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**Sustainable Procurement Practices and Organizational  
Performance: The Moderating Effects of Relational  
Governance and Top Management Commitment in the  
public sector of Ghana.**

**Submitted by**

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## **Abstract**

Sustainable Procurement Practices (SPP) have dominated the global landscape and have been established as an effective means of addressing global sustainability challenges. Experts have emphasized the importance of utilizing procurement activities to address the issues associated with sustainable development. Long-term sustainability as a broad concept is certainly one of the most serious issues of the twenty-first century, as it entails ensuring full economic, environmental, and social growth, as well as the well-being of present and future generations. Sustainable procurement is viewed as a vital tool for achieving considerable success in implementing sustainability strategies and mechanisms in both the private and governmental sectors. SPP's performance in several jurisdictions provides compelling evidence for its implementation in both developing and developed economies. However, corporations and governments in mature economies are more sustainable than their counterparts in developing ones.

Although scholars have focused on sustainability for decades, there is still a lack of consensus regarding the effects of sustainable procurement methods on organizational performance, particularly in the public sector of developing countries. Additionally, studies that have examined the impact of SPP on organizational performance have found inconsistent results — in some circumstances, the association is favorable and significant, while in others, it is not. To address shortcomings in the existing literature, this research examines the effect of underlying sustainable practices on an organization's performance.

To contribute to the discourse on sustainable procurement and organizational performance, the study examines the moderating role of relational governance and top management commitment. According to the study, relational governance has the capacity to completely control the relationship between sustainable procurement

practices and organizational performance. Relational governance has the potential to boost collaborative performance and increase the Relational Capital of stakeholders within a certain procurement network. Nine (9) hypotheses were evaluated using relational exchange theory, network social capital theory, and institutional theory as theoretical lenses.

The study collected and analyzed data using a combination of methods. The data was gathered from key informants inside Ghana's public sector procurement landscape. The primary data was gathered through a web-based survey of a group of people, procurement practitioners with active membership details found on the CIPS Ghana procurement portal's database, and a phone interview with procurement experts, practitioners, and senior managers found on the CIPS Ghana procurement portal's database. The questionnaire and interview guide were designed to elicit data and information from respondents in a targeted manner. Five Hundred and Twenty (520) replies were received in response to the Eight Hundred and Seventy-Seven (877) emails sent, accounting for Five Hundred and Eleven (511) completed questionnaires.

Additionally, the interviewees included 25 procurement specialists and experts from public sector entities. The collected data was analyzed for common method bias, construct validity, and reliability. These tests suggest that all constructs under investigation satisfy an acceptable threshold for construct reliability and validity. The data collected was used to validate the structural model and to further evaluate the study's hypotheses. The study's subsequent findings reveal that some dimensions of the sustainability framework (economic, social, and environmental) have an impact on organizational performance. Economic sustainability, studies indicate, has an effect on organizational performance.

However, socially and ecologically responsible buying practices have little effect on the performance of an organization. Surprisingly, relational governance is

capable of mitigating the negative impact of environmental sustainability procurement practices on an organization's performance. Additionally, dedication from senior management moderates the relationship between economically sustainable procurement practices and organizational performance. In summary, the research findings have both theoretical and practical implications.

The study's findings contribute to Institutional Theory by emphasizing the importance of both institutional support systems and mechanisms. The commitment of senior management or institutional backing is critical to the transaction and implementation of current technology as well as innovation. It also has implications on how institutional commitment and support shape and modify organizational systems. In a green era, culture and policy take on a sustainability dimension. Additionally, it emphasizes the critical role of network social capital in the performance of the focal firm in an inters-firm alliance. Utilizing network resources has been shown to be advantageous for both focal and peripheral enterprises. Interaction between network players fosters exchanges and strengthens relational trusts, which are critical for the acquisition and transmission of superior knowledge and information via network actors.

Engaging players in a firm-supplier network strengthens the compliance skills of the main company and its associated peripherals. The growing involvement of network participants in sustainability networks enhances procurement officers and entire institutions' skills and competencies. Additionally, the study emphasizes the importance of relational exchange, relational trust, and relational capital in organizations' performance, particularly in the public sector. Among network players, relationship exchange is critical for the transfer and dissemination of information and superior knowledge.

To improve sustainable procurement practices and its consequence on organizational performance, a network-collaboration model is proposed. The central

tenet of this model is to promote inter-departmental and inter-institutional collaboration and cooperation to implement sustainable procurement practices. The model centers on using relational asset for sustainable buying methods. The relational asset of an inter-organizational network is believed to influence the performance of both focal and peripheral enterprises. A major feature of this strategy is conflict management. Relationships aside, it also enables resources to be exchanged openly, while at the same time exposing hidden motives.

The relational governance model suggested is based on organizational collaboration on the one hand, and network conflict resolution on the other. Establish deliberate partnerships with important suppliers or service providers in the sustainability landscape. Green competence and competences should be used to identify suppliers or service providers. Sustainable procurement provider is selected and procurement network is established. Resource mobilization and exchanges are facilitated by the formation of a green procurement network. It further impacts the inter-organizational asymmetry of power and information. Green procurement network puts green agenda in sync with organizational core strengths and competencies.

**Keywords:** Sustainable Procurement Practices, Relational Governance, Top Management Commitment, Public Sector Organizations

## **Dedication**

This thesis is wholeheartedly dedicated:

To God Almighty – for unmatched grace, mercy and the breath of life.

To Prophet T.B. Joshua – a true servant of the Most High God.

To my beloved daughter Elena-Lisa Swanzy Awozum, as we thank GOD and welcoming you into the family and for GOD's protective shield as you seek life as an inspiration.

To the memory of my late beloved senior brother Kenneth Awozum – for all the priceless sacrifices he made in my life and in the lives of my siblings and for leading the way for our accomplishments and successes.

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*“Unless the Lord builds the house, its builders labour in vain. Unless the Lord watches over the city, the watchmen stand guard in vain”. – Psalm 127: 1-2*

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## **Declaration**

I **Swanzy Awozum**, hereby declare that this dissertation is the product of original research conducted by me under the supervision of Dr. Johnson O. Okeniyi. I also declare that this dissertation has not been submitted to any other Institution for assessment, publication, or for any other purpose. Where the works of other people have been used, references have been duly cited. It is in this regard that I declare this work as originally mine. It is hereby presented in partial fulfilment of the requirements for the award of the Doctor of Philosophy Degree in Business Administration at the Nobel International Business School.

..... Date: .....

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**Dr. Johnson O. Okeniyi (Principal Supervisor)**

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## **List of Abbreviations**

AMOS	Analysis of Moment Structures.
AVE	Average Variance Extracted
CE	Circular Economy
CEO	Chief Executive Officer
CIPS	Chartered Institute of Purchasing and Supply
CJI	Centre for Social Justice
CSR	Corporate Social Responsibility
D.F.	Degrees-of-Freedom
DEFRA	Department for Environment, Food and Rural Affairs, UK Government
EcSPP	Economic Sustainable Procurement Practice
EFA	Exploratory Factor Analysis
EnSPP	Environmental Sustainable Procurement Practice
EPA	Environmental Protection Agency
EPA	Environmental Protection Agency
EPP	Environmental Preferable Procurement
EU	European Union
FCIPS	Fellowship Chartered Institute of Purchasing and Supply
FDA	Food and Drugs Authority
GDP	Gross Domestic Product
GFI	Goodness of Fit Index
GHS	Ghanaian Cedis
GIMPA	Ghana Institute of Management and Public Administration
GPA	Government Procurement Agreement
GPP	Green Public Procurement
GPP	Green Public Procurement
GSA	Ghana Standards Authority
IFI	Incremental Fit Index

IJVs	international joint venture
KMO	Kaiser-Meyer-Ohlin
KNUST	Kwame Nkrumah University of Science and Technology
LCC	Life Cycle Costing
MCIPS	Full Member Chartered Institute of Purchasing and Supply
MiDA	Millennium Development Authority
MNEs	Multinational enterprises
MoE	Ministry of Energy,
NEoCSR	Natural Environment Oriented Stakeholder Responsibility
NFI	Normed Fit Index
NiBS	Nobel International Business School
OECD	Organization for Economic Co-operation and Development
OI	Organizational Identity
OP	Organizational Performance
PPA	Public Procurement Authority
PPA	Public Procurement Authority
PwC	PricewaterhouseCoopers
RDT	Rapid Diagnostic Test
RG	Relational Governance
RMSEA	Root Mean Square Error of Approximation
RP	Responsible Procurement
RSF	Response Sample Frame
SA	Sustainable Acquisition
SCM	Supply Chain Management
SDG	Sustainable Development Goals
SF	Sample Frame
SFL	Standardized Factor Loading
SHP	Stakeholder Pressure

SoCSR	Social Organization's Oriented Corporate Stakeholder Responsibility
SoSPP	Social Sustainable Procurement Practice
SP	Sustainable procurement
SPP	Sustainable Procurement Practices
SPSS	Social Science Statistical Package
SRP	Social Responsible Procurement
TMC	Top Management Commitment
TP	Target Population
TPR	Transnational Private Regulations
UN	United Nation
UNCTAD	United Nations Conference on Trade and Development
UNEP	United Nations Environment Programme
UNSDP	United Nation Sustainable Development Program
UNSP	United Nation Sustainable Procurement
VIF	Variance Inflation Factor
WHO	World Health Organization
PhD	Doctor of Philosophy
PCA	Principal Component Analysis
CFI	Comparative Fit Index
CFA	Confirmatory Factor Analysis
COVID 19	Coronavirus disease 2019

## **Chapter 1: Introduction**

### **1.1 Background of the study**

Sustainable Procurement Practices have dominated the global landscape and emerged as appropriate ways to address global concerns on sustainability (Ghadge et al., 2019; Tang et al., 2019 Walker, 2015). It remains to excel at academic study (Alhola et al., 2018; Chiarini et al., 2017). Experts have focused on the use of procurement work to address the challenges of sustainability (Leal Filho et al., 2019; Meehan & Bryde, 2011). Broad-based concepts of long-term sustainability are among the most pressing problems in the twenty-first century, and it involves safeguarding full economic, environmental and social development, and the well-being of present or future generations (Blok et al., 2015; Thiele, 2016).

The cost of procurement activities is increasingly becoming exorbitant for firms in both private and public sectors (Grandia, 2016). However, this capital investment has had a limited impact on the sustainability drive of most enterprises (Harland et al, 2019). Public sector production and productivity have a significant impact on the country's economic performance and social well-being. First and foremost, the government industry is a significant player. On average, government production costs represent 21.9% of GDP among Countries Organization for Economic Co-operation and Development (OECD) (Connolly & Li, 2016). Through 2015, OECD governments' output represented a gross value added of 12.3% of GDP (Connolly & Li, 2016). Governments are the main and sometimes only providers of key goods and services to citizens. These goods and services include education, health, social services, transportation, and infrastructure. In fact, in several sectors, governments purchase most of the sectors' services; the governments of OECD countries are responsible for, on the average, 70% of final consumption expenditure on health goods and services, as

well as for 84% of final consumption expenditure on education as recorded in national accounts (OECD, 2017).

The case of Ghana and of most countries within the OECD community is no different. Governments in these jurisdictions account for a major share of procurement expenditure and spending. Given that the use of public procurement procedures is mandated for a large proportion of government spending, these procedures can be a key lever for increasing the efficiency and effectiveness of government spending. However, in Ghana, public procurement accounts for an even larger share of spending, representing close to 80% of government expenditure and 15% of GDP (OECD, 2017). Given these figures, public procurement should be considered one of the key activities in the economies of OECD countries and Ghana in particular (OECD, 2017).

In recent times, the attention of scholars, enterprises, and relevant stakeholders has been drawn to the essence of impacting sustainability mechanism to curb the impact of its activities on the immediate environment (Walker & Wendy, 2006; Blok et al, 2015; Thiele, 2016; Leal Filhon et al, 2019). Therefore, the significance of enterprise-wide sustainability strategy cannot be underestimated if the organization is to achieve significant sustainability objectives. Contemporary trading Organizations and corporate associates may learn about each other's activities' focus on their Procurement strategies in minimizing 'footprints' of their buying and supplying activities. The need to improve organizational performance, reduce waste, overcome procurement risk, and gain a competitive position has led organizations to begin to consider the implications of ongoing procurement from a competitive point of view (Humphreys, 2003).

The SDGs include 17 goals and 169 summarized goals such as there will be no poverty, and there will be no hunger. Good health and happiness, Gender balance, higher education, clean water and sanitation, sustainable and clean electricity, good jobs, and economic development are only a few of the issues that need to be addressed.

Infrastructure, industry, and creativity reduce inequity, and create more prosperous towns and neighborhoods, effective use and development production of the climate, undersea culture, terrestrial life, peace, liberty, solid institutions and co-operation of intentions (United Nations Conference on Trade and Development, 2018).

Additionally, the UN acknowledges the relevance of public sector procurement in the provision of direction and leadership in the quest to achieve sustainable practices. The rationale for encouraging sustainable procurement practices is rooted in the fact that procurement serves as a gatekeeper for organization acquisition, sourcing, and supply partnerships. Sustainable procurement (SP) is characterized as the fulfillment of long-term sustainability goals through all of the strategic procurement processes and as integrating environmental, social, and economic goals (Phillips & Walker, 2009). Sustainable procurement is a deliberate business strategy formulated by an organization to acquire and conduct business with responsible business entities. Sustainable procurement practices can be categorized into three distinct dimensions – economically sustainable procurement practices, socially sustainable procurement practices, and environmentally sustainable procurement practices (Aragao & Jabbour, 2017; Leal Filho et al, 2019).

Brammer and Walker (2010) illuminated Public Procurement as “Procurement of resources and merchandise by nation or public-sector organizations” (Flanagan & Uyarra, 2010) and seem to be among the most important functions of any institution. Generally, public procurement is a major facet of national expenditure (Hawkins, Gravier & Powley, 2011). The power of public organizations can be utilized to maintain sustainable development on a macro level where every product or service procured conforms to social, environmental, and economic standards. Indeed, the practice of sustainability has been acknowledged and has attracted scholarly attention (Xu et al, 2013; Smith, 2012; Luthra, Garg & Haleem, 2014; Walker et al, 2006; Brammer, 1996).

Sustainable buying does not feature regularly in educational textbooks. Most often than not, expressions like green offers, green purchases, direct purchasing practices, green buying and supply processes, environmental purchases, ethical procurement of environmental sustainability, renewable supply chains, green value chains, and industrial supply chain management service vendor are all concepts linked to sustainability procurement (Xu et al, 2013; Roman, 2017; Islam et al, 2017).

The success of sustainable procurement practices (SPP) in different jurisdictions serves as a strong case for its adoption in both developing and developed economies. Furthermore, firms and nations in developed economies tend to enjoy a high degree of sustainability as compared to counterparts in developing economies (Brammer & Walker, 2011; Been et al, 2014; Thong & Wong, 2018). However, the state of Sustainable Procurement Practices (SPP) in emerging economies is in the developing stages of evolution although the undesirable consequences of climate change worsen current development patterns. Public organizations or contracting authorities, nevertheless, have to exercise exceptional cautiousness during the procurement processes leading to the award of contracts. Ongoing procurement practices are now widely known as a lever for innovating and improving the efficiency of public and private organizations around the world. The SPP, thus, relies on a strong international policy framework. (UNCTAD, United Nations Conference on Trade and Development. / ALDC / 2018/4, 2018).

The program promotes public procurement activities that facilitate the convergence of the three facets of sustainability. Public procurement is to safeguard the public purse and environment to meet the demands of civil society organizations and bilateral agents especially in emerging economies (Walker et al, 2006). Public procurement is a major facet of national expenditure. Sustainable procurement Practices (SPP) are the new frontiers for organizational competitive advantage. Government demands and pressures

from customers have ushered organizations into an era of sustainable practices (Zhu & Sarkis, 2007). From organizational and partnership perspective, sustainability can only be achieved through collaboration and the formation of an alliance with prospective partners and suppliers. Collaboration between public and private sector agents is essential to the performance of such alliances (Connlley et al, 2006; Das & Teng, 2000). Sustainable Procurement Practices (SPP) is the new paradigm in procurement globally, with global consent and recognition, ensuring that the public sector procures goods and services through social, conservational, and environmental protection measures (Walker & Brammer, 2009).

Research shows that numerous factors could increase or influence the sustainable public procurement behavior of an organization. These include, but are not limited to, green knowledge capabilities and management; motivation and clear purpose (Günther & Scheibe, 2006; Islam et al, 2019); senior administration systems, national legislation, procurement engagement, and preparation (Giunipero, Hooker, & Denslow, 2012); constitutional provisions, procurement commitment, and training (Giunipero, Hooker & Denslow, 2012). These studies focused on the antecedents of sustainable procurement practices among organizations, especially public ones (Walker et al, 2006; Nasiche & Ngugi, 2014; Gatari, 2014; Telewa, 2014), without proposing mechanisms of attaining SPP outcomes. In addition, many studies examined the impact of buyer-supplier selection in ensuring sustainable practices (Roman, 2017; Islam et al, 2017). In furtherance, organizational sustainability behavior and commitment to change occupies another section of studies (Preuss, 2009; Erridge & Hnnighan, 2012).

Other studies (Kannan, 2021; Sheng et al, 2018) consider sustainable procurement practices as a series of network-related activities between diverse actors in a particular public procurement system. The establishment of a sustainability network is to acknowledge the emergence of good practices on SPP (Zhu & Sarkis, 2007). These

studies have been extended to include the sociological factors that promote commitment and trust on the part of actors from a social exchange perspective (Liu et al, 2009; Poppo & Zenger, 2002; Jap & Anderson, 2003). Organizational performance in an era of sustainability is measured in three dimensions – the social, environmental, and economic performance of firms (Grandia et al., 2015; Thong & Wong, 2018; Kates, 2018). The fluctuation in the degree of performance can be attributed to the governance mechanism employed in the discharge of procurement activities.

The sustainable procurement orientation and pressure from stakeholders are key drivers in the acceptance of sustainability procurement platforms. A study on historical developments of sustainability suggests the essential role stakeholders play in the attainment of organizational and network goals (Lennox et al, 2018). Sustainable procurement practices, as a multi-facet paradigm that requires coordination and cooperation between diverse actors, rely on the performances of several individuals to achieve such a feat (Kannan, 2021). The demand for sustainable procurement practices and products by external stakeholders has altered the functional and operational activities of firms. Sustainable Procurement Practice-oriented pressures from key partners in the business ecosystem shape the implementation process and further impact the organization's performance. The pressure from stakeholders guides the corporate sustainable procurement practices of firms. It further ensures firms abide by business ethics (Horisch et al, 2014; Aragon-Correa et al, 2008; Saravanamutthu, 2018).

Organizational achievement is often evaluated in terms of its desired consequences (or goals and objectives), such as real production or organizational outcomes (Short, Ketchen, Palmer & Hult, 2007). Operational productivity, integration, acquisition, diversity ratios, organizations, the structure and style of the administrative leadership, staff administration, and socio-political exploitation of power in business concessions are all factors that influence an organization's level of success

(Mankins & Steele, 2005). Organizational success is often hampered by different interpretations of social-oriented actions, foreign or cross-cultural practices to broaden and change, and numerous other organizational factors such as knowledge exchange networks and others, according to King (2007). As a result, organizational success is essential which is a multifaceted structure influenced by a broad integration of internal and external elements of the organization. As a result, organizational success is essential which is a multifaceted structure influenced by a broad integration of internal and external elements of the organization.

Therefore, administrative businesses, blends, and power relationships are examples of systems. Organizational activities can be specified as create, establish, and direct strong corporate social cohesion in relationships (Colombelli et al., 2019). With the provision of a specific administrative structure or coalition of intergovernmental organizations, the purpose of the institutionalized system of governance is to provide the integration and control required to address transaction issues (Colombelli et al., 2019; Pennec & Raufflet, 2018).

By lowering transaction costs and increasing transaction volume, effective governance will generate revenue (Benitez – Avila et al, 2019). In the management of trade ties, there should be a non-profit aspect, as well as a "social" or "political" "part of the partnership " (Ju & Gao, 2017). According to Granovetter (1985), biologically integrated human partnerships play a significant role in economic trade. The term 'relational governance' was coined by Zaheer and Venkatraman (1995) to describe the current state of economic governance and social exchanges involving certain assets, including the trust within an organization. The purpose of this centralized approach, which is considered to be an organizational strategy, is to protect the group with certain assets from what is assigned to them and to focus on the prospects for continued relationship (Joshi & Campbell, 2003; Ju & Gao, 2017).

Improving strategic relational or interpersonal ties besides exchanges between procuring party and supplier requires a flexible mode of governance that ensures a continuous exchange of information and knowledge. The adoption of Relational Governance ultimately would ensure opportunistic behavior is mitigated to the minimum. The relational ties and capital individuals and organizations enjoy serve as breeding grounds for trust and mutual understanding (Poppo & Zenger, 2002; Benitez – Avila et al, 2019; Ju & Gao, 2017). This provides organizations with the needed social identification to ensure the continuous exchange of tacit knowledge and information relevant to the survival of sustainable procurement practices.

Although the choice of governance performs a critical function in enriching the outcome of sustainable procurement practices, its success rests on the involvement and commitment of employees and top management. Commitment from top management provides the suitable enabling environment leading to the adoption and application of internal and external SPP mechanisms and processes (Wijethilake & Lama, 2019; Rocha, Searcy & Karapetovic, 2007). Several research findings have shown various significant parts human factors play in the success of the organizational strategy. The commitment and competence of an organizational human capital provide the competitive edge needed to outwit competitors and further achieve sustainability goals and objectives (Daily & Huang, 2001).

Improving Sustainable Procurement Practices is proportional to the extent of senior management obligation, in other words top management commitment. The commitment of employees and management is unraveling in several studies to impact the sustainability practices and performance of enterprises (Latan et al, 2018; Chiarini & Vagnoni, 2016; Chen & Kitsis, 2017). However, most of these studies fail to illuminate the extent to which senior management obligation, in other words

top management commitment, affect the association between an organizations sustainability procedure and further promote the success of the organization.

To address the limitations concerning current literature, the research explores the effect of undermining sustainability practices on the performance of an organization. The study further investigates the moderating role of relational governance and top management commitment on organizational performance. It is conceptualized that relational governance has the potential to absolutely moderate the association between sustainable procurement practices and organizational performance. Relational governance possesses the ability to enhance collaborative performance and to improve the Relational Capital of stakeholders within a particular procurement network.

## **1.2 Problem Statement**

There is a consensus in the literature about the development, adoption, and application of sustainable procurement practices within organizations over the period since its emergence (Walker & Wendy, 2006; 2009; Walker & Brammer, 2012; Walker et al., 2012; Grandia et al., 2015; Thong & Wong, 2018; Kates, 2018; UN Sustainable Development Goals Report, 2018). The advancement over the decades has revealed numerous research findings and conclusions on organizations with the focus on identifying factors, drivers, challenges, and barriers to sustainable procurement practices (Walker & Brammer, 2012; Walker et al., 2012; Grandia et al., 2015).

Other research has focused on the antecedent of sustainability practices (Walker et al, 2006; Nasiche & Ngugi, 2014; Gatari, 2014; Telewa, 2014) and effects of sustainability practices as a one-dimensional construct in organizational performance (Thong & Wong, 2018). Although studies in these domains reveal there is a relationship between an organization's sustainable practices and its financial performance, there is limited

evidence as to how these influence the overall performance of an organization (Islam et al., 2019; Karim, 2008).

Nevertheless, as reassuring and noteworthy as the current developments in the advancement of these areas of study is, there is still much that needs to be done on the impact of organizational performance. For example, most of the available disciplinary academic researches are mainly descriptive and frequently admonished for the insignificant contribution they make to this field of development (Green et al., 2000; Kleindorfer et al., 2005; Lember et al., 2011; Seuring & Müller, 2008).

These observations fall short of examining the effects of sustainable procurement practices as a full-scale multi-dimensional construct and their overall impact on organizational performance. Also, what mechanisms are available to enable organizations practising sustainability to attain significant organizational performance is not clear. In the same way, few empirical studies which have captured an organization's ability to balance sustainable procurement practices (Attia & Salama, 2018; Howard, 2015; Oelze, 2017), have mostly used environmental and social sustainability or economic sustainability as a one-dimensional construct (Thong & Wong, 2018), thereby limiting researchers' insight into how sustainable practices affect organizational performance as a multiple-dimensional construct. Sustainable procurement practices undoubtedly affect the performance of organizations (Zhu & Sarkis, 2004; Hervani, Helms & Sarkis, 2005).

The Government of Ghana took a significant step in December 2010 when it made a public commitment to adopting Sustainable Procurement Practices (SPP) as part of its national strategy for sustainable development (Etse et al., 2021). The developments in public sector organizations about organizational performance need attention. Public sector organizations' performance mostly is purely service delivery, policy intervention,

enforcement, regulatory, etc. According to the Centre for Social Justice (CSJ), between 2000 and 2020, public sector originations in Ghana incurred an accumulated total of GHS 1.89 Billion in judgment debts for the Government of Ghana, as a result of poor contract management practices. The reasons for the judgment debt ranged from contractual breaches to the government's failure to promptly pay compensations for its compulsory land acquisitions, as well as statutory breaches committed by public officials in the course of their official duties. Additionally, the Ghanaian economy is still confronted with serious and complex environmental challenges, despite the various interventions by the Environmental Protection Agency (EPA) over the last 40 years. These challenges include waste management, illegal mining, logging, deforestation, noise, and water and air pollution.

These developments raise serious questions about the significant levels of organizational performance within public sector organizations in Ghana. According to studies such as Etse et al. (2021) and Anane et al. (2019), sustainable procurement practices since their adoption have been critical to achieving a significant level of organizational performance and sustainability in every organization and economy, and Ghana is no exception. The procurement landscape, since 2015, has been experimenting with sustainable procurement practices as a tool to achieve sustainable development goals. The shift from cost-based procurement evaluation to a sustainable framework for supplier selection is evident in the extent of sustainability practices in the public procurement landscape. However, the procurement ecosystem has been riddled with several challenges that impact the implementation of sustainable procurement practices and their subsequent impact on the performance of public institutions. Cases such as corruption, lack of exchange and collaboration between relevant stakeholders, and low degree of sustainability knowledge are identified to affect the adoption and diffusion of these sustainability mechanisms (UNSP, 2018). Additionally, an audit assessment by

the Public Procurement Authority (2019) reveals that organizations have not instituted strategies and institutional mechanisms to foster sustainable procurement practices. Also, most public institutions do not have in place sustainable procurement frameworks to guide procurement requirement management and decision making. And these factors have serious implications on the performance of public sector organizations in their quest to achieving sustainable procurement practices.

In order to achieve the 2030 Agenda for Sustainable Development, the Coordinated Programme of Economic and Social Development Policies, the UNSDP sets out the UN's partnership for 2018-2022 through these four Results Areas: Shared prosperous economy, Social investment in people, Protected and safe environment, and Inclusive, accountable governance.

The current study investigates the effects of economic, environmental, and social sustainable procurement practices on the performance of organizations. It further examines the moderating roles of relational governance and top management commitment to sustainability in the performance of organizations. There is an overall agreement within academia following the emergence of the debate about the fact that organizations comprehend performance achievements from interpersonal or relational governance initiatives in their recurring corporations (Goerzen, 2007). Conclusively, scholars advocate that long-term bond allows for aggregation of certain activities and practices, which in turn enhances the effectiveness of inter-corporate trade (Mayer and Argyres, 2004; Zollo et al., 2002).

Poppo et al. (2008) conclude that, because managing relationships and methodologies of relational governance improves the well-being of both relationships (Heide and John, 1992; Macneil, 1980), in the long run, groups create relationship patterns, and ways of meeting, following sharing knowledge and in-depth interaction, which reduces

communication expenses, disputes, and knowledge- collection problems (Zollo et al., 2002). Thus, like internationalization, relationship management involves trust as a strategic goal, as well as specific and other practices that facilitate the integration of functions and knowledge (McEvily et al., 2003, p. 92). Subsequently, convictions including practices are advantageous to collective relationships and improves outcomes of results (Heide and John, 1992).

Additionally, it is empirically proven in several dynamic research activities, where scholars view high management commitment as a scale of comparison action based on organizations' principles (Dubey et al., 2016; Liang et al., 2007). It is generally acknowledged that management engagement is the most important factor in transforming a long-term supply chain operational competitiveness results of profitability (Hitt et al., 2015; Prajogo and Olhager, 2012; Waller and Fawcett, 2013; Wu, et al., 2006). Perhaps most importantly, there is a surprising amount of research into the management of the government segment (Mitra and Webster, 2008; Walker and Brammer, 2012) as well as reasons that could influence organizational performance after the adoption of ongoing sustainable procurement platforms (Carter and Rogers, 2008; Crespín-Mazet and Dontenwill, 2012; Grob and Benn, 2014). There is a bit of knowledge about important roles played by organizational leaders (senior executives) after implementing sustainable processes, and their impact on the overall organizational performance. Having in place an agile governance structure is essential. However, commitment from relevant stakeholders is needed to achieve the significant feat. The commitment from top management personnel would influence the implementation of sustainability practices in a prudent manner. Insights from senior management/managers have a potential consequence on sustainable procurement practices and organizational performance. Ultimately, the adoption of relational governance coupled with the undivided commitment of top management towards

sustainability would have an enormous impact on sustainability practices and organizational performance.

### **1.3 Research Objectives**

The purpose of the study was to investigate the effects of Sustainable Procurement Practices and further examine the moderating effects of relational governance and top management commitment on organizational performance in the public sector of Ghana.

#### **1.3.1 Specific Objective**

To achieve this broader goal, the study was guided by the following specific objectives:

1. To examine the impact of economic, social, and environmentally sustainable procurement practices on organizational performance;
2. To understand the moderating effects of relational governance in the relationship between economic, social, and environmentally sustainable procurement practices and organizational performance;
3. To investigate the moderating effects of top management commitment in the relationship between economic, social, and environmentally sustainable procurement practices and organizational performance;
4. To establish and unearth the current state of the literature on sustainable procurement practices research;
5. To propose an operational framework for public sector organisations to enhance and achieve significant organisational performance in relation to the adoption of SPP.

### **1.4 Research Questions**

In recognition of the research problem and goals above, the subsequent research questions arose as important for this study:

1. What is the impact of economic, social, and environmentally sustainable procurement practices on organizational performance?
2. To what extent does relational governance moderate the relationship between economic, social, and environmentally sustainable procurement practices and organizational performance?
3. To what extent does top management commitment moderate the relationship between economic, social, and environmentally sustainable procurement practices and organizational performance?
4. What is the current state of the literature on sustainable procurement practices?
5. What operational framework can public sector organisations use to enhance and achieve significant organisational performance in relation to the adoption of SPP?

### **1.5 Significance of the study**

Limited academic work has attempted to scrutinize the effect of SPP on organizational productivity. Although studies in this domain reveal existing ties between organizations' sustainable practices and financial productivity, there is limited evidence as to how they influence the overall performance of a firm (Islam et al., 2019; Karim, 2008). The inability of firms, especially public organizations, to achieve a high degree of success in the practice of sustainability can be attributed to diverse factors, including lack of transparency and proper governance structures. These factors affect the level of trust between key stakeholders within the procurement landscape (Brammer & Walker, 2010; Poppo & Zenger, 2002).

The synergies that competitive advantage inter-departmental/institution contributes can be unearthed only when the mode of operations and governance are conducted in an

agile manner that ensures enough participation from every individual. Constant interaction between individuals is acknowledged to foster relational bonds that serve as the prerequisite for relational capital diffusion and utilization, trust and mitigation of opportunistic behavior (Zhu & Sarkis, 2004; Gulati & Sytch, 2005; Powell, 2010).

This study contributes to the debate on the dynamics of inter-organizational governance thereby enriching the research on sustainability and the public procurement systems at large in emerging economies. Also, this policy is derived from the research guidelines and participates in public administration by improving the inefficiency of public procurement processes and relationships between stakeholders and rival organizations, as well as an achievement of the Sustainable Development Goals (SDGs) which seek to promote sustainable public policy and national policies and priorities.

The findings from the study will contribute to researchers understanding of the characteristics of network theory that underpin the exchange of tacit and explicit information and knowledge within complex social settings. The continuous interaction between these stakeholders will lead to the utilization of accumulated social capital to source and develop environmentally friendly products and services. Continuous interaction results in the establishment of strong ties between stakeholders and this impact positively the flow or diffusion of information and knowledge within the network. The findings of the study will serve as a blueprint for policy makers regarding sustainable policy formulation and execution. Managers and policy makers will gain insights into the factors that underpin continuous exchange and how it is likely to affect the outcome of sustainable practices.

## **1.6 Summary of Research Methodology**

The study adopted a mixed-method approach – both quantitative and qualitative research methods and techniques were utilized to collect and analyze data to investigate the research questions and objectives of the study. Consistent with the chosen approach, data was collected from key informants from the procurement landscape in the public sector of Ghana. Quantitative data was collected using a survey approach. The questionnaire was utilized to acquire data from key respondents using a random sampling approach. Summarily, the survey process witnessed a high response rate with common method bias being a non-issue. Data validity and reliability were examined using average variance extracted, Cronbach alpha, and composite reliability test. Confirmatory factor analysis and exploratory factor analysis were performed to examine the model fit of the structural model. The stated hypotheses of the study were analyzed using regression analyses and t-statistics tests.

Interview sessions were used to collect qualitative data. It is worth noting that the interview process included respondents from the non- response category during the survey period. The interview sessions were recorded and transcribed. Transcribed documents were assessed for reliability and validity. Data acquired from the interview sessions were analyzed using thermal content analysis techniques.

## **1.7 Limitations and Delimitation**

The scope of the research was restricted to the Chartered Institute of Purchasing and Supply (CIPS), Ghana Branch, being the local chapter of the Chartered Institute of Purchasing and Supply, UK which is a global professional organization. The objective of CIPS Ghana is to impact positively on the Ghanaian economy through the application of CIPS standards in supply chain processes. CIPS Ghana aims to promote good practice and provide services to procurement professionals, students, government

institutions, and other stakeholders. The Ghana Office of The Chartered Institute of Procurement and Supply is committed to promoting excellence and providing a continuous improvement in technology standards, raising awareness of donation and procurement by corporate, national and international prosperity professionals who are involved in procurement and supply and warehousing and reside in Ghana. Membership is open to all studying at various levels of the CIPS course and may be associates and full members.

According to Sekaran (2005), a population is a group of people, objects within which samples are taken to be measured or by a group of people, or objects with at least one similar object. The research aimed at CIPS Members of the Ghana Branch who are currently engaged within the public sector in Ghana. The membership of the Ghana branch of CIPS is made up of all the five (5) categorizations as defined by the CIPS,UK as follows:

1. Study CIPS: Student, Certificate, Diploma, or Associate
2. MCIPS: Full Member
3. FCIPS: Fellowship
4. Affiliate: Affiliate membership
5. Chartered Professional: Chartered status

The CIPS Ghana database of membership is filtered for only active members who are current on membership dues on subscriptions. CIPS Membership subscriptions and all CIPS membership fees quoted are for annual subscriptions (12 months). Members are required to renew and make payment before the expiry of their 12-month membership subscription to maintain their active membership status. Description of job titles cover the following aspects of procurement and supply chains: purchasing and procurement, production, inventory management, demand forecasting, warehousing, and transportation to filter out the active membership status in the database of CIPS Ghana.

The scope of the study was limited to public offices in the public sector. Public procurers and officers working as active members in the database of CIPS Ghana were surveyed for the study. The Government of Ghana public sector institutions were selected and public procurement professionals engaged with some public-sector organizations, including the Environmental Protection Agency (EPA) and the Public Procurement Authority (PPA) were further included in the landscape of the research.

