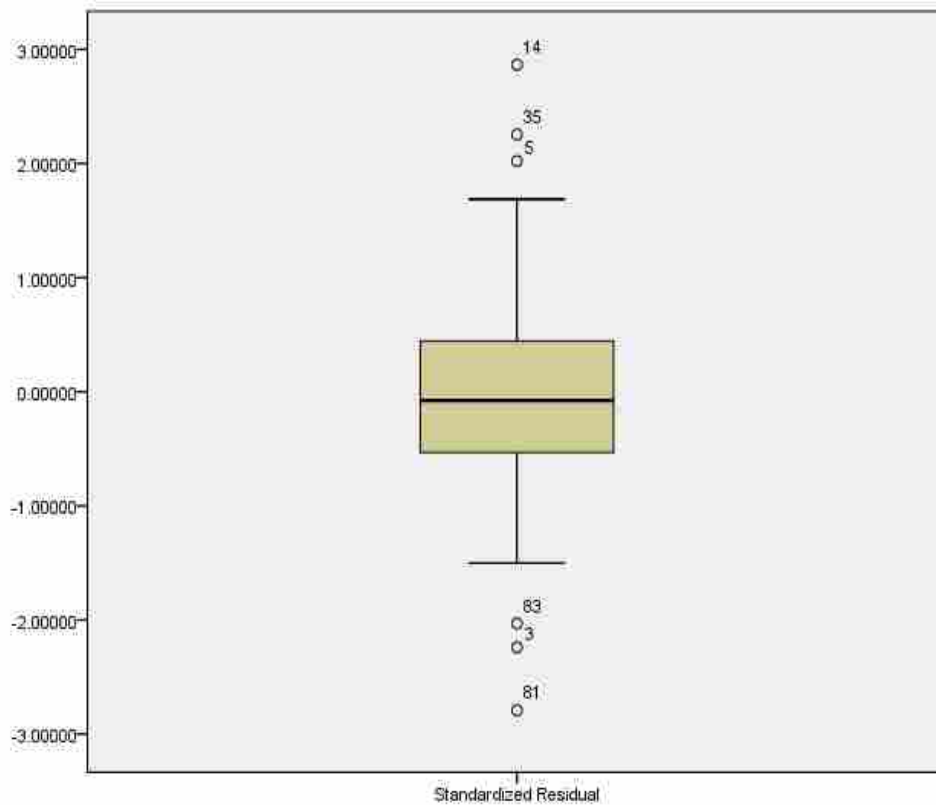
## SPP



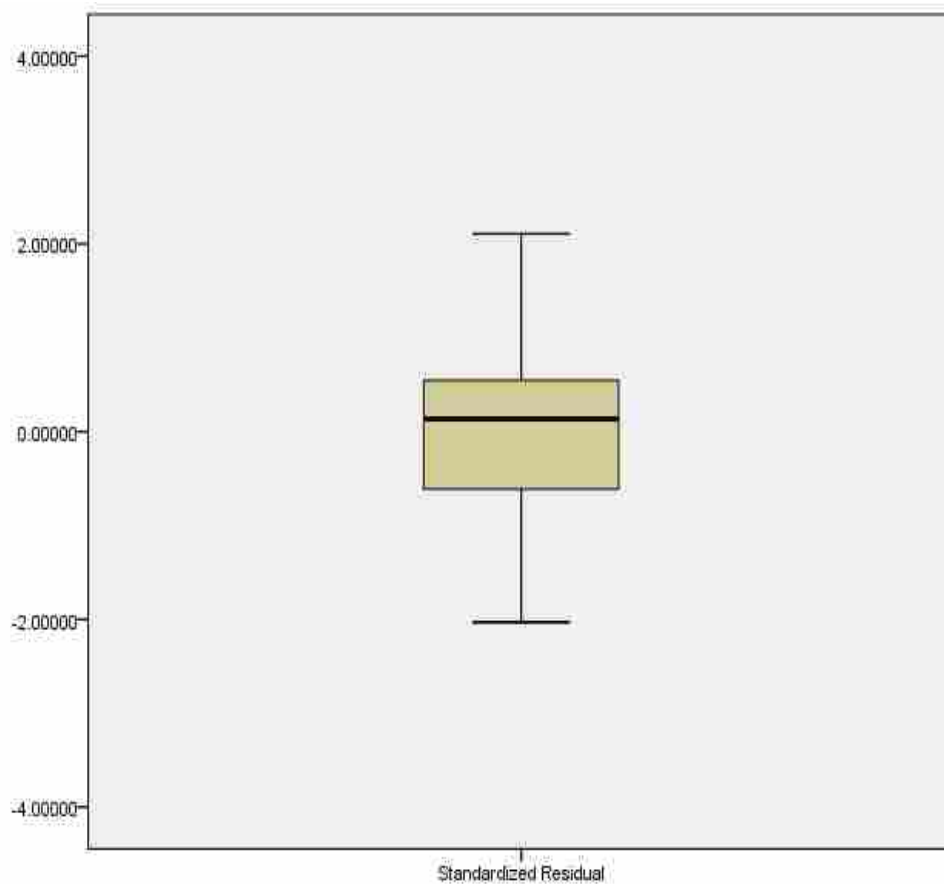
## Green



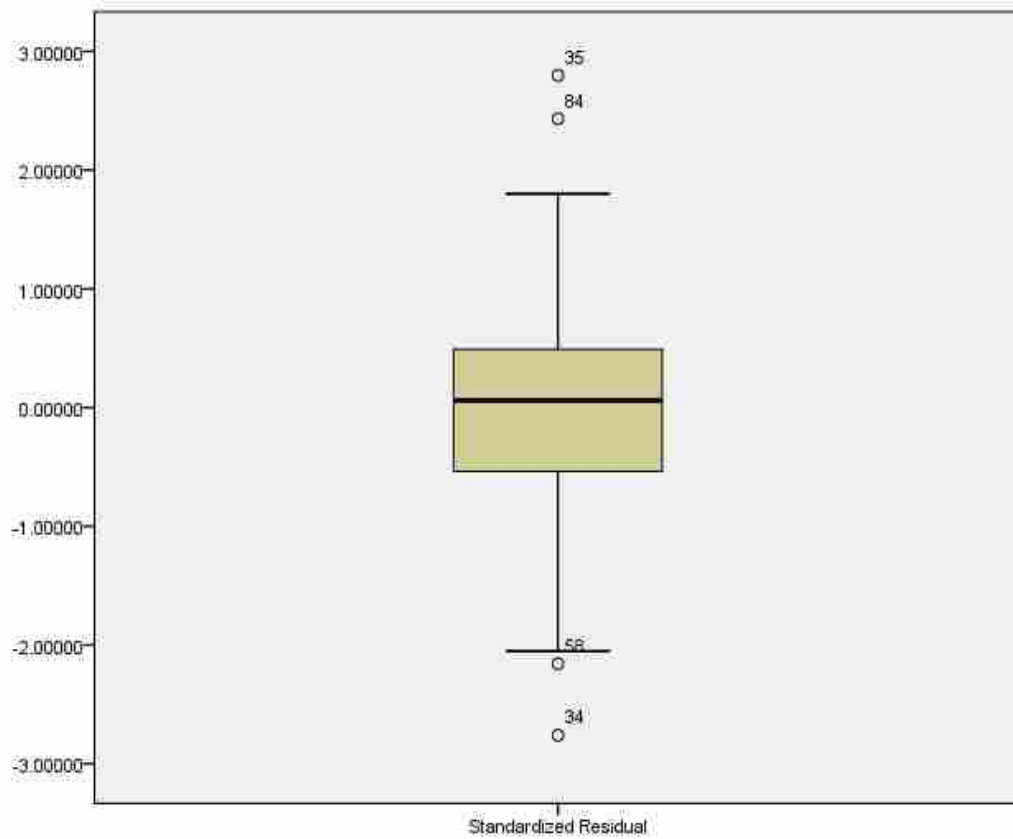
### HR



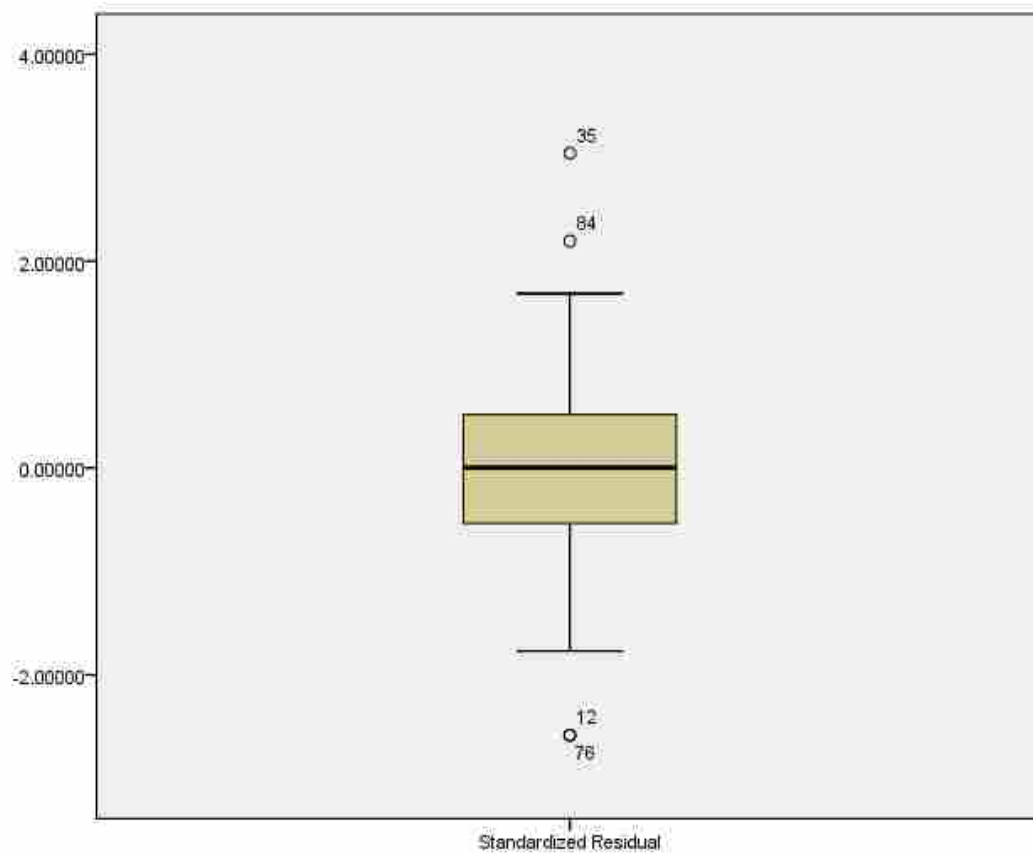
### HS



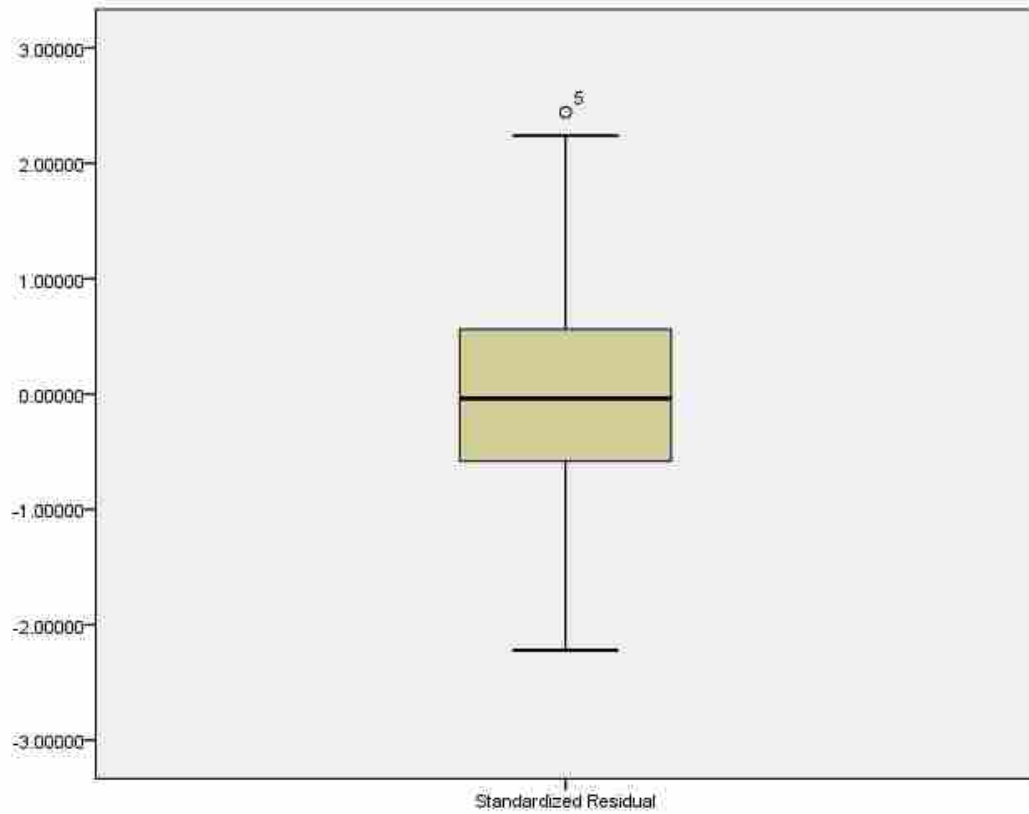
## SMEs



## Innovation



## Philanthropy



## SPP stepwise

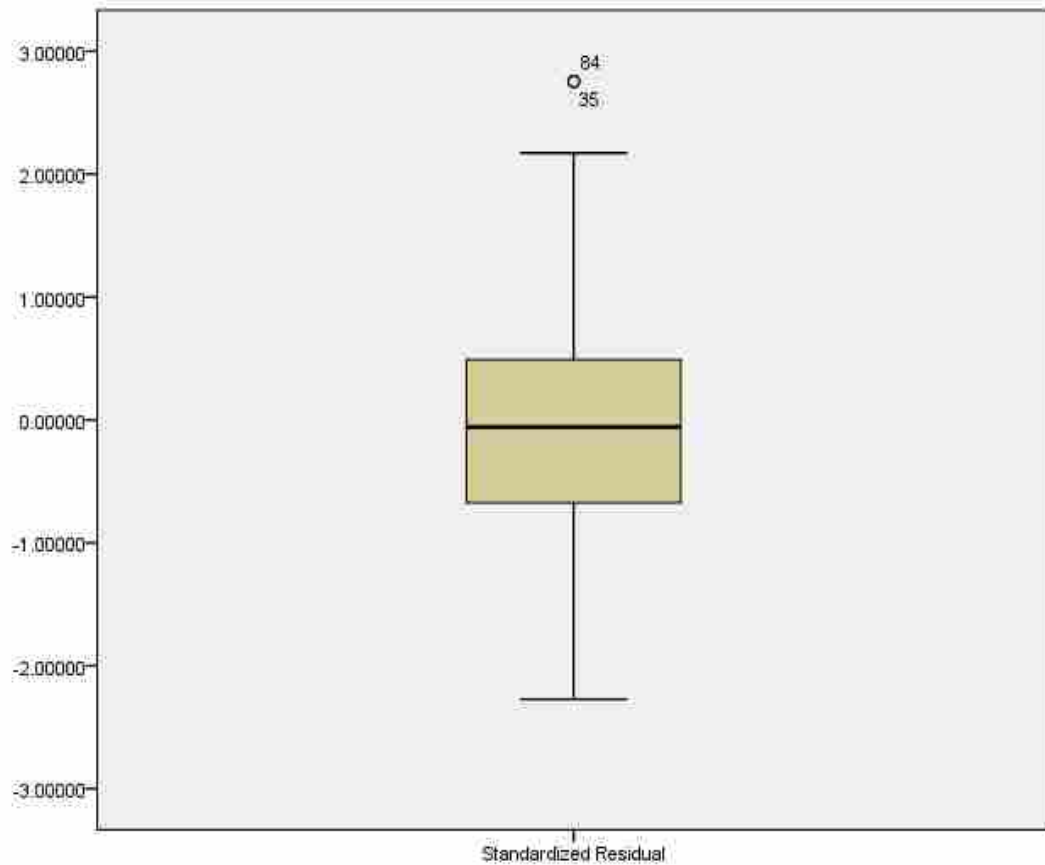


Table E: Green Dimension Correlation

|       |      | Green   | B1     | B2     | B3     | B4     | B5     | B6     | B7    | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|-------|------|---------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| Green | R    | 1       |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. |         |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B1    | R    | -.185*  | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .035    |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B2    | R    | -.142   | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .082    | .078   |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B3    | R    | .014    | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .447    | .003   | .000   |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B4    | R    | -.063   | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .270    | .063   | .000   | .000   |        |        |        |       |        |        |        |        |        |        |        |    |
| B5    | R    | -.243** | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .008    | .020   | .000   | .001   | .000   |        |        |       |        |        |        |        |        |        |        |    |
| B6    | R    | -.092   | .110   | .435** | .258** | .547** | .573** | 1      |       |        |        |        |        |        |        |        |    |
|       | Sig. | .186    | .141   | .000   | .005   | .000   | .000   |        |       |        |        |        |        |        |        |        |    |
| B7    | R    | -.236*  | .213*  | .287** | .364** | .402** | .237** | .482** | 1     |        |        |        |        |        |        |        |    |
|       | Sig. | .010    | .018   | .002   | .000   | .000   | .010   | .000   |       |        |        |        |        |        |        |        |    |
| D1    | R    | .088    | .025   | .170*  | .061   | .044   | -.045  | .108   | .175* | 1      |        |        |        |        |        |        |    |
|       | Sig. | .195    | .404   | .048   | .278   | .333   | .330   | .145   | .043  |        |        |        |        |        |        |        |    |
| D2    | R    | .238**  | .107   | .070   | .110   | .039   | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |    |
|       | Sig. | .009    | .149   | .248   | .142   | .353   | .362   | .190   | .012  | .000   |        |        |        |        |        |        |    |
| D3    | R    | .133    | .103   | .029   | .054   | .113   | .108   | .185*  | .124  | .641** | .463** | 1      |        |        |        |        |    |
|       | Sig. | .096    | .158   | .390   | .301   | .136   | .146   | .035   | .113  | .000   | .000   |        |        |        |        |        |    |
| D4    | R    | .227*   | .002   | .206*  | .026   | .112   | .210*  | .249** | .044  | .504** | .459** | .466** | 1      |        |        |        |    |
|       | Sig. | .013    | .491   | .021   | .399   | .137   | .019   | .007   | .335  | .000   | .000   | .000   |        |        |        |        |    |
| D5    | R    | .169*   | .066   | .153   | .039   | .181*  | .007   | .165   | .195* | .571** | .703** | .379** | .563** | 1      |        |        |    |
|       | Sig. | .049    | .261   | .067   | .352   | .038   | .473   | .053   | .028  | .000   | .000   | .000   | .000   |        |        |        |    |
| D6    | R    | .227*   | .011   | .342** | .226*  | .129   | .034   | .197*  | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
|       | Sig. | .013    | .457   | .000   | .013   | .104   | .371   | .027   | .022  | .000   | .000   | .000   | .000   | .000   |        |        |    |
| D7    | R    | .284**  | .065   | .043   | .187*  | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
|       | Sig. | .002    | .262   | .337   | .034   | .081   | .232   | .314   | .057  | .000   | .001   | .000   | .214   | .000   | .000   |        |    |
| D8    | R    | .480**  | .091   | .188*  | .130   | .044   | .165   | .133   | .195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |
|       | Sig. | .000    | .188   | .032   | .102   | .336   | .054   | .097   | .028  | .000   | .000   | .012   | .005   | .000   | .000   | .001   |    |

\*Correlation is significant at the 0.05 level (1-tailed).

\*\*Correlation is significant at the 0.01 level (1-tailed).