The extent to which the research was carried out covers procurement professionals and experts. The outcome of the research and the practical implications were taken into account given the study's narrow scope, that is the Ghana public sector institution. Though the majority of the population are made up of procurement professionals and experts in active service who are currently in active membership status in the database of CIPS Ghana of the Government of Ghana, took part in the study. The conclusions are limited and remain cautious not to make a sweeping statement on the findings over all organizations, economies, and countries.

## **1.8 Research Structure and Framework**

This study is outlined in five different chapters. They are as follows:

Chapter one of the study outlines the background and significance of this study. In addition, Chapter one presents the research objectives, research problem, and the significance of the study. Chapter two reviews the relevant body of knowledge in the domain. Literature relating to innovation policy concept, design, and implementation is discussed. Theoretical relations between relational governance, green procurement network, and sustainable procurement practices are emphasized.

Chapter three of this study presents the research methodology employed to enable the research to achieve its objective. The study employed quantitative and qualitative

methods to examine the hypothesis formulated. The process of data collection, storage, and analysis is elaborated in this chapter. Chapter four presents the empirical analyses and deductions of this research. In responding to the research questions and objectives outlined for this study, a partial least square structural equation model was used. The results for the hypotheses are also discussed in this chapter.

Chapter five focuses on discussions, recommendations, and policy implications of the outcome of the study. In addition, a conclusion and further research directions are suggested in this section.

## **1.9 Summary of Chapter 1**

Sustainable Procurement Practices have dominated the global landscape and emerged as an appropriate way to address global concerns on sustainability. The concept of sustainability which includes long-term sustainability is among the most pressing problems in the twenty-first century. It involves safeguarding full economic, environmental, and social development of the well-being of present and future generations. The case of Ghana and most countries within the OECD community is no different. Governments in these jurisdictions account for a major share of procurement expenditure and spending. Given that the use of public procurement procedures is mandated for a large proportion of government spending, these procedures can be a key lever for increasing the efficiency and effectiveness of government spending. This study aims at providing a relational governance framework to enhance the practice of sustainable procurement practices and their impact on organizational performance. It therefore examines the moderating roles of relational governance and top management commitment to the sustainability of organizational performance.

The findings from the study will contribute to researchers' understanding of the characteristics of network theory that underpins the exchange of tacit and explicit information and knowledge within complex social settings. The continuous interaction between these stakeholders will lead to the utilization of accumulated social capital to source and develop environmentally friendly products and services. The research questions are addressed using a mixed method approach. Data is collected from key informants in the public procurement practitioners in the public sector of Ghana.

## Chapter 2: Literature Review

### 2.1 Introduction

This chapter presents the literature review. Areas such as sustainability, sustainable public procurement, organizational performance, relational governance, and top management commitment are reviewed. Underlying theories and concepts of the study are discussed at length. The effect of relational governance and top management commitment on the performance of an organization's utilization of the three dimensions of sustainable procurement practices is argued. Additional theoretical background for hypothesis development is discussed in this section of the study.

#### *2.1.1 Overview of Sustainability and Sustainable Procurement Practices (SPP)*

Even though sustainability has been a buzzword in the social science literature for decades (Dragos & Neamtu, 2014), overall sustainability practices have yet to be reached (Shevchenko, Lévesque & Pagell, 2016). The triple bottom line is a term that refers to the three dimensions of sustainability: fiscal, environmental, and social. However, this emergent rift is amid empty promises and practical accomplishment (Seele, 2016). Global reviews of the literature clearly shows that there is no question that a shift toward more natural lifestyles is underway the way forward. Likewise, there is an indication that sustainable theory, guidelines, and transnational agreements are emerging. Nevertheless, it is also true that the appetite for pollution of the atmosphere and unwarranted routines are also on the rise due to a lack of funding. In the literature, this paradox is referred to as the "sustainability gap" (Esty & Lubin, 2014). Surprisingly, the greater the call for prosperous global culture growth, the wider the divide seems to become.

This sustainability gap is a wake-up call that challenges researchers and academicians to study and advance mechanisms of global, social, and human interaction are dynamic structures. In an extensive academic analysis of sustainable public procurement involving 9.5 trillion dollars for long-term sustainability, Sebastian Knebel et al. (2018) conclude in their article exploring 9.5 trillion dollars for long-term sustainability. that placing sustainable procurement practices (SPP) at the core, and with it, the huge financial leverage of public procurement, is the only way to ensure long-term sustainability. Accordingly, state procurement accounts for at least 12 percent of the overall purchases on a country's GDP on average (OECD, 2015). The estimated amount of government purchases of products, utilities, and building activities is 9.5 trillion dollars (The World Bank, 2016). State agencies are the primary customers of many business markets, making public procurement a vital economic operation for states (OECD, 2015).

### ***2.1.2 The Concepts of Sustainability***

Sustainability is defined as a business strategy concerned with offering products and services that meet the needs of today, without compromising the ability of future generations to meet their own needs (Mensah, 2019). Sustainability practices take the form of three distinct dimensions, namely: economic sustainability practices, social sustainability practices, and economic sustainability practices.

The ever-surging decrease in global resource stockpiles has revolutionized the production and consumption patterns of organizations and individuals. Activities of humans in the past century have depleted the resources available for this and future generations (Konikow, 2005; Adger et al, 2003; Dussel & Klein, 2006). For instance, most virgin forests have been polluted due to the irresponsible activities of miners and lumbermen over the years. The activities of production networks and organizations emit

a significant amount of carbon dioxide and other toxins that after the friendly nature of the environment and its ecosystem (Parikka – Alhola, 2008; Walker & Brammer, 2012). The gravity of harm human and organizational activities cause to communities, their members and environs cannot be underestimated.

Several governments and international agencies such as the UN and World Bank acknowledge the harmful effect of organizational and individual activities on the environment. To curb the continuous exposure of the environment to toxic substance, these authorities and agencies have collectively developed frameworks and guidelines to serve as a blueprint for reducing the hazardous footprint of such activities. In addition, several governments have adopted measures that seek to mitigate the situation in specific countries. To reduce the carbon footprint and emission of factories and production yards in China, the central government enacted a law to close down some high carbon-emitting factories. It further advocated for the relocation of organizations to other geographical locations to reduce the number of carbon emission organizations in specific locations. Miniature forests are cultivated to supplement the need for atmospheric gas. And checks indicate these policy structures and plans have yielded some positive results (Zhang & Cheng, 2009; Yu et al, 2014; Ackah et al, 2013; Rita – Ross et al, 2012; Preuss, 2009; Srivastava, 2007).

Ecological frameworks and agreements, for example, Paris Climate Change Accord, Sustainable Development Goal by Millennium Development Authority (MiDA) share a similar passion that seeks to encourage responsible innovation. These agreements advocate for responsible production and consumption by individuals and organizations. Authorities are of the view that when enterprises and individuals adhere to responsible production and consumption it will mitigate environmental hazard (PPA Act 663, 2003; Amendments Act 914, 2016; Griggs et al, 2013; Sachs, 2012). Attaining an optimal level of development requires production which is carried out using clean innovative

technologies and processes that are environmentally friendly. Developing clean innovative technologies takes collaboration between several actors within the supply network. Scholars in the field of open innovation have advocated that no organization possesses all the needed resources to constantly enrich its innovation capacity, and therefore calls for collaboration and exchanges between diverse actors to cushion their innovation capabilities. The production and development of new products usually take this approach. For instance, Toyota and most car manufacturers depend on several part manufacturers to meet their production and delivery schedule (Chesborough, 2003; Bos & Tarnai, 1999; Hart, 2012; Iyer et al 2009).

In emerging economies, government and public institutions contribute a majority share of national expenditure. Some scholars have advocated for government involvement to steer the affairs of industries towards achieving sustainable goal (Parikka – Alhola, 2008; Walker & Brammer, 2012). Government procurement activities form a major aspect of the entire national service and product sourcing. The power government and its affiliate institutions wield can be used to influence procurement practices and activities to achieve collective decisions outlined in the sustainable development goals.

Procurement, and for that matter product and service sourcing over the years, has been based on price criteria. Thus, suppliers and service providers with competitive prices and those that seem to provide value for money are awarded the contract of engagement (Bratt et al, 2013; Mouraviev & Kakabadse, 2003). And this limits researcher understanding about the role public agencies and institution play in the development and implementation of a new procurement guideline that is geared toward attaining responsible production as outlined in the Sustainable Development Goals (SDGs) (UNEP, 2010; Acosta Bogran & Dzaja, 2015; Aguilar, 2016). To achieve significant change in the pattern of production and consumption to a more responsible one in emerging countries especially in Africa requires the power of governments and their

agencies. The share of government expenditure is most significant as compared to private spending or consumption. On average 60 – 70 percent of national procurement is done by the government and its related agencies. The excessive influence that government wields can be utilized to exacerbate the adoption of green procurement practices, and understandably so (Perara & Colverson, 2012).

### ***2.1.3 The Concepts of Procurement Practices That Are Sustainable***

Sustainable Procurement Practice (SPP) applies to innovations that meet current needs while not jeopardizing ability of decades to come and satisfy their requirements defined by the three dimensions of fiscal, financial, and social sustainability (Carter & Rogers, 2008). Internal management cognition, market pressure, customer interest, and government engagement are all factors that influence effective procurement practices (Thong & Wong, 2018). Sustainable Procurement Practices (SPP), which combine the aspects of sustainability, procurement, regulation, and industry, have become a household name in recent years (Caranta, 2010). The concept of Sustainable Procurement Practices, as proposed by Kauffman and Arico, may well become a realistic approach to the sustainable development problem (2014). SPP has the potential to redirect large financial investments in procurement into renewable goods and services.

As a result, SPP and SPP analysis help government agencies approach socio-technical processes in more sustainable directions. For instance, it has the potential to become a general enabler in the path to sustainability (Miller et al., 2014). Fundamental laws govern state purchases. If the discretionary benefit crosses the WTO's Government Procurement Agreement (GPA) thresholds, these guidelines extend to the procurement process (European Commission, 2017; WTO, 2017).

#### ***2.1.4 Sustainability Practices in Public Organizations***

Sustainable supply chain methods boost the functioning of effective public sector enterprises (Delmonico et al., 2018; Morton, Paget & Mena, 2013; Oelze, 2017). Invariably, intangible assets seem to impact organizational performance on account of their economic, social, and environmental results (Bahrami et al., 2013; Econ, 2018; Thong & Wong, 2018).

Organizational performance, including the economy, society, and the environment, is influenced by supply chain sustainability strategies, which are a combination of both internal and external elements such as regulatory, institutional, and market strategies (Attia & Salama, 2018; Thong & Wong, 2018).

Additionally, few empirical studies have successfully balanced sustainable procurement behavior and organizational performance (Attia & Salama, 2018; Howard, 2015; Oelze, 2017). SSP studies have typically treated environmental and social sustainability as a monolithic notion (Thong & Wong, 2018), constraining researcher knowledge on how sustainable practices impact company performance. Organizations, in general, operate for profit or to achieve an economic impact when working with social entrepreneurs. Sustainable practices will be threatened if they offers no direct financial benefit to the organization and its customers (Boons et al, 2013; Robinson, 2004).

The sustained performance of a business is vital in implementing sustainable procurement strategies. Organizational performance influences culture, beliefs, and activities. Sustainable procurement procedures and change practices are positively impacted when well-managed (Brown & Starkey, 2000; Pratt & Foreman, 2000). Successful organizations use purposeful means to integrate sustainable principles throughout all activities (Been et al, 2014; Kates, 2018). Using sustainable procurement

strategies yields many opportunities. The WTO expects SPP to become a crucial component of multilateral business systems (Arrowsmith & Anderson, 2011).

Potentially, sustainability is located in government procurement control activities. This method could be employed to help establish businesses with a long-term supply of components that go overlooked (Preuss, 2009). Long-term futures incentivize competitiveness, which heightens dialogues with stakeholders (UNEP, 2012). Preuss (2009) asserts that using social, environmental, and economic objectives, SPP might deal with global procurement systems.

Scholars such as Bratt et al. (2013) and Grandia (2015) have concluded that implementation of SPP is informed by policies enactment. SPP as a policy tool defines the power that guides choices taken by stakeholders as well as partners in a more long-term future way. Grandia (2015) confirmed that the development of public procurement should be used as a governance instrument to achieve societal goals. The fundamental principles governing SPP aims to refocus public procurement on merit rather than price, focusing on value efficiency rather than including cost-effectiveness. This vision and systemic reforms are in step with transformative change, which is at the heart of sustainable research (Kauffman & Arico, 2014). Customarily Public procurement activities must be cost-effective and focused solely on the bottom line. Despite the sustainability deficit, policymakers and organizations have reached a point that they must “lead by example” in the modern era. The power of procurement is required to be used sustainably by public organizations.

Over 300 SPP instruments, such as guidelines, handbooks, databases, and applications, were established by the Marrakech Task Force in 2007 (Perera, Chowdhury & Goswami, 2007). There was a movement early on in the implementation of SPP to incorporate environmental standards into procurement procedures as a first step toward more competitive public procurement. Additionally, the technical specifications to be

used in the procurement process are updated with environmental data requirements. Furthermore, this concept was extended to include the further demographic criteria into the procurement processes (Steiner, 2017). Owing to the strong bonds between government and legal acquisitions as this is common among nations continuously advancing their long-term future initiatives (Perera et al., 2007). Nonetheless, it is a fact that for the procurement practices of a globalized strategy to be competitive, there is a significant need for an international SPP framework. As a result, transcontinental, transnational, or multinational organizations are nurturing future long-term developments.

### ***2.1.5 Current State of Research in SPP***

To sum up, findings and recommendations in prior literature reveals study disparities in the area. The majority of published SPP papers contain discussions on how to overcome barriers for SPP as well as related topics. The established study gaps in the literature are classified in the form of drivers, impediments, and future investigations.

The primary research gap classification system is concerned with organizational and systemic issues. Gaps in communication studies are characterized as either relational or informational gaps. They fall under the area of organization and communication. The most frequently cited impediment to SPP in the literature is information dissemination on SPP (Grandia, 2015; Preuss, 2009; Uyarra et al., 2014). The most likely reason for overcoming the knowledge dissemination barrier is to prepare for and participate in SPP adoption (Couto & Ribeiro, 2016; Omwoha, 2015).

Additionally, the current study identifies how SPP instruction might be implemented in adopting businesses. However, what is missing is an analysis of the benefits and efficacy of SPP training on organizational results, while Arago and Jabbour (2017) documented this gap in the literature and showed that instruction is vacuous in their analysis. Another accelerator for SPP, as defined by the SPP literature, is the

strengthening of relationships between policymakers and practitioners, or procurers and providers (Corvaglia, 2016; Walker & Brammer, 2012). It has not yet been determined how these collaborations affect an organization's overall performance.

Additionally, the second research gap is classified as the lack of available benchmark data; that is data for benchmarking perspectives on SPP comparability issues. Without SPP data gathering for benchmarking, it is difficult to measure, monitor, and optimize any SPP process. The literature reviewed by Dragos & Neamtu (2014), Preuss (2009), Sjaafjell & Wiesbrock (2015) and UNEP (2016) underlines the necessity of transparency, comparability, and audit systems. There is a severe lack of research on SPP measures and assessment, as well as how SPP indicators can be successfully integrated into tender processes while adhering to all applicable national and international criteria. Walker (2010) and Uyarra et al. (2014) address this literature gap by describing and emphasizing the vital nature of SPP data gathering for SPP analysis. Once again, the consequences and impact of the aforementioned rectified deficit on organizational performance are unknown.

Bratt, Hallstedt, Robèrt, Broman, and Oldmark (2013) acknowledged a lack of universal definitions underpinning SPP which makes a discussion about SPP even more complicated. Furthermore, the lack of a universally agreed-upon definition of sustainability enters the SPP debate. The embellishment of objectives, goals, and strategies is hampered by this deficiency. Walker and Brammer (2012), Perera et al. (2007), and UNEP (2016), among others, have identified the need for comprehensive theory development. SPP research and implementation can be seen in policy and industry-specific areas at the regional and local levels. Simultaneously, researchers concentrate on single case studies that are locally tailored, industry and policy-specific, and have little overall validity. Governments' current SPP implementation process is

exploratory and based on best practice, with ideas exchanged. There is a lack of scientific policy development and implementation testing.

Finally, it is conclusive in the literature review on the research gap named *economics*. This has been viewed by researchers as it refers to a study deficit in the area of SPP's economic factors. According to the European Union (2014), Steiner (2013), Witjes & Lozano (2016), the procurement tender process has been and continues to be heavily influenced by the lowest price or total cost received. In light of this, a UNEP study finds that SPP is considered to be more costly. Concurrently, this fact is regarded as the most significant impediment to the production and execution of a successful SPP.

The SPP literature addresses this issue in part by claiming that SPP offers financial benefits as a result of waste reduction and value creation. Drogos and Neamtu (2014) proposed a life cycle costing as a method for proving SPP's economic efficiency. Further studies in the economic sector of SPP may aid in understanding or dispelling the perceived financial barrier.

#### ***2.1.6 Research Gaps in Sustainable Procurement Practices (SPP)***

There is a lot of agreement in academia about the developments, adoption, and implementation of sustainable procurement practices in organizations over the period since its emergence (Walker and Wendy, 2006 & 2009; Walker and Brammer, 2012; Walker et al., 2012; Grandia et al., 2015; Thong & Wong, 2018; Kates, 2018; UN Sustainable Development Goals Report 2018). The advancement over the decades has had numerous research findings and conclusions on organizations with the focus on identifying factors, drivers, challenges, and barriers to sustainable procurement practices (Walker and Brammer, 2012; Walker et al., 2012; Grandia et al., 2015). Other studies focused on the antecedent of sustainable procurement practices (Walker et al., 2006; Nasiche & Ngugi, 2014; Gatari, 2014; Telewa, 2014) and the effects of sustainable procurement practices as a one-dimensional construct on organizational

performance (Thong & Wong, 2018). Although studies in these domains reveal there is a relationship between a firm's sustainable practices and financial performance, there is limited evidence as to how these influence the overall performance of an organization (Islam et al., 2019; Karim, 2008).

Nevertheless, as reassuring and important as recent increases in these areas of study are, there is still much that needs to be done on the impact of organizational performance. The bulk of existing disciplinary study, for example, is introductory and is often criticized for its minimal contribution to the field's theoretical growth (Green et al., 2000; Kleindorfer et al., 2005; Lember et al., 2011; Seuring and Müller, 2008). These observations fall short of examining the effects of sustainable procurement practices as a full-scale multi-dimensional construct and their overall impact on organizational performance.

Also, what mechanisms are available to enable organizations practicing sustainability to attain significant organizational performance? In the same way, few empirical studies which have captured an organization's ability to balance sustainable procurement practices (Attia & Salama, 2018; Howard, 2015; Oelze, 2017), mostly used environmental and social sustainability or economic sustainability as a one-dimensional construct (Thong & Wong, 2018), thereby limiting researchers' insight into how sustainable practices affect organizational performance as a multiple-dimensional construct. Sustainable procurement practices undoubtedly affect the performance of organizations (Zhu & Sarkis, 2004; Hervani, Helms & Sarkis, 2005).

The current study investigates the effects of economic, social, and environmentally sustainable procurement practices on the performance of organizations. It further examines the moderating roles of relational governance and top management commitment to sustainability on the performance of organizations. In the study, there

is a common agreement following the emergence of the debate in terms of whether companies benefit from relational governance in their repeat relationships in terms of results (Goerzen, 2007).

Finally, scholars argue that long-standing relations allow for the accumulation of specific interactions and rituals, which improve inter-organizational exchange efficiency (Mayer and Argyres, 2004; Zollo et al., 2002). Poppo et al. (2008) concluded that, since relational governance improves the shared relationship's well-being (Heide and John, 1992; Macneil, 1980), parties create relational routines over time, such as knowledge exchange and deep communication, which reduce interaction costs, tensions, and information-gathering issues (Zollo et al., 2002). Relational government, as a multidimensional framework, includes trust as a guiding concept, as well as concrete routines and actions to make function and knowledge coordination easier (McEvily et al., 2003, p. 92). As a result, values and behaviors help the whole partnership improve success outcomes (Heide and John, 1992).

Additionally, many quantitative studies have looked at top management loyalty as an indicator of their behavior based on their values (Dubey et al., 2016; Liang et al., 2007). It is widely acknowledged that top management engagement is one of the most important factors in achieving long-term procurement transition and organizational success through the strategic edge (Hitt et al., 2015; Prajogo and Olhager, 2012; Waller and Fawcett, 2013; Wu et al., 2006). Quite pertinently, not only is there a paucity of research on public sector management (Mitra and Webster, 2008; Walker and Brammer, 2012) and factors that may lead to improved organizational performance after the adoption of sustainable practices (Mitra and Webster, 2008; Walker and Brammer, 2012; Carter and Rogers, 2008; Crespín-Mazet and Döntenwill, 2012; Grob and Benn, 2014). We understand very little about the important positions played by

corporate leaders (senior leadership) since sustainable activities have been legitimized together with their impact on the overall organizational performance.

Having in place an agile governance structure is essential. However, commitment from relevant stakeholders is needed to achieve the significant feat. The commitment from top management personnel would influence the implementation of sustainable practices in a prudent manner. Insights from senior management/managers have a potential consequence on sustainability practices and organizational performance. Ultimately, the adoption of relational governance coupled with the undivided commitment of top management towards sustainability would have an enormous impact on sustainability practices and organizational performance.

## **2.2 Systematic Review of SPP Literature**

Given the rapid pace of development of sustainable public procurement, particularly in the area of adoption and implementation in national, transnational, multinational, international, and worldwide legal structures and infrastructures, this systematic literature review updated selected works of literature on practices, policies, and regulation to include a few state-of-the-art examples.

Noblit and Hare (1988) distinguish between two forms of formal literature reviews based on their numerous abilities to conduct a full analysis of scholarly literature. As a result, they concluded that literature evaluations fall into one of two categories: integrative or interpretative. Integrative assessments are often appropriate and relevant when there are several parallels between the study category and data collection. To summarize, integrative analyses seek to synthesize massive amounts of literature through the use of objective meta-analysis methodologies.

On the other hand, interpretive evaluations are frequently coupled with a range of testing methodologies; nonetheless, inductive methods are sufficient. This is introduced

and applied when there are fewer similarities between studies and a combination of qualitative and quantitative analytic approaches. As a result, an interpretive method is both appropriate and beneficial for this study's systematic assessment of the SPP literature.

This study of the literature focuses on SPP, even though the term has multiple connotations in academia, business, and practice. Environmentally friendly public procurement is the most frequently employed in academia, business, and practice. These concepts are used to explain the incorporation of environmental norms and criteria into public procurement procedures, as well as to describe early attempts to incorporate sustainability data into tenders (Brammer & Walker, 2011). In spite of this, researchers incorporated economic and social norms into public procurement by examining recent trends and developments (Steiner, 2017). On the other hand, this study considers all three dimensions of sustainability, as embodied in the broader notion of sustainability in public procurement, more precisely SPP.

This process utilized a three-step model to conduct a systematic review of the literature on SPP. Primarily, the keyword search for "Sustainable Public Procurement" was conducted online utilizing Google Scholar's Advanced Search titles-only option. The resulting list of publications, articles, and papers was then screened and eliminated if SPP was not the primary variable or component of the identified research outcome.

Following that, a list of previously published book chapters, articles, and related publications was considered that did not appear in the general search but are well-known and referenced in the scientific field of SPP. To summarize, the dataset includes One Hundred and Fifteen (115) publications up to 2019. Subsequently, the papers were separately read, examined, and coded. A parallel platform, Authors, was established independently, to generate research clusters based on the described coding.

Correlations have been assigned to each post. As a result of this strategy, various pairs of correlations between two writers were described in two dimensions. To increase the reliability of the investigation, these distinct pairs of fragments were created individually. Additionally, each article was assigned to its cluster. As a conclusion, the researcher integrated these clusters in consensus to create the following headings: definition, scope, measurement and indicators, geographic, management and innovation, and regulation. These publications were then classified and thoroughly evaluated to develop summary sections and structural analysis based on clusters.

### ***2.2.1 Summary of Interpretive Approach***

A three-stage model was used to do a systematic analysis of the literature in the area of sustainable procurement practices. Foremost, a search was conducted on google scholar using the advanced search feature. The search criteria are limited using specific keywords – keywords included “sustainable procurement practice”, “public procurement practice” and “environmental Procurement practices”. There were 115 posts in the final data collection from July 2017. In the resulting list if SPP was not the research's central variable or build, it was evaluated and eliminated. Thereafter, the coding and clustering of articles according to the scope are conducted. Based on this, the coding clusters were created around research themes. The clusters were assigned to all of the posts. To improve the study's reliability, individual cluster sets were built.

Finally, there merged clusters to form a consensus on the current scope of study in the field of sustainable procurement practices. The final approach of the interpretative systematic review is to merge the research cluster to provide a synthesis of the current state of the body of knowledge understudy. The publications were then categorized and thoroughly examined to provide cluster-based overview chapters and their synthesis. In all six final research clusters are identified. The six final research clusters are described

as follows: Definition, Scope, Geographic, Regulation, Management and Innovation, and Measurement and Indicators.

## **2.2.2 Outcome of Systematic Review of SPP Literature**

### **2.2.2.1 Conglomeration of SPP Literature**

#### **2.2.2.1.1.1 Definition**

There are various approaches and definitions to sustainable public procurement (SPP). Also, it is named differently, depending on the researchers and the historical development of SPP. First, we give an overview of existing definitions of procurement, then we dive into the definition of SPP and how current literature is using it. Afterwards we come up with our own definition of SPP and how we interpret it in this work as a first contribution to the science of SPP.

*Procurement* is the process by which organisations purchase goods and services. More precisely, it is the process by which organisations try to arrange supplier contracts for the purchase of goods and services (Perera et al., 2007). *Public Procurement (PP)* narrows the scope down to purchasing processes of governments and public-sector organisations. There is no global harmonized methodology of procurement; thus PP differs from country to country. The only common principles of procurement processes are “value for money”, “transparency”, and “anticorruption” (Bratt et al., 2013; Perera et al., 2007; Uyarra et al., 2014). Most public procurement is carried out by tender processes to which all suppliers may submit a tender (Perera et al., 2007). It is one of the key economic activities of a government (Brammer & Walker, 2011). *Sustainable Procurement (SP)* considers broader concerns about sustainable development in procurement processes. Most commonly used is the definition of the UK Sustainable Procurement Task Force in 2006, which states “sustainable procurement is the process whereby organizations meet their needs for goods, services, works and utilities in a way that achieves value for money on a whole life basis. It results in benefits not only to the

organization, but also to society and the economy, whilst minimizing damage to the environment” (DEFRA, 2006; Perera et al., 2007; Preuss, 2009). *Sustainable Public Procurement (SPP)* does not have a consensus definition among researchers. The EU defines SPP as “a process by which public authorities seek to achieve the appropriate balance between the three pillars of sustainable development - economic, social and environmental - when procuring goods, services or works at all stages of the project” (European Commission, 2017a). Other names like *green public procurement (GPP)*, *Environmental Preferable Procurement (EPP)*, *Social Responsible Procurement (SRP)*, *Sustainable Acquisition (SA)*, *Responsible Procurement (RP)*, *CSR Procurement and Ethical Procurement* are also being used and mean the same as SPP. GPP and EPP try to emphasise the environmental aspect over social and economic ones but do not exclude them (UNEP, 2013). Defined by the EU “Green Public Procurement (GPP) means that public authorities seek to purchase goods, services and works with a reduced environmental impact throughout their life-cycle compared to goods, services and works with the same primary function which would otherwise be procured” (European Commission, 2017a). Seeing all the definitions pointing to one or more aspects of sustainability in public procurement, it makes sense to use the all-inclusive expression of SPP following the lead of the WTO and the UNEP (UNEP, 2013; Yaker, 2017).

There is a critique to the definition of SPP due to the lack of clear definitions of sustainability objectives (Bratt et al., 2013). This critique is widely discussed in all research fields embracing sustainability. There is no clear definition of sustainability (Knebel & Seele, 2015).

In the beginnings, public procurement had to be economically efficient and to combat corruption (Arrowsmith & Anderson, 2011b). The interests of public procurement were the opening of markets to increase competition for best pricing and to support anti-corruption measures through transparency. This is still the case today. However, in the

last years, with the development of sustainable concepts and corporate social responsibility (CSR) governments have been put in the position to “lead by example” (Dragos & Neamtu, 2014). That led to the introduction of SPP, policies and guidelines. When discussing SPP researches and the UNEP tend to use the DEFRA definition mentioned above. We propose the following definition for SPP leaning on all pre-existing definitions of sustainability in public procurement. Especially considered are the widely used definition by the DEFRA and the definition of GPP by the EU. Also anticipated are the current discussions about SPP (Steiner, 2017) and the inclusion of all sustainability dimensions in SPP:

*Sustainable Public Procurement enfolds the economic, environmental and social dimensions in all public purchases.*

#### **2.2.2.1.1.2 Scope**

There is a trend in the SPP research to examine case studies in a specific industry sector. All papers following this trend were sorted in the scope cluster. Usually the analysed sector lies within in a legally harmonized frame, in a particular country. The most analysed industry sectors with an SPP perspective are the construction industry (e.g. Keaveney & Butler, 2014; Uttam, 2014), the healthcare industry (e.g. Asare, 2017) and Universities (e.g. Omwoha, 2015; Pacheco-Blanco & Bastante-Ceca, 2016). Other analysed sectors are food, waste, water, and recycling. Within these cases, the implementation of SPP is analysed together with its impact on the industry sector concerned. Asare (2017), for example, analysed the implementation of SPP in the health care sector of Ghana. He explored that the lack of a sufficient SPP policy in Ghana results in misleading tender procedures which is a negative impact. The case studies are to a majority based on surveys of experts. These experts are public procurers and the corresponding suppliers in the sector. Therefore, in this cluster the studies focus on

drivers and barriers in the communication between the two corresponding parties. The main overarching result is a barrier to SPP identified in a lack of knowledge about SPP and a lack of training in SPP on both sides: procurers and suppliers (Keaveney & Butler, 2014; Omwoha, 2015; Uttam, 2014).

All researchers in this cluster conclude with detected barriers and improvement possibilities. Next to the already mentioned lack of knowledge and training, other barriers and complementing drivers or improvement possibilities are identified. These are the lack of policies and legal frameworks, the lack of collaboration between lawmakers and practitioners and the problems of comparison and measurement.

Also, the research states that due to the variation of SPP policies and implementation practices, the case studies are single cases without any comparisons. This leaves the validity of the research in this cluster within the local scope of the analysed industry sector and legal frame. These findings are consistent with the findings of Brammer and Walker (2011). Brammer and Walker spotted a typical SPP research approach in single case studies with a sectoral perspective investigating how sustainability can be encouraged when public procurers buy from suppliers in specific industries (Brammer & Walker, 2011).

#### **2.2.2.1.1.3 Geographic**

Most studies within the whole sample have a geographic frame. This cluster contains those papers that generated a general overview of SPP practices within a certain country. For example, Kaya analyses current SPP practices in Turkey finding that the current legal framework is not sufficient to promote SPP in Turkey (Kaya, 2014). Another example is taken from Prier, Schwerin and McCue (2016) who analysed public

sector organisations in the US with the result that the current state of SPP in the US created a random experimentation with little systematic pattern to SPP adoption.

Also, in this cluster, there are just a few international comparison case studies. Steurer, Berger, Konrad & Martinuzzi (2007) analysed SPP adoption characteristics within European countries examining the state of development of national action plans regarding green or sustainable public procurement in the EU. Their analysis showed that only one third of the 27 EU member states had implemented SPP action plans at that time. They also found that the emphasis of actions taken is environmental rather than social in character. McCrudden (2004) did a global comparative analysis of SPP developments. He elaborated that the SPP developments in the US are non-discriminatory driven. According to McCrudden (2004) the EU focuses on value for money and competition while Japan passed a law mandating all public organisations to implement SPP in their processes.

These examples highlight the difficulties to compare SPP approaches internationally. The differences between countries in their approaches also due to cultural reasons play a strong part in the SPP implementation. That complements the findings of Uyarra et al. (2014), who found that SPP initiatives vary strongly in their rationale and implementation mode and reflect national differences in culture, structure and governance of PP practices. That results in different objectives associated with different policies and the complexity of procurement processes in general.

The UNEP and PricewaterhouseCoopers (PwC) tried each to rank countries in their SPP activities. PwC used expert opinions, while the UNEP used a content analysis of countries cited in the SPP literature to come up with a ranking (PwC, 2008; UNEP, 2013). Both rankings differ in their result and leave room for interpretation. The UNEP's top five is Sweden, UK, Germany, Denmark and Switzerland. PwC identified the frontrunners in Japan, USA, and Canada followed by the European "Green-7"

countries: Austria, Denmark, Finland, Germany, the Netherlands, Sweden and the UK, as well as Belgium, Italy and Spain (UNEP, 2013).

#### **2.2.2.1.1.4 Regulation**

Legal literature about SPP concerns the conditions under which sustainability criteria might be introduced in the public procurement regulation and how the subjects in charge could implement them. One major element that links the different papers is the awareness that SPP has gained prominence in Europe and that its implementation in procurement practice has become a crucial priority (Corvaglia, 2016; Palmujoki, Parikka-Alhola & Ekroos, 2010; Sjøfjell & Wiesbrock, 2016). In this context, the literature tries to find out the legal conditions under which states can apply the requirements of SPP as a policy tool to foster the sustainable development. A central element is that the integration of environmental and social criteria is considered as a *secondary* policy compared to the *primary* one, which is related to the economic objectives of the public procurement regulation (such as fair and open competition; efficient allocation of public funds; transparency and non-discrimination). Therefore, a considerable segment of the scholarship looks at how to integrate and balance these secondary objectives to the primary ones in the legal system without denaturalising or ignoring them (Arrowsmith & Kunzlik, 2009b; Palmujoki et al., 2010; Steiner, 2017; Wiesbrock & Sjøfjell, 2016). In this context, some authors suggest to use the label “horizontal” (instead of “secondary”) in order to ensure that the objectives of these policies could gain the same status as the primary ones (Arrowsmith & Kunzlik, 2009b). Other researchers analyse the amount of the discretion and the flexibility that states have in the implementation of sustainability rules under the GPA Agreement (Semple, 2017; Steiner, 2017) and under the EU law (Andrecka, 2017; Arrowsmith & Kunzlik, 2009b; Sjøfjell & Wiesbrock, 2016; Wiesbrock, 2016). They do so through a systematic

analysis (also comparative, see Comba, 2010) of the legal framework, of the awarding entities' praxis and jurisprudence of the Courts, on both, the international and national levels. In doing so, the scholarship tries to individuate the most suitable collocation (or classification) of the secondary considerations within the different stages of the tender process. Also, it points out the margin in which member states have to implement horizontal policies within every single stage (selection criteria, award criteria, technical specifications). In this context, within the scholarship, a rather general unexplored topic is the need and the appropriateness of a mandatory approach (Arrowsmith & Kunzlik, 2009b; Wiesbrock, 2016). In addition, a part of the literature also highlights that green and social considerations do not have the same weight in the juridical framework (Comba, 2010; Wiesbrock, 2016).

Furthermore, a part of the contemporary doctrine points out that the use of transnational private regulations (TPRs), such as standards, labelling (in particular eco-label) and certifications, has increased within the award process, since it is considered as a direct instrument of verification for environmental and social criteria. Thus, authors focus on the potential, the chance and the legitimacy to utilise and implement them within the legal GPA (Corvaglia, 2016) and EU framework (Caranta, 2015; Schebesta, 2014; Wilsher, 2009), without distorting competition or trying to dissimulate discriminatory practices (Corvaglia, 2016). In particular, the literature argues that TPRs must be based on objectively verifiable and non-discriminatory criteria and that they must be transparent and accessible to all economic operators (Martinez Romera & Caranta, 2017).

#### **2.2.2.1.1.5 Management and Innovation**

SPP literature that does not have a regulative, country specific or sector specific approach is likely to be driven by business science in the private sector. That means

that the chosen perspective of analysis is from private business looking at SPP. Several papers analyse the relationships between buyers and suppliers, as well as the relationships between governments and businesses (Witjes & Lozano, 2016). Frameworks and innovations are introduced with the aim of improving the supply chain. Also, lessons learned from sustainability in supply chain management (SCM) are transferred to SPP and analysed in their possibilities for SPP (Brammer & Walker, 2011; Preuss, 2009; Walker, 2010; Witjes & Lozano, 2016). The results highlight the positive potentials of SPP on business and describe the impacts of SPP on economic activity (Brammer & Walker, 2011).

Researchers agree that a competition over price alone is not stimulating innovation. At the same time, it is stated that SPP needs to provide incentives for business to embrace it (Steiner, 2017; Witjes & Lozano, 2016). According to Witjes and Lozano (2016) and Preuss (2009) the incentives are given in the SPP process as to be seen in sustainable SCM. Collaboration of procurers and suppliers lead to reductions in raw material utilisation and waste generation and promote the development of new, more sustainable, business models. Another approach to visualise incentives of SPP is life cycle costing (LCC). LCC is a tool which evaluates the costs of an asset throughout its life-cycle. Dragos and Neamtu identify LCC as an important element to make SPP attractive by shifting the focus beyond the solely purchased price of goods or service (Dragos & Neamtu, 2014).

Lessons from sustainable SCM are concerned with the supporting factors – transparency, strategy, culture and risk management – that could also be taken one-by-one as important supporting factors for SPP (Preuss, 2009).

An innovative proposal to SPP is the concept of circular economy (CE). The idea is to close life cycle loops of products and goods through recycling, levels of recovery and

the longest possible usage. The focus is on a circular value chain, similar to cradle-to-cradle technologies (Witjes & Lozano, 2016).

Grandia (2015) chose a psychological behavioural approach and found that the behaviour of the procurer is one of a mediator between the organizational factors and the degree of sustainable public procurement that is implemented. He indicates that the lack of knowledge that is identified as a major barrier to SPP across the literature is not directly responsible for the diminishing implementation of SPP. Rather, does this lack of knowledge influence the behaviour of the procurer who then in turn is implementing less SPP (Grandia, 2015)?

Walker and Brammer (2012) have observed that the flow of innovation does not need to start top down from SPP practices. They explain that a change in policy forces business to improve the sustainability of operations across the supply chain. But research and practice in SCM can as well influence policy by presenting alternatives in sustainable SCM (Alhola, Salo, Antikainen & Berg, 2017; Brammer & Walker, 2011).

Research about SPP from the business perspective have similar results than other SPP studies concerning barriers and drivers of SPP. Communication, collaboration, knowledge, price, training and relational factors between procurers and business are identified as areas of problems and potential for SPP.

#### **2.2.2.1.1.6 Measurement and Indicators**

The literature on measurement of SPP is scarce. In a few reviewed papers, researchers touched on the topic of indicator implementation or tender criteria improvement. Vatalis, Manoliadis & Mavridis (2012) identified performance indicators for construction and procurement processes in Greece. Based on two rounds of Delphi questionnaires most practical indicators for project management were identified by

which one indicator is connected to SPP and which is waste reduction. Vos (2010) made suggestions to improve the sustainability criteria of public procurement in the Netherlands. The suggestions are tailored to current PP practices in the Netherlands. One suggestion is the summary of all technical specifications that concern sustainability. They could then be put into one sustainability category that is weighted accordingly (Vos, 2010). Prennen (2008) analysed 120 tender documents in the Netherlands in their usage of SPP criteria. The results show the possibility to implement sustainability prominent in PP practices but at the same time it is not being done often. Mansi analysed disclosure practices of central public-sector enterprises in the field of SPP in India which underperforms in the SPP dimensions (Mansi, 2015).

Walker and Brammer (2012) used the purchasing social responsibility scale items developed by Carter and Jennings (2004) in a survey to find out if and how SPP was implemented. They tested the impact relations of communication and e-procurement. The result is that e-procurement seems to hinder SMEs to participate in tenders and that communication is positively related to SPP.

The findings are listed in the following table.

### 2.2.3 Cluster Summary and Research Gaps

Table 1: Summary Table Clustering Literature

No.	Area of study and Publications	Summary of findings	Scholars and Authors
1	<p><b>Definitions</b></p> <p>Focus on the terminology of sustainable public procurement (SPP).</p> <p><b>4 Publications</b></p>	<ol style="list-style-type: none"> <li>1. Conceptual publications on the definition of sustainable public procurement (SPP).</li> <li>2. Definition of terminology such as public procurement (PP), Sustainable Procurement (SP), Green Public Procurement (GPP), etc.</li> <li>3. Concluding from the literature review our SPP results in "sustainable policy enfolds the fiscal, environmental social aspects of all public transactions."</li> </ol>	<p>Perera et al., 2007. Bratt et al., 2013;</p> <p>Uyarra et al., 2014</p> <p>Brammer &amp; Walker, 2011</p> <p>UK Sustainable Procurement Task Force 2006</p> <p>Preuss, 2009</p> <p>Knebel &amp; Seele, 2015</p> <p>Steiner, 2017</p>
2	<p><b>Scope</b></p> <p>Focus on a particular industries such as construction, healthcare, universities, food, waste, etc.</p> <p><b>25 Publications</b></p>	<ol style="list-style-type: none"> <li>1. Single case studies with a sectorial perspective</li> <li>2. Concentrate on the factors that influence and obstruct coordination between the two sides.</li> <li>3. Lack of knowledge and training, a combination limited of policies and legislative systems, a stroke of luck in terms of cooperation between legislators and clinicians, and a compare and calculation challenge.</li> </ol>	<p>Asare (2017)</p> <p>Keaveney &amp; Butler, 2014;</p> <p>Omwoha, 2015;</p> <p>Uttam, 2014</p> <p>Brammer and Walker (2011).</p> <p>Pacheco-Blanco &amp; Bastante-Ceca, 2016</p>

3	<p><b>Measurement and indicators</b></p> <p>Focus on methods on how to empirically measure SPP.</p> <p><b>7 Publications</b></p>	<p>1. Literature on measurement of SPP is scarce.</p> <p>2. E.g. One study used the purchasing social responsibility scales items to find out whether and how SPP was introduced (Walker and Brammer 2012)</p>	<p>Vatalis, Manoliadis &amp; Mavridis (2012)</p> <p>Vos (2010). Prennen (2008). Mansi, 2015</p> <p>Walker and Brammer (2012)</p> <p>Carter and Jennings (2004)</p>
4	<p><b>Regulation</b></p> <p>Focus on policy issues, legal framework, regulated procedures etc.</p> <p><b>24 publications</b></p>	<p>1. SPP is seen as:</p> <p>A. as a strategy instrument for promoting long-term growth and</p> <p>B. as a way to establish certificates and label implementations within existing regulation environments</p> <p>2. Majority of publications address how EU laws is implemented in national law regarding sustainability in a certain country</p>	<p>Corvaglia, 2016; Palmujoki, Parikka-Alhola &amp; Ekroos, 2010; Sjøfjell &amp; Wiesbrock, 2016</p> <p>Arrowsmith &amp; Kunzlik, 2009b;</p> <p>Semple, 2017; Steiner, 2017</p> <p>Comba, 2010; Wiesbrock, 2016</p> <p>Caranta, 2015; Schebesta, 2014; Wilsher, 2009</p> <p>Martinez Romera &amp; Caranta, 2017</p>
5	<p><b>Geographic</b></p> <p>Focus on a particular geographical region such as the US, EU, Japan, Turkey etc</p> <p><b>30 Publications</b></p>	<p>1. difficult for international comparison of SPP due to national differences in culture, structure and governance of public procurement practices</p> <p>2. Ranking of countries by UNEP as well as PwC results in different list of counties performing well in SPP.</p>	<p>Kaya, 2014).</p> <p>Prier, Schwerin and McCue (2016)</p> <p>Steurer, Berger, Konrad &amp; Martinuzzi (2007)</p> <p>McCrudden (2004)</p> <p>PwC, 2008; UNEP, 2013</p>

6	<p><b>Management and innovation</b></p> <p>Focus on relationship between buyers (Government) and suppliers (Companies).</p> <p><b>25 Publications</b></p>	<p>1. Sustainability lessons learned in supply chain management (SCM) are translated to SPP.</p> <p>2. Incentives such as the life cycle costing (LCC) concept are necessary for businesses to participate in SPP.</p>	<p>Witjes &amp; Lozano, 2016</p> <p>Brammer &amp; Walker, 2011; Preuss, 2009; Walker, 2010. Steiner, 2017. Grandia, 2015</p> <p>Alhola, Salo, Antikainen &amp; Berg, 2017;</p>
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Figure 1: Cluster Summary and Research Gaps

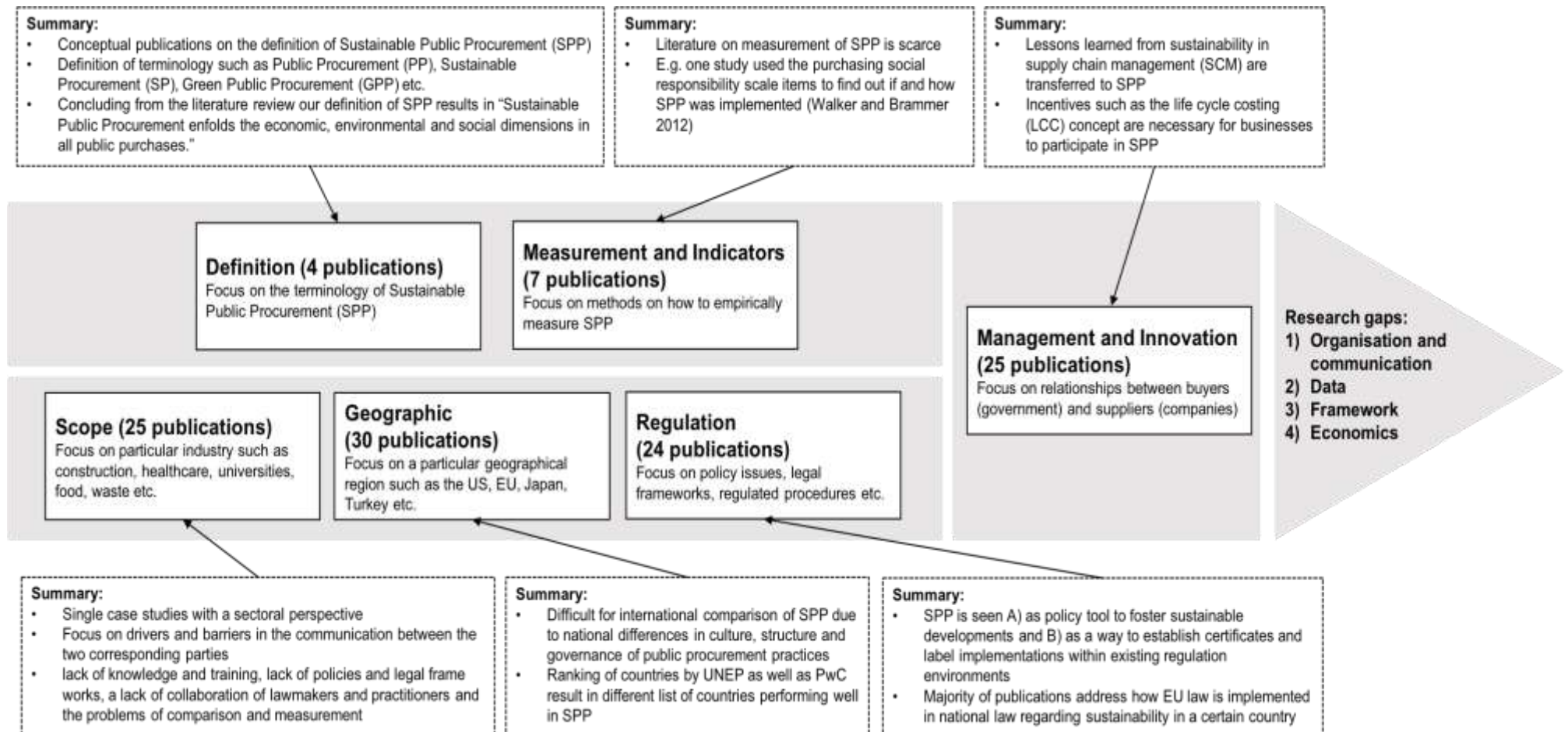


Figure 2: Adopted from Knebel et al 2019

#### **2.2.4 Summary: Identified Research Gaps based on Systematic Review of SPP Literature**

To sum up the described clusters above, including the research gaps, the key findings are illustrated in Figure 1. The scientific SPP literature reveals research gaps. All published SPP papers include in their discussion drivers and barriers for SPP. Some researchers point to directions for further research. The identified research gaps of SPP evolve on the one hand from that formulated literature in form of drivers, barriers and needed future research. On the other hand, they evolve from their lack of existence in the current literature. For a better understanding, the research gaps have been categorized in four sections and are being described in the following: *organisation and communication, data, framework, economics*.

The first research gap category is summarizing organisational and communicational research gaps. *Organisation and communication* as a research gap categorise all identified relational and informational gaps. Most identified barrier to SPP in the reviewed literature is knowledge dissemination of SPP (e.g. Grandia, 2015; Preuss, 2009; Uyarra et al., 2014). Most proposed solution and driver to encounter the barrier of knowledge dissemination is SPP training (e.g. Couto & Ribeiro, 2016; Omwoha, 2015). The current literature does not answer how SPP training should look alike. Also, literature has not yet analysed the impact and effectiveness of SPP trainings. Aragão and Jabbour (2017) identified this lack in the literature and found in their study that training is void. Another identified drivers for SPP by the SPP literature are intensified relationships between policymakers and practitioners (Corvaglia, 2016; Walker & Brammer, 2012) and, respectively, procurers and suppliers (Brammer & Walker, 2011; Uyarra et al., 2014). It is not yet analysed how these relationships could be established and framed. Also, the possibly involved risks of close relationships are not discussed. Risks of close relationships are for example corruption, patronage, barriers to market extension and barriers for innovation.

The second research gap is categorised as *data*. *Data* stands in this section for the comparability problems of SPP as well as the lack of SPP monitoring. Without SPP data collection it is difficult to measure, monitor and improve any SPP processes. The importance of transparency, comparability and audit mechanisms is mentioned in the literature (e.g. Dragos & Neamtu, 2014; Preuss, 2009; Sjaafjell & Wiesbrock, 2015; UNEP, 2016). But only a few researchers started to analyse SPP criteria development in tenders (Vos, 2010) and possibilities of how SPP could be implemented effectively into tender procedures (Witjes & Lozano, 2016). There is a lack of research about SPP indicators and measurement seen in the cluster development of this paper. Also, there is a lack about how SPP indicators could be effectively implemented into tender procedures in full compliance with all the relevant provisions at a national and an international level. Walker (2010) and Uyarra et al. (2014) emphasise the importance of SPP data collection for SPP research.

The third identified research gap category describes gaps concerning the overall scientific SPP framework. *Framework* is supposed to describe here the general scientific approach to SPP and its improvement possibilities. Bratt, Hallstedt, Robèrt, Broman and Oldmark (2013) identified a lack of common global definitions which makes a discussion about SPP difficult. Also, the general lack of a common agreed-on definition of sustainability enters the discussion about SPP. This lack hinders the elaboration of objectives, goals and strategies. Amongst others Walker and Brammer (2012), Perera et al. (2007) and the UNEP (2016) identify the need for a global theory development. Research and implementation of SPP takes place in regional and local policy and industry specific areas. Concurrently the research focusses on local-tailored, industry and policy specific single case studies with little global validity. The current SPP implementation process of governments is explorative and based on best practices example dialogues (UNEP, 2012). A scientific policy

development testing respectively implementation testing is missing (Dragos & Neamtu, 2014; Grandia, 2015; McCrudden, 2004; Walker & Brammer, 2012).

The fourth research gap is named *economics*. It stands for research gaps concerning economic factors of SPP. The tender process has been and still is strongly based on the lowest price or overall cost (European Union, 2014; Steiner, 2013; Witjes & Lozano, 2016). A UNEP study concludes that SPP is perceived as more expensive. Simultaneously, this fact is seen as the biggest obstacle for a successful SPP development. The SPP literature tackles this problem partially by claiming that due to waste reduction and quality, SPP provides financial incentives. Drogos and Neamtu (2014) introduced life cycle costing as a solution to prove economic efficiency of SPP. Further research in the economical field of SPP can help to understand or dispel the perceived barrier of financial constraints.

### **2.2.5 Conclusion and Limitations based on Systematic Review of SPP Literature**

The objective of the Systematic Review of SPP Literature under this study was to give a review of the literature about SPP. Hopefully the developed clusters, the proposed definition of SPP and the identified research gaps will be useful for researchers who intend to work in this powerful and interesting field of sustainability and public procurement. The proposed definition of SPP stating that ‘Sustainable Public Procurement enfolds the economic, environmental and social dimensions in all public purchases’ could be used as a fruitful starting point and common ground for all interested researchers.

There is consensus that SPP can be implemented as policy to drive sustainability. It is a pragmatic hands-on approach towards more sustainable practices. Due to the vast amounts of money that are

being channelled by public procurement, the impact could be high. The scientific approach to SPP is in its youth and needs to fill several research gaps before qualified decisions about the proper global implementation of SPP can be made. It is clear that the cost of the goods and services continue to remain the most important and applicable criterion for procurers. Therefore, the big research question in SPP is how to mould social, environmental and long-term economic criteria into the purchase decisions, and this is within a legal framework that is still keen to consider horizontal (social and environmental) policies in public procurement as secondary, or even antonymous, objective to the others (as competition, free movement and value for money) (Arrowsmith & Kunzlik, 2009a; Steiner, 2013, 2017). One possibility given in the analysis of this study is the construction of measurement infrastructure as fundamental for a strong argument for SPP. In order to refine the science of SPP, a critical analysis of the SPP approach as such is useful (Hettne, 2013). Also scrutinising the proposed drivers of SPP is helpful for the development of SPP (Preuss, 2009). It is still unclear, for example, if training has a positive impact on SPP (Aragão & Jabbour, 2017). Also unclear is how SPP can become indeed a powerful source of innovation at supplier side (Uyarra et al., 2014). An interesting field of research and important for SPP is the necessary form in which the proposed close relationships and interactions between procurer, supplier and policymaker should be fostered. And there are already considerable risks mentioned by scholars who see the foundational principles of public procurement endangered by SPP (Walker & Brammer, 2012). These principles are transparency, anti-corruption and enlarged market access through the nondiscrimination principle. Morse is warning about the creation of sustainability indicators and indices without assessing their usefulness, as is currently being done in many cases. That could trigger evolutionary processes in the development of sustainability indicators and shift the development away from technical concerns towards the users' needs (Morse, 2015). Barnett

points at the double-edged characteristic of sustainability indicators and indices. On the one hand, they help to reduce complexity; on the other hand they might provide hazardous simplifications (Barnett, Lambert & Fry, 2008). And last but not least are the vast experiences in sustainability driven transformational changes SPP research could learn from, as, for example, in the coffee industry with passive revolutions in value regimes (Levy, Reinecke & Manning, 2016). The science of SPP has the ability to develop the necessary theoretical framework to address and include its critics.

#### ***2.2.6 Sustainable Procurement Practices and Organizational Performance***

Sustainability has become a buzzword in recent years. Every company and institution places a premium on optimizing resource use during the production and consumption processes. To accomplish this goal, every actor in the supply chain must adopt sustainable practices. The impact that operations management methods have on an organization's success is well documented (Zhu & Sarkis, 2004; Wisner, 2003). Sustainable procurement procedures are crucial for achieving both sustainable development goals and the organization's long-term growth and viability. Sustaining organizational growth is critical for sustaining a competitive edge, even more so in a volatile business climate. However, implementing environmentally friendly products and services exposes businesses to previously unexplored markets, which have the potential to boost profits (Walker & Brammer, 2010; Securing, Muller & Core, 2008).

Sustainable Procurement Practices have the potential to influence an organization's performance outcome. Recently, responsible organizations have benefited from economic and financial incentives to provide risk-free services and goods. The rationale for implementing such methods

is to comply with government and institutional requirements while strengthening the organization's financial position. Without a doubt, sustainability strategies have the potential to impact an organization's success.

### ***2.2.7 Organizational Sustainable Orientation and Sustainability Practices***

Organizational identity is defined as the collection of beliefs that determine an organization's culture and practices. These principles serve to differentiate any corporation in the commercial world from its competitors. Organizational orientation is determined by the organization's identity. Additionally, the community or society in which an enterprise operates is capable of interpreting and interacting with the enterprise's underlying ideas and beliefs (Albert et al., 2000). Organizations that demonstrate a sustainable approach to production and consumption seek to form alliances with like-minded partners. Numerous organizations form strategic alliances to accomplish both individual and collective goals. The benefits of such alliances are well discussed in the strategic management literature (Schiling, 2012).

The kind of management firms implement is dependent on the organizational identity. It also shapes the devotion and attitude toward business basic purpose and mission (Lee & Klassen, 2008; Min & Galle, 2001; Helen & Neil, 2012). As a result, the organization's identity is critical to the success of sustainable supply chain processes. According to studies, firms with a green identity contribute positively to the longevity and viability of green supply chains (Walker & Brammer, 2012; Preuss, 2009; Erridge & Hnnighan, 2012).

Integrate client concerns to increase your success. Long-term goals require a high level of commitment from employees and management. A clear approach has been established for how

management and employees interact (Choi, 2011). When businesses strengthen their employees' mental models, they increase their chances of achieving sustainability goals. Additionally, it asserts that because individual actors act in accordance with the supplier's mandate, the overall health of the network is improved. Customers acquired in this manner are more likely to make additional purchases. Sustainability commitment has a significant impact on sustainable supply chain activities. Organizations that are sustainable engage in sound economic, environmental, and social practices.

### ***2.2.8 Organizational Knowledge Management Capability on Sustainability Practices***

Organizational resources provide a company's competitive advantage. Many studies emphasize the crucial importance of organizational resources in the establishment and functioning of organizations by using the resource base theory. Utilizing these resources builds and sustains a lasting competitive advantage (Hall, 1993; Yang et al 2009). Most of these studies devote emphasis to the concrete resources an organization holds, overlooking important intangible resources such as organizational knowledge. Organizational knowledge is a crucial strategic resource for an organization's success and survival. It is beneficial to design procedures that enable a company to harness superior knowledge in order to produce new goods, services, and processes that increase productivity. Advanced knowledge could enable companies to expedite their creative and innovative processes. People with certain characteristics may make better decisions.

In order to keep their competitive advantage, organizations must integrate into the global supply chain by partnering with prominent partners. Firms can obtain access to critical information and knowledge, helping them build a competitive advantage (Yang & Chen, 2007; Collison & Parcell,

2004). Expertise is valuable only if organizations strive to gather, protect, apply, and act on that knowledge. Success in supply networks depends heavily on the acquisition and application of information. Knowledge management capabilities are described as the way in which knowledge is obtained, applied, protected, and converted into a strategic business resource (Lee & Lan, 2011; Chan & Chao, 2008; Gold et al., 2001). Previous studies have proven the crucial importance of knowledge management in strategic alliances. As a result, supply network participants can boost performance and productivity. The creative process benefits from various facts and knowledge that are added to it (Halley & Beaudieu, 2015; Xu et al, 2014).

### ***2.2.9 Green Procurement Network***

Green procurement refers to the processes by which businesses and public entities acquire goods and services from low-carbon suppliers (Lee, 2011; Benjaafar, Li & Daskin, 2013; Bocken & Allwood, 2012). Nowadays, procurement priorities have shifted in favour of green vendors, reducing harm to the community and the ecosystem and the growing threat to the environment posed by human and organizational activity

Green procurement's success is predicated on advancements in environmentally friendly product manufacture. Political will is required to properly implement a green procurement policy. Individuals will adhere to protocols and procedures established by legislators (Blome et al, 2013). These environmental regulations are aimed at limiting the environmental impact of their demand and output. China's carbon emissions have been reduced as a result of the government's determination to meet the target of the carbon trading plan. In Guangdong province of China, Cheng et al. (2015) discovered a strong association between carbon trading and pollution reduction.

Environmental stewardship is a universal reality. Numerous scientific articles (Eskandarpour, Dejax, Miemczyk, & Petron, 2015; Ramudhin, Chaabane, & Paquet, 2010; Nagurney & Nagurney, 2010; Seuring, 2013) all emphasize the importance of developing environmentally conscious supply chain networks. Numerous researches studied the impact of unethical sourcing on human health and the environment. In the public procurement sector, the government prefers environmentally responsible vendors. Purchasing authority empowers the government to carry out green procurement policies. In-depth study has established that government money has an effect on how policies are implemented (Walker & Brammer, 1996).

Numerous obstacles jeopardize the sustainability of green procurement. Maintaining supplier network standards is tough in a dynamic corporate environment, particularly in an unclear and confusing position. To overcome these obstacles, a proactive approach that promotes proper information and knowledge sharing, as well as ongoing actor-actor engagement, is essential. (Michelsen & de Boer, 2009; Varnes et al., 2009) (Adhan & Siwar, 2012; Michelsen & de Boer, 2009; Varnes et al., 2009).

#### ***2.2.10 Determinants of Green Procurement Network***

Green supply chain networks strive to limit hazardous by-products released into the environment as a result of their operations. Consistently reduced carbon footprints support the growing trend toward clean sources. Green sourcing began when corporations sought out businesses which complied with environmental rules. Additionally, the green identity of a business has an effect on its green innovation (Srivastava, 2007; Vachon & Klassen, 2006; Sarkis, 2003).

To improve the performance of ecologically responsible businesses, commodities and components should be acquired from environmentally responsible suppliers. Supply chains that are sustainable are critical for production and consumption. Additionally, the manufacturing to consumption of the supply chain requires coordination and collaboration between many stakeholders in the downstream or upstream segments of the supply chain (Kiiver & Kodym, 2004; Rietbergen & Bolk, 2013). This study is pertinent to green procurement since it is concerned with the establishment and maintenance of a green supplier network. There is a dearth of study on how to select partners and suppliers in order to achieve sustainable development goals.

Through the lens of network theory and social capital, the study examines how green supply networks might help encourage sustainable procurement practices. Findings from actor-actor relationships research using network theory, whereas social capital research focuses on the collective knowledge used to achieve responsible sourcing and consumption (Blome et al, 2014; Al Nuiami & Khan, 2019). The term "Green Supplier Network" refers to a group of environmentally aware suppliers who have banded together to develop and implement sustainable procurement practices. Collaborative play will result in the development of social capital necessary for the production of green products and services. Active communication results in the building of strong bonds between players, which facilitates the flow of information and knowledge throughout the network (Papen & Amin, 2019; Zhang & Cui, 2019).

### ***2.2.11 Inter- Organization Alliance and Organisation Performance***

Organizations should realize the value of organization-environment linkages and technical or market change for survival rather than relying on the performance of previous experiences

as open processes generated and modified by the external environment (Scott, 2003). In conditions of globalizing competition and market division of labor, organizations form interorganizational partnerships with their stakeholders, such as suppliers, consumers, and other resource providers, to acquire specialized resources and define the organizational domain.

According to research, inter-organizational alliance management and coordination could give an adequate response to uncertainty and rapid technological change (Ring & Van de Ven, 1992; Gulati & Singh, 1998). According to previous research, understanding how partners interact or coordinate, such as the distribution of rights, the exchange of information, and the flow of resources (e.g. the specificity of assets contributed by one partner), is expected to be important predictors of inter-organizational relationship management and arrangement (governance) (Grandori & Soda, 1995; Sobrero & Schrader, 1998; Lambe, Spekman & Hunt, 2000). There are dynamic and interrelated transactional interdependence (e.g. exchange) and cooperative interdependence (e.g. Production) in the management of inter-organizational cooperation (Grandori & Soda, 1995; Madhok, 2000).

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(e.g. production) in the management of inter-organizational cooperation (Grandori & Soda, 1995; Madhok, 2000).

According to Yan and Gray (1994), there are two types of bargaining power: context-based negotiating power and resource-based bargaining power. For starters, the context-based factors include the availability of alternatives and strategic importance. The availability of alternatives refers to their ability to choose amongst numerous agreements in the negotiation relationship. According to Heide and John (1988), businesses with specific assets invested in manufacturer-agency dyads should lessen their reliance by enhancing the replaceability of the incumbent partners (i.e. increasing alternatives).

Second, dependency on natural resources was formed as a basis for bargaining leverage (Yan & Gray, 1994). The pledges or contributions of resources and capabilities made by the partners are a major source of resource-based components. To put it another way, the relative bargaining power of parties in an asymmetric inter-organizational partnership is determined by who brings what and how much to the relationship.

Relative bargaining power can be determined not only by the presence of resource contributions as a driver of collaborative relationship patterns of control, but also by the sorts of contributed resources, such as tangible (factory, equipment) and intangible (technology, manufacturing know-how, management skill, and knowledge) (Lee, Chen & Kao, 2003).

According to Yan and Gray (1994), if B contributes more critical resources to the alliance than A, B will gain more bargaining power. RDT, on the other hand, says that A must create an alliance with B to avoid confusion and ensure access to necessary resources. In

terms of organization size, Ernst (2000) defines the asymmetric Inter-organization partnership between Taiwanese organizations and larger MNEs. The occurrence of volatility of asymmetric Inter-organizational alliances (IJVs) is viewed in terms of the degree of equity ownership (Lee et al., 2003; Dhanaraj & Beamish, 2004). Reve (2001) shows the difficulties of unequal interdependence between buyer and supplier in terms of whether the deployment of specific assets is balanced. Despite the fact that earlier research, including negotiating power views, has placed a larger emphasis on the power-dependence framework of asymmetric Inter-organisation alliances, asymmetry or interdependence trends have been decided or organized before cooperative partnership members engage in economic activities.

Organization size, whether companies deploy specific properties or not, the availability of alternatives, and the strategic value of partners are all ex ante determinants of cooperative partnerships (Yan & Gray, 1994). Relationship patterns, for example, can be observed. Parkhe (1993) proposes, for example, that businesses invest in transaction-specific investments to boost productivity based on ex ante expected length. However, once relationship patterns have been identified, explaining changes in partner relationship status poses some significant challenges.

When organizations make transaction-specific investments ex ante, factors such as understanding of transactional attributes and information accumulation may alter (Reuer & Koza, 2000). As a consequence, it is critical to distinguish between ex ante and ex post concerns in asymmetric inter-organizational partnerships. Changes in knowledge flow (e.g. changes through acquisition of knowledge) (Inkpen & Beamish, 1997), capital flow (Dussauge, Garrette & Mitchell, 2004), and information flow regulation (Gulati, Khanna & Nohria, 1994) can all be seen as a result of asymmetric Inter-organization partnership

trends. The relative negotiating strength of asymmetric Inter-organizational alliances varies from one partnership to the next.

According to the above statement of Inter-organization alliance, such asymmetric Inter-organization alliance patterns represent the different exchange and flow of knowledge and resources (Bovik & Reve, 2002; Lee et al., 2003). Kern and Willcocks (2000), for example, argue that due to an IT outsourcing strategic alliance, Xerox initially over-relied on EDS's information systems to track efficiency in a case study of a cooperative partnership between Xerox and EDS.

In other words, knowledge and resource distribution asymmetries have been utilized to predict whether or not inter-organizational partnerships are asymmetric (Grandori & Soda, 1995). Resource flow asymmetry reveals how resource contributions influence relative bargaining power and the establishment of asymmetric governance arrangements (Lee et al., 2003). According to transaction cost economics and agency theory, information asymmetry, which refers to the incomplete or skewed disclosure of information, is the outcome of the incapacity of ex ante collection, screening, assessing partners' competency, and ex post monitoring to discover shirking or moral hazard (Williamson, 1985; Stump & Heide, 1996).

Information flows that can give an early warning system, such as information collecting, detailed reports, and conflict management, play a significant role in managing complicated partnership processes (Gulati et al., 1994). If partners in cooperative Inter-organization alliances do not undertake such efforts, they may suffer greater transaction costs (or information costs), which could result in lock-in or hold-up concerns, particularly when making asset specificity decisions (Hennart, 1994; Bensaou & Anderson, 1999). "Asset precision and knowledge asymmetry are interdependent," writes Williamson (1985, p.83).

The asymmetry in knowledge flow produced by asset specificity, can only look at ex ante patterns of relationships and ex post types of asymmetric Inter-organization alliances in this research.

### ***2.2.12 Governance of Organizational Alliance- Relational Governance***

The goal of transaction cost economics is to find a governance system that not only provides the necessary coordination, control, and confidence at the lowest possible cost, but also improves the exchange rate (Williamson, 1985; Dyer, 1996). The goal of governance is to cope with issues such as protecting certain properties and responding to changing circumstances (Rindfleisch & Heide, 1997).

In recent years, research into inter-organizational partnerships has emphasized the governance perspective (Heide, 1994; Zaheer & Venkatraman, 1995; Dyer, 1996; Madhok, 2002). Governance has been defined as a means of coordinating transactions (Williamson & Ouchi, 1981).

As a result, governance structures like markets, hybrids, and hierarchies can be defined as institutional arrangements that shape, organize, and coordinate the partners' activity (Dyer, 1996; Sobrero & Schrader, 1998). The goal of governance structures, which are a type of institutional arrangement, is to offer the necessary coordination and control for addressing transaction issues within a specified governance framework or Inter-organizational alliance (Chi, 1994; Dyer, 1996).

The original transaction cost economic framework, according to Heide (1994), views governance decisions as an option between markets that depend on price structures and hierarchies that rule

through a single authority structure. From an efficiency standpoint, the system specifically implies that we should follow alternative governance frameworks. This argument's rationale is founded on the premise that internal entities will reduce transaction costs (Rindfleisch & Heide, 1997).

According to relational views, trading partners engage in recurrent transactions such as bilateral governance (Heide, 1994), relational norms (Heide & John, 1992), and relational contracts (Ring & Van de Ven, 1992) in order to achieve long-term gains and engage in the process of "projecting exchange into the future" (Dyer, 1997; Samiee & Walters, 2003). Organizations having exchange relationships will generate relational rents through a synergistic combination of relational-specific features, knowledge-sharing routines, and capabilities (Dyer & Singh, 1998).

Good governance can generate rents by lowering transaction costs and increasing transaction value (Dyer, 1997; Dyer & Singh, 1998). There must be a non-economic side to the regulation of trading interactions, such as "social" or "relational" aspects (Ring & Van de Ven, 1992; Zaheer & Venkatraman; 1995).

According to Granovetter (1985), socially anchored personal ties play an essential role in economic transaction. Zaheer and Venkatraman (1995) used the term "relational governance" to characterize the economic and sociological phenomena of trade involving unique assets and interorganizational trust. The goal of this intermediate governance mode, which may be thought of as the organization's interorganizational strategy, is to protect the party with distinctive assets from appropriation while focusing on relationship continuity expectations (Joshi & Campbell, 2003).

### ***2.2.13 Relational Governance and Organizational Performance***

Resource dependency theory becomes a key aspect of relational exchange when long-term relationships necessitate more time and energy (Rokkan & Haugland, 2002). Few entities are internally self-sufficient in essential resources, according to resource dependency theory. Organizations can create trade partnerships with partners who control these resources in order to minimize instability and manage dependency in order to survive. As a result, this theory sees inter-organizational alliance governance as a constructive strategy for dealing with unpredictable and dependent environmental conditions (Pennec & Raufflet, 2018). Interorganizational relations, such as contracting and joint ventures, are seen as solutions to the problems of instability and dependency (Benitez-Avila et al, 2019).