Table F: HR Dimension Correlation

|    |      | HR      | B1     | B2     | B3     | B4     | B5     | B6     | B7    | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|----|------|---------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| HR | R    | 1       |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. |         |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B1 | R    | -.141   | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .085    |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B2 | R    | -.224*  | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .014    | .078   |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B3 | R    | -.035   | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .367    | .003   | .000   |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B4 | R    | -.151   | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .070    | .063   | .000   | .000   |        |        |        |       |        |        |        |        |        |        |        |    |
| B5 | R    | -.320** | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .001    | .020   | .000   | .001   | .000   |        |        |       |        |        |        |        |        |        |        |    |
| B6 | R    | -.197*  | .110   | .435** | .258** | .547** | .573** | 1      |       |        |        |        |        |        |        |        |    |
|    | Sig. | .027    | .141   | .000   | .005   | .000   | .000   |        |       |        |        |        |        |        |        |        |    |
| B7 | R    | -.051   | .213*  | .287** | .364** | .402** | .237** | .482** | 1     |        |        |        |        |        |        |        |    |
|    | Sig. | .311    | .018   | .002   | .000   | .000   | .010   | .000   |       |        |        |        |        |        |        |        |    |
| D1 | R    | .117    | -.025  | .170*  | .061   | .044   | -.045  | .108   | .175* | 1      |        |        |        |        |        |        |    |
|    | Sig. | .128    | .404   | .048   | .278   | .333   | .145   | .043   |       |        |        |        |        |        |        |        |    |
| D2 | R    | .284**  | -.107  | .070   | .110   | -.039  | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |    |
|    | Sig. | .002    | .149   | .248   | .142   | .353   | .362   | .190   | .012  | .000   |        |        |        |        |        |        |    |
| D3 | R    | .102    | .103   | .029   | .054   | .113   | .108   | .185*  | .124  | .641** | .463** | 1      |        |        |        |        |    |
|    | Sig. | .159    | .158   | .390   | .301   | .136   | .146   | .035   | .113  | .000   | .000   |        |        |        |        |        |    |
| D4 | R    | .364**  | .002   | .206*  | .026   | .112   | .210*  | .249** | .044  | .504** | .459** | .466** | 1      |        |        |        |    |
|    | Sig. | .000    | .491   | .021   | .399   | .137   | .019   | .007   | .335  | .000   | .000   | .000   |        |        |        |        |    |
| D5 | R    | .276**  | .066   | .153   | .039   | .181*  | -.007  | .165   | .195* | .571** | .703** | .379** | .563** | 1      |        |        |    |
|    | Sig. | .003    | .261   | .067   | .352   | .038   | .473   | .053   | .028  | .000   | .000   | .000   | .000   |        |        |        |    |
| D6 | R    | .263**  | .011   | .342** | .226*  | .129   | .034   | .197*  | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
|    | Sig. | .005    | .457   | .000   | .013   | .104   | .371   | .027   | .022  | .000   | .000   | .000   | .000   | .000   |        |        |    |
| D7 | R    | .153    | .065   | .043   | .187*  | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
|    | Sig. | .067    | .262   | .337   | .034   | .081   | .232   | .314   | .057  | .000   | .001   | .000   | .214   | .000   | .000   |        |    |
| D8 | R    | .378**  | .091   | .188*  | .130   | .044   | .165   | .133   | .195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |
|    | Sig. | .000    | .188   | .032   | .102   | .336   | .054   | .097   | .028  | .000   | .000   | .012   | .005   | .000   | .000   | .001   |    |

\*Correlation is significant at the 0.05 level (1-tailed).

\*\*Correlation is significant at the 0.01 level (1-tailed).

Table G: HS Dimension Correlation

|    |      | HS      | B1     | B2     | B3     | B4     | B5     | B6     | B7    | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|----|------|---------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| HS | R    | 1       |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. |         |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B1 | R    | -.325** | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .001    |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B2 | R    | -.121   | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .119    | .078   |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B3 | R    | -.205*  | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .022    | .003   | .000   |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B4 | R    | -.185*  | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .035    | .063   | .000   | .000   |        |        |        |       |        |        |        |        |        |        |        |    |
| B5 | R    | -.157   | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |    |
|    | Sig. | .063    | .020   | .000   | .001   | .000   |        |        |       |        |        |        |        |        |        |        |    |
| B6 | R    | -.102   | .110   | .435** | .258** | .547** | .573** | 1      |       |        |        |        |        |        |        |        |    |
|    | Sig. | .159    | .141   | .000   | .005   | .000   | .000   |        |       |        |        |        |        |        |        |        |    |
| B7 | R    | -.255** | .213*  | .287** | .364** | .402** | .237** | .482** | 1     |        |        |        |        |        |        |        |    |
|    | Sig. | .006    | .018   | .002   | .000   | .000   | .010   | .000   |       |        |        |        |        |        |        |        |    |
| D1 | R    | .120    | -.025  | .170*  | .061   | .044   | -.045  | .108   | .175* | 1      |        |        |        |        |        |        |    |
|    | Sig. | .120    | .404   | .048   | .278   | .333   | .330   | .145   | .043  |        |        |        |        |        |        |        |    |
| D2 | R    | .183*   | .107   | .070   | .110   | -.039  | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |    |
|    | Sig. | .037    | .149   | .248   | .142   | .353   | .362   | .190   | .012  | .000   |        |        |        |        |        |        |    |
| D3 | R    | .100    | -.103  | .029   | .054   | .113   | .108   | .185*  | .124  | .641** | .463** | 1      |        |        |        |        |    |
|    | Sig. | .165    | .158   | .390   | .301   | .136   | .146   | .035   | .113  | .000   | .000   |        |        |        |        |        |    |
| D4 | R    | .144    | .002   | .206*  | .026   | .112   | .210*  | .249** | .044  | .504** | .459** | .466** | 1      |        |        |        |    |
|    | Sig. | .080    | .491   | .021   | .399   | .137   | .019   | .007   | .335  | .000   | .000   | .000   |        |        |        |        |    |
| D5 | R    | .186*   | .066   | .153   | .039   | .181*  | -.007  | .165   | .195* | .571** | .703** | .379** | .563** | 1      |        |        |    |
|    | Sig. | .034    | .261   | .067   | .352   | .038   | .473   | .053   | .028  | .000   | .000   | .000   | .000   |        |        |        |    |
| D6 | R    | .243**  | .011   | .342** | .226*  | .129   | .034   | .197*  | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
|    | Sig. | .008    | .457   | .000   | .013   | .104   | .371   | .027   | .022  | .000   | .000   | .000   | .000   | .000   |        |        |    |
| D7 | R    | .326**  | .065   | .043   | .187*  | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
|    | Sig. | .001    | .262   | .337   | .034   | .081   | .232   | .314   | .057  | .000   | .001   | .000   | .214   | .000   | .000   |        |    |
| D8 | R    | .284**  | .091   | .188*  | .130   | .044   | .165   | .133   | .195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |
|    | Sig. | .002    | .188   | .032   | .102   | .336   | .054   | .097   | .028  | .000   | .000   | .012   | .005   | .000   | .000   | .001   |    |

\*Correlation is significant at the 0.05 level (1-tailed).

\*\*Correlation is significant at the 0.01 level (1-tailed).