In asymmetric international subcontracting relationships, we could investigate the function of unilateral dependency. Only one partner makes a resource commitment in a unilateral or asymmetric dependency scenario; the other might be opportunistic, Taking advantage of the circumstances and extracting a partner's profits by manipulating the more reliant partner's behaviors. This circumstance would be detrimental to bilateral relations and governance (Rokkan & Haugland, 2002). When powerful organizations perceive their partners are dependant on them, they are less likely to desire to form a long-term cooperative relationship with them (Ganesan, 1994).

In addition, symmetric interdependence implies that the partners share a forbearance motivation and form a self-enforcing agreement that ensures that the targeted advantages surpass any potential short-term profit (Heide, 1994).

The consequence of symmetric reliance is to create a lock-in state, which aids the exchange relationship's stability. The degree of reciprocal interest required for relational trade will be defined by the relationship's symmetry (Zollo et al, 2019).

The presumption of trust in an exchange partner is based on the partner's experience, dependability, and intentionality (Liu et al 2017). According to Kern and Willcocks (2000), confidence is based on one partner's prior expectation that the other will carry out the requisite contractual exchanges and produce positive outcomes. Partnering in interorganizational partnerships necessitates confidence in order to solve problems and build loyalty. Trusted relationships would promote loyalty through the mutual concept and emphasize a 'win-win' mentality (Liu et al 2017).

Collaborators in an exchange relationship will promote confidence and loyalty by exchanging values, beliefs, knowledge, and communication. When loyalty and confidence are present, partnerships can collaborate successfully and accomplish common objectives. According to social exchange theory, a retailer's happiness with equal results would lead to a higher understanding of the supplier's trust and reputation (Biedenbach et al, 2019; Wang et al, 2018). The manufacturer is expected to have a long-term friendship with the seller in such a trusted relationship. The most frequently discussed leadership questions are protecting issues that are measured by the degree to which the partnership parties' properties are specialized to transaction (Agarwal & Narayana, 2020; Wang et al, 2018).

Particularly if it is assumed that organizations are exchanging strategic commodities that are incompletely mobile, untradable, and have causal uncertainty, organizations will face substantial delays (Chi, 1994). Several scholars point out that after categorizing the historical roots of governance challenges, the preference of governance structures is critical. Hence resulting in

variability, incomplete mobility, and causal complexity characterize (intangible) asset specificity. When companies invest in unique assets that are a significant cost of doing business, they can use governance structures to prevent opportunistic behavior between companies.

Organizations should create effective governance structures including supplying a remedy to gap as negotiating strength with acquire leased based on relationships and attain comparative unbalanced benefits on Inter-organization alliances, in addition to productivity (Galati & Bigliardi, 2019), based on value-creation viewpoint. “Investing done by an organization which relates significantly beyond the focal partnership, there is little significance, are described by an organization significantly. They see tightening buyer-supplier relations as a solution to the need to protect individual properties. According to scholars, intangible and human resource precision plays a major role in trade relationships in the knowledge-driven economy (Subramani & Venkatraman 2003).

In relationship-related intangible investments, there is market process specificity, which refers to essential specific procedures of organizations, and domain knowledge specificity, which refers to knowledge and experience that is specific to the needs of other organizations. When those basic assets are important to shared growth and learning, ongoing cooperation between partners is required for the sharing of tacit, procedural information (Nooteboom, 2004). Supplier organizations could improve the scenario by engaging in intangible asset precision ex post, even though they don't extract protections and exert leverage by dominant organizations (Subramani & Venkatraman 2003).

Since it can alter the power-dependence relationship, asset specificity causes transaction costs and governance issues (Ganesan, 1994). Concurrent investment in specific properties, on the other

hand, can create a shared dependence relationship or a self-enforcing contract. It promotes flexibility in the face of complexity and conflict (Joshi & Stump, 1999). For continue, there are processing expenses which rise as the amount of money invested in specific assets grows. About this, partners maintain a high degree of confidence and symmetry dependency, or are beyond a certain threshold of trust; frequent investments act relating to a trustworthy indication of loyalty (Dyer, 1997).

Partners can minimize transaction costs and optimize transaction value when contracts are backed by reliable promises. The engagement of trust and transaction costs, according to Zaheer and Venkatraman (1995), might also influence the depth of relational governance's structural dimension. As a result, foreign organisations can become more reliant on suppliers global outsourcing arrangements that really are irregular thus, suppliers spend immeasurable resource precision which is ingrained in their own schedules, information processes, and core competence. The relative bargaining power of the parties will change (Schmidt & Wagner, 2019; Akbar, 2018).

### ***2.3 Theoretical Framework and Hypotheses Development***

This section represents the theoretical context of this study, it shows how the researcher generated opinions about alternative solutions for the research questions, these opinions, the topic is then framed by the clustering of ideas and hypotheses into themes (Telewa, 2014). This study was primarily concerned with on examining the effects of economic, social and environmentally sustainable procurement practices on the performance of an organization. It further examines the moderating roles of relational governance and top management commitment to sustainability on organisational performance. The underpinning theories include Relational Exchange Theory, Network Social Capital Theory and Institutional Theory. These theories have been used severally in the management literature to investigate diverse questions and business problems. Over the

years these theories have provided a nuance framework for assessing organization behavior and its interaction with external stakeholders. The rationale for selecting these theories out of the many organizational theories is based on the premise that these frameworks provided the relevant fundamental framework to aid in understanding the impact of sustainable procurement practices on performance of public enterprises.

### ***2.3.1 Relational Exchange Theory***

The foundations of relational exchange theory can be found in both law and promotion fields – legal theorist acknowledged that business was preferable to depend on what was planned behaviour traits of partner. Theses behavioural traits would contribute to honest and decency of inter-firm alliance member (Macaulay, 1963). In addition, extralegal mechanisms for maintaining working arrangements and resolving conflicts (Beale and Dugdale, 1975; Macaulay, 1963). Although Macauley (1963) laid the foundation for relational exchange theory, Macneil (1974; 1980) seminal work set the tone for further development. His argument is rooted in the fact that legal contract does not adequately addresses relational norms' scientific truths. Simultaneously, marketing theorists continued to advocate for an emphasis on the buyer-seller relationship rather than focusing exclusively on just one. Johnson and Bonoma (1977) proposed a "dyadic paradigm" that emphasized relationships, interdependencies, and reciprocities among exchange parties.

Relational exchange theory rest on the premise that parties involve in an alliance to some extents are involved in some form of exchanges. The exchanges within these networks or inter-firm alliance provide parties the relevant leverage to ensure parties attach some level of importance to the relationship. It further encourages parties to devote the necessary resources towards the success, development and maintenance of such alliance (Anderson & Narus, 1984; 1990; Lambe et al, 2000). The existence of norms associated with the formation, maintenance, and

harmonization of the relationship between the exchange partners characterizes relational exchange theory (Macneil, 1980; Brown et al., 2000).

The essence of relational exchange theory is well documented in management and inter-organizational alliance literature. Relational exchange theory rests on the premise that parties involved in an alliance to some extent are involved in some form of exchanges. The exchanges within these networks or inter-firm alliances provide parties the relevant leverage to ensure parties attach some level of importance to the relationship. It further encourages parties to devote the necessary resources towards the success, development and maintenance of such alliances (Anderson & Narus, 1984; 1990; Lambe et al., 2000).

One significant factor for the upsurge in research in this domain is growing interest in examining exchange relationships contrasting to evaluating exchange events (Gundlach & Murphy, 1993). The rationale for this surge is due to the fact that researchers argue there is a paradigm shift from transactional to relational exchanges. Exchange is viewed as a continuum of relational exchange theory, spanning from isolated to relational. There are a set of rules that govern trade. Others are more focused on the discrete end of the spectrum, while others are more focused on the hierarchical end (Macneil, 1980; Lambe et al., 2000; Das & Teng, 2001).

Relational exchanges are based on expectations about partner behaviour in an alliance, however to shape these attitudes and behaviours a set of relational norms are developed. These relational norms serve as a guide to shape the behaviour of individuals. Furthermore, relational norms are designed to enrich the well-being of the relationship in its entirety (Brown et al., 2000; Blomqvist & Sundqvist, 2007). The existence of norms associated with the formation, maintenance, and

harmonization of the relationship between the exchange partners characterizes relational exchange theory (Macneil, 1980; Brown et al., 2000).

Relational exchange plays a pivotal role in trust building between partners. Trust is crucial to value-enriching relationship and processes of particular alliance. In addition, trust serves as a defence mechanism for curbing exploitative and opportunistic behaviours in a group (Uzzi, 1997; Koza & Dant, 2007). According to Mayer, Davis, and Schoorman (1995), confidence is a firm's willingness to bear risk as a result of a partner's conduct because it expects the partner's action to be important, regardless of the firm's ability to supervise or monitor the partner. Even in the face of short-term offers, trust may also be described as the belief that a trading partner will not indulge in opportunism (Bradach & Eccles, 1989; Orbell, Dawes, & Schwartz-Shea, 1994). Other research (e.g., Das & Teng, 2001; Seppänen, Blomqvist, & Sundqvist, 2007) look at two types of trust: competence trust and goodwill trust. Competence trust relates to standards dependent on the degree to which partners have the necessary technical qualifications to contribute to the project achieving relational goals and objective.

### ***2.3.2 Network Social Capital Theory***

Literature review concluded that, this method stresses the significance of horizontally and vertically relationships between persons, as well as relationships within and among organizational institutions such as neighbourhood groups and organizations. (Woolcock and Narayan, 2000). Woolcock and Narayan (2000) go on to say that this described network strategy considers social capital gains of both positive and negative organizational activities. Burt (1992, 1997, 1998); Lin (1999, 2001); Portes (1995, 1997, 1998); and Portes and Sensenbrenner (1993) have all contributed to the field of network theories, building on the findings of Granovetter (1973). 'An individual's

possible stock of social capital consists of the selection and sequence of interactions in which one is engaged and to which one has access to the position and resources,' wrote Sandefur and Laumann (1998). patterning of one's associations in bigger social space.

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Consider how technology-enabled networking may affect the accumulation of cognitive, relational, and structural social capital during the development of a cooperative network's social capital. Collaboration technologies have shifted the nature of inter-firm collaboration away from centrally supervised contractual activities and toward social phenomena involving individual businesses (Hau, Kim, Lee, and Kim, 2013). Recent research has demonstrated the method's promise by eschewing transactions and causal relationships in favour of competitive dynamics in some ecosystems (Ritala et al., 2016). Paulin and Suneson (2015), Yang et al (2016)

In social networks, social capital is defined as the collective use of network knowledge and information to improve individual players' innovation outcomes. Knowing certain basic properties

of fundamental measurements such as density, centrality, and cohesiveness, as well as a set of assumptions about how to effectively represent and explain social phenomena of interest, is required when studying social networks. As a result, networks analysis does not presume that the environment, qualities, or circumstances effect the actors in isolation, but rather that they all interact in a systematic way to condition the ultimate result (Li, 2012; Neumeayer et al, 2019).

The case for sustainable procurement practice has been articulated many times, but with disappointing results. The lack of a planned collaborative effort to instilling the culture of irresponsibility in procurement and sourcing culture is to blame for this process's unsatisfactory state. Furthermore, a lack of commitment from a variety of stakeholders within the procurement ecosystem has had an impact on the result of sustainable procurement practices. In this arena, sustainability policy acts as a guideline to encourage product sourcing that considers the social, economic, and environmental aspects of the Triple Bottom Line (Wang, Qiao & Li, 2020).

While the organization's structure is important, the social capital that develops among network users is vital for inspiring people to share information (Hau et al., 2013; Wagner, Beimburn, and Weitzel, 2014) and assuring the continuous relevance of technology-enabled knowledge-sharing networks (Sykes, Venkatesh, and Gusain, 2009). As a result, we are concentrating our research on how individuals perceive cooperative network social capital. More precisely, social capital, which we suggest is what defines the network's processes and outcomes, encompasses network legitimacy, trust, and resilience. Thus, we define network social capital as a metaconstruct that is embedded in the legitimacy, trust, and resilience of the network as perceived by its individual members.

In terms of shared norms, values, and beliefs, network legitimacy refers to players' perceptions of the cooperation network as desirable, legitimate, and acceptable (Low and Johnston, 2008). Successful business collaborations require a positive net impact (Kumar and Das, 2007). The commitment of resources required for successful cooperation requires that members within the network view one another as real partners and are willing to contribute to collective goals (Kumar and Das, 2007). To join a cooperative network, however, the network must be viewed as genuine, and the network's perceived legitimacy grows as a result of cooperative outcomes.

Members' risk tolerance and vulnerability when interacting with the cooperative network are referred to as network trust (e.g., Cohen and Roper, 1972). (e.g., Cohen and Roper, 1972). For an extended period of time, actors in a cooperative network have placed their faith in the network. One must have trust in other business partners in order to have confidence in their ethical behavior on the network (e.g., Akpinar and Vincze, 2016). Members' opinions on network trust should reflect two factors: individual trust perceptions and trust in the network's efficacy. When network partners trust one another, societal norms and standards strengthen, creating a less risky environment for opportunistic partners (Chow and Chan, 2008).

The term "relational social capital" refers to the ties between actors that have grown over time, i.e., the degree to which trust, obligation, and reciprocity exist (Krause, Handfield, and Tyler, 2007; Nahapiet and Ghoshal, 1998). In the context of inter-firm cooperation, network trust is critical for the network's ability to facilitate collaborations among members, as it encapsulates the degree to which knowledge exchanges among network members are considered as accurate and beneficial by both parties. Prior research indicates that interpersonal interactions between partners can indirectly foster trust by increasing familiarity and communication, even when network members

are merely connected in an indirect manner (Chen, Lin, and Yen, 2014; Kumar and Das, 2007). This shows that network trust is a particularly good indicator of a network's relational standards.

Lastly "network resilience" relates to network actors' assessments of the network structure's continued relevance and adaptability in meeting the individual and collective goals of its members (Christofferson, 2012; Coleman, 1986). In the case of technology-enabled coopetition, it refers to individual members' perceptions of the social network and underlying technology as being capable of supporting efficient and reliable knowledge sharing between members. Additionally, the network and underlying technology must foster interaction in order to yield collective advantages in the present and future. Rather than network actors, network resilience is focused with joint outcomes. More precisely, network resilience refers to the capacity of the network's technology, protocols, and control mechanisms to provide a platform that meets the demands of each individual network member and promotes desirable individual and communal results. Perceptions of network resilience are reinforced by the network's current relevance and adaptability, the enthusiasm of members to participate, and the belief that network protocols and standards are relevant to attaining results (Christofferson, 2012; Marshal and Marshal, 2007).

### ***2.3.3 Institutional Theory***

According to Glover (2014), institutional theory is a theory that explains how institutions function and seeks to provide a scientific prism from which to see the world scholars are able ascertain and scrutinize factors or practices that influences and stimulate organizational existence and validity of its practices. Researchers has identified Community, social climate, law (including the legal environment), practice and history, as well as economic benefits, are all essential considerations, though resources are also considered (Baumol et al., 2009), (Brunton et al., 2010) (Hirsch, 1975), (Brunton et al., 2010), (Brunton et al., 2010), (Brunton (Lai et al., 2006). Validity of organisational

practices applies to stakeholders' acceptance of environmental activities that they deem acceptable and reasonable. According to Scott (2007), "traditionally, institutional theory has been concerned with how individuals, groups, and organizations enhanced and secured by adhering to regulations such as administrative systems, administrative bodies, legislation, courts, occupations, and codes, as well as several other socio-cultural norms that impose conformance demands and standards, they may maintain their roles and prestige institution" (Scott, 2007).

An increasing number of management scholars are applying institutional theory to the study of public and private organizations (Dacin, Goodstein, & Scott, 2002), as it provides a rich theoretical foundation for examining a variety of critical issues and also enables theorizing at multiple levels of analysis, which is critical for MNC research (Djelic & Quack, 2003).

The adoption of differences in society values, technical advances, and regulations can all affect decisions about 'green' sustainable activities and environmental management (Tate et al., 2010). In the light of sustainable procurement practices, Institutional Theory is used to investigate how various corporate techniques influence the implementation of fiscal, social, and environmental management practices. Significant factors in promoting sustainable practices are changes in guidelines or rules to include the organisation's core procurement requirements and government regulation (Rivera, 2004).

Consequently, organizations may explain and describe concepts and practices that are appropriate or legitimate, as Scott, 2007 puts it 'what is acceptable behaviour', As a result, other actions become unacceptable or even unthinkable. This will have an impact on how businesses make decisions. This can reveal the role of various stakeholders in the development of sustainable procurement practices as well as their role in achieving conformity. The structural viewpoint

allows for the emphasis on the role of compliance, legislative and social pressures in driving organizational behavior (Westphal et al., 1997). (Westphal et al., 1997).

Institutional theory over the years has been predominantly used to explain the behavior and actions of both individuals and organizations. This framework enables organizations to determine what actions influence the behavior of individuals and activities in a peculiar direction (Bruton, Ahlstrom, Li, 2010; Geels, 2004; Lowndes, 2001). Several scholars have criticized institutional theory; however, it is still the most acceptable framework for assessing the homogeneity of phenomena. Although organizations change over time with a non-uniform approach, institutional theory happens to provide proper insights into the process and activities that govern organizational settings. And this is attributed to the richness and diversity of processes and procedures integrated in the institutional logic framework (Tolbert & Zucker, 1996; Scott 2005).

Studies have highlighted the role of institutions on political and actors that operates in the corporate environment. The logic of this influence is drawn from the institutionalist approach that examines individuals as an integrated part of a complex environment. Therefore, to sharpen the actions of such an environment requires a change in the behavior of individuals (Mettler & Soss, 2004; Oliver & Mossialos, 2005). A sustainable procurement network can be a complex network comprises of several parts which required proper attention for sustainable procurement practices to be sustained. These individual components must be entrenched in a supplier network in a way that forms a micro institution (Ebbinghaus, 2005).

To accomplish a high achievement in the field of sustainable procurement requires organisational innovation to provide agility in an era of organisational change. Organisations may consider enforcing requirements for some particular supplier's network to shift from the provision of

traditional goods and services to more sustainable ones. Creating an agile and flexible institutional structure that seeks to provide comfort for each stakeholder to develop their competence and capabilities is crucial. In addition, it is essential for the continuity of any network to ensure when there are appropriate structures available (Bahle, 2003; Currie 2009; Scott, 2000).

In order to ensure compliance, local government and other relevant institutions attempts to influence the behavior of these supply networks especially during public procurement. Survey conducted in the UK public sector procurement revealed that significant attention is placed on supplier that provide eco – efficient products during sourcing process. The attention green products have drawn from policy makers have encouraged local suppliers in diverse sectors to implement the sourcing and usage of clean technology in the production process. Although cost is established to be a key influencer to the sustainability of green supplier network and procurement, the influence of institutions such as government is still the pressing factor in the pursuit for green ecosystem (Wilson & Alves, 2017; Boffcher & Muller, 2015; Walker & Brammer, 2009).

Extending institutional analysis to include market-based factors occurred gradually and became significant in the 2000s, as academics used institutional theory to investigate the emergence and structure of markets. This expansion occurred concurrently with a greater emphasis on agency in institutional theory, an issue that had gotten scant attention previously. The research focused on those players who interfered to alter markets or precipitated institutional change, which incentivizes actors to contribute to institutional change despite constraints toward stability (Battilana, Leca, & Boxenbaum, 2009) This renewed perspective concentrated on the ‘supply side’ of markets, examining how committed, frequently powerful, skilled, and resourceful organizations are more likely to structure markets and shape institutions such as firms (Garud, Jain, & Kumaraswamy, 2002; Kitchener & Leca, 2009), intermediaries (Déjean, Gond, & Leca, 2004),

and consecration authorities (Jones, Maoret, Maoret (de Bakker, de Hond, King, & Weber, 2013; Rao, 2009).

Additionally, institutional theory emphasized the importance of players willing to institutionalize new behaviours in order to capitalize on existing consumer habits rather than disturb them. Munir and Phillips's (2005) study of the rise of mass photography in the United States exemplifies this notion. They explore Kodak's success in establishing a new market, finding that it was due to its strategy of integrating photography into the institutionalized routines of vacationing and sharing memories with others. Kodak sought to establish a connection between its product and institutionalized symbols by heavily utilizing those cultural codes in their advertising and by urging customers to take their camera on vacation.

#### **2.4 *Theoretical Foundation for the study***

The underpinning theories include Relational Exchange Theory, Network Social Capital Theory and Institutional Theory. These theories have been used severally in the management literature to investigate diverse questions and business problems. Over the years these theories have provided a nuance framework for assessing organization behavior and its interaction with external stakeholders. The rationale for selecting these theories out of the many organizational theories is based on the premise that these frameworks provide the relevant fundamental framework to aid in understanding the impact of sustainable procurement practices on performance of public enterprises.

According to Glover (2014), institutional theory is a theory that explains how institutions function and seeks to provide a scientific prism from which to see the world scholars are able ascertain and

scrutinize factors or practices that influences and stimulate organizational existence and validity of its practices. In order to achieve a high degree of sustainability in green business landscape institutional systems, structures and climates plays a crucial role. Institutional theory offers normative and subjective factors that influence implementation of organizational strategy. Since sustainability is a strategic objective of organization it requires commitment of entire organization especially individuals in top management position. In addition the nature of public institutions dictates that authority and decision making personnel takes center stage in the formulation and execution of strategic plans and initiatives. Sustainable procurement been considered as a strategic step for organizations to curb environmental hazards. The commitment of top management is essential to diffuse sustainable procurement practices across several departments and unit or in some cases inter – organizations.

In as much as institutional commitment can fasten the implementation of sustainable procurement practices, to derive immerse benefits requires acquisition and utilization of slack resources in organizations' external environment. To derive significant benefits from inter – firm alliance, network actors should be able to recognize and utilized accumulated social capital. Network social capital theory augments stakeholder theory by offering a theoretical perspective to examine how organizations co-create while competing to offer value to customers. Network actors contributes significant amount of resources that can be utilized collectively for collective good. The availability of these slack resource forms the backbone of network social capital. The Social Capital aspect is broadly refers to those factors of effectively functioning social groups such as interpersonal relationships, a shared sense of identity, a shared understanding, shared norms, shared values, trust, cooperation and reciprocity (Randolph, Hu & Silvernail, 2020; Han, Yoon & Chae, 2020).

In social networks, social capital is defined as the collective use of network knowledge and information to improve individual players' innovation outcomes. Knowing certain basic properties of fundamental measurements such as density, centrality, and cohesiveness, as well as a set of assumptions about how to effectively represent and explain social phenomena of interest, is required when studying social networks. As a result, networks analysis does not presume that the environment, qualities, or circumstances effect the actors in isolation, but rather that they all interact in a systematic way to condition the ultimate result (Li, 2012; Neumeyer et al, 2019). The case for sustainable procurement practice has been articulated many times, but with disappointing results. The lack of a planned collaborative effort to instilling the culture of irresponsibility in procurement and sourcing culture is to blame for this process's unsatisfactory state. Furthermore, a lack of commitment from a variety of stakeholders within the procurement ecosystem has had an impact on the result of sustainable procurement practices. In this arena, sustainability policy acts as a guideline to encourage product sourcing that considers the social, economic, and environmental aspects of the Triple Bottom Line (Wang, Qiao & Li, 2020).

Relational exchange theory plays a pivotal role in trust building between partners. Trust is crucial to value-enriching relationship and processes of particular alliance. In addition trust serves as a defence mechanism for curbing exploitative and opportunistic behaviours in a group (Koza & Dant, 2007; Uzzi, 1997). In line with Mayer, Davis, and Schoorman (1995), trust is a firm's willingness to suffer risk caused by the partner's actions based on the expectation that the partner's action is significant, irrespective of its own ability to supervise or control the partner. Trust is also understood as the expectation that a trading partner will not engage in opportunism, even in the face of short-term incentives (Bradach & Eccles, 1989; Orbell, Dawes, & Schwartz-Shea, 1994). Some other studies (e.g., Das & Teng, 2001; Seppänen, Blomqvist, & Sundqvist, 2007) consider

two main dimensions of trust, including competence trust and goodwill trust, according to which competence trust refers to expectations based on the extent to which partners have the required professional skills contributing to achieving relational goals and objective.

## **2.5 Hypotheses Development**

### ***2.5.1 Economic Sustainable Procurement Practices and Organizational Performance***

Rapid economic and social developments over the past decades also laid the groundwork for the emergence of sustainable development. The justification for sustainable development stems from the idea that conventional development methods are ineffective approach to production and consumption has reduced in increasing environmental challenges and crisis. The concept of sustainability consequently resulted in the introduction of concept of green production and consumption. It further led to the birth of area of responsible innovation. The concept of sustainable procurement is to encourage organisations to consider environmental and social impact of its economic activities (Paulraj, Chen & Blome, 2017; Kim & Kim, 2017).

To curb wastage and further provide an enabling environment for the consolidation of expenditure revenue most entities have integrated sustainability practices into its procurement activities. Sustainable procurement practices are adopted as a means to reduce wastage in procuring process and further gain value for money on acquired item. In addition it ensure suppliers or relevant stakeholder adheres to outlined guidelines and framework. Sustainable procurement practices are classified into three (3) distinct dimensions – environmental procurement activities that are both sustainable and cost-effective sustainable procurement practices and social sustainable

procurement practices (Walker & Brammer, 2011: 2012; Wittstruck & Teuteberg, 2012; Hall, 2000).

Economic dimension of sustainable procurement practices focus primarily on achieving business efficiency, productivity and profit. Basically economic sustainability practices encompass the optimization of quality, price and availability of product or service. Economic sustainable practices in most cases advocate for utilized of financial in a prudent manner to ensure value for money. For instance in public procurement where government expenditure is used to deliver broader government program, it is critical to ensure monies offered are been used in accordance with stipulated frameworks and guidelines (McCrudden, 2014; Cambra – Fierro & Ruiz – Benitez, 2011). Notwithstanding the significance of diverse dimensions of sustainability practices, the economic sustainability practices turns to overweigh the social and environmental dimension in practical terms.

Most organizations turn to practices sustainability due to the economic gains and incentive associated with it therefore paying limited attention to environmental issues and social consequences of its activities. Economic resilience has been shown to have an effect on an organization's financial and non-financial success in studies. (Islam et al, 2017; McMurray et al, 2014). The economic incentive organizations stand to gain from the practices of sustainability turns to influence their decision towards the production and offering of products. Offering sustainable service or products in recent times aids organisations to gain entry to novel opportunities. And this contributed immensely towards the performance of organization. Achieving superior performance is of utmost importance to every organization. Against this backdrop the study hypothesizes that organizations that adhere to sound economic sustainability practices would enjoy superior organization performance. Hypotheses 1 is formulated;

*H1: Economic Sustainable procurement practices have a positive impact on performance of public sector enterprises.*

### **2.5.2 Environmental Sustainable Procurement Practices and Organizational Performance**

Public-sector organisations in recent times are encourage to conduct activities such as production and consumption in an eco-friendly manner. This is to avert the rapid depletion of resources and population of natural environment. In most cases the irresponsible production and consumption activities of organisations have affected the survival of environment and its habitat (Brammer & Walker, 2010; Wisner, 2003). To curb hazardous production and consumption patterns, organisations are encouraged to source and produce product and services using sustainable means. Sustainability is the new frontier for sustaining the competitive advantage of an enterprise. Organisations have to invest significantly to adopt new improved production techniques that based on clean technologies. Optimizing the usage of resources for high productivity is of importance to organisations in this turbulent era (Zhu & Sarkis, 2004; elms & Sarkis, 2005).

Survival of organisations rest on the population dynamics of it composition (Perrigot, 2008; Khessina, 2006). The innovation orientation has positive impact on innovation and overall performance of organization, specifically in an era of environmental turbulence. In an era where customers demand environmentally friendly products – to survive as a organisation requires the acquisition of novel process and production techniques (Meeus & Oerlemans, 2000; Patzett & Audretsch, 2008).

The sustainability of organizations happens to improve performance of entire stakeholders. When stakeholders possess the requisite sustainable orientation, it initiates deliberate measures shape behaviour of members towards attaining sustainability benchmarks (Walker & Brammer, 2010).

The sustainable orientation of organizations serves as a platform to assess organizational commitment of relevant stakeholders. The commitment of employees, organisation and diverse stakeholders are critical to the achieving of sustainability goals (Choi, 2011).

Gaining commitment and support of key stakeholder is acknowledged to impact the environmental practices of organization in sustainability era (Dragoes & Neamtu, 2014; Kauffman & Arico, 2014). Achieving environmental targets enriches the sustainability profile of an organization. It further enhances the corporate image of such an entity. Having an environmentally friendly product offers organisations the needed leverage to out compete competitors. The culminated merits that an organization derives from the offering of environment sound products and services shapes its organizational performance. It opens up new markets and attract new improved incentives that serves as a base to augment organizational performance (Centobelli, Cerchione & Esposito, 2017: 2018; Amann et al, 2014).

The capabilities of an organization to enrich its ability to offer environmentally sustainable products and service by utilizing environmentally sound practices are conceptualize to impact the performance of such entity. Abiding by the environment specification and requirement during product design, production and commercialization stages does not only enhance the organisations sustainability stands but further enrich overall performance of an organization. Based on this backdrop the study hypothesized that environment sustainability practices seem to have a positive influence on organizational success. Based on above hypotheses 2 is formulated;

*H2: Environmentally Sustainable procurement practices have a positive impact on performance of public sector enterprises.*

### ***2.5.3 Social Sustainable Procurement Practices and Organizational Performance***

Sustainability has become a buzzing word in past decade. The quest for sustainability is to encourage responsible production (innovation) and consumption. The adoption of sustainable practices is not only about going green but further suggests products should consider the social and environmental dimension/impact of product. It is assumed eco-friendly products can ensure environmental, social and economic risk is mitigated to barest minimum. Relevance of sustainability practices has gained the support of multi-lateral organisations and nations (Walker & Braymer, 2012; Islam, Mural & Kari, 2017).

At the forefront of sustainability is responsibility of procurement officers and respective activities. Procurement of goods and services should be extended from *buying green* to maintaining a sustainable procurement. Procurement that is environmentally friendly enables organisations gain both financial and nonfinancial benefits (Carter et al, 2008; Pullman, Malone & Carter, 2009). Despite the benefits, research findings do not have the necessary data to support the impact of sustainable procurement activities and non-financial results of organizations. However, the practices of sustainable procurement are document to impact significantly on financial performance of organisations (Murakami & Kumara, 2015; Islam, Mural & Kari, 2017).

In most cases organization overlook the social dimension of sustainability practices because it is increasing challenging to determine how it impact the organization performance financially. Since organization are profit oriented entities, deviating to offer socially responsible products and service in some case places a financial burden on institutions resulting in high expenses and operational cost (Sarıs, 1998; Luthra et al, 2004; Awaysheh & Klassen, 2010). Social aspect of sustainable procurement practices involves the provision of fair and equitable environment for employees, customers and entire community in most cases. These activities turn to enrich the reputation of

organization by offering support to communities and further restricting its product specification to community accepted level. Communities' complaints about pollution and hazards should be address to improve the lives of every stakeholder.

Leadership executives are constantly being held accountable for ensuring that their companies act as "healthy corporate citizens" not just at home, but also in their foreign relations (Brammer, 2012). However, this puts corporate executives in a difficult position, since they must reconcile the needs of shareholders with their need for high returns. Procurement practitioners must address social responsibility buying (SRP), as well as other business factors such as "value for money" and low-cost sourcing, as well as customer perceptions of low costs, in the sustainability model.

Furthermore, it is documented in procurement literature the relevant of social interaction on the organizational performance. For instance, study conducted by Delmas & Pekovic (2013) expunge that an organisation enjoys superior performance if it adopts and implement environmental standards couple with increasing employee training and interpersonal contact. And this assertion is further supported in the findings of Sammalisto & Brown (2012). Ultimately the adoption of social sustainable procurement practices would impact the performance of public organizations. Based on this backdrop the third hypothesis formulated as such. Hypotheses 3 is proposed based on above theory:

*H3: Social Sustainable procurement practices have a positive impact on performance of public sector enterprises.*

#### ***2.5.4 The Moderating Role of Relational Governance on Sustainable Procurement Practices and Organizational Performance***

Towards improve competitive advantage of organisations in an evolving green revolution; the business landscape has witnessed the establishment of new inter-organisation alliances. A review of the literature reveals organisational alliance has an impact on the sustainability on organisation operational and innovation performance. Per resource-based view and relational capital theories the successes of these alliances are built on the constant interaction and cooperation between network members (Tsang, 2005; Wu, 2008; Chong et al, 2011).

The establishment of green procurement network is not farfetched if sustainable procurement practices can be implemented effectively. The mandate of this network is to champion the green evolution agenda. And further encourage actors to adhere to standards and regulation governing the green procurement process. This network will ensure sufficient knowledge and information is diffuse among actors, resulting in the development of ties and trust between individual actors. As elaborate by several studies trust is key antecedent of information and knowledge sharing but requires a collective effort to initiate. Therefore, the formation of green network provides actors the opportunity to foster together, build trust and contribute individual quota to achieving successful responsible procurement that is divulge of wastage and meets the triple bottom line (Lee, 2011; Benjaafar, Li & Daskin, 2013; Bocken & Allwood, 2012).

Several policies and deliberate measures have been instituted to ensure organization abide by sustainable practices and standards, however, it has not achieved desired outcome. Studies in the transaction cost economies domain has reveal that most organisation enter into the practice of sustainability for sole purpose of economic gains as opposed to enrich social and environmental dimension of sustainability (Walker et al, 2011; Carter & Rogers, 2008). Furthermore, a major

characteristic of transaction cost economies is utilization of contract governance. Contractual governance is documented to impact negatively based on the quantity and accuracy of data and knowledge shared between parties. And further promotes opportunistic behaviours (Poppo & Zenger, 2002).

To achieve a significant feat the quest for sustainability requires collaboration between diverse stakeholders. Collaboration between stakeholders steer the innovation activities of institutions. In addition, collaboration between individuals helps shape their attitude and mental framework (Mettler & Soss, 2004; Oliver & Mossialos, 2005). The exchanges and ties between individuals and organizations serve as a catalyst for information and knowledge sharing. Inter- agency cooperation enables actors achieve sustainability practices along entire supply/procurement network.

Insofar as proper coordination and interaction processes plays a pivotal position in the growth of the procuring-supplier network, as well as choice underpinning governance is critical essence. Relational governance ensures an improvement in ties between actors in green network. Organisations enjoy social capital, resources and shared responsibility by adopting a series of processes that have the support of every member of network. The mutual understanding and trust between parties serve as a thrust to boost the performance of green procurement networks (Powell, 2010; Zinger & Poppo, 2012).

A flexible form of governance is required to encourage voluntary participation of individuals in information and knowledge sharing process. For sustainable procurement practices to thrive is a shared responsibility of various stakeholders – to ensure positive outcome requires constant exchange of information and knowledge. The ties between individual through continuous

interaction help to build mutual trust and understanding. Relational governance provides the flexible and agile framework to improve the performance of a knowledge intensive network (Tsang, 2005; Powell, 2010; Poppo & Zenger, 2002).

The continuous interaction between agents in network has impact on the extent of information and knowledge sharing. As depicted by relational rent theory actors in particular network are able to utilise the capabilities and resources of external parties to improve internal innovation performance. The mutual trust developed by actors in green network serves as a catalyst for improving internal and external operational efficiencies (Lin & Lin, 2006; Song et al, 2006). Relational governance provides individuals and organisations the relevant social identification. The social identification of individuals in an alliance is crucial to the survival of inter-organizational network. Organisation that considers its contribution is valued in an alliance will deem the success of such alliance as a shared responsibility (Micheal, Sally & Marie – Anne, 2014; Frohlich & Westbrook, 2001).

The adoption of relational governance ultimately would ensure opportunistic behaviour is mitigated to the minimal. The relational ties and capital individuals and organizations enjoy serves as breeding grounds for trust and mutual understanding. It further provides organisations with the needed social identification to ensure continuous exchange of tacit knowledge and information relevant for survival of SPP. Opportunistic behaviour mitigated through interaction and aid in establishment of friendship and respect between functional departments. Organisations are able to improve organisation innovation and financial performance utilizing relational resources. The inputs from other agents serve as complimentary resources to sustain organisation core competitiveness (Hillebrand & Biemans, 2003; Schroeder et al, 2002).

Relational form of governance has an effect on the development and sustainability of network relational capital. Relational governance provides actors the avenue to explore the relational resources available to particular group. The flexibility but agile nature of relational governance enables organisations to enjoy available network social capital and relational resources in an effective and efficient manner as opposed to market and hierarchy forms of governance. Consequently, the study argues that organizational alliance that enjoys high degree of relational ties would derive significant benefits from the utilization of sustainable procurement practices and vice versa.

To derive enormous benefits from sustainable procurement practices, organizations should endeavour to bridge difference between relevant stakeholders through improves relational exchanges. Entities or departments that is able to build high degree of relational ties using proper relational governance framework. Proper coordination and interaction between relevant department and personnel consequently would impact the performance of organization. The environmental, social and financial sustainability practice is enriched.

Therefore, it is prudent for organizations to cultivate healthy relationship with key stakeholders to ensure efficiency in sustainability practices. By doing so, organizations can disseminate knowledge and information and exchanges. Based on this argument the hypothesis 4 is expanded in three folds. Hypothesis 4a, 4b, and 4c formulated below:

*H4a: Relational governance can positively moderate the relationship between economic sustainable procurement practices and firm performance.*

*H4b: Relational governance can positively moderate the relationship between environmentally sustainable procurement practices and firm performance.*

*H4c: Relational governance can positively moderate the relationship between social sustainable procurement practices and firm performance.*

### ***2.5.5 The Moderating Role of Top Management Commitment in Sustainable Procurement Practices and Organizational Performance***

The current literature places significant emphasis on the need for organizations to adopt the utilization of clean innovative technologies. The rationale for the shift in production paradigm is rooted in the drastic depletion of natural resources and habitat. In addition, the demand from employee to operate in a safety environment has introduced new dimensions to the sustainability process (Bina, 2013; Kenis & Lievens, 2015). To curb the situation requires the conscious effort of diverse stakeholders (Osttom, 1999; Agrawal, 2001).

Studies have focused on the antecedent of sustainable procurement practices among organizations, especially public ones (Walker et al, 2006). The majority of studies in sustainability domain have focused on how to maintain sustainable practices through the selection of suppliers perceived to offer ecologically friendly products (Walker & Brammer, 1996; Walker & Hampson, 2008; Stuart, 2000). Other studies, such as Preuss (2009) and Erridge & Hnnighan (2012), are centred on the organization of sustainability behavior and commitment to change.

The majority of studies have further focused on green purchasing strategies and supply policies (Min & Galle, 1997; Carter et al., 2000; Zsidisin & Siferd, 2001), green supply chains and green supply chain management (Rao & Holt, 2005; Handfield et al, 1997; Sarkis, 2003) and environmental performance of suppliers (Humphreys et al., 2003). However, a significant portion of studies was conducted in the private sector rather than in the public sector (Walker & Brammer, 2012).

However, findings from these numerous studies happen not to come to a consensus on the implications of sustainable procurement activities on the performance of establishments. The literature suggests series of distortion regarding the connection between sustainable practices and organizational productivity. Some studies report there is indeed a connection among adopting sustainable practices and an organization's financial results. Some further reveal that there is partial or no significant association between SPP and organizational productivity (Knebel, Sturmer, Rossa & Seele, 2019). The rationale for this inconclusive assertion can be classified as micro and macro level factors. However, the study focuses on the micro (internal) factors. Factors such as organizations' attitude towards transformation, key employees' unwillingness to commit and management hinders the achievement of sustainable procurement outcome. To ensure sustainable procurement practices are adhered to in every sector of an organization requires aid and dedication of every individual especially top management.

Top Management Commitment is referred to as a demonstration of top management belief in the significance of sustainable procurement practices (Millman & Wilson, 1999). Top management have the sole responsibility to shape an organization towards its goals and mission. Studies in the area of strategy implementation suggest the importance of top management commitment towards the adoption of new innovation and practices (Spencer, Adams & Yapa, 2013; Wijethilake & Lama, 2019). Top management supports a critical role in the implementation of sustainable approaches such as allocation of resources and personnel. Making prudent decision is rooted in the commitment and involvement level of top management personnel. Basically, the extent at which leadership are dedicated on a particular strategy to impact its implementation process (Gonzalez – Benito & Gonzalez – Benito, 2010).

A study conducted by Bansal and Roth (2000) reveals topmost management obligation remains crucial benchmark to ascertain if an organization is committed to its sustainability values and goals. Although organization implements and maintains sustainability practice mostly is based on normative institutional force. And this one critical reason why sustainability practices fails to achieve stated outcome in practice (Wijethilake et al 2017). To address this situation, require proper communication to attract the commitment and involvement of top management personnel that seeks to serve the sustainability agenda of the organization. Having the support of management would boost the morale of other individuals to abide by sustainability framework.

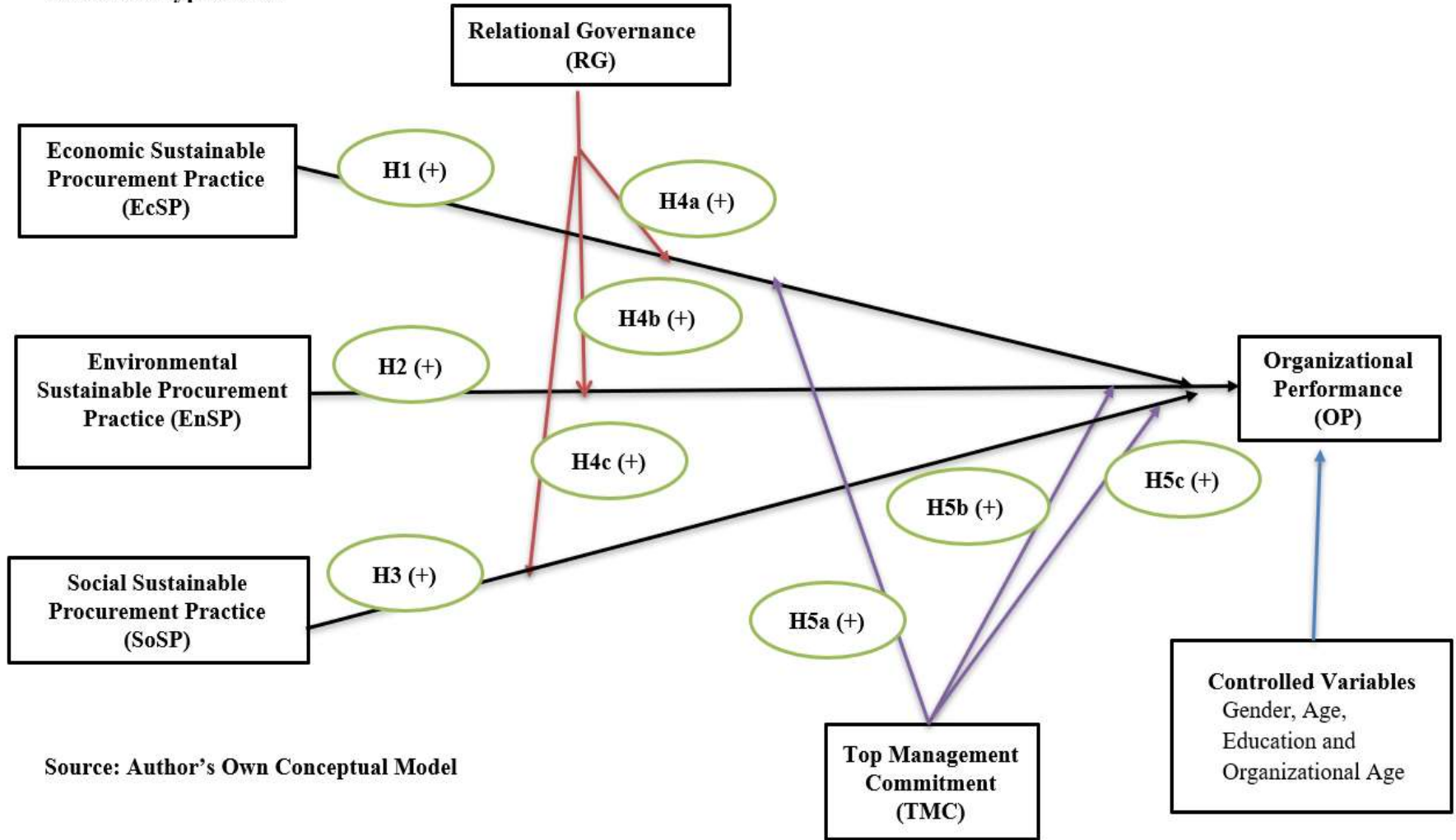
In addition, committed management would result in frequent monitoring and evaluation to ensure wastage is dealt within the procurement process. Therefore, the study conceptualizes that organization that enjoys high management commitment or support has higher probability of improving the correlation between sustainable procurement activities and organizational productivity. The hypotheses 5a, 5b and 5c are formulated below:

*H5a: Top management commitment can positively moderate the relationship between economic sustainable procurement practices and firm performance.*

*H5b: Top management commitment can positively moderate the relationship between environmentally sustainable procurement practices and firm performance.*

*H5c: Top management commitment can positively moderate the relationship between social sustainable procurement practices and firm performance.*

**Figure 2: Theoretical Framework: Research Model: Provides a Conceptual Visualization of the Complete Model and the associated hypotheses.**



## **2.6 Summary of Chapter 2**

Sustainable procurement practices are briefly described as using a firm sourcing strategy to sharp organizational sustainability goals and objectives. Procurement is a strategic activity undertaken by organizations to source and acquire high quality products and services that meet approved standards and benchmarks. The essence of procurement activities in ensuring value for money and value improvement cannot be underestimated especially in public sector institutions. Studies in the intersection of procurement, organizational strategy and sustainability have acknowledged the role of procurement in attaining sustainability implementation. The literature reveals that public institutions, especially in developing economies, happen to be the significant contributor to national expenses and expenditure. The institutional power and authority that public institutions and related agencies have place them in respective positions to enforce sustainability compliance and regulatory requirement. In addition, the concepts and operational definitions of the key construct of the study are discussed in this chapter.

To gain insight into the research questions, the network social capital, relational exchange theory and institutional theory were adopted as theoretical lenses. Adopting these diverse theoretical perspectives enables the study to draw lessons from the strengths of these theories. For instance, relational exchange theory enables the study to investigate the role of relational trust and capital on SPP compliance and exchanges. It further looks at how it mitigates exchange hazards. Institutional theory provides the grounds to examine the role of top management support and commitment towards sustainable procurement practices. In summary the study examined nine (9) hypotheses. The conceptual framework is to measure the direct relationship between dimensions of sustainable procurement practices and organization performance and further investigate the moderating role of top management commitment and relational governance.

## **Chapter 3: Research Methodology**

### **3.1 Introduction**

This research chapter represents the methodological concerns of the study; thus, the chapter explains the research design. Arguments are made for specific philosophical decisions, purpose, strategy and data gathering methods. The study adopts a post positivist approach to investigate research questions understood. The study further adopted a mixed method research strategy. This chapter explains the rationale for selecting mixed-method techniques for data gathering using field survey approaches. In addition how questionnaires and telephone interview are designed in accordance with best practices to ensure data quality and high degree of response rate. The sample technique and data gathering procedure is emphasized. Measurement items and questionnaire telephone interview designs are presented in this section of the study. Data is collected from procurement professionals in Ghana. The acquired data is put to exam the hypotheses stated for the research. Reliability and validity of data is examined in accordance with composite reliability and discriminant validity approach. The structural mode is tested using structural equation modelling techniques.

#### **3.1.1 Research Paradigm**

Identifying the highly preferred study paradigm is significant in the preliminary study strategy road map to adopt for the study. Academia has explained various ideas of the study strategies in various forms per their understanding. Desponded (1983) described the paradigm as a set of concepts integrated into a global investigation, and in addition to that paradigm's goal is to figure out what issues need to be addressed as well as studied and which research resources are accessible to explore at them. Guba (1990) stated this framework is made up of a series of assumptions guide achievement.

Denzin and Lincoln (2000) say that the scholar looks at the whole planet through a collection of theories, a hypothesis, or a phenomenology defines a set of questions (epistemology) and then experiment with methods (methodology, analysis). There are several philosophies that can be used to direct analysis. As proposed by Easterby-Smith, Thorpe and Lowe (1991) suggest positivism and ontology are two philosophies. Denzin and Lincoln (2000) proposed quality and quantity philosophies.

In addition, four foremost ideologies have been identified by works of Guba and Lincoln (1994) that include positivist approach, structuralism, and critical theory are examples of philosophies and reality. Moreover, each of these elements are inter-related with the concept of truth, epistemology is the study of the relationship between things, facts as well as the analyst (epistemology); strategies (the procedure). Guba and Lincoln's (1994) classification that is corroborated by Saunders, Lewis and Thornhill (2007) was chosen for this research and is discussed below.

### ***3.1.1.1 Positivism***

Positivism adopts opposition to quality study, and it is based on the assumption that scientific approach is right adequately balances with one frightening fact (Healy & Perry 2000). Positivism academicians who are optimists look at the world through a single-dimensional focal lens, thereby limiting the academic viability of other exploitation possibilities (Anderson, 1986; Healy & Perry, 2000). Likewise, it is factual that, the positivism dimensions require the research persons total alienation from the environment of which the study is taken place, in other to fully appreciate the outcomes of the investigations.; while academics tries to formulate and construct theories of critical theories believe, those who would engage in real-world activities in order to get a deeper understanding of the inquiry (Healy & Perry, 2000). Key information gathering strategies for

positivist comprise experimental testing as well as evaluation of targeted results (Christie, Rowe, Perry & Chamard, 2000). Christie et al. (2000) proposes other dimension of philosophical reasoning's which are highly relevant in assessing social complexities that require human interaction and real-life experiences. In contrast, Healy and Perry (2000) have recommended positivity is inappropriate when participants are involved in the study real experiences. Most of the explanations above are why pure positivism is not appropriate for this study.

#### ***3.1.1.1.1 Post-Positivism Approach***

Post-positivism is a sensible option that allows for dynamic and interconnected relationships consideration factors such as bureaucratic, historical, legal, and personal associated with the enquiry (Iuchanan and Bryman, 2007). The Post-Positivism method is preferred because it provides an overview of these events, consistent with the definition and evaluation of the research. It also reflects the thinking process that is clearly in line along with the researchers.

The purpose of the research is twofold:

- (a) To investigate the effects of economic, social and environmentally sustainable procurement practices on performance of organizations; and
- (b) To empirically test and explain the impact of the moderating roles of relational governance and top management commitment to sustainability on organisational performance.

Post-Positivism is established as an appropriate paradigm in this study. Compared to other philosophical theories in the field of management, post-positivism deserves to be researched based on the following factors.

Firstly, as established, the study is undertaken within societal background where by the study investigate the effects of economic, social and environmentally sustainable procurement practices on performance of organizations, and further examines the moderating roles of relational governance and top management commitment to sustainability on organisational performance. In such a case, the collected data is deeply embedded in the public domain and the complete interpretation of the data will not be possible (Trochim, 2000).

Secondly, the context created for the public to be investigated in the study means that a number of researchers' opinions and sentiments cannot be excluded from the study in order to make non-discriminatory observations (Sarantakos, 2005; Fraser, 2014). In the above perspective, Post-Positivism empowers to the analyst to minimize numerous steps with multiple views, in order to achieve a clearer picture of the situation physical authenticity (Trochim, 2000).

Third, Post-Positivism shows that perception is full of the theory that existing ideas can affect the process of observation (Trochim, 2000). In this research, research ideas and theoretical framework are developed primarily based on existing theoretical theories, texts and findings. Post-Positivism is therefore a viable option.

#### **3.1.1.1.2 Research Philosophy**

The Study paradigm and philosophy plays a critical role in entire research process, however, selecting a relevant research philosophy being determined by the study's major focus as well as main goal. The central theme the research is to investigate the consequence of relational governance on the outcome of sustainable procurement practices. The study adopts a paradigm of positivism and mixed study method. As a result, the inquiry was launched which requires deductive logic and the inductive reasoning. The research paradigm a researcher adopts plays a

critical role in gaining insights into researcher world perception (Kamal, 2019; Kaushik & Walsh, 2019).

The underlying philosophy for the study is rooted mainly in the positivism school of thought. The study's main goal is to explore the impact of relational governance on the outcome of sustainable procurement practices using accepted scientific processes and procedures. The usage of scientific process enables the discovery of novel knowledge using logical models grounded in robust theories. The choice of paradigm is relevant because the theme of the study does not bother on gaining the mechanism and structures that produce an experience and as such interpretivism and critical realism are not suitable for the research (Khaldi, 2017).

Adopting a post-positivist approach is essential for addressing the research questions by engaging directly with statistical techniques and procedures to create and validate a factual context stated in the hypotheses. In dealing with positivist approach the objective reality of the subject matter is ignored, significant emphasis is place on the statistical evidence relational governance on sustainable procurement practices.

Providing insights into the deductive logic, the conceptual model seeks to understand the relationship between rational governance on sustainable procurement practices. Understanding a subject matter requires looking at situations from a factual perspective rooted in accurate data. In addition, the positivism approach is relevant to the study because it addresses research question in real-life context by soliciting for data from practitioners and professionals in the procurement landscape (Behfar & Okhuysen, 2018).

### **3.1.1.1.3 Research Approach**

According to Saunders et al., 2007, a research methodology includes the use of a concept that is often defined in the research design phase or can be clearly defined in the presentation of conclusions and conclusions. The extent to which the scholar explains the ideas at the beginning of the study raises an important question regarding the structure of the study. It has been suggested that research should use a gravity approach or an attractive approach. Further discussions are done on the suitability and the justification for the specific choice for this study. Two main study methods are both inductive and deductive reasoning approaches. Based on these a research can be further classified as quantitative or qualitative.

#### ***3.1.1.1.3.1 Inductive Approach***

Starting with observations of particular cases, inductive reasoning is a theory-building technique, as well as attempting to build generalisations concerning the occurrence under investigation (Hyde, 2000). Inductive approach uses statistics collected to construct a theory based on analysis. Data is collected in the inductive method, as well as concept is formulated as a part of the review of the results. Moving from concrete observations to wider generalizations and hypotheses is how inductive reasoning works. It's often referred to as a "bottom up" strategy (Saunders, et al., 2007). Inductive reasoning starts with basic observations and measurements that help detect patterns and regularities, then moves on to formulating preliminary hypotheses that can be tested, and eventually to forming general assumptions or theories.

#### ***3.1.1.1.3.2 Deductive Approach***

Cooper and Schindler (2006) clarify that the deductive method is concerned with the formulation of theories and hypotheses through the development of a testing technique to test them. Saunders

et al., 2007 further confirms that, in a deductive approach, a theory and hypothesis or theories are formulated based on the research methodology. After that, a testing methodology is created to verify the theory. The deductivist method begins with the creation of an abstract, logical relationship between concepts before moving on to concrete empirical proof" (Neuman, 1997). As a result, current theoretical framework actively and forms part of grounded structure's role in deductivist science, as it directs the development of theories, the collection of parameters, and the subsequent measures that researchers plan to use. In this method, the researcher first develops a theoretical concept before putting it to the test. Deductive intellectual is a form of cognitive which focuses on testing or proving hypotheses in other words, the goal of deductive reasoning is to test or confirm hypotheses (Saunders et al., 2007).

#### **3.1.1.1.4 Methodological Paradigm**

Methodological paradigm for the study is heavily rooted in mixed research methods. Quantitative methods present the relevant approach necessary for measuring and analysing the data at hand. The option of this methodology for research is in accordance with epistemology and ontology perspective of the research. To mitigate the level of uncertainty and error associated this approach is to design and utilized a well-designed questionnaire as the data collection instrument.

As articulated by Neuman (2003), quantitative research is centred building and testing conceptual model using sets of variables. Measurement to measure, variables are employed to exam the formulated propositions ascertaining the empirical relationship between relational governance, top management commitment, organizational performance and dimensions of sustainable procurement practices. The rationale for selecting quantitative is because of the strategy it allows scholar to explore and relationship between the measurement variables understudy. A number of hypotheses are stated for the study to gain meaningful understanding of the theoretical relationship

outlined in the hypotheses, quantitative techniques are considered appropriate (Neuman, 2003; Roberts, 2006). The relationship is explored using regression models.

#### ***3.1.1.1.5 Adopting the sequential mixed methods design with explanations***

The study used an explanatory sequential mixed methods approach chosen for a variety of reasons. To begin, the research gaps indicate a need to collect empirical data in order to better define the problem and examining the effects of sustainable procurement practices as a full scale multi-dimensional construct and their overall impact on organisational performance. Also, what mechanisms are available to enable organisations practicing sustainability attain significant organisational performance. The current study's quantitative aspect assisted in gathering the necessary analytical data in a format that can be analysed to assess the degree to which each of the variables may have an effect on the outcome of organisational performance. The phone interview of procurement experts and practitioners is the current study's qualitative part. This is needed in order to collect additional information in order to better clarify the situation and the overall impact of all the three dimensions of SPP in relation to proposed moderating factors on organisational performance.

As a result, the reason for combining, it is essential to collect both quantitative and qualitative data and adequately capture the information and the complicated features of organizational performance following the adoption of SPP by organisations, since the qualitative phase will aid in the development of the first phase's findings (Ivankova, Creswell & Stick 2006; Ivankova & Stick 2007). In addition, all parties' perspectives as a procurement experts and practitioners on the effects of adopting SPP on organizational performance over the period can be sufficiently appreciated by the support of the analysis comprising of both quantitative and qualitative elements.

Current literature reviews fall short of examining the effects of sustainable procurement practices as a full scale multi-dimensional construct and their overall impact on organisational performance. Also, what mechanisms are available to enable organisations practicing sustainability attain significant organisational performance. In the same way, few empirical studies have captured organisation's ability to balance sustainable procurement practices (Attia & Salama, 2018; Howard, 2015; Oelze, 2017), mostly used environmental and social sustainability or economic sustainability as a one-dimensional construct (Thong & Wong, 2018). Thereby limiting researchers' insight into how sustainable practices affect organisational performance as a multiple dimensional construct. Sustainable procurement practices undoubtedly affect the performance of organisations (Zhu & Sarkis, 2004; Hervani, Helms & Sarkis, 2005).

The current study investigates the effects of economic, environmental and social considerations on sustainable procurement practices on performance of organizations. It further examines the moderating roles of relational governance and commitment from the top leadership to sustainability and performance of organizations. In the literature, there is a general agreement, following emergence debate in terms of whether companies benefit from relational governance in their repeat relationships in terms of results (Goerzen, 2007). Conclusively, scholars advocate that, long-standing relations allow for the accumulation of specific interactions and habits, which improve inter-organizational exchange efficiency (Mayer and Argyres, 2004; Zollo et al., 2002).

To do so, this study required the gathering of a descriptive percentage of data that had been accomplished by interviewing procurement experts and practitioners. According to Henwood and Pidgeon (2006), qualitative data can be used to produce new information about a specific phenomenon. This is also likely to provide new insights into the phenomenon.

### **3.2 Quantitative and Qualitative Research**

Based on these two approaches, research can be categorised as quantitative or qualitative research. Where the research combines both quantitative and qualitative methods, it is categorised as mixed methods. Quantitative research methodology follows deductive reasoning while qualitative research methodology follows inductive reasoning. The use of sustainable procurement has been investigated through mixed-methods analysis approaches over the years (Walker & Wendy; 2006 & 2009; Walker & Brammer, 2012; Walker et al., 2012; Grandia et al., 2015; Thong & Wong, 2018).

The term "qualitative research" refers to research that is conducted on a small scale as "non-quantitative testing and interpretation of the target, with the aim of obtaining sub-definitions and relationship patterns" (Babbie, 2010: G9). Quantitative analysis, on the other hand, represents numerical illustration of observational data for the aim of explaining the occurrences reflected by those observations" is defined as "the numerical analysis and interpretation of findings for the purpose of describing and explaining the occurrences reflected by those assertions" (Babbie, 2010). Objectivist science, which assumes that truth occurs independently of the researcher, is frequently correlated with quantitative research (Gray, 2009). Qualitative research, on the other hand, is linked to social constructionist research, which considers reality and context to be created and interpreted by individuals (Gray, 2009). Quantitative research is characterized along with "the compilation or interpretation of quantitative data in a particular sample in which the data are obtained and prioritized, and require data integration one or more times during the research development" (Creswell & Clark, 2011).

Despite the fact that these studies approaches are often focused on different epistemologies, they are not mutually exclusive. Mixed-method research employs both qualitative and quantitative

research approaches, as well as a much more practical study epistemology "which interpretations information where both socially built and grounded in the truth of the society, we live in" (Johnson et al., 2007; Gray, 2009).

### **3.3 Justifications for the adoption of the Mixed Methods Approach**

This research paradigm, more commonly known as a hybrid approach, encompasses the inclusion from the design of quantitative and qualitative approaches phase to the analysis and insight obtained. Subsequently, that combination of both methods is used for question-making, method selection, data collection and analysis, and indexing (Tashakkori & Creswell 2007; Tashakkori & Teddlie 2003; Teddlie & Tashakkori 2009). For data analysis, mixed research methods use various mixture of statistical and contextual approaches (Teddlie & Tashakkori 2009). This helps to identify and interpret the corresponding dynamics linked with the object under studied.

### **3.4 Research Designs**

Research design is a structural framework that outlines statistics gathering process as well as data processing techniques to be utilized. In accordance with positivist paradigm adopted for the study, the study first accepts a quantitative approach of explored the connection between economic, social and environmental SPP on organizational performance and moderation roles of relational governance and top management commitment. Adopting this approach provide relevant avenue to unearth salient insights into how relational governance and top management commitment influence the connection between sustainable procurement and organizational performance (Yin, 2009; Heron et al., 2006).

The quantitative method places significant attention on variables in the data collection process. Data acquired enables researcher to examine the extent relational governance affect sustainable procurement practices (SPP) using empirical techniques. The quantitative approach uses structural analysis techniques such as questionnaires, interviews, or both to assess the relationship between variables. The implementation of such a model necessitates the development of numerical or quantitative representations of the subject matter (Fisher, 2011; Baxter & Jack, 2008). Data is collection is conducted in multiple phases using questionnaire as data collection instrument. The questionnaire is designed in concise and appropriate manner devoid of any form of ambiguities and common variance bias. The quality of questionnaire has a positive consequence on the quality of information acquired. The questionnaire measures items on a 7-liket scale. Using 7-scale to assess questionnaire offers more room to gain insights from respondents and well accepted in management research.

### **3.4.1 The Study Design Focused on The Study's Goal**

Academia literature outlines classifications of research designs on the basis of the purpose of the study. According to the purpose outlined by the study, common designs are exploratory, descriptive, or explanatory (Engstrom & Salehi-Sangari, 2007). Exploratory designs basically, promote the creation and formulation of a research concept, researchers can typically explore not well-understood occurrences known (Thomas & Lawal, 2020) in other words interact with a novel, under-appreciated challenge, question, or subject (Phillips & Pugh, 2000). Exploratory studies are useful for to find out what is happening; seeking new understanding; asking questions and exploring something in a new way '(Robson, 2002). It works especially when researchers want to

clarify their understanding of a problem, so that they can present the problem situation directly (Shen et al, 2021). Camargo & Pereira, (2020) exploratory study is very flexible and adaptable to change.

Explanatory designs define relationships amongst dissimilar situations, either variation in the configuration of the situation, including looking at the relationships that exist (Marinelli & Salopek, 2019). In explanatory academia research, the aim of analysis is to investigate a condition or dilemma in order to understand the relationships between variables (Saunders et al., 2007). The data collected in explanatory research is usually subjected to statistical tests like correlations and regression analysis to explain or understand the link between the various variables.

In far more previous seasons, academics possess discovered these same advantages of multidisciplinary research (e.g., Andrew & Halcomb 2006; Teddlie 2009). In particular, mixed research methods provide research power related to psychological functioning and human behavior (Ponterotto, Mathew & Raughley 2013). This study uses a combination of research methods as it is suitable for the following situations:

1. Where it is necessary to include both verification and evaluation in relation to research questions and objectives (Teddlie & Tashakkori 2009);
2. Consolidating disagreements in the views and perceptions of the sample participants in this study (Tashakkori & Creswell 2007; Tashakkori & Teddlie 2003; Teddlie & Tashakkori 2009); and
3. In order to conduct a thorough investigation into the unidentified dimensions of this occurrence, (Moran-Ellis et al. 2006; Teddlie & Tashakkori 2009).

Consequently, worst-case scenario is to use a multi-dimensional approach where quantitative or qualitative methods can answer one study enquiry. This research requires a study of mixed methods such preceding study on the adoption and implementation of on-going procurement practices in organizations long since emergence (Walker & Wendy, 2006 & 2009; Walker and Brammer, 2012; Walker et al., 2012; Grandia et al., 2015; Thong & Wong, 2018; Kates, 2018; Report of the UN Sustainable Development Goals Report 2018).

Regardless of the fact that recommendation by Creswell & Clark (2007), the numerous problems which renders it possible to incorporate hybridization approaches is very problematic (Ivankova 2004; Ivankova, Creswell & Stick 2006; Ivankova & Stick 2007). In particular, multidisciplinary study is a time-consuming process, and the decision must be made quickly as a making procedure for the first half of the quantity or quality is a challenging task (Creswell & Plano-Clark 2011; Creswell 2013). This implies that proper preparation and resource scheduling are needed critical to avoid backlogs while research focuses on time. All of these issues have been addressed in this dissertation with construction followed by revision on the regular recurrences of the Gantt chart revisions on important times as well as related activities. Other views anticipated five main design projects for mixed-methods adoption: similarity, sequence, modification, multi-levelled and interconnected (Creswell 2003; Creswell & Clark 2007). These types of designs can be modified which has led to other sub-types.

A consecutive approach has a subset that is known as a sequential descriptive design of a mixed path (Creswell & Plano-Clark 2011). The design of a series of mixed-methods being favoured as best fit for this study (Teddlie & Tashakkori 2009). This architecture is mainly concerned with the dimensions of the measuring data following that the enquiries are

generated from the analysed the initial data's outcomes collection of the second data collection. There are therefore two distinct categories of data collection of consecutive descriptive method data (Creswell & Plano-Clark 2011) size and level categories (Tashakkori & Creswell 2007; Tashakkori & Teddlie 2003; Teddlie & Tashakkori 2009). With the above layout, the previous process of data gathering comes before the phase of data analysis quality.

### **3.5 Research Strategy**

Marshall and Rossman (1999) consider research strategy as methodical approach to map out and address research objectives and questions of a particular study. Yin (2003) classified research strategies into diverse forms such as experimentations, observation, archival study, histories, and case studies are the five main research techniques in the social sciences. However, Saunders et al. (2007) recognize seven study techniques. with exploration, survey, experimental, practical study, established theory, ethnography, and archaeological study. Through method that can be applied to a variety of situations all three research projects depending on the research purpose, i.e., descriptive, descriptive, and experimental. These strategies can be based on diminished or intellectual schools, with a focus on enabling the researcher to achieve research goals.

Experiment: an ancient kind of study that contributed a lot to natural and social sciences, especially psychology. Survey: is usually associated with a drag method. It is a popular and common strategy in business research. They allow for the collection of large amounts of data from adults in a highly cost-effective manner. Based on the frequency of the questionnaire, the data is evenly placed and allows for easy comparison. Case study: especially interesting where the goal will be to achieve a thorough comprehension of the research's meaning and mechanisms involved (Widdersheim, 2018).

Basic theory: collection of data starts before the current conceptual structure is formed. Information from a series of experiments was used to establish concept of visual cues. This information leads to the formation of assumptions that are then put to the test on a continuous note. The purpose of understanding the socioeconomic environment is to research topics in the way they interpret them. This is obviously a time-consuming and time-consuming research process. Practical explorations: the participant is a member of an organisation where the testing method and modifications are managed (Huynh et al., 2018).

Based on the explanations above, this study adopts the Survey Strategy. Further explanation is given on the research strategy choice to provide insight and a pathway to statistics gathering. This research adopts the survey research strategy which is generally linked to the deductive method. It is a well-known and widely used technique in market analysis. This strategy enables for the gathering of a huge amount of information from a significant number of people in a cost-effective way, typically by questionnaires; data are standardized and simple to compare (Riley et al, 2012).

### **3.5.1 Justification for Choosing Survey Strategy**

The deductive method is often correlated with the survey technique. It's a standard and widely used approach in business and management studies, and it's the most basic way of answering who, when, when, how many, and how many questions (Wagner et al., 2020; Pop, 2019). In particular, a survey entails conducting interviews with respondents using a questionnaire that has been pre-designed. Explanatory analysis relies heavily on surveys. Personal interviews, mail panels, postal polls, telephone interviews, and internet surveys are all examples of survey methods. Respondents are quizzed about how they feel about their behaviour, motives, and behaviours toward others

(Montabon & Daugherty, 2018). However, questionnaires are not the only way to gather data for surveys. Structured observation and structured interviews, in which all interviewees are asked the same set of questions, are also included in this grouping.

Surveys are being as mentioned: an observational study investigation into present occurrence in its natural setting, particularly with distinctions with relationship regarding occurrence and meaning blurred (Hullan et al, 2018). A survey is one of the methods for conducting social science studies. The survey's benefits and drawbacks have been identified by researchers (Dube & Pare, 2003).

### **3.6 Questionnaire Design**

Questionnaire is design with the user/respondents in perspective – the questionnaires were designed to solicit straightforward answers from key informants. The language of questionnaire is simple to ensure respondents can provide the necessary responses. The questionnaire is classified into two sections. First aspect of the questionnaire focuses on the demographics of respondents while the last aspect of the questionnaire highlights the items used to measure the conceptual framework of the study. Measurement items on the questionnaire include relational governance, collaborative performance, relational identification and sustainable procurement practices. The items on questionnaire are multidimensional and measured on a 7-liket scale. Adopting this technique allows the researcher to gain enough information on the extent at which participants agrees or disagree with particular item. It is worth noting the questions are close ended.

### ***3.6.1 Pilot Study on Questionnaire Design***

#### ***3.6.1.1 Over View of the Public Procurement Authority (PPA).***

The Public Procurement Act, 2003 (Act 663) constituted the PPA being the legislative body responsible for successful enforcement by the Public Procurement Law of Ghana. In order to foster a sustainable local economy and raise the confidence of our various partners in public procurement, the Authority aims to ensure equity, accountability, and non-discrimination in public procurement.

#### ***3.6.1.2 Justification for Pilot Study with Public Procurement Authority PPA***

In December 2010, the Government of the Republic of Ghana took a big move forward when it announced that as part of its national plan for sustainable growth, it will establish a Sustainable Public Procurement (SPP) scheme through the public procurement authority (PPA). The PPA was tasked to implementing this policy since it is the national regulator on procurement in Ghana. Ghana has promoted the purpose of SPP as being one of the constituents their main strategy interventions towards this date, through PPA, in order to sustain the government procurement policies have seen significant improvement. It is expected, parties would get used to it latest tendency of work through the management to enforce it as soon as possible.