Table H: Locals Dimension Correlation

|       |      | Local   | B1     | B2     | B3     | B4     | B5     | B6     | B7    | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|-------|------|---------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| Local | R    | 1       |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. |         |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B1    | R    | -.264** | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .005    |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B2    | R    | -.184*  | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .036    | .078   |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B3    | R    | -.074   | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .234    | .003   | .000   |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B4    | R    | -.320** | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .001    | .063   | .000   | .000   |        |        |        |       |        |        |        |        |        |        |        |    |
| B5    | R    | -.198*  | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |    |
|       | Sig. | .026    | .020   | .000   | .001   | .000   |        |        |       |        |        |        |        |        |        |        |    |
| B6    | R    | -.196*  | .110   | .435** | .258** | .547** | .573** | 1      |       |        |        |        |        |        |        |        |    |
|       | Sig. | .027    | .141   | .000   | .005   | .000   | .000   |        |       |        |        |        |        |        |        |        |    |
| B7    | R    | -.336** | .213*  | .287** | .364** | .402** | .237** | .482** | 1     |        |        |        |        |        |        |        |    |
|       | Sig. | .000    | .018   | .002   | .000   | .000   | .010   | .000   |       |        |        |        |        |        |        |        |    |
| D1    | R    | .280**  | -.025  | .170*  | .061   | .044   | -.045  | .108   | .175* | 1      |        |        |        |        |        |        |    |
|       | Sig. | .003    | .404   | .048   | .278   | .333   | .330   | .145   | .043  |        |        |        |        |        |        |        |    |
| D2    | R    | .264**  | .107   | .070   | .110   | -.039  | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |    |
|       | Sig. | .005    | .149   | .248   | .142   | .353   | .362   | .190   | .012  | .000   |        |        |        |        |        |        |    |
| D3    | R    | .243**  | .103   | .029   | .054   | .113   | .108   | .185*  | .124  | .641** | .463** | 1      |        |        |        |        |    |
|       | Sig. | .008    | .158   | .390   | .301   | .136   | .146   | .035   | .113  | .000   | .000   |        |        |        |        |        |    |
| D4    | R    | .230*   | .002   | .206*  | .026   | .112   | .210*  | .249** | .044  | .504** | .459** | .466** | 1      |        |        |        |    |
|       | Sig. | .012    | .491   | .021   | .399   | .137   | .019   | .007   | .335  | .000   | .000   | .000   |        |        |        |        |    |
| D5    | R    | .436**  | .066   | .153   | .039   | .181*  | -.007  | .165   | .195* | .571** | .703** | .379** | .563** | 1      |        |        |    |
|       | Sig. | .000    | .261   | .067   | .352   | .038   | .473   | .053   | .028  | .000   | .000   | .000   | .000   |        |        |        |    |
| D6    | R    | .352**  | .011   | .342** | .226*  | .129   | .034   | .197*  | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
|       | Sig. | .000    | .457   | .000   | .013   | .104   | .371   | .027   | .022  | .000   | .000   | .000   | .000   | .000   |        |        |    |
| D7    | R    | .479**  | .065   | .043   | .187*  | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
|       | Sig. | .000    | .262   | .337   | .034   | .081   | .232   | .314   | .057  | .000   | .001   | .000   | .214   | .000   | .000   |        |    |
| D8    | R    | .311**  | .091   | .188*  | .130   | .044   | .165   | .133   | .195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |
|       | Sig. | .001    | .188   | .032   | .102   | .336   | .054   | .097   | .028  | .000   | .000   | .012   | .005   | .000   | .000   | .001   |    |

\* Correlation is significant at the 0.05 level (1-tailed).

\*\*Correlation is significant at the 0.01 level (1-tailed).