### ***3.6.2 Pilot Testing Study***

To ascertain a questionnaire's validity and reliability, this study conducted a feasibility study to pre-test the data collection tool. An online survey instrument is use to collect the pilot test data. This is consistent with the survey strategy being adopted for the main study. The designed questionnaire is shared with the PPA. The pilot study involved the administering of questionnaire to staff of the PPA which is made up of well-seasoned procurement practitioners and academicians

Items on the questionnaire that measures independent variables are evaluated using the Liker scale of seven-point. As such the questionnaire therefore was shared on the platform for the pilot testing.

The study was been taken through the pilot analysis at the time could only record about Seventy-Five (75) Technical Staff at the PPA. Fifty-Seven (57) confirmed availably and readiness to take part with the pilot study. The remaining Eighteen (18) were however, engaged in the field outside the region. They however, gave assurance of their readiness to take part with the main study since they are also active members with CIPS-Ghana Branch. Below is summary of the population, sample and response received. The table 2 presents a summary of the respondents selected for the pilot survey study. As elaborated the pilot study is to gain insights into the accuracy, reliability and validity of questionnaire and measurement items.

**Table 2: Pilot Study**

<b>Public Procurement Authority (PPA)</b>		<b>Pilot Test Population</b>	<b>Pilot Test Sample</b>	<b>Pilot Test Response</b>
<b>Directorates for Pilot Test</b>				
1	CEO Directorate	15	6	6
2	Legal Directorate and Board Secretariat	1	1	1
3	Directorate of Capacity Development	10	5	5
4	Directorate of Management Information Systems	6	4	4
5	Directorate of Compliance, Monitoring and Evaluation	17	17	17
6	Corporate Affairs and Administration Department	2	1	1

7	Directorate of Policy and Strategy and Finance	13	12	12
8	Human Resources Department	11	11	11
	<b>Total Public Procurement Authority (PPA)</b>	<b>75</b>	<b>57</b>	<b>57</b>
	<b>Percentage</b>		<b>76%</b>	<b>100%</b>

**Source: Field Data: PPA (2020)**

Out of the Fifty-Seven (57) confirmed sample that took part with the pilot study, all responded making up hundred percent (100%) response rates. The rationale for this pilot test is to evaluate the accuracy and relevance of questionnaire items. Adopting this mechanism enables the study to deal with issues of ambiguities associated with questionnaire. It further provides relevance leverage to deal with common method bias (DeVellis, 2003). Furthermore, the Pilot analysis of the questionnaire is conducted to ascertain the accuracy of measurement items and survey instrument. During the pilot testing phase respondent provided insightful feedbacks that shaped the final questionnaire. Issues such as word ambiguity and incomplete statements are identified and addressed. Pre-testing help mitigate construction errors and wrong wording in questionnaire (Zikmund et al, 2012; Collin, 2003). Finally, during the pilot testing and focus group discussion, social desirability bias is examined. Information from key informant involved in the test suggests social desirability is not a threat to data collection instrument.

**3.6.3 Pilot Testing Result**

**3.6.3.1 Validity and Reliability Test**

The pilot test results were undertaken using the reliability and validity of the pilot data is ascertained by conducting Cranach alpha test and average variance extracted test respectively. The outcome of this initial analysis indicates the questionnaire items are valid and reliable according

to the composite and average variance extracted values. These tests outcome are consistency with benchmark index proposed by Hair et al (2014). Validation of measurement items provides the study the grounds to scale up data collection processes. The table 3.1 presents the outcome of reliability and validity test.

No.	Variables	No. of Items	Alpha	Average Variance Extracted(AVE)
1	Economic Sustainable Procurement Practices	5	0.746	0.616
2	Environmentally Sustainable Procurement Practices	3	0.583	0.578
3	Social Sustainable Procurement Practices	3	0.643	0.658
4	Top Management Commitment	3	0.718	0.546
5	Relational Governance	7	0.694	0.684
6	Organizational Performance	4	0.821	0.596

**Source: Field Data: (2020)**

### 3.7 Population and Sample

The Research term "population" refers to all individuals or things that are being studied, while "sampling" refers to the method of choosing a subset of the population to investigate (Hair, 2003).

Sampling is the method of choosing targeted units from a data collection in order to assess the people's traits, values, and attitudes. In survey vocabulary, a population is a diverse group of individuals, organizations, items, and other objects with common features that the analyst is concerned with. Individuals, organizations, objects, and so on are distinguished by the common characteristics of the communities.

The study's aim is to look at the consequences of economic, environmental and social sustainable procurement practices on performance of organizations. It further examines the moderating roles of relational governance and top management commitment to sustainability on organisational performance. A variety of parameters were used to assess the population of the study to ensure that sampling errors were minimized on the procurement experts and professionals for the present study's first step of data collection. This contained the following:

- The chartered institute of purchasing and supply (CIPS) Ghana database of membership is filtered for only active members who are current on membership dues on subscriptions. CIPS Membership subscriptions and all CIPS membership fees quoted are for annual subscriptions (12 months).
- CIPS Membership is basically drawn from public and private sector educational institutions, organisations and professional associations across the globe. Some key areas of concern to CIPS have to do with Aerospace and Defence, Construction, Engineering, International Development, Manufacturing, Oil, Gas and Energy, Public and private Sector development, Services and Transport.
- Active membership must fall within the Study CIPS, MCIPS, FCIPS, Affiliate and the Chartered Professional

### ***3.7.1 Justification for Targeted Population***

The CIPS Ghana database of membership is filtered for only active members who are current on membership dues on subscriptions. CIPS Membership subscriptions and all CIPS membership fees quoted are for annual subscriptions (12 months). Members are required to renew and make payment prior to the expiry of their 12-month membership subscription in order to maintain their active membership status. A summary of the targeted population – thus the CIPS membership is presented in table 4.

#### **CIPS Membership Benefits:**

- **Facilities:** Take advantage of an abundance of information, information, guidelines, white papers, tools, and models, as well as reporting, commentary, and resources.
- **CIPS Information:** Connect a range of information, skills, and materials, such as guides, white papers, software, and models.
- **Supply Management Magazine:** A free web magazine with the latest news, work openings, and recent trends in the buying and sale of real estate. Sale of goods.
- **Ethics E-learning:** Integrate understanding and commitment guaranteed to ethics and practical online courses.
- **Connect Directly:** Share insights, news, and best practices with the global CIPS group of over 200,000 employees across an online and offline network.
- **Continuous encouragement:** Get access to technical development resources, such as a results self-assessment platform.
- **CIPS membership also gives you access to discounts on seminars, meetings, and business books.**

- Self-Assessment: Self-Assessment Tools to guide self-study and development and compliance with International Standards.

Job Description which includes the seven (7) main areas of Supply Chain operations: Procurement, Production, Asset Management, Demand Management, Housing Maintenance, Transportation, and Customer Service to filter active membership status in the CIPS Ghana database.

**Table 3: Active Membership Details as at February 2020**

<b>Active Members of CIPS Ghana as at February 2020</b>								
<b>No.</b>	<b>DESCRIPTION</b>	<b>JOB</b>	<b>Study</b>	<b>MCIPS</b>	<b>FCIPS</b>	<b>Affiliate</b>	<b>Chartered</b>	<b>Totals</b>
	<b>TITLES</b>		<b>CIPS</b>				<b>Professional</b>	
	<b>General Functions</b>							
	<b>(Supply Chain)</b>							
1	Directors	-	70	45	55	46		<b>216</b>
2	Deputy Directors	-	66	36	45	49		<b>196</b>
3	Principal Managers	23	55	66	79	43		<b>266</b>
4	Senior Managers	40	89	55	98	89		<b>371</b>
5	Managers	10	25	64	55	23		<b>177</b>
6	Assistant Managers	16	13	24	44	22		<b>119</b>
7	Chief Assistants	8	15	34	55	10		<b>122</b>
8	Principal Assistants	39	6	4	5	30		<b>84</b>
9	Senior Assistants	14	14	6	1	40		<b>75</b>

10	Assistants	20	15	5	1	-	<b>41</b>
11	Senior Officer	14	23	22	1	1	<b>61</b>
12	Officers	10	-	-	-	-	<b>10</b>
	<b>Totals</b>	<b>194</b>	<b>391</b>	<b>361</b>	<b>439</b>	<b>353</b>	<b>1,738</b>

**Source: Field Data: CIPS-Ghana (2020)**

### **3.7.2 Sampling Methods and Procedure**

In social science analysis, there are two kinds of sampling techniques: probability and non-probability (Babbie 2012; Bryman 2012). In general, the potential of a sampling technique to yield more reliable results without needing to gather data from the whole population can guide the sampling technique for a sample (Denscombe 2010). This is important, given the expenditure in terms of financial expenses and length of period spent on collecting and analysing test results. The probability sampling procedure being specifically applied for realizing the sample being reflective in comparison to the population in order for the scene intended for future results generalization (Hair et al., 2007). Since the procedure is random, the researcher has little control about what items may be included or omitted from the sample in this sort of sampling approach (Celsi et al. 2011; Hair et al., 2007). Non- probability sampling is an alternative to probability sampling. The non-probability sampling method can be used for a variety of purposes. Bryman (2012) identifies the most prominent factors as a lack of time and money in comparison to available resources, significant difficulties in collecting chance samples, and the one-of-a-kind opportunity to research a specific sample of a population.

This dissertation' quantitative data collection method included a web-based survey of Active Members of CIPS Ghana, was conducted using the probability sampling approach. While

employing probability sampling approaches, it is recommended that concerns such as sample size and effect, in addition to predictive capacity measurements, be carefully considered. The value of selecting the appropriate sample size stems in part from the effect it has on the precision of results (Bryman 2012).

The overall size of the population, confidence levels, and confidence intervals were all considered and accounted when deciding the appropriate size of the sample size for this current study's web-based survey. According to some academia studies in related industry survey undertaken totalling of about 2,439 respondents, would result in an estimated and generally agreed statistical using the error of margin, confidence level, population size, and confidence interval (Raosoft, 2004). After the data was analysed, a sample size of 332 was determined (margin of error = 5%, confidence level = 95%, target population size = 2439, and response distribution = 50%). When the target population is less than 10,000, Saunders et al. (2011) suggest that the original sample size (the statistic derived during the initial calculation) has to be refined further. A further change was made since the present study's target population is 1738. The following formula (Sigmund, 2003; Zikmund et al., 2012) is commonly proposed for further adjustment of the original sample size:

$$n' = \frac{NZ^2P(1 - p)}{d^2(N - 1) + Z^2P(1 - P)}$$

Where;

$N'$  = represent the sample size to be determined

$N$ = represents the population

$Z$ = denotes the statistical value of confidence level, 95% confidence level, thus  $Z = 1.96$

D= denotes the margin of error of 95% confidence level

P=denotes estimated population proportion (0.5)

Based on above, and following calculations, n' is the modified sample size, n is the original sample size and N is the target population size. Consequently: Substituting the values in the formula the sample size computed as follows:

$$n' = \frac{1738(1.96)^2 0.5(1 - 0.5)}{0.05^2(1738 - 1) + (1.96)^2 0.5(1 - 0.5)}$$

$$N' = 338$$

Therefore: n' = 338

At a 95 percent confidence level, the improved sample size of 338 is compatible with the matching sample size and related target population table created and suggested by Saunders et al. (2011).

Table 4: Sample Frame

Description Job Titles	Study CIPS		MCIPS		FCIPS		Affiliate		Chartered Professional		Totals	
	TP	SF	TP	SF	TP	SF	TP	SF	TP	SF	TP	SF
Director of Procurement	-	-	70	35	45	23	55	28	46	23	<b>216</b>	<b>109</b>
Deputy Director of Procurement	-	-	66	33	36	18	45	23	49	25	<b>196</b>	<b>99</b>
Principal Procurement Manager	23	12	55	28	66	33	79	40	43	22	<b>266</b>	<b>134</b>
Senior Procurement Manager	40	20	89	45	55	28	98	49	89	45	<b>371</b>	<b>187</b>
Procurement Manager	10	5	25	13	64	32	55	28	23	12	<b>177</b>	<b>89</b>
Assistant Procurement Manager	16	8	13	7	24	12	44	22	22	11	<b>119</b>	<b>60</b>
Chief Procurement Assistant	8	4	15	8	34	17	55	28	10	5	<b>122</b>	<b>62</b>

Principal Procurement Assistant	39	20	6	3	4	2	5	3	30	15	<b>84</b>	<b>42</b>
Senior Procurement Assistant	14	7	14	7	6	3	1	1	40	20	<b>75</b>	<b>38</b>
Procurement Assistant	20	10	15	8	5	3	1	1	-	-	<b>41</b>	<b>21</b>
Senior Procurement Officer	14	7	23	12	22	11	1	1	1	1	<b>61</b>	<b>31</b>
Procurement Officer	10	5	-	-	-	-	-	-	-	-	<b>10</b>	<b>5</b>
<b>Totals</b>	<b>194</b>	<b>98</b>	<b>391</b>	<b>197</b>	<b>361</b>	<b>182</b>	<b>439</b>	<b>222</b>	<b>353</b>	<b>178</b>	<b>1,738</b>	<b>877</b>

**50.46%**

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**Source: Field Data: CIPS-Ghana (2020)**

TP: Target Population

SF: Sample Frame

### 3.7.3 Sample Frame Selection

The identification and selection of appropriate sample for the study is critical to the credibility of the outcome of the study. Having the ability to identify the right sample frame out of a targeted population is of essence. However, it is prudent to clearly define the targeted population in order to overcome the boundary specification problem identified with survey process (Amphora, 2008; Wywial, 2008). The above target population is further filtered to job titles directly related to purchasing and procurement only as the sampled frame population for the study.

Table 5: Sample Frame (SF): Active Membership Details as at February 2020 (Purchasing and Procurement Only)

No.	DESCRIPTION JOB TITLES	Study	MCIPS	FCIPS	Affiliate	Chartered	Totals
		CIPS				Professional	
	Sample Frame	SF	SF	SF	SF	SF	SF
1	Director of Procurement	-	45	23	12	28	<b>108</b>
2	Deputy Director of Procurement	7	38	23	36	27	<b>131</b>
3	Principal Procurement Manager	15	34	35	17	28	<b>129</b>
4	Senior Procurement Manager	27	30	20	21	29	<b>127</b>
5	Procurement Manager	10	25	22	14	23	<b>94</b>
6	Assistant Procurement Manager	16	13	24	13	22	<b>88</b>
7	Chief Procurement Assistant	8	15	21	13	10	<b>67</b>
8	Principal Procurement Assistant	12	6	4	5	17	<b>44</b>
9	Senior Procurement Assistant	3	5	6	1	19	<b>34</b>

10	Procurement Assistant	5	8	5	1	3	<b>22</b>
11	Senior Procurement Officer	7	8	13	1	1	<b>30</b>
12	Procurement Officer	3	-	-	-	-	<b>3</b>
	<b>Totals</b>	<b>113</b>	<b>227</b>	<b>196</b>	<b>134</b>	<b>207</b>	<b>877</b>

**Source: Field Data: CIPS-Ghana (2020)**

**SF: Sample Frame**

Table 6: Sample Frame and Response: Active Membership Details as at February 2020 (Purchasing and Procurement Only)

No	CIPS-Ghana Categorisations	Study CIPS		MCIPS		FCIPS		Affiliate		Chartered Professional		Totals	
		SF	RSF	SF	RSF	SF	RSF	SF	RSF	SF	RSF	SF	RSF
1	Director of Procurement	-	-	45	27	23	14	12	7	28	17	<b>108</b>	<b>64</b>
2	Deputy Director of Procurement	7	4	38	23	23	14	36	21	27	16	<b>131</b>	<b>78</b>
3	Principal Procurement Manager	15	9	34	20	35	21	17	10	28	17	<b>129</b>	<b>76</b>
4	Senior Procurement Manager	27	16	30	18	20	12	21	12	29	17	<b>127</b>	<b>75</b>
5	Procurement Manager	10	6	25	15	22	13	14	8	23	14	<b>94</b>	<b>56</b>
6	Assistant Procurement Manager	16	9	13	8	24	14	13	8	22	13	<b>88</b>	<b>52</b>
7	Chief Procurement Assistant	8	5	15	9	21	12	13	8	10	6	<b>67</b>	<b>40</b>

8	Principal Procurement Assistant	12	7	6	4	4	2	5	3	17	10	44	26
9	Senior Procurement Assistant	3	2	5	3	6	4	1	1	19	11	34	20
10	Procurement Assistant	5	3	8	5	5	3	1	1	3	2	22	13
11	Senior Procurement Officer	7	4	8	5	13	8	1	1	1	1	30	18
12	Procurement Officer	3	2	-	-	-	-	-	-	-	-	3	2
	<b>Totals</b>	<b>113</b>	<b>67</b>	<b>227</b>	<b>135</b>	<b>196</b>	<b>116</b>	<b>134</b>	<b>79</b>	<b>207</b>	<b>123</b>	<b>877</b>	<b>520</b>

**Percentage**

**59.29%**

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**Source: Field Data: CIPS-Ghana (2020)**

**SF: Sample Frame**

**RSF: Response Sample Frame**

Table 7: RSF: Response Sample Frame: Active Membership Details as at February 2020 (Purchasing and Procurement Only)

No	CIPS-Ghana Categorisations	Study CIPS	MCIPS	FCIPS	Affiliate	Chartered Professional	Totals
	Description Job Titles	RSF	RSF	RSF	RSF	RSF	RSF
1	Director of Procurement	-	27	14	7	17	64
2	Deputy Director of Procurement	4	23	14	21	16	78
3	Principal Procurement Manager	9	20	21	10	17	76
4	Senior Procurement Manager	16	18	12	12	17	75
5	Procurement Manager	6	15	13	8	14	56
6	Assistant Procurement Manager	9	8	14	8	13	52
7	Chief Procurement Assistant	5	9	12	8	6	40
8	Principal Procurement Assistant	7	4	2	3	10	26
9	Senior Procurement Assistant	2	3	4	1	11	20
10	Procurement Assistant	3	5	3	1	2	13
11	Senior Procurement Officer	4	5	8	1	1	18

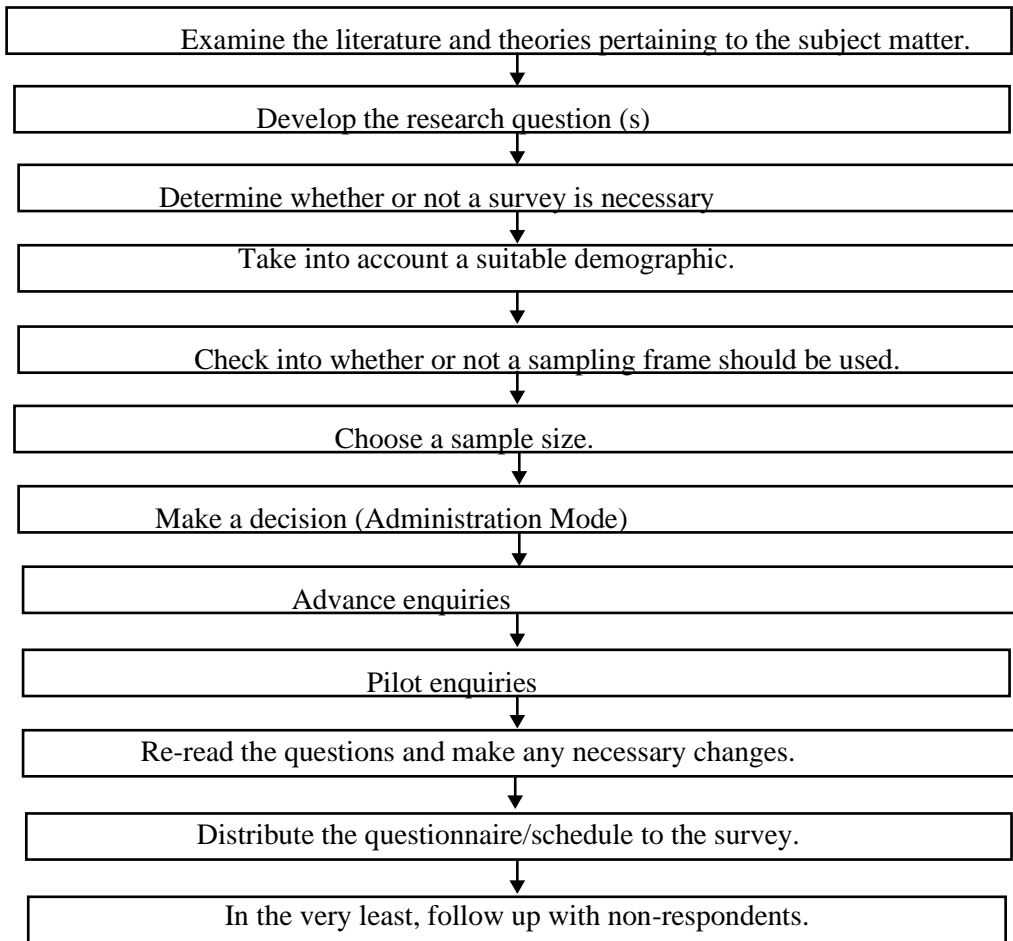
12	Procurement Officer	2	-	-	-	-	2
	<b>Totals</b>	<b>67</b>	<b>135</b>	<b>116</b>	<b>79</b>	<b>123</b>	<b>520</b>

**Source: Field Data: CIPS-Ghana (2020)**

### **3.8 Data and Data Collection Methods**

Questionnaires, conferences, Observations, focus group discussions, testing, and secondary data sources will all be used to gather research results (Johnson & Turner, 2003). Both secondary and primary data are used in this analysis. A literature review was used to collect secondary evidence (discussed in earlier Chapters) pertaining to the effects of sustainable procurement practices of a full scale multi-dimensional construct and their overall impact on organisational performance. Also, what mechanisms are available to enable organisations practicing sustainability attain significant organisational performance. The secondary data gathered thus served as a basis for the creation of the study's conceptual structure and instruments for data gathering that is web-based survey instrument and interview questions. This assisted in determining which data collection methods were suitable for the current study provided the circumstances. The primary data was gathered by conducting a survey by web-based to a group of people, procurement practitioners with active membership details found on the CIPS Ghana database of the procurement portal and phone interview for viewpoints of procurement experts, practitioners and senior managers on the CIPS Ghana database of the procurement portal. As a result, the primary data for this study is split into two sections: quantitative (web-based survey) and qualitative (interviews) (phone interview). As mentioned in earlier sections, the reasoning for using a web-based survey and a phone interview to gather primary data for this report. Figure 3 depicts the steps taken to develop and administer the web-based survey instrument, along with the relevant parts.

**Figure 3: Survey Strategy**



**Bryman (2012, p.185)**

A web-based survey is conducted to solicit key informants in the identified population. Issues raised during the pilot testing are addressed. The revised version of the questionnaire is utilized to collect data from targeted individuals. Data is acquired from key informants in the procurement department of several public agencies and institutions. Initial permission was sort from the head of department of various agencies

In February 2020, an invitation letter was sent out to 877 procurement practitioners with active membership details as of February 2020 found on the CIPS Ghana database of the procurement

portal. To increase awareness, the survey was discussed on the procurement online forums, social media platforms such as What Sapp was used to communicate the essence of the survey to targeted informants. Out of the Eight Hundred and Seventy-Seven (877) questionnaires sent out, Five Hundred and Twenty (520) responses were received making up a response rate of 59.29% present, accounting for Five Hundred and Eleven (511) answered questionnaires. Three Hundred and Fifty-Seven (357) emails did not get any feedback or responded to. The researcher followed up on the procurement online forums, social media platforms such as What Sapp to understand the turner of responses. Additionally, the CIPS Ghana database system administrator was tasked to enquire why the low turn-out of response was received. With the exemption of Fifty-Seven (57) individuals who did communicate no specific reason can be attributed to the low response rate.

Reasons provided by the majority of these individuals on the procurement platform and through the CIPS Ghana database system administrator included the following;

- 1) Respondents are currently very busy engaged with their organization's assignments outside the country and unable to complete the questionnaire about One Hundred and Twenty-Four (124 respondents);
- 2) Respondents currently occupied with official duties, therefore, deem themselves not in the right situation to provide proper response and insight into the subject under discussion: Ninety-Eight (98 respondents),
- 3) Respondents currently on retirement from the public service but are still active members on the CIPS-Ghana database: Eighteen (18 respondents).

- 4) Respondents currently unable to access their mails and survey link due to individual challenges, largely internet and connectivity problems: Sixty (60 respondents)

### ***3.8.1 Variable Measurement***

The purpose of the research is toward investigating the effects of economic, social, and environmentally sustainable procurement practices on the performance of organizations. It further examines the moderating roles of relational governance and top management commitment to sustainability on organizational performance. To address this objective and research question discussed in earlier sections of the study, measurement scales are adopted from the body of literature in marketing and management. These measurement scales include relational governance (Poppa & Zenger, 2002; Zhu & Sarkis, 2004); sustainable procurement practices (Walker & Brammer, 2010; Choi, 2011; Benjaafar, Li & Daskin, 2013). Table 13 presents the measurement items used in the design of the data collection instrument. See appendix (A) Table 9: Measurement Items for the table of measurement items.

### ***3.8.2 Common Method Variance/Bias***

In other words, there might not be enough difference in the responses received. The issues of common method bias may also arise because; a single data collection source may not be the appropriate source when data is derived from a single data source, the problem of common method bias occurs. This implies that because the data was gathered from a single source it is very likely that the responses from that single data source will lack variability to answer all questions in a questionnaire. In the context of this study, however, the study instituted measures at the questionnaire design stage to check for possible biases in responses received. Though the data was collected from a single response category, responses were solicited from different profiles of jobs

descriptions of functionality levels undertaking the procurement function within the CIPS-Ghana database. Additionally, the research questions have also been phrased, structure and arrangement by mixing their arrangement.

This was to help increase the variability of the responses received. However, at the data analysis stage, the researcher also checked to confirm any actual issues of common method bias by employing the one-factor evaluation protocol devised by Harmon (Podsakoff & Organ, 1986). The one-factor evaluation protocol devised by Harmon (Podsakoff & Organ, 1986) follows that all items used in measuring the various constructs in a given study be subjected to an exploratory factor analysis where the factor extraction is restricted to only 1 factor and the resultant variance of that single factor extracted should not exceed 50% (Podsakoff & Organ, 1986). Thus, based on the findings from the Harmon's one-factor test carried in the in context of this study, the resultant variance was 22% (see Appendix). This, therefore, confirms that there were no issues of common method bias in the data collected.

### ***3.8.3 Data Quality Check and Validation***

It is important to determine the reliability and authenticity of data derived from field surveys to extract useful information from the data. The Cronbach alpha and composite reliability approaches are used to assess the data's reliability. The researcher will be able to determine the intrinsic accuracy of calculating objects objectively using these approaches. It also acts as a screening instrument, indicating whether or not there is a problem with multicollinearity and vice versa. These measurements will reveal the measurement model's goodness of fit (Hair et al, 2014). The average variance extracted test is used to determine the validity of measuring objects. To determine the discriminant validity of a construct, the average variance extracted test is used.

The AVE value should be bigger than every other latent variable's greatest squared correlation, according to Fornell & Larcker (1981) and Henseler ET al (2014). The validity results presented in the table below indicate the degree to which the questionnaire Items calculate the things they're supposed to measure. Thus, in confirming the validity of the items in measuring what they are supposed to measure, the study carried out convergent and discriminant validity tests.

Table 8: Construct Validity

No.	Constructs	No. of items	AVE	$\sqrt{AVE}$
1	Relational governance	7	0.501	0.706
2	Economic Sustainable Procurement Practice	5	0.511	0.701
3	Environmentally Sustainable Procurement Practice	3	0.620	0.787
4	Social Sustainable Procurement Practice	3	0.574	0.758
5	Organisational Performance	4	0.541	0.693
6	Top management commitment	3	0.517	0.719

Source: Field Data (2020)

The convergent validity is determined by the AVEs while the validity discriminant is determined by the square root of the AVEs. The threshold to determining convergent validity is where the AVEs are .50 and above (Fornell & Larcker, 1981). From the result shown in table 5, the AVEs for all the constructs meet that threshold, therefore the items used in measuring each construct are considered valid. However, to confirm that constructs of discriminant validity, the squared root of the AVEs were taken. To confirm discriminant validity, the resultant figure that comes from the square root of the AVEs should be higher than the inter-item correlation coefficients among the various constructs (Fornell & Larcker, 1981).

A confirmation of the discriminant validity of the constructs is shown in table 14. The discriminant validity values are shown in the diagonal section in bold. And when the values are compared with the inter-item correlations in the off-diagonal, it can be noted that the discriminant validity values are significantly greater than the inter-item correlation coefficients, therefore discriminant validity was achieved for all the constructs.

### **3.9 Data Analysis**

Statistics acquired for the intent of the investigation are analysed using empirical and qualitative techniques. The initial validity and reliability of data are ascertained. Benchmark index for composite reliability and validity will be used to evaluate the outcome of these tests (Kelley & Pornprasertmanit, 2016; Henseler et al., 2015). The further empirical analysis will only be performed if acquired data meets accepted reliability and validity outcome. Descriptive statistics are conducted to explore the characteristics of data collected. These characteristics include the average, median, mode, standard deviation, and standard error kurtosis. The profile of respondents is highlighted.

The measurement model is examined by conducting exploratory Using factor analysis, you can figure out which of the predictors accesses the latent variables appropriately. The exploratory factor analysis is an effective methodology process. In conducting exploratory factor analysis, principal component techniques will be used (Lei & Lu, 2007). A confirmatory factor test is conducted to ascertain the optimal match between the theoretical base and observed factors for the given data set that set out to determine the main index of the predetermined factor model. It further enables the researcher to examine the adequacy of measurement criteria of models (Malhotra, 2008).

The structural model of the study will be examined using moderation regression analysis (Mackinnon & Fairchild, 2009). The moderation effect of top management commitment and relational governance is examined using the moderation procedure proposed by Hayes (2012). It further enables the researcher to identify the direct and indirect relationship between constructs. Hypotheses will be tested using the t-statistics test. Data analysis will be conducted using the Social Science Statistical Package (SPSS version 22) and AMOS package respectively.

### ***3.9.1 Summary on Quantitative Analysis***

Chapter 3 discusses the research philosophy, methodological paradigm, study strategy, and method of the research. Further places of interest are the study population, sampling technique, and data collection process utilized for the collection of data to address research questions and objectives. The questionnaire is adopted as statistics gathering instrument for the quantitative study. The Questionnaire items are selected from syntheses of literature in the area of sustainable procurement and management. The questionnaire is used as a data gathering instrument to solicit data from key informants in the procurement function operating within the public service of Ghana and is

currently being active members of CIPS Ghana. Constructs under the research are measured on a 7-Likert scale.

To ascertain the robustness and accuracy of questionnaire items, the pilot study is conducted. The outcome of the pilot testing is utilized to address issues and shortcomings. In addition, initial reliability and validity test is conducted using data obtained from the pilot study. The outcome is reported in the above sections. Data collection is scaled up after the pilot testing. Data is collected from over two hundred (200) key informants across the active members of CIPS Ghana. Acquired data is analysed using various empirical techniques – aside from reliability and validity tests, exploratory and confirmatory factor analysis is conducted. The structural model is examined by performing correlation and regression analysis. Moderation regression analysis is conducted to ascertain the moderating effect of relational governance and top management commitment on the proposed relationship between theoretical models.

### ***3.9.2 Phone Interview: The Qualitative Phase***

Except for helping to understand some of the findings of the statistical research conducted after the web-based survey of the CIPS Ghana database of membership, the qualitative process of this study also assisted in the generation of valuable primary data, the qualitative data collected aims to provide insight into how Sustainable Procurement Practices, Top Management Commitment, and Relational Governance affect the Performance of Organization. It entailed a semi-structured telephone interview with a group of Procurement Professionals and Experts. The respondents for the study are selected from the target population of the CIPS Ghana Branch database of active members from various public service departments. These respondents comprise 25 respondents who occupy the top managerial positions in the public sector with job roles as director of

procurement, Manager of Sourcing, and Supply Chain Management departments. These experts are procurement professionals within the industry for over 20 years.

Additionally, during the qualitative phase, the interview question was aimed at soliciting expert opinion insight on the dimensions of sustainable procurement practices and how each dimension affects the performance of the respective organization. It further elucidates for information on relational practices and the relational governance framework of such institutions. In addition, the role of top management is examined. Lastly, challenges impeding the performance of public organizations performance. Interview data is analysed using thematic content analysis – adopting this approach enables the research to analyze and codify data to arrive at relevant themes appropriate to make inferences. Aside from gaining insight on the subject matter of the study, respondents were asked to offer suggestions that would ensure improvement in the performance of public institutions.

### ***3.9.3 Sampling Method and Procedure***

According to studies by Guest, Bunce, and Johnson (2006), 12 participants in a qualitative study are adequate for interviews. This is further reinforced by the fact that, in qualitative analysis, the sample size is less important (Bryman 2012; Creswell 2013; Zikmund et al. 2012); rather, what is required is to pay attention to the principle of saturation (Bryman 2012; Creswell 2013; Zikmund et al. 2012). The point of saturation is where the qualitative sample's return on investment diminishes to the point that collecting evidence from more respondents would not ultimately result in the acquisition of fresh knowledge beyond what has already been realized (Bowen 2008; Morse 1995).

The seven distinct measures Onwuegbuzie and Collins (2007) suggested for mixed methods smiling were strictly followed when selecting the sampling methodology to use for the qualitative process of the current research. The seven stages are as follows: Establish the study's aim, develop research goals, 3. define the research intent, and identify the research query (s), choose a test design, choose a sampling design, and finally choose a sampling scheme. The purposive sampling approach was chosen to meet the goals of the current study's qualitative process (which is to contact a sample capable of demonstrating the quantitative phase's results). Purposive sampling is a method of non-probability sampling technique that is widely used in qualitative analysis (Bryman 2012; Bryman & Bell 2007). In qualitative analysis, there are no hard and fast guidelines on sample size.

As a result, the researcher was able to select respondents capable of providing informative and rich answers due to their expert expertise (Teddlie & Yu 2007; Zikmund et al. 2012) to better clarify ship to shore mobility among ship officers by using the purposive sampling methodology for this step of the analysis. As a consequence, the decision to use a purposive sampling technique for the current study's qualitative process stemmed from the desire for a group of respondents that could offer detailed insight into the web-based survey's findings while needing statistical generalizations (Onwuegbuzie & Collins 2007; Teddlie & Yu 2007). Table 10 – 11 provide a description of the respondents surveyed during interview session.

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Table 9: Sample Frame (SF): Active Membership Details as at July 2020 (Purchasing and Procurement Only)

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<b>DESCRIPTION JOB TITLES</b>	<b>FCIPS</b>	<b>Affiliate</b>	<b>Chartered</b>	<b>Totals</b>
			<b>Professional</b>	
<b>Sample Frame</b>	<b>SF</b>	<b>SF</b>	<b>SF</b>	<b>SF</b>
Director of Procurement	2	2	4	8
Procurement Manager	2	2	4	8
Purchasing and Supply Chain Manager	1	2	2	5
Procurement Consultant	1	1	2	4
<b>Totals</b>	<b>6</b>	<b>7</b>	<b>12</b>	<b>25</b>

**Source: Field Data: CIPS-Ghana (2020)**

**SF: Sample Frame**

Table 10: RSF: Response Sample Frame: Active Membership Details as of July 2020

(Purchasing and Procurement Only)

<b>CIPS-Ghana Categorisations</b>	<b>FCIPS</b>	<b>Affiliate</b>	<b>Chartered</b>	<b>Totals</b>
			<b>Professional</b>	
<b>Description Job Titles</b>	<b>RSF</b>	<b>RSF</b>	<b>RSF</b>	<b>RSF</b>
Director of Procurement	0	1	3	4
Procurement Manager	1	2	1	4
Purchasing and Supply Chain Manager	1	1	0	2

Procurement Consultant	1	1	3	5
<b>Totals</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>15</b>

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**Source: Field Data: CIPS-Ghana (2020)**

Procurement professionals are the intended sampled population for the study. Selecting procurement professionals as the study sample population ensures the researcher acquires relevant information and data to address research questions. The purposive sampling approach is adopted to collect data from key experts and professionals in the procurement landscape. Utilizing this approach enables the study to deal with the issue of selecting relevant sampling units in precise mode. Using the techniques provides the researcher the necessary confidence level needed to determine an appropriate study sample (Zikmund et al., 2009).

Data is collected from diverse procurement professionals from the CIPS Ghana database of membership operating within the public sector of Ghana. Respondents are selected using a purposive sampling approach across the cross-section of industries/organizations in the public sector of Ghana. These individuals possess adequate knowledge and exposure about up-to-date procurement and purchasing practices and policies as well as operations within the procurement landscape in the country. This is further supported by the fact that, each active member on the CIPS Ghana database is well equipped with the following; Wide pool of Professional Resources, exposure to CIPS Knowledge, access to Supply Management Magazines monthly, guided by Ethics E-learning platforms, opportune to Continual Support from international and local experts, and finally members can undertake a Self-assessment to be able to align themselves against the Global Standard and current developmental plans.

The study used a purposive sampling approach; informants are restricted to Directors of Procurement, Procurement Managers, Purchasing and Supply Chain Manager, and Procurement Consultants under the procurement function operating within the public service of Ghana and are currently being active members of CIPS Ghana. The rationale for selecting these individuals is rooted in the idea that most of the on-going procurement activities in the country are carried out by public agencies. And a check on the CIPS Ghana portal supports this assertion since updates and clarification requests are constantly being sorted.

After identifying the target population, the researcher then filtered to job titles directly related to purchasing and procurement only as of the final sampled population for the study and thereby generates a list of key informants with their corresponding organizations to confirm their active involvement with the public sector. In addition, the CIPS Ghana database system administrator is tasked to seek permission from the members for their consent for the study. The objectives of the study is explained to sampled members with the intention to gain their permission to utilize its personnel details. During the research period, the CIPS Ghana database system administrator served as a ‘buffer’ or ‘gatekeeper’ between the researcher and the sampled members (O’ Connor & Rice, 2013).

#### ***3.9.4 The Design: Telephone Interviews***

There are a variety of qualitative data collection methods available. Interviews, fieldwork, participant evaluation, and desktop analysis or archival studies are the most common approaches (Myers 2013; Rubin & Rubin 2011). Interviews, out of all the data collecting methods used for qualitative surveys, are commonly recognized as the preferred method due

to the abundance of data and the potential for gaining further insight into the phenomena being examined (Schultze & Avital 2011).

As a consequence, it should come as no surprise that interviews are ideally fit for qualitative studies since the accompanying transcripts have a credible source of rich textual evidence that can be analysed qualitatively (Cachia & Millward 2011). In most cases, interviews are conducted face-to-face or over the internet, and they may be organized, unstructured, or semi-structured (Cachia & Millward 2011; DiCicco-Bloom & Crabtree 2006). Nonetheless, there has been a new trend of conducting interviews digitally, thanks to technical advances.

This form, which typically entails interviewing participants via the internet, has emerged and is gaining popularity among researchers over time (Beck 2005; Hamilton & Bowers 2006). For the current analysis, a telephone interview with a semi-structured questionnaire format was chosen (as it engages participants better than the online option).

Cachia and Millward (2011) argue that telephone interviews paired with a semi-structured model are very complementary and useful from a methodological rather than a convenience standpoint.

As a result, telephone interviews cannot be seen as a substitute for face-to-face interviews, but rather as a tool that is similarly efficient in terms of efficiency (Halt 2010). In the following paragraphs, the conditions that led to the decision to use telephone interviews to collect evidence for the qualitative process of this study are addressed. The procurement professionals from CIPS Ghana's membership database who work in Ghana's public sector are spread out throughout the region, and the

respondents are geographically scattered. Traveling to reach them for face-to-face interviews was impossible due to expenses (air fares and hotel) and time constraints (Holbrook, Green & Krosnick 2003; Opdenakker 2006).

Furthermore, the global influence of COVID 19 together with World Health Organization (WHO) preventive procedures to combat disease transmission render face-to-face interviews almost impossible. In addition, the 25 procurement executives and experts chosen for the interview may be classified as elite or ultra-elite (Stephens 2007). Since these individuals are always distracted, it's impossible for a researcher to set up face-to-face interviews with them (Harvey 2011; Stephens 2007). As a result, a phone interview is a safer choice, as it could be more comfortable for them with their busy work schedules (Harvey 2011; Zuckerman, 1972).

Telephone interviews are now commonplace among researchers, and they have proven to be effective in gathering data from study participants, especially among the elite and ultra-elite (Novick, 2008; Stephens, 2007). Until recently, the same was so, with many scholars skeptical of the feasibility of utilizing telephones to perform in-depth interviews for qualitative data collection (Holt 2010; Stephens, 2007).

Apart from the goals of the current study's qualitative phase (elaborate on the results of the web-based survey and explain expert opinion insight on the dimensions of sustainable procurement practices and how each dimension affects the performance of the respective organization), the many advantages of using telephone interviews to collect qualitative data have influenced the decision (Sturges & Hanrahan 2004).

Telephone interviews, for example, are quicker and less expensive (Henwood & Pidgeon 2006), provide access to almost unreachable audiences (Opdenakker, 2006), and have a larger regional coverage. Due to the restricted resources and funds available for this research, face-to-face interviews were not a choice due to the high costs associated with traveling to visit the sampled sourcing specialists and professionals for interviews. While the researcher had access to other data collection methods such as email, postal mail, and participant evaluation, they were not well suited to provide the desired richness of answer that telephone interviews might provide. The flooding of respondents with surveys and on-the-job messages from government and private organizations may have resulted in a poor answer rate in the case of emails (Cahoon, 2004; Fan & Yan 2010).

There are, however, several reasons about conducting telephone interviews. For example, since the researcher cannot see the interviewee, it is impossible to gather information about nonverbal contact, such as sign language (Cachia & Millward 2011). The richness of data provided by the non-verbal part of an interviewee's reaction is forfeited in telephone interviews, which is a kind of intrinsic shortcoming (Fontana & Frey 2005).

Nonetheless, Novick (2008) claims that telephone interviews will yield richer results because subjects are more secure than in face-to-face interviews and are more inclined to reveal personal details to the researcher. When the study is mainly focused on critical subjects, telephone interviews become a more realistic alternative. Another disadvantage to telephone interviews is the question of respondents' linguistic and hearing difficulties (Carr & Worth 2001). It's quite possible that not many of the

respondents had connections to telephones. This bottleneck can reduce the efficacy of data collection exercises that rely heavily on the telephone (Carr & Worth 2001; Sturges & Hanrahan 2004).

### ***3.9.5 Design of the Instrument for Phone Interviews***

The semi-structured telephone interview instrument (Appendix D) was created with the aim of offering comprehensive interpretations of the web-based survey findings and explaining expert opinion insight on the aspects of competitive procurement processes and how each dimension affects the success of the respective company. Since the interview method was not intended to gather quantitative data (rather, textual data for a thematic analysis), the questionnaire consisted of just seven (7) open-ended questions. This was important in order for respondents to properly articulate themselves (Ballou, 2008) in terms of their interpretation and explanations as specialists and procurement professionals have opinion and perspective on the aspects of sustainable procurement processes and how each dimension affects the success of the respective company. As a result, the structure of the interview has a significant impact on the question style, and using closed-ended questions may have defeated the intent of the phone interviews.

The main distinction between the telephone interview instrument and the web-based survey instrument is that the former had more closed-ended questions while the latter only had open-ended ones. This is attributed to the fact that the two data collection phases had different goals. Despite the web-based survey's few open-ended queries, the aim was to collect numerical data from specialists and procurement practitioners. The aim of a phone interview is to gather textual information.

### ***3.9.6 Pre-Testing the Instrument***

Prior to conducting the phone interview, the instrument was pre-tested. Pretesting of the interview instrument was important to define the referential significance of the individual queries, assess the appropriateness of the interview questions, detect hidden prejudice in the language and rectify other inconsistencies that which influence the validity of the data gathered for the (Bowden et al. 2002; van Teijlingen & Hundley 2002). Fundamentally, the pre-testing of the interview instrument was sufficient to minimize errors (Teddlie 2009; Zikmund et al. 2012). Thus, the interview instrument for this study was pre-tested using eight (8) respondents - researchers, students and practitioners (Cahoon 2004; Moeser, Schmitz & Moeser 2012). (Cahoon 2004; Moeser, Schmitz & Moeser 2012). This included Two (2) lecturers (with related expertise in Procurement and Supply Chain) on of the Public Universities in Ghana, Kwame Nkrumah University of Science and Technology (KNUST), three (3) Heads in Divisions of Public Procurement Authority (PPA) of Ghana and three PhD research students.

Comments provided by the two lecturers and Heads of Divisions at the PPA aided in revision of the vocabulary of the interview instrument (Burke & Miller 2001) to represent the correct terms for the sampled 25 procurement experts and practitioners. The pre-test study is sent a hard copy of the interview instrument (Appendix D), a pre-testing letter (Appendix C), Advance letter (Appendix F), Participant details sheet (Appendix I) and the confirmatory telephone interview instrument (Appendix G).

The pre-testing letter was used to explain the aim of the study, research questions and its significance to the pre-test sample. After the first stage of pre-testing, three members

of the initial pre-test sample were re-selected to do another pre-test for some final polishing of the interview survey instrument. This was participatory and it helped to determine the approximate time period of the interview, measure the recording method to be used for the key interview and decide how interviewees could react to the pronunciation of terms (Burke & Miller, 2001).

This has helped to strategise about male voice problems (for the interviewer) which has long been noted as responsible for elevated rejection rates for telephone interviews (Myers & Newman 2007; Oksenberg, Coleman & Cannell 1986). Another important aspect of the polishing pre-testing was identifying and correcting issues such as distracting background noise. It was also a successful way to assess the capacity of the recording device to withstand the duration of the interviews.

### ***3.9.7 Collection of the Data***

Several methods and measures (shown in Figure 5) were taken to collect the qualitative data via the semi-structured phone interview of the 25 intentionally sampled procurement practitioners from the CIPS Ghana database of membership working within the public sector of Ghana. Burke and Miller (2001) suggested following the measures (broadly separated into pre-interview process, interview phase, and post-interview phase) to gather information for this thesis, data was collected over a phone interview.

Findings from a web-based study of procurement experts from the CIPS Ghana database of participants working in Ghana's public sector, as well as revelations from the literature review, were discussed during the interviews. Participants were given an invitation to engage in the interview (the full collection of sent informational documentary facts Appendices F, H, and I

include this detail. (Rothstein & Shoben 2013; Seidman, 2012). Following the participants' agreement to join, confirmation phone calls-up and messages were placed to schedule interviews for them (Berg & Lune 2004; Singer & Frankel 1982).

The dates of the interviews have been agreed upon among all respondents were chosen with care to ensure that they were convenient for them (Burke & Miller 2001; Harvey, 2011). respondents are also asked to maintain a record of the appointment in their respective "to-do lists" in a welcoming tone (Burke & Miller 2001). A regular list of all encounters with respondents and their replies was held on an Excel spreadsheet. Appendix G contains the confirmation telephone call letter that was used to set up the interview dates with participants. The follow-up phone call also served to include a concise and encouraging presentation of the researcher to the participants, as well as additional information about confidentiality, how the data collected could remain, and interview duration for the report (Burke & Miller, 2001; Cahoon, 2004).

Prior to the main interview, the confirmatory phone call helped to build a bond with the respondents (Goldman & Swayze, 2012; Ostrander, 1993). While the study's details was included in the invitation letter sent to participants prior to the confirmatory telephone call, previous research (e.g., Burke & Miller, 2001; Dillman et al., 2009) suggests that most participants did not read the letter. This explains why participants were told about the research during the confirmation phone call. For the CIPS-Ghana to be authorised, the telephone interview instrument (Appendix D) and all associated records (Appendices F, G, H, and I) were sent to the Data System Administrator (Emam et al. 2013; McGinn & Bosacki 2004). Participants were informed during the

interview that, with their permission, the interview would be taped and transcribed word for word. Given that the topic of recording could lead some respondents to drop out of the interview (Dillman et al., 2009), great caution was taken to ensure that the intent and relevance of the recording is clearly clarified to them. Additionally, after the phone interviews, anecdotal notes were taken at the same time. As a result, all of the interviews were tape-recorded using a compact digital recorder. The aim of the interviews was to get senior executives to talk about their experiences in the field of sustainable procurement practices.

Procurement professionals from CIPS Ghana's database of representatives working in Ghana's public sector were also told that they had access to the transcripts of the interviewed hearings being parts of them modified if appropriate. Considering the subjects one of the primary underpinnings of qualitative research ethically is to read the scripts after they've been transcribed. (Nunkoosing, 2005; Seidman, 2012) also, it means allowing others to concur to have the interview deliberations documented. During the entire phone interview period, the researcher retained a courteous, polite, and conversational tone (Berg & Lune, 2004; Burke & Miller, 2001). In a conversational tone and manner, the interview questions were read aloud, in the questioning phrases like "cool" and "may you elaborate a little more" used while respondents gave ambiguous responses. Since the majority of the candidates were given open-ended questions granted enough opportunities to thoroughly a means of expressing themselves, resulting in useful results. The duration of each interview was between 35 and 40 minutes. This is in line with the total duration of interviewing selected few and super-duper over the phone which has been tracked at 37 minutes (Ostrander 1993; Stephens 2007). The interview transcripts were primarily prepared for review during the post-interview process.

### ***3.9.8 Dealing With Bias and Error Control***

Significantly, one of the most critical difficulties in social science research is reducing sources of mistakes and biases during the interview phase. The study's incapacity to examine and identify each inaccuracy in any given research may also create questions of reliability and validity (Hair et al., 2007; Zikmund et al., 2012). When sources can be recognized throughout the research process, it is feasible to decrease mistakes.

According to Bryman (2012), the four primary sources of research faults are: Sampling Error, Sampling-Related Error, Data-Collection Error, and Error in Data Processing.

Sampling mistakes arise when the sample picked is not actually representative of the population, which can lead to further generalisability and validity issues (Babbie, 2012; Lewis-Beck et al., 2004).

### ***3.9.9 Coverage and Non-Response Bias: Correcting Sampling Errors***

Attempts were made in this study to avoid common sample frame problems including picking an out-of-date frame, including things that were not intended to be part of the target population or vice versa, and so on (Celsi et al., 2011). Procurement professionals from the CIPS Ghana database of membership working in Ghana's public sector who may have left their jobs for other professions and careers, for example, are omitted from the web-based survey's target population because the details they may provide cannot be construed as representing an up-to-date view of those who have left their jobs for other professions and careers. Coverage error and non-response bias for procurement professionals from the CIPS Ghana database of membership functioning within the public sector of Ghana in the newest research are two of the most common mistakes connected with the

administration of web-based surveys, such as the one done for this study. Non-response biases must be identified before the questionnaire is delivered in order to comprehend the survey instrument's flaws in every specific study (Wislar & Johnson, 2012).

According to Alvarez and VanBeselaere (2003), to accurately correct coverage errors, the researcher must be able to classify all members of the subject group to ensure that the likelihood of them being sampled is significant. In the particular instance of the current sample, a variety of parameters (discussed earlier in this Chapter) were used to assess the sampling frame.

This was useful in determining which units should have been included or omitted from the population. Take, for example, the elimination of non-active procurement professionals within the CIPS Ghana database of membership operating within the public sector of Ghana, and active membership working within the private sector of Ghana.

It was impossible to include them in the current study's web-based survey because its participation might not have fulfilled the study's primary objectives. As a result, understanding which units to use or remove when determining the sampling frame is critical for preventing sampling and sampling-related errors (Levy & Lemeshow, 2013). The primary factors provided regarding non-response bias within respondents who are the subject of web-based surveys are respondents' inability to participate in a survey combined with a lack of programming skills. The restricted access is also a factor in the present research as a result of the impact of COVID-19 and the global measures adopted by nations and economies to prevent the transmission of COVID-19 that apply to all workplaces and all people at the workplace, physical distancing, limiting movement and travel, staying at home, and practicing self-isolation which now part every working place orientation Non-response bias may be construed as a type of nonresponse bias throughout the web-

based survey. These factors will influence whether or not a respondent completes the survey (Gunn 2002). Non-compliance with surveys would result in low response rates, resulting in non-response bias. As opposed to mail and phone polls, online sample results are 11 percent lower on average, according to Petchenik and Watermolen (2011).

To avoid the errors associated with low response rates, Dillman's (2011) method for the design, pre-testing, and administration of web-based surveys was used to raise response times for the survey of procurement practitioners again from CIPS Ghana database of the membership working in Ghana's public sector. This strategy entails increasing the pace at which respondents are contacted, which in this case was achieved by gatekeepers. After delivering a survey instrument, follow up with the targeted audience at least three times to boost response rates and eliminate non-response bias (Bryman 2012; Bryman & Bell 2007). Participants received a message inviting them to participate in the study and explaining its significance a week before the gatekeepers made the web-based survey available to them. Not only did the letter of request to respondents assist to minimize the low response rate that has been synonymous with web-based polls (Emam et al. 2013), but it also helped to lessen acceptance bias, which is often disregarded (Emam et al. 2013). Dillman et al. (Dillman et al., 2009). As a consequence, the Dillman technique was effective in minimizing response rate mistakes in the current study by 1. sending non-responding participants communication alerts (Appendix E) two weeks after the survey Link was first released and on a gatekeeper-managed forum; and 2. sending reminders one week later.

### ***3.9.10 Working With Bias in Research Instrumentation***

One of the most common causes of research errors is survey instruments, particularly when questions are poorly written (Fowler 2009; Rea & Parker 2012). Instrumentation bias is the term for this kind of mistake. For the current report, attempts were taken to ensure that the web-based survey did not include double-barrelled questions to prevent instrumentation errors. In addition, the survey instrument was created to remove long questions and assertions, minimize uncertainty in questions by minimizing the usage of complicated syntax (Lietz 2010), prevent bad and negative query wording, and avoid trivial questions that were not linked to the research's main themes (Fowler 2009).

In addition, a "Not Sure" option was included, along with an orderly arrangement of the questions to assist respondents in responding. The use of reverse scales was needed in terms of organization and questionnaire design, for example, to minimize central tendency errors (Gingery 2009; Groves 2004). The configuration of the web-based polling instrument and the order of the questions were both taken into account in order to minimize error and bias and ensure that the survey results were useful. To stop argument, a funneling strategy was used to switch the participant from generic to more relevant questions (Bryman 2012; Celsi et al. 2011; Creswell & Plano-Clark 2011). Furthermore, the web-based survey instrument was subjected to pre-testing with the help of eight (8) individuals with both a business and academic experience. To ensure that the questions were straightforward, understandable, and impartial, this was important. As a result, the pre-testing was a means of determining the data collection instrument's apparent validity (Celsi et al. 2011).

### ***3.9.11 Summary On Qualitative Analysis***

The analysis design and methods used to gather data from this study are discussed in this chapter in relation to the procurement professionals from the CIPS Ghana database of membership operating within the public sector of Ghana has just been argued. In addition, the selected method of data collection (web-based survey and telephone interviews) were justified by demonstrating their necessity in answering the current study's primary research questions. The researchers used a hybrid methods technique that included two steps of data collection. The use of a web-based survey to gather data from procurement practitioners from around the country was explained in the first process of data collection through the CIPS Ghana database of membership operating within the public sector of Ghana through the gatekeeper (CIPS system administrator).

In addition, reasoning was provided behind why phone interviews are being used to gather qualitative data in the second step of data collection which was restricted to Directors of Procurement, Procurement Managers, Purchasing and Supply Chain Manager and Procurement Consultants under the procurement function operating within the public service of Ghana and are currently being active members of CIPS Ghana. As such, Considerations affecting the design, pre-testing, and administration of data collection instruments were addressed, and justifications were provided for why some crucial decisions about survey instrument layout, duration, and type of questions had to be taken (to minimize errors). In addition, adequate techniques were used to ensure that the web-based survey and interview instruments received a high response rate. Follow-up letters (for the first phase), advance letters, and confirmatory telephone interviews were all included (for the second phase). The

results of the data collection for the first and second phases of the research are summarized in the following chapters.

### **3.10 Summary of Chapter 3**

In this Chapter the research design and methodology used to collect data from procurement professionals operating within the public service of Ghana and are currently being active members of CIPS Ghana has been discussed. Also, justification was given for the chosen data collection methods (web-based survey and telephone interviews) by demonstrating their necessity in addressing the key research questions of the current study. A mixed methods approach which involves two phases of data collection was used. For the first phase of data collection, explanation was provided for using a web-based survey to collect data from from the procurement professionals through the gatekeeper being active members of CIPS Ghana. Also, for the second phase of data collection, justification was given for why phone interviews were used to collect qualitative data from senior procurement professionals operating within the public service of Ghana and being active members of CIPS Ghana.

Thus factors relevant to the design, pre-testing and administering of the data collection instruments were discussed and justifications given for why certain critical decisions had to be made (to reduce errors) with regards to survey instrument layout, length and type of questions. Also, appropriate strategies were used to ensure a high response rate for the web-based survey and interview instruments. This included the use of follow-up letters (for the first phase), advance letter and confirmatory telephone interviews (for the second phase). The analysis of data collected for the first and second phases of the study is respectively presented in Chapters five and six.

## **Chapter 4: Quantitative and Qualitative Analysis**

### **4.1 Introduction**

This section of the thesis presents the findings as a result of the tested hypotheses by the research. The analysis of the data was done using AMOS for the factor analysis and SPSS statistical tools for the regression analysis. The analyses were primarily based on some direct and moderating relationships. In general, the study's aim was to discover how sustainable procurement practices impact organisational performance and how this relationship can also be impacted by relational governance and top management commitment.

#### ***4.1.1 Biographical information***

Information regarding respondent's biographical information covers some details about the individual respondents and some details of the organizations they work for. At the individual respondent's level, the researcher solicited responses regarding the gender, age and educational background of respondents. However, at the organizational level, the researcher was only interested in soliciting responses regarding the age or the organization. The findings of the survey are shown in Table 17 biographical overview of the individual respondents and the organizations surveyed

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Table 11: Biographical Analysis

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<b>Category</b>	<b>Description</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Gender	Male	319	62.40
	Female	192	37.60
Age	Below 20 years	8	1.60
	21-25years	9	1.80
	26-30years	61	11.90
	31-35years	48	9.40
	36-40years	125	24.50
	41 years and above	260	50.90
Educational level	Diploma	37	7.20
	Bachelors	176	34.40
	Masters	293	57.30
	PhD	5	1.00
Organizational age	0-5years	2	0.40
	6-10years	36	7.00
	11-15years	76	14.90

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	16-20years	130	25.40
	Above 21 years	267	52.30
Organization's Operation	Total Government Owned	502	98.24
	Public Private Partnership	2	0.39
	Government divestiture	7	1.37
Industry Type	Production	5	0.98
	Manufacturing	2	0.39
	Services	504	98.63

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**Source: Field data (2020)**

#### ***4.1.1.1 Gender of Respondents***

The majority of the respondents were largely males. This represents 319 (62.4%) males as per the respondent profile shown in Table 17 compared to only 192 (37.6%) being females only.

This gender pattern in the data for respondents is not unprecedented, since it supports previous study findings by Brammer and Walker (2011). Also, the UK Sustainable Procurement Task Force 2006 as well as the database of Chartered Institute of Purchasing and Supply (CIPS-UK) also found that the procurement function currently is mostly a male-dominated sector, with women accounting for just 20% of the over 1 million people who work as procurement chartered active and non-active members operating globally in both private and public sectors. Consequently, the findings reflect the need for business employers to identify opportunities to further encourage women to careers in procurement.

#### ***4.1.1.2 Age of Respondents***

The Table 2 shows the demographic characteristics of the respondents represents the age distribution of respondents. There are six age groups among the participants in the research.: (1) Below 20 years, (2) 21-25years, (3) 26-30years, (4) 31-35years, (5) 36-40years and (6) 41 years and above. The most representative respondent ages were in the ages of 41 years and above with a frequency of 260 (50.9%) and 36-40years with a frequency of 125 (24.5%) variety. The age group 26-30 years old comes in subsequently with a frequency of 61 (11.9%). This finding backs up the literature's general consensus as concluded by Grandia 2013 and 2015 that the age groupings associated with sustainable procurement practices of predominantly 27 and above. This was attributed to the fact that there seem to be a very high sense of responsibility and commitment to sustainable practices associated with these age grouping as maturity progresses.

#### ***4.1.1.3 Educational Level of Respondents***

Since the procurement function is being regulated academic and industry practices, it came out that the respondents confirmed as Diploma holders has a frequency of 37 (7.2%), Bachelors with a frequency of 176 (34.4%), Masters with frequency 293 (57.3%) and PhD also with a frequency 5 (1.0%). According to the CIPS a chartered professional it is characteristic charter with a minimum of a Bachelors or Masters to qualify for the charter status being conferred.

#### ***4.1.1.4 Organizational Age***

The literature review confirms scales established by El Akremi (2011) to measure organisation's oriented corporate stakeholder responsibility (SoCSR) and natural environment oriented stakeholder responsibility (NEoCSR). Additionally, it was concluded by Brammer and Walker (2011) and Grandia (2015), also, the UK Sustainable Procurement Task Force 2006 that, organisations commitment to Cooperate Social Responsibility (CSR) is directly related to

the age of organisations operation and the need to give back society, environment and cooperate. It is however confirmation to findings in the literature, as 0-5years representing a frequency of 2 (.40%), 6-10years representing a frequency of 36 (7.0%), 11-15years representing a frequency of 76 (14.90%), 16-20years representing a frequency of 130 (25.40%) and Above 21 years representing a frequency of 267 (52.30%).

#### ***4.1.1.5 Organization's Operation***

Sebastian Knebel et al 2019, sustainable public procurement (SPP) is at the centre global market business and with a strategic capacity of 9.5 trillion dollars in public procurement representing a as well as anticipated spillover results from the government to the private market. According to their study conducted, on the government procurement accounts for 12% or more of a country's GDP on average (OECD, 2015). The estimated amount of government purchases of products, utilities, and building activity is 9.5 trillion dollars (The World Bank, 2016). State agencies are the primary sellers in a number of industries, rendering public procurement a crucial commercial operation for states.

It is however not unexpected to findings in the responds gathered under the Biographical Analysis further confirms the above conclusions by Sebastian Knebel et al 2019. In this study the respondents were predominantly from Government Owned organisations totalling a frequency of 502 representing a percentage of 98.24%, while those from Government divestiture where government has some percentage of shares made of a frequency of 7.00 representing a percentage of 1.37%. Whereas respondents emerging from purely Public Private Partnership has a frequency of 2.00, representing a percentage of 0.39%.

#### ***4.1.1.6 Industry Type***

This finding backs up the academia's general consensus as concluded by Sebastian Knebel et al 2019 that state agencies are the primary sellers in a number of industries, rendering public

procurement a crucial commercial operation for states. It is however confirmatory that, this results indicated the public sector is largely a services industry accounting for a frequency of 504 representing a percentage of 98.63%. Whereas respondents emerging under production totalling with a frequency of 5 accounting for a percentage of 0.98%. Whereas the, Manufacturing sector only accounts for a frequency of 2 representing a percentage of 0.39%.

#### ***4.1.2 Normality Testing***

After the data was cleaned of missing values and wrong entries, the researcher then performed a descriptive statistics test to determine the quality of the data. The descriptive statistics test checked for the minimum and maximum entries, the mean statistics, standard deviation, skewness and kurtosis of the data. The results is presented in the table 13 The minimum and maximum entries show the scale on which responses were gathered. Thus, if any response that does not fall within the response category was treated as a missing value. However, the mean depicts the average response for each question, whiles the standard deviation depicts how spread out the general data is around the mean.

Moreover, the skewness of the data refers to asymmetry or distortion in a symmetrical bell curve, also known as a normal distribution, can be found in a series of results. Thus, a data is said to be skewed if it is tilted to the left or to the right. Lastly, the kurtosis of a data represents the ‘tailness’ of the probability distribution of a real-valued random data.

Table 12: Normality Statistics

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Skewness</b>		<b>Kurtosis</b>	
RG1	511	1.0	7.0	4.521	1.1611	-.556	.108	.836	.216
RG2	511	1.0	7.0	4.920	1.0771	-.766	.108	.991	.216
RG3	511	1.0	7.0	4.975	1.1788	-.362	.108	.697	.216
RG4	511	1.0	7.0	5.029	1.1381	-.683	.108	1.095	.216
RG5	511	1.0	7.0	4.847	1.1899	-.200	.108	.177	.216
RG6	511	1.0	7.0	4.982	1.1889	-.268	.108	.172	.216
RG7	511	1.0	7.0	4.838	1.3192	-.707	.108	1.233	.216

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RG8	511	1.0	7.0	4.521	.9676	.170	.108	2.004	.216
EcSP1	511	1.0	7.0	4.339	.8993	-.443	.108	2.389	.216
EcSP2	511	1.0	7.0	4.456	.7393	-1.251	.108	3.699	.216
EcSP3	511	1.0	7.0	4.339	.7598	-.762	.108	3.636	.216
EcSP4	511	1.0	7.0	4.425	.7288	-.698	.108	2.795	.216
EcSP5	511	1.0	7.0	4.609	.7615	-.999	.108	3.304	.216
EcSP6	511	1.0	7.0	4.364	.8288	-.267	.108	2.243	.216
EnSP1	511	3.0	6.0	4.636	.5879	-.919	.108	.449	.216
EnSP2	511	2.0	5.0	4.368	.6929	-1.383	.108	3.023	.216
EnSP3	511	2.0	7.0	4.450	.7650	-1.018	.108	2.701	.216
EnSP4	511	2.0	6.0	4.476	.7376	-1.284	.108	2.911	.216

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EnSP5	511	2.0	5.0	4.331	.6248	-.912	.108	2.186	.216
SoSP1	511	2.0	7.0	4.472	.7712	.662	.108	1.065	.216
SoSP2	511	1.0	7.0	4.571	.8622	1.390	.108	2.231	.216
SoSP3	511	2.0	7.0	4.665	.6712	.747	.108	1.829	.216
SoSP4	511	1.0	7.0	4.376	.7274	.147	.108	3.871	.216
OP1	511	2.0	7.0	4.387	.7986	-.486	.108	1.452	.216
OP2	511	2.0	7.0	4.431	.7712	.479	.108	3.283	.216
OP3	511	2.0	7.0	4.333	.8828	-.668	.108	1.812	.216
OP4	511	2.0	7.0	4.335	.6885	.139	.108	2.413	.216
OP5	511	2.0	7.0	4.342	.7910	-.427	.108	1.577	.216
OP6	511	2.0	7.0	4.319	.7884	-.124	.108	1.818	.216

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Table 13: Continued: Normality Statistics

					<b>Std.</b>				
	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Deviation</b>	<b>Skewness</b>	<b>Kurtosis</b>		
TMC1	511	2.0	7.0	4.393	.7488	-.251	.108	2.231	.216
TMC2	511	2.0	7.0	4.389	.8014	-.474	.108	1.428	.216
TMC3	511	2.0	7.0	4.309	.8668	-.933	.108	1.753	.216
TMC4	511	2.0	7.0	4.409	.7689	.139	.108	2.940	.216
OI1	511	2.0	5.0	4.215	.7699	-1.166	.108	1.689	.216
OI2	511	2.0	6.0	4.378	.8142	-1.538	.108	2.310	.216
OI3	511	2.0	5.0	4.329	.7259	-1.272	.108	2.218	.216

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SHP1	511	1.0	5.0	4.274	.8374	-1.356	.108	1.934	.216
SHP2	511	1.0	5.0	4.225	.8891	-1.415	.108	2.100	.216
SHP3	511	1.0	5.0	4.258	.8447	-1.303	.108	2.088	.216

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**Source:** Field data (2020)

### 4.1.3 Multicollinearity Test

The study further examined multicollinearity of data acquired – this is to augment the validity and reliability of data collected and used for the study. From studies such as Hair et al (2014) and Henseler et al (2014) suggests indicators should obtain a variance inflation factor (VIF) score below 10. The lower the variance inflation factor scores the better – meaning multicollinearity is not an issue with the acquired data. Internal consistency of data acquired is critical to the validity and quality of data used. The outcome of the VIF test provides credence to support the validity of constructs. The table 14 provides summary of the outcome of the variance inflation factor test.

**Table 14: Variance Inflation Factor Score**

<b>Variance inflation factor score</b>	
<b>Indicators</b>	<b>Variance Inflation Factor Score</b>
Relational Governance (RG)	
RG1	0.987
RG2	1.879
RG3	0.098
RG4	1.123
RG6	0.982
RG7	0.891
Organisational Performance (OP)	
OP1	1.453
OP2	1.325
OP3	0.034

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OP4	1.091
OP5	1.759
OP6	3.874
Economic Sustainable Practice (EcSP)	
EcSP1	1.892
EcSP2	0.905
EcSP3	1.004
EcSP4	1.946
EcSP5	4.972
EcSP6	1.904
Environmental Sustainable Practice (EnSP)	
EnSP1	1.696
EnSP2	1.095
EnSP3	1.963
EnSP4	2.694
EnSP5	1.096
Social Sustainable Practice (SoSP)	
SoSP1	1.789
SoSP2	2.065
SoSP3	1.560
SoSP4	0.120
Top Management Commitment (TMC)	
TMC1	1.056

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TMC2	0.452
TMC3	2.568
TMC4	1.906
Organizational Identity (OI)	
OI1	3.093
OI2	0.484
OI3	4.034
Stakeholder Pressure (SP)	
SHP1	0.789
SHP2	1.298
SHP3	2.045

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Source: Author's Construct (2020)

#### **4.1.4 Exploratory Factor Analysis**

Exploratory Factor Analysis (EFA) was used by the study as a data reduction strategy and also as a way of ensuring unidimensionality between the constructs. To determine the theoretical structure or underlying relationships between the different calculated factors, exploratory factor analysis (EFA) was used. Principal Component Analysis (PCA) was used in the factor analysis. Leading up to the extraction of the relevant factors, the Bartlett test of Sphericity (Approx:  $\chi^2 = 3778.534$ ,  $df = 300$ , Sig .000) and the Kaiser-Meyer-Ohlin (KMO) measure of sampling adequacy value of .775 (Cerny & Kaiser, 1977) confirmed that there was significant correlation among the variables to warrant the use of the factor analysis for further analysis.

A sequence of iterations and deletions of certain cross-loadings is used to achieve the unidimensionality of the variables. However, the final analysis found the extraction of six (6) variables with eigenvalues exceeding Kaiser's criteria of one, accounting for 58.029 percent of the variance. The table 3 shows the rotated factor loadings with the KMO and Bartlett's test of sphericity results.