Table I: SME Dimension Correlation

|     |      | SME    | B1     | B2     | B3     | B4     | B5     | B6     | B7    | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|-----|------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| SME | R    | 1      |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|     | Sig. |        |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B1  | R    | -.223* | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|     | Sig. | .014   |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B2  | R    | -.155  | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |    |
|     | Sig. | .065   | .078   |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B3  | R    | -.009  | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |    |
|     | Sig. | .467   | .003   | .000   |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B4  | R    | -.171* | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |    |
|     | Sig. | .047   | .063   | .000   | .000   |        |        |        |       |        |        |        |        |        |        |        |    |
| B5  | R    | -.202* | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |    |
|     | Sig. | .024   | .020   | .000   | .001   | .000   |        |        |       |        |        |        |        |        |        |        |    |
| B6  | R    | -.231* | .110   | .435** | .258** | .547** | .573** | 1      |       |        |        |        |        |        |        |        |    |
|     | Sig. | .011   | .141   | .000   | .005   | .000   | .000   |        |       |        |        |        |        |        |        |        |    |
| B7  | R    | -.179* | .213*  | .287** | .364** | .402** | .237** | .482** | 1     |        |        |        |        |        |        |        |    |
|     | Sig. | .040   | .018   | .002   | .000   | .000   | .010   | .000   |       |        |        |        |        |        |        |        |    |
| D1  | R    | .280** | .025   | .170*  | .061   | .044   | -.045  | .108   | .175* | 1      |        |        |        |        |        |        |    |
|     | Sig. | .003   | .404   | .048   | .278   | .333   | .330   | .145   | .043  |        |        |        |        |        |        |        |    |
| D2  | R    | .130   | .107   | .070   | .110   | -.039  | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |    |
|     | Sig. | .102   | .149   | .248   | .142   | .353   | .362   | .190   | .012  | .000   |        |        |        |        |        |        |    |
| D3  | R    | .083   | .103   | .029   | .054   | .113   | .108   | .185*  | .124  | .641** | .463** | 1      |        |        |        |        |    |
|     | Sig. | .208   | .158   | .390   | .301   | .136   | .146   | .035   | .113  | .000   | .000   |        |        |        |        |        |    |
| D4  | R    | .117   | .002   | .206*  | .026   | .112   | .210*  | .249** | .044  | .504** | .459** | .466** | 1      |        |        |        |    |
|     | Sig. | .128   | .491   | .021   | .399   | .137   | .019   | .007   | .335  | .000   | .000   | .000   |        |        |        |        |    |
| D5  | R    | .250** | .066   | .153   | .039   | .181*  | -.007  | .165   | .195* | .571** | .703** | .379** | .563** | 1      |        |        |    |
|     | Sig. | .007   | .261   | .067   | .352   | .038   | .473   | .053   | .028  | .000   | .000   | .000   | .000   |        |        |        |    |
| D6  | R    | .290** | .011   | .342** | .226*  | .129   | .034   | .197*  | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
|     | Sig. | .002   | .457   | .000   | .013   | .104   | .371   | .027   | .022  | .000   | .000   | .000   | .000   | .000   |        |        |    |
| D7  | R    | .264** | .065   | .043   | .187*  | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
|     | Sig. | .004   | .262   | .337   | .034   | .081   | .232   | .314   | .057  | .000   | .001   | .000   | .214   | .000   | .000   |        |    |
| D8  | R    | .172*  | .091   | .188*  | .130   | .044   | .165   | .133   | .195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |
|     | Sig. | .046   | .188   | .032   | .102   | .336   | .054   | .097   | .028  | .000   | .000   | .012   | .005   | .000   | .000   | .001   |    |

\* Correlation is significant at the 0.05 level (1-tailed).

\*\*Correlation is significant at the 0.01 level (1-tailed).

Table J: Innovation Dimension Correlation

|            | Innovation | B1      | B2     | B3     | B4     | B5     | B6     | B7     | D1    | D2     | D3     | D4     | D5     | D6     | D7     | D8     |   |
|------------|------------|---------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|---|
| Innovation | R          | 1       |        |        |        |        |        |        |       |        |        |        |        |        |        |        |   |
|            | Sig.       |         |        |        |        |        |        |        |       |        |        |        |        |        |        |        |   |
| B1         | R          | -.177*  | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |   |
|            | Sig.       | .042    |        |        |        |        |        |        |       |        |        |        |        |        |        |        |   |
| B2         | R          | -.248** | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |   |
|            | Sig.       | .007    | .078   |        |        |        |        |        |       |        |        |        |        |        |        |        |   |
| B3         | R          | -.147   | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |   |
|            | Sig.       | .076    | .003   | .000   |        |        |        |        |       |        |        |        |        |        |        |        |   |
| B4         | R          | -.320** | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |   |
|            | Sig.       | .001    | .063   | .000   | .000   |        |        |        |       |        |        |        |        |        |        |        |   |
| B5         | R          | -.257** | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |   |
|            | Sig.       | .006    | .020   | .000   | .001   | .000   |        |        |       |        |        |        |        |        |        |        |   |
| B6         | R          | -.396** | .110   | .435** | .258** | .547** | .573** | 1      |       |        |        |        |        |        |        |        |   |
|            | Sig.       | .000    | .141   | .000   | .005   | .000   | .000   |        |       |        |        |        |        |        |        |        |   |
| B7         | R          | -.378** | .213*  | .287** | .364** | .402** | .237** | .482** | 1     |        |        |        |        |        |        |        |   |
|            | Sig.       | .000    | .018   | .002   | .000   | .000   | .010   | .000   |       |        |        |        |        |        |        |        |   |
| D1         | R          | .223*   | .025   | .170*  | .061   | .044   | -.045  | .108   | .175* | 1      |        |        |        |        |        |        |   |
|            | Sig.       | .014    | .404   | .048   | .278   | .333   | .330   | .145   | .043  |        |        |        |        |        |        |        |   |
| D2         | R          | .220*   | .107   | .070   | .110   | -.039  | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |   |
|            | Sig.       | .015    | .149   | .248   | .142   | .353   | .362   | .190   | .012  | .000   |        |        |        |        |        |        |   |
| D3         | R          | .282**  | .103   | .029   | .054   | .113   | .108   | .185*  | .124  | .641** | .463** | 1      |        |        |        |        |   |
|            | Sig.       | .003    | .158   | .390   | .301   | .136   | .146   | .035   | .113  | .000   | .000   |        |        |        |        |        |   |
| D4         | R          | .276**  | -.002  | .206*  | .026   | .112   | .210*  | .249** | .044  | .504** | .459** | .466** | 1      |        |        |        |   |
|            | Sig.       | .003    | .491   | .021   | .399   | .137   | .019   | .007   | .335  | .000   | .000   | .000   |        |        |        |        |   |
| D5         | R          | .264**  | .066   | .153   | .039   | .181*  | -.007  | .165   | .195* | .571** | .703** | .379** | .563** | 1      |        |        |   |
|            | Sig.       | .004    | .261   | .067   | .352   | .038   | .473   | .053   | .028  | .000   | .000   | .000   | .000   |        |        |        |   |
| D6         | R          | .338**  | .011   | .342** | .226*  | .129   | .034   | .197*  | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |   |
|            | Sig.       | .000    | .457   | .000   | .013   | .104   | .371   | .027   | .022  | .000   | .000   | .000   | .000   | .000   |        |        |   |
| D7         | R          | .400**  | .065   | .043   | .187*  | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |   |
|            | Sig.       | .000    | .262   | .337   | .034   | .081   | .232   | .314   | .057  | .000   | .001   | .000   | .214   | .000   | .000   |        |   |
| D8         | R          | .387**  | .091   | .188*  | .130   | .044   | .165   | .133   | .195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1 |
|            | Sig.       | .000    | .188   | .032   | .102   | .336   | .054   | .097   | .028  | .000   | .000   | .012   | .005   | .000   | .000   | .001   |   |

\* Correlation is significant at the 0.05 level (1-tailed).

\*\*Correlation is significant at the 0.01 level (1-tailed).

Table K: Philanthropy Dimension Correlation

|      |      | Phil   | B1     | B2     | B3     | B4     | B5     | B6     | B7    | D1     | D2     | D3     | D4     | D5     | D6     | D7     | D8 |
|------|------|--------|--------|--------|--------|--------|--------|--------|-------|--------|--------|--------|--------|--------|--------|--------|----|
| Phil | R    | 1      |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|      | Sig. |        |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B1   | R    | -.085  | 1      |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
|      | Sig. | .204   |        |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B2   | R    | -.136  | .145   | 1      |        |        |        |        |       |        |        |        |        |        |        |        |    |
|      | Sig. | .092   | .078   |        |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B3   | R    | -.058  | .275** | .402** | 1      |        |        |        |       |        |        |        |        |        |        |        |    |
|      | Sig. | .288   | .003   | .000   |        |        |        |        |       |        |        |        |        |        |        |        |    |
| B4   | R    | .008   | .157   | .390** | .415** | 1      |        |        |       |        |        |        |        |        |        |        |    |
|      | Sig. | .467   | .063   | .000   | .000   |        |        |        |       |        |        |        |        |        |        |        |    |
| B5   | R    | .015   | .210*  | .509** | .308** | .432** | 1      |        |       |        |        |        |        |        |        |        |    |
|      | Sig. | .440   | .020   | .000   | .001   | .000   |        |        |       |        |        |        |        |        |        |        |    |
| B6   | R    | -.127  | .110   | .435** | .258** | .547** | .573** | 1      |       |        |        |        |        |        |        |        |    |
|      | Sig. | .107   | .141   | .000   | .005   | .000   | .000   |        |       |        |        |        |        |        |        |        |    |
| B7   | R    | -.189* | .213*  | .287** | .364** | .402** | .237** | .482** | 1     |        |        |        |        |        |        |        |    |
|      | Sig. | .032   | .018   | .002   | .000   | .000   | .010   | .000   |       |        |        |        |        |        |        |        |    |
| D1   | R    | .222*  | .025   | .170*  | .061   | .044   | -.045  | .108   | .175* | 1      |        |        |        |        |        |        |    |
|      | Sig. | .014   | .404   | .048   | .278   | .333   | .330   | .145   | .043  |        |        |        |        |        |        |        |    |
| D2   | R    | .427** | .107   | .070   | .110   | -.039  | -.036  | .090   | .230* | .654** | 1      |        |        |        |        |        |    |
|      | Sig. | .000   | .149   | .248   | .142   | .353   | .362   | .190   | .012  | .000   |        |        |        |        |        |        |    |
| D3   | R    | .103   | .103   | .029   | .054   | .113   | .108   | .185*  | .124  | .641** | .463** | 1      |        |        |        |        |    |
|      | Sig. | .158   | .158   | .390   | .301   | .136   | .146   | .035   | .113  | .000   | .000   |        |        |        |        |        |    |
| D4   | R    | .236*  | .002   | .206*  | .026   | .112   | .210*  | .249** | .044  | .504** | .459** | .466** | 1      |        |        |        |    |
|      | Sig. | .010   | .491   | .021   | .399   | .137   | .019   | .007   | .335  | .000   | .000   | .000   |        |        |        |        |    |
| D5   | R    | .230*  | .066   | .153   | .039   | .181*  | -.007  | .165   | .195* | .571** | .703** | .379** | .563** | 1      |        |        |    |
|      | Sig. | .012   | .261   | .067   | .352   | .038   | .473   | .053   | .028  | .000   | .000   | .000   | .000   |        |        |        |    |
| D6   | R    | .343** | .011   | .342** | .226** | .129   | .034   | .197*  | .205* | .606** | .555** | .444** | .463** | .643** | 1      |        |    |
|      | Sig. | .000   | .457   | .000   | .013   | .104   | .371   | .027   | .022  | .000   | .000   | .000   | .000   | .000   |        |        |    |
| D7   | R    | .237** | .065   | .043   | .187*  | .143   | .075   | .050   | .162  | .427** | .320** | .367** | .081   | .375** | .392** | 1      |    |
|      | Sig. | .010   | .262   | .337   | .034   | .081   | .232   | .314   | .057  | .000   | .001   | .000   | .214   | .000   | .000   |        |    |
| D8   | R    | .449** | .091   | .188*  | .130   | .044   | .165   | .133   | .195* | .368** | .575** | .229*  | .262** | .393** | .494** | .307** | 1  |
|      | Sig. | .000   | .188   | .032   | .102   | .336   | .054   | .097   | .028  | .000   | .000   | .012   | .005   | .000   | .000   | .001   |    |

\* Correlation is significant at the 0.05 level (1-tailed).

\*\* Correlation is significant at the 0.01 level (1-tailed).