Table 14: Exploratory Factor Analysis (EFA)

	Component					
	1	2	3	4	5	6
RG1	.676	-.044	-.200	.109	.056	.050
RG2	.680	-.002	.044	.007	-.026	-.051
RG3	.724	.013	.023	-.018	.095	-.009
RG4	.617	.017	.148	.010	.001	-.156
RG5	.763	-.033	-.083	-.018	.113	-.048
RG6	.787	-.010	-.040	-.066	.091	-.007
RG7	.682	-.052	-.052	-.072	.053	.091

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EcSP2	.047	.594	.267	.163	.246	-.173
EcSP3	-.012	.752	-.120	-.062	-.032	.081
EcSP4	-.023	.707	.078	-.156	-.243	.049
EcSP5	-.014	.710	.219	.076	.019	-.059
EcSP6	-.098	.731	.022	.309	-.078	.099
EnSP2	-.131	.074	.021	.747	.079	.066
EnSP3	.075	-.019	-.206	.788	-.055	-.039
EnSP4	.020	.097	.076	.825	.049	-.140
SoSP1	.133	.071	.013	-.042	.761	.004
SoSP2	.141	-.086	-.130	.012	.740	.096
SoSP3	.020	-.115	.038	.095	.772	-.055

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OP2	-.064	-.051	.666	-.074	-.005	.115
OP3	-.066	.246	.716	-.001	-.040	.122
OP5	-.002	.077	.711	.005	-.076	.248
OP6	.041	.100	.677	-.008	.027	.287
TMC1	-.020	-.078	.354	-.110	.090	.640
TMC2	.028	.144	.244	-.029	.079	.761
TMC4	-.124	-.031	.249	.017	-.113	.750
Eigen values	4.044	3.253	2.628	1.979	1.563	1.040
Percentage of variance explained	16.175	13.010	10.514	7.916	6.253	4.161
Cumulative percentage of variance explained	16.175	29.185	39.698	47.614	53.868	58.029

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Kaiser-Meyer-Olkin		.775
Measure of Sampling Adequacy.		
Bartlett's Test of Sphericity	Approx. Chi-Square	3778.534
	df	300
	Sig	.000

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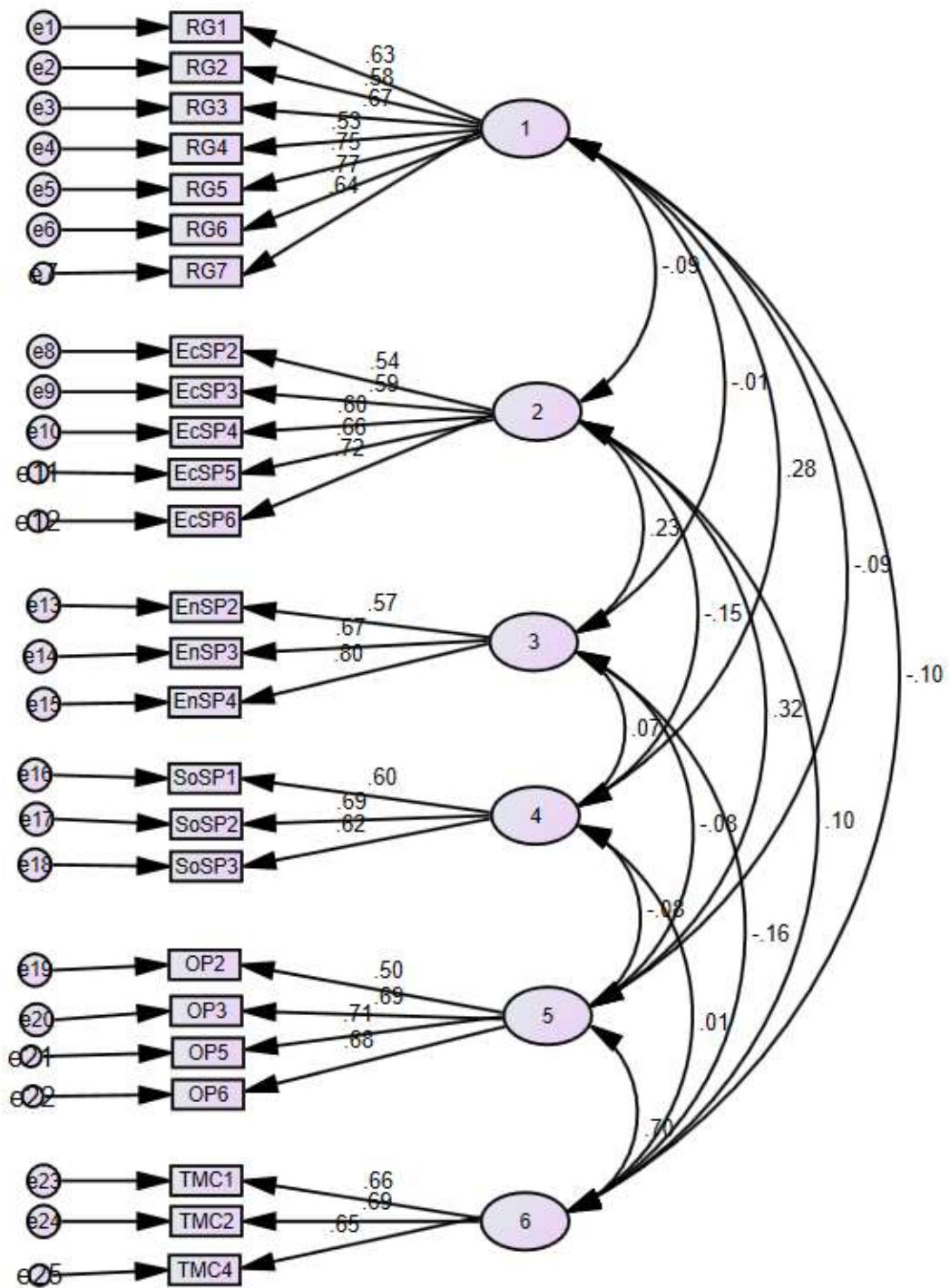
**Source:** Field data (2020)

#### ***4.1.5 Confirmatory Factor Analysis (CFA)***

A confirmatory factor analysis (CFA) is a multivariate statistical procedure that is employed to test how well suited some measured variables represents a construct they are supposed to measure. Thus, the CFA is employed to assess the validity of items used to measure a construct. Most times a CFA procedure may be carried out in an omnibus manner such that all the items used in a given study are all validated in a single measurement model. However, it is recommended that, in cases where the items are all too many, it is more prudent to run the measurement model in two sub-analyses to avoid complexities (Bentler & Chou, 1987).

In the study's background, because the total items used in measuring the various constructs were 25 in all and did not exceed 30, the researcher considered an omnibus measurement model as an ideal measuring or validation approach rather than splitting the items into sub-models. The result of CFA is shown in figure 4.

Figure 4: CFA Path Model



Source: Field data (2020)

Table 15: Operational Measures of Constructs

<b>Operational Measures of Constructs</b>					
<b>Model Fit Indexes: <math>\chi^2 = 472.056</math>; d.f. = 245; <math>\chi^2/\text{d.f.} = 1.927</math>; RMSEA = .043; NFI = .900, IFI = .937, TLI = .922, CFI = .936, GFI = .932</b>					
	<b>SFL</b>	<b>t-</b>	<b>value</b>	<b><math>\alpha</math></b>	<b>CR</b>
<b>Relational governance (Poppo &amp; Zenger, 2002</b>			<b>.834</b>	<b>0.874</b>	
<i>Joshi &amp; Campbell, 2003)</i>					
RG1	Our organization has an extremely collaborative relationship with its partners and suppliers.	.630	14.971		
RG2	To delegate positions and obligations to each party in the partnership, we focus on our shared agreement with partners and suppliers.	.580	14.248		
RG3	We deal with unforeseen incidents by depending on our collaborators and suppliers' shared understanding.	.667	16.379		
RG4	Remedies for failure to perform are based on our mutual understanding with partners and suppliers	.526	11.835		
RG5	Our organization and its associates collaborate to address and settle disputes	.749	19.570		

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RG6	A cooperative collaboration with partners and suppliers is important for the relationship	.772	17.191	
RG7	Our firm and its collaborators work together to sustain and develop a mutually trusting cooperative partnership.	.641	12.909	
<b><i>Economic Sustainable Procurement Practice</i></b>			<b>.759</b>	<b>0.828</b>
(Meehanl & Bryde, 2010)				
EcSP2	During the tender process, my organisation prefers vendors that score well on sustainability.	.538	10.941	
EcSP3	We have a formal procurement program in place that states our dedication to buying environmentally friendly products and services.	.592	11.658	
EcSP4	My organization has created sustainability a part of its procurement process.	.598	14.494	
EcSP5	In my organization's contract notes, sustainability requirements are defined	.657	11.620	
EcSP6	Our sustainable procurement policy and procedures have been communicated to our suppliers.	.716	17.206	

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<b><i>Environmental Sustainable Procurement Practice</i></b>		<b>.718</b>	<b>0.830</b>
(Thong & Wong, 2018)			
EnSP2	Environmental sustainability is critical to our success	.567	11.352
EnSP3	Environmental sustainability is a key priority of our organization	.672	13.678
EnSP4	Our organisation prefers its suppliers to have environmental certifications.	.799	15.903
<b><i>Social Sustainable Procurement Practice</i></b> (Thong & Wong, 2018)		<b>.700</b>	<b>0.802</b>
When choosing partners, our organization prioritizes			
SoSP1	those who practice and respect social sustainability rules, policies, and standards.	.601	11.269
SoSP2	Our organization has put in place a healthy and safe management system.	.690	13.501
SoSP3	Our organization also participates in voluntary charitable work	.624	12.416
<b><i>Oganisational performance</i></b> (BouLlusar, beltran – Martin & Escrig – Tena, 2016)		<b>.733</b>	<b>0.787</b>

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OP2	Our organization achieves reduction in the number of reports or allegations from stakeholders and users	.501	10.322
OP3	Within a short period of time, employees in this organisation learn new procedures and processes that have been introduced into their jobs.	.686	16.008
OP5	Employees in our organisation have a variety of talents that can be extended to activities that are related to other employment.	.707	15.993
OP6	In this organisation, employees who wish to find different ways of doing things get a lot of support from their bosses.	.676	15.181

**Source:** Field data (2020)

Table 16: Continued: Operational Measures of Constructs

<b>Operational Measures of Construct</b>			
<b>Model Fit Indexes:</b>	$\chi^2 = 472.056$ ; <b>d.f.</b> = 245;	<b>SFL</b>	<b>t-value</b>
	$\chi^2/\text{d.f.} = 1.927$ ; <b>RMSEA</b> = .043; <b>NFI</b> = .900, <b>IFI</b> =		<b><math>\alpha</math></b>
	.937, <b>TLI</b> = .922, <b>CFI</b> = .936, <b>GFI</b> = .932		<b>CR</b>

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	<i>Top Management Commitment</i> (Wijethilake & lama, 2018 Colwell & Joshi, 2013)		<b>.707</b>	<b>0.762</b>
TMC1	Our Top Management extends full support for sustainability practices	.665	14.268	
TMC2	Our Top Management consistently assesses the sustainability impacts of our operations	.693	15.678	
TMC4	Our organization's Top Management has a great understanding of stakeholders' sustainability practices for operations	.652	14.422	

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**Source:** Field data (2020)

From table 21 & 22, using a factor loading threshold of 0.50 it can be noted that all the items retained in measuring the various constructs all exceeded this minimum threshold point, reading from the standardized factor loading (SFL) section. Thus, the retained items as shown in table are good indicators for the constructs they are supposed to measure. Additionally, with regards to the reliability of the constructs, using the Cronbach's alpha value of .70 as a benchmark, it can be noted that all of the constructs had a Cronbach's alpha values above .70, therefore the constructs were reliable. Using the same reliability benchmark it can also be noted that composite reliability (CR) for all the constructs again exceeds this benchmark and hence they are all reliable.

Aside the standard factor loading (SFL) and reliability tests as shown in table 4, also highlight model fit indices of the confirmatory factor analysis carried out. Seven main model fit indices were used to assess the overall goodness of fit of the model. These

are the ratio of  $\chi^2$  to the degrees-of-freedom (d.f.), root mean square error of approximation (RMSEA), normed fit index (NFI), incremental fit index (IFI), comparative fit index (CFI), and goodness of fit Index (GFI). As shown in the table all the model indices were within the accepted levels, confirming the measurement model as a good fit with the data collected. Specifically, the model fit indices obtained for the measurement model for all the constructs were  $\chi^2 = 472.056$ ; d.f. = 245;  $\chi^2/\text{d.f.} = 1.927$ ; RMSEA = .043; NFI = .900, IFI = .937, TLI = .922, CFI = .936, GFI = .932.

Table 17: Summary Model Fit Index Outcomes

Indices	Threshold/Values	Estimated	Comment
S-B $\chi^2$		472.056	-
Df		245	-
Chi-square ( $\chi^2/\text{df}$ )	< 5 (acceptable fit); < 3 (good fit)	1.927	Good fit
GFI	> 0.90 (acceptable fit); > 0.95 (good fit)	.932	Acceptable fit
Comparative Fit Index (CFI)	> 0.90 (acceptable fit); > 0.95 (good fit)	.936	Acceptable fit

Incremental Fit Index (IFI)	> 0.90 (acceptable fit); > 0.95 (good fit)	.937	Acceptable fit
Normed Fit Index (NFI)	> 0.90 (acceptable fit); > 0.95 (good fit)	.900	Acceptable fit
Tucker-Lewis Index (TLI)	> 0.90 (acceptable fit); > 0.95 (good fit)	.922	Acceptable fit
Root Mean-Square Error of Approximation (RMSEA)	$\leq 0.08$ (acceptable fit); $\leq 0.05$ (good fit)	.043	Good fit

**Source:** Field data (2020)

#### ***4.1.6 Correlation and Descriptive Statistics***

Correlation is a statistical test that test shows how one (latent) variable relates with another variable. Thus, correlation ranges on a scale of -1 to +1. At the two extremes, is an indication of what is described as perfect correlation. A perfect correlation is usually attained when a variable correlates with itself. Therefore, it is not expected for two variables that are conceptually or theoretically different or distinct from each other to have a perfect correlation or close to perfection.

The problem of multicollinearity arises when two variables that are expected to be different from each other have a correlation coefficient of either -1 or +1 or close. In the view of Gujarati and Porter (2003) a guide that could confirm an issue of multicollinearity

is when the correlation coefficients between two constructs are greater than 0.8. Thus, from the table 7, it can be deduced that none of the correlation coefficients are beyond the 0.8 benchmark. Hence it is concluded that, the variables employed in this study are conceptually and theoretically distinct from each other. In other words, there are no issue of multicollinearity.

Aside testing for the correlation or the association among the various constructs, the study also tested the descriptive statics of the constructs. Specifically, the mean, standard deviation, skewness and kurtosis were tested. This was done to give a general idea of nature and distribution of the data collected. Based on the distribution in the table above, it can be concluded that the data collected is normally distributed.

Table 18: Correlation and Descriptive Statistics

	1	2	3	4	5	6	7	8	9	10
1. Gender	1									
2. Age	.134**	1								
3. Education	-.037	-.038	1							
4. Organizational Age	-.039	-.015	.079	1						
5. Economic Sustainable Procurement Practice	-.026	-.038	-.019	.016	1					

<b>6.</b> Environmental Sustainable Procurement Practice	-0.015	-.095*	-.042	.094*	.149**	1				
<b>7.</b> Social Sustainable Procurement Practice	.038	.067	.035	-.024	-.089*	.053	1			
<b>8.</b> Top Mgt. Commitment	-.070	.099*	.017	-.025	.068	-.113*	.003	1		
<b>9.</b> Relational Governance	.083	.005	-.026	-.024	-.059	-.021	.210**	-.079	1	
<b>10.</b> Organisational Performance	-.075	.083	.040	.009	.239**	-.071	-.054	.520**	-.075	1
<b>Mean</b>	1.3757	5.0607	2.5205	4.2211	4.4384	4.4312	4.5695	4.3973	4.8731	4.3562
<b>Standard Deviation</b>	.48479	1.22003	.64403	.97015	.54530	.58559	.59948	.61414	.83598	.60318
<b>N</b>	511	511	511	511	511	511	511	511	511	511
<b>AVEs</b>	-	-	-	-	<b>0.511</b>	<b>0.620</b>	<b>0.574</b>	<b>0.517</b>	<b>0.501</b>	<b>0.541</b>

**Source:** Field data (2020) +p < .10, \*p < .05, \*\*p < .01, \*\*\*p < .001 (two-tailed test)

#### ***4.1.7 Diagnostic Statistics***

Diagnostic statistics is a statistical measure or procedure in regression which is employed to assess the validity of a model (Schulzer, 1994). It is used to evaluate the model assumptions and find out whether there is any observation with undue large influence on the results (Penrose, Nelson & Fisher, 1985). For the normality and linearity, the Normal P-P plot was used by inspecting the visual histograms for any possible discrepancies in the data. Outliers in the data were also deleted using the Cook's distance (Cook, 1979). Based on the regression outputs a total of 6 outlier cases or influential observations were noted and deleted after two series of regression analysis. The outcome of these tests is reported in the appendix.

#### ***4.1.8 Regression Analysis***

To determine the outcome of the various hypothesized relationships, the researcher performed a hierarchal regression test, containing both the direct and moderating effect hypotheses. The table below shows the outcome of the hierarchal regression test.

The hierarchical regression procedure employed in testing the study hypotheses was done in four models. Model I contained the individual effect of the control variables on the dependent variable, while model II contained the effect of the control variables and the independent variable. In the model III, the moderator variables were added to the control and independent variables, whereas in the fourth and final model, the interaction terms were introduced to add to the controls, independent and moderator variables

Table 19: Regression Result

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>Variables</b>	<i>b</i> (t-values)	<i>b</i> (t-values)	<i>b</i> (t-values)	<i>b</i> (t-values)
<b>Control variables</b>				
Gender	-0.063 (-1.390)	-0.057 (-1.310)	-0.023 (-.597)	-0.013 (-.338)
Age	.091 (2.021)*	.092 (2.093)*	.043 (1.110)	.047 (1.225)
Education	.033 (.727)	.031 (.706)	.026 (.676)	.035 (.929)
Organizational age	.030 (.663)	.030 (.689)	.031 (.801)	.033 (.863)
<b>Independent variables</b>				

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Economic Sustainable Procurement Practice (ECSPP)	.252 (5.733)***	.204 (5.252)***	.113 (2.339)*
Environmental Sustainable Procurement Practice (ENSPP)	-.084 (-1.906)**	-.028 (-.720)	.018 (.424)
Social Sustainable Procurement Practice (SSPP)	-.018 (-.418)	-.023 (-.596)	-.007 (-.151)
 <b>Moderator</b>			
Top Mgt. Commitment (TMC)		.465 (11.937)***	.431 (10.084)***
Relational Governance (RG)		-.011 (-.278)	-.018 (-.459)
 <b>Interaction effect</b>			

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ECSPP * TMC					-210 (-4.454) <sup>***</sup>
ENSPP * TMC					.000 (.008)
SSPP * TMC					-.092 (-2.120) <sup>*</sup>
ECSPP * RG					.022 (.528)
ENSPP * RG					-.092 (-2.275) <sup>*</sup>
SSPP * RG					-.030 (-.684)
R <sup>2</sup>	.013	.078	.287	.333	
Adjusted R <sup>2</sup>	.005	.065	.274	.312	
F value	1.606	6.002 <sup>***</sup>	22.081 <sup>***</sup>	16.202 <sup>***</sup>	
$\Delta R^2$		.066	.209	.046	

---

Partial F value		11.725***	72.304***	5.549***
Degrees of freedom	4/498	7/495	9/493	15/487
Durbin Waston test	1.488			

**Source:** Field data (2020) +p < .10, \*p < .05, \*\*p < .01, \*\*\*p < .001.

#### 4.2 Hypotheses Testing

The table 4.9 presents outcome of the hypotheses tested for the study. The outcome of regression analysis supports four (4) out of stated nine (9) hypotheses. Hypotheses is judged by the t-statistics value and significant level. Summary of the hypotheses testing is presented.

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Table 20: Outcome Hypotheses Test

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<b>HYPOTHESES</b>	<b>DECISION</b>
1. Economic SPP → Organizational Performance	<b>SUPPORTED</b>
2. Environmental SPP → Organizational Performance	<b>NOT SUPPORTED</b>
3. Social SPP → Organizational Performance	<b>NOT SUPPORTED</b>
4. ECSPP * TMC → Organizational Performance	<b>SUPPORTED</b>
5. ENSPP * TMC → Organizational Performance	<b>NOT SUPPORTED</b>
6. SSPP * TMC → Organizational Performance	<b>SUPPORTED</b>
7. ECSPP * RG → Organizational Performance	<b>NOT SUPPORTED</b>
8. ENSPP * RG → Organizational Performance	<b>SUPPORTED</b>
9. SSPP * RG → Organizational Performance	<b>NOT SUPPORTED</b>

---

**Source:** Field data (2020)

### **4.3 Interpretation of Regression Results**

From table 8, the explained control variables 1.3 % of the variation is due to organizational performance as shown in Model 1. The independent variables are added together that is economic sustainable procurement practices, environmental procurement practices and social sustainable procurement practices to the control variables in Model 2 increased the variance to 7.8% ( $\Delta F = 26.002, p < .001$ ), depicting a change in the variance by 6.6%. Furthermore, when the moderator variables that is top management commitment and relational governance was added to the variables under control and the independent variables in Model 3 the variance again increased to 28.7% ( $\Delta F = 22.081, p < .001$ ), depicting a change in the variance by 20.9%. Lastly, the inclusion of the interaction terms to the control, independent and moderator variables in model 4 also increased the variance to 33.3% ( $\Delta F = 16.202, p < .001$ ) with a corresponding change in  $R^2$  of 4.6%.

#### **4.3.1 Effects of Control Variables on Organizational Performance**

The study controlled for four main variables that include gender, age, education and organizational age. Reading from Model 4, it was found that none of the control factors had any significant effect on organizational performance. Specifically, gender of respondents had a negative and insignificant effect on organizational performance ( $b = -.013, t = -.338, p > .01$ ). Additionally, respondents age ( $b = .047, t = 1.225, p > .01$ ) had a positive but insignificant effect on organizational performance. Also, the educational level of respondents ( $b = .035, t = .929, p > .01$ ) had a positive but insignificant effect on organizational performance. Lastly, the result also revealed that organizational age had a positive but insignificant effect ( $b = .033, t = .863, p > .01$ ) on project success.

### ***4.3.2 The Independent Variables' Effect on Organizational Performance***

The independent variables used in the context of this study include economic sustainable procurement practices, environmental sustainable procurement practices and social sustainable procurement practices. Based on the result obtained from the hierarchical regression conducted, one out of the three independent variables had a significant effect on organizational performance. Reading from Model 4, it was found that economic sustainable procurement practices had a significant positive impact ( $b = .113, t = 2.339, p < .05$ ) on organizational performance, implying that hypothesis 1 was not supported. With regards to the second hypothesis, it was found that environmental sustainable procurement practices had a positive but insignificant effect ( $b = .018, t = .424, p > .10$ ) on organizational performance, thereby hypotheses 2 was not supported. The third hypothesis holds that social sustainable procurement practices will have a positive and significant relationship with organizational performance. Based on the result, it was found that, social sustainable procurement practices had a negative and insignificant effect ( $b = -.007, t = -.151, p > .10$ ) on organizational performance. This means hypothesis 3 was also supported.

### ***4.3.3 The Interaction Effect Interpretations***

Aside the direct effects of the independent variables on organizational performance, the study also tested for the moderation effect of top management commitment and relational governance on the relationship between the independent variables and the dependent variable. Based on the results, it was found that the interaction effect of economic sustainable procurement practices and top management commitment ( $b = -.210, t = -4.454, p < .001$ ) on organizational performance was negative and significant. However, the interaction effect of environmental sustainable procurement practices and top management commitment ( $b = .000, t = .008, p > .10$ ) on organizational performance was positive but not found to be significant. Additionally, it was found that the

interaction effect of social sustainable procurement practices and top management commitment ( $b = -.092, t = -2.120, p < .05$ ) on organizational performance was negative and significant.

With respect to the second moderator variable, it was found that the interaction effect of economic sustainable procurement practices and relational governance ( $b = .022, t = .528, p > .10$ ) had a positive and non-significant effect on organizational performance. Also, the result revealed that the interaction effect of environmental sustainable procurement practices and relational governance ( $b = -.092, t = -2.275, p < .05$ ) on organizational performance was negative and significant. Lastly, the result of the study also revealed that the interaction effect of social sustainable procurement practices and relational governance ( $b = -.030, t = -.684, p > .10$ ) on organizational performance was negative and non-supported.

#### **4.4 Qualitative Analysis**

The findings of this analysis present the viewpoints of procurement experts and practitioners on the how sustainable procurement influences the performance of organizations. It further elucidates on the role of Top Management and Governance in the discharge and implementation of Sustainable Procurement Practices across diverse departments and institutions in the Public Sector. The analysis presented in this section covers the broad scope or theme of the study, thus, Sustainable Procurement Practices, Top Management Commitment, Relational Governance and Organizational Performance. The section presents the background justification to adopt Qualitative Method for Data Collection. Furthermore the demographic information and characteristics of the respondents are presented. Also, the the qualitative techniques and procedure utilized to analyze the interview data are discussed.

This section of the study presents the outcome of qualitative analysis from interview, mostly employed in the public sector of Ghana.

#### ***4.4.1 Data Analysis: Techniques and Process***

As elaborated in chapter 3 of the study, the study adopted a mix-method approach, thus the usage of both qualitative and quantitative techniques to address stated research questions and objectives. Both doing so, the study is able to illustrate on the quantitative and qualitative factors that influence sustainable procurement practices and organizational performance. The purpose of the field survey that is interview session is to explore and gain in-depth understanding into the effect of sustainable procurement practices on organizational performance. In addition the rationale for conducting interview is to gain insights from respondents that were not able to participate in the survey process. To gain insights from non-respondents sample of the study – this category included individuals who expressed their willingness to participate in subsequent survey despite not having time for questionnaire survey. Gaining insights from these categories would provide some evidences to augment the quantitative findings and further provide avenue to unearth new evidences. In address this objective interview questions and discourse were centered on this scope;

1. Identify the extent of SPP implementation and its impact on operational activities of organization.
2. What governance mechanism or framework is used in guiding exchanges?
3. Identify the role of top management/institution support towards improving SPP practices.

Based on the qualitative approach to identify and answer the questions raised during the interview session, an appropriate qualitative technique should be identified and utilized to gain in-depth

understanding from the textual data available (Carcary, 2011). From a methodological standpoint, this research adds to the existing body of knowledge on sustainable procurement practice by teasing out both quantitative and qualitative influencers.

#### ***4.4.2 Process of Data Analysis***

During the interview session, discussion between interviewer and interviewee were recorded and later transcribe verbatim and coded (Bazeley & Jackson, 2013). The transcript is reexamining to ascertain there are no forms of vagueness and ambiguities. As elaborated in Zhang & Wildemuth (2009) study, it is prudent to code and further attach codes to important words, sentences and paragraphs from the interview transcript. Although the study did not employ the services of a professional transcriber, the author asked the assistance of an academic expert to examine the accuracy and credibility of transcribed document. This was done by comparing recorded audio interview with the transcribed document. Adopting this approach is acceptable and in line with techniques utilized in the management literature, for instance study conducted by Halcomb & Davidson, (2006).

The study uses computer – aided qualitative analysis software to analyze transcribed document. Although there are several CAQDAS software such as Atlas.ti, MAXQDA and others the study adopted the Nvivo software. The rationale for adopting this tool is rooted in its robustness and wide acceptance in management and organizational research (Carcary, 2011; Siverman, 2013). The relevance of project journal in qualitative research and analysis as elaborated by Rothman et al (2007), therefore prior to coding and analysis of transcribe the author had a project journal that outlines coding rules and node creating for categorization. In this study Rothman et al (2007) approach to qualitative analysis is adopted. In his approach, one should endeavor to follow five

step diligently in order to gain in-depth insights into transcribed document. These five steps are as follows, 1) preliminary exploration of interview transcript and note taking; 2) node formation when data patterns develop; 3) node categorization and classification; 4) data coding into the applicable topic; and 5) writing conclusions from an examination of the coded data inside the cluster of nodes

#### ***4.4.3 Data Analysis Technique***

To gain insights into the interview transcript by utilizing the thematic content analysis approach. The Content and topic analysis were used to synthesize the coded textual data for the current investigation (Neuendorf & Kumar, 2015; Erlingsson & Brysiewicz, 2017). The adoption of this technique is because it enables a reduction of textual data into simplify understandable theme and this is an accepted practice in the social science research (Mayring, 2004). The utilization of this technique enables study to identify Interview transcripts reveal trends and patterns. In addition, It's an effective methodology and method for analyzing key ideas in a manuscript. . Some of the key facets to consider when performing content analysis related to how data should be analyses, how they should be defined, population, context, analysis limits, and the inferences to be drawn (Kohlbacher 2006; Krippendorff, 1980).

The study adopts the inductive process of content analysis of textual data acquired during interview session. In performing the content analysis, the study revealed four major themes were identified. The four major themes identified are centered on sustainable procurement practices, organizational performance, top management/institutional support and relational governance. The coding enables the study to differentiate the themes that emerges from the transcribed interview (Basit 2003). The theme identified is labeled to enable the generation of clear definitions and names for the final

analysis in relation to research question and body of literature. Once the themes are identified and relationship between codes established the themes are reviewed and interest identified. All identified code and themes are assessed for commonalities related to the central theme of the study (Rothman et al, 2007; Thomas & Harden, 2008).

#### ***4.4.4 Response Rate and Demographics***

The sample size of the study is 25 comprising of procurement manager/directors and procurement experts working in public institutions across Ghana. The selected sample represents top individuals in the procurement landscape. The participation rate of 15 procurement experts representing 60 percent, out of this number 10 are procurement managers and procurement directors in public sector institutions. The remaining 5 are procurement consultants affiliated with other statutory agencies or bodies in the public sector. The rationale for non-response is attributed to issues of movement restriction and safety especially in these times of covid-19 pandemic. In addition, these individuals have been working in the procurement landscape as senior officers on average over a period of 7 years. The table below shows the demographics of respondents in interview session.

Table 21: Profile of Telephone Interview Participants

<b>Category</b>	<b>No. of Employees</b>	<b>No. of participants</b>	<b>%</b>
Director of Procurement	> 100	4	27
<b>Other Senior Managers</b>			
Procurement Manager	>150	4	27
Purchasing and Supply Chain Manager	>500	2	13
Procurement Consultant	>200	5	33
<b>Years of experience</b>			
Slightly experienced (5 years or less)		4	27
Moderately experienced (6-10 years)		8	53
Highly experienced and seasoned (over 10 years)		3	20

#### **4.4.5 Sustainable Procurement Practices**

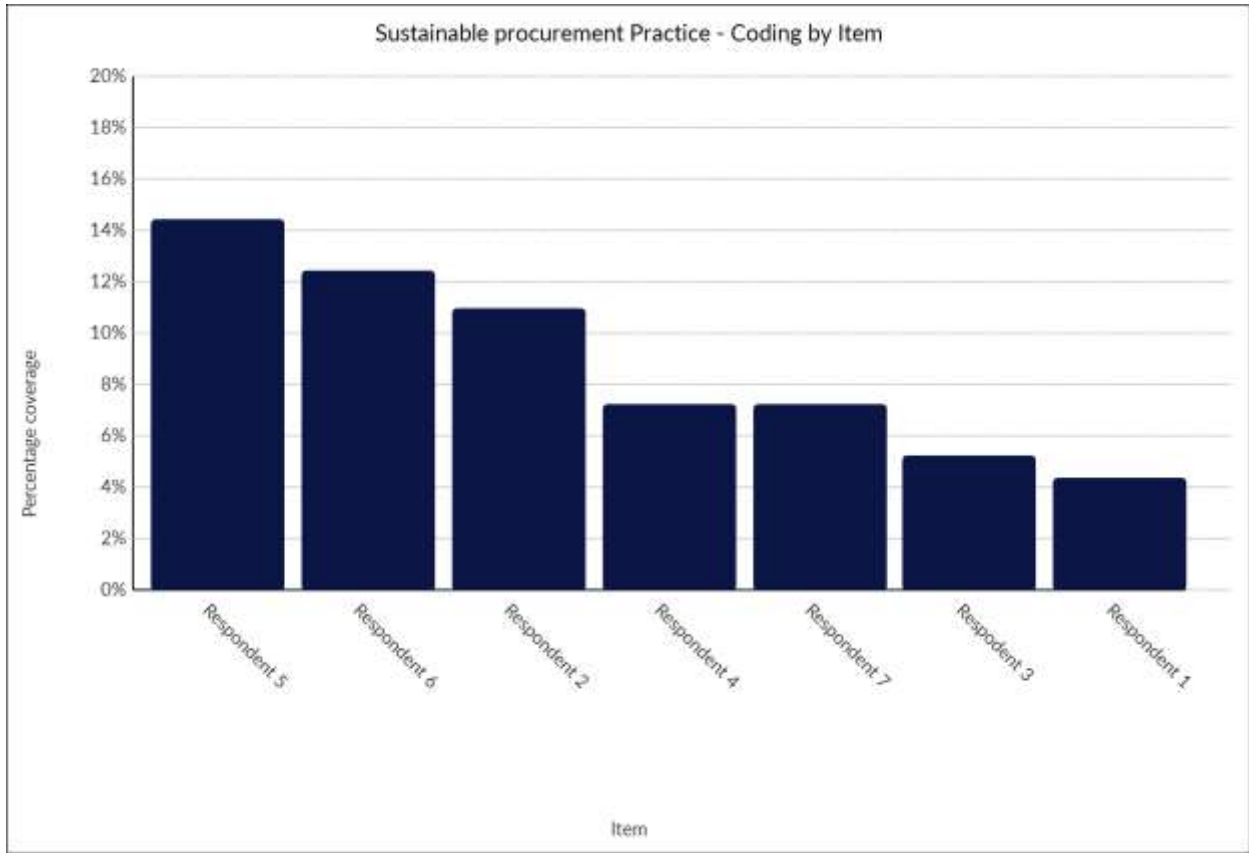
The core purpose of the study is to examine the effect of sustainable procurement practices on organizational performance in the public sector. To address this subject it is prudent to assess the perception of respondent about their understanding of sustainable procurement practices, its benefits and challenges relating to its implementation. Before identifying how it impact the performance of specific organizations. The respondents were asked if their organizations practice sustainable procurement and what dimensions of sustainable procurement practice is implemented or adhered to.

#### ***4.4.6 Understanding of Sustainable Procurement Practices***

Inference from qualitative findings indicates that the respondents understand and acknowledge the importance of sustainable procurement practices. These respondents argued that sustainable procurement practices are fundamental to the improvement of organizational functional activities whiles adhering to regulatory requirements. Respondents acknowledged that organizations can thrive in an evolving green business landscape only if it adopts sustainability practices of which procurement is at its core. Comments from three (3) respondents indicate the acceptance and implementation of sustainable procurement practices. In addition these organizations have configured and realign its corporate strategy to integrate sustainability practices. The figure 7 present word cloud contain percentage coverage for sustainable procurement practices



Figure 6: Sustainable Procurement Practice-Coding by Item



Source: Field data (2020)

Deducing from interview data indicates some organizations pay critical attention to the implementation of sustainable procurement practices differs from one institution to another. Some institutions have ascertained and benefitted from such sustainable practices whereas some firm are at the initial stages of sustainability adoption and implementation. As elaborated by procurement experts;

*“Currently, our organization has adopted the concept of sustainability by analyzing Our company's reputation, in terms of economic, environmental, and social action, is highly reliant on its supply chain and the long-term success of each and every link in the chain, including both primary and secondary suppliers.’*

*--Procurement Expert.*

*‘Sustainable procurement is a hot topic in today's business world. It can assist in cost savings, waste reduction, increased competitiveness, and the enhancement of a company's reputation.’*

*- Procurement Manager*

*‘Sustainable Procurement achieves the following: avoids pollution, greenhouse dioxide, oil and water use, preserves habitats, prevents the purchasing from unhealthy sources, promote equitable and sustainable economic development, and provide social benefits by procurement’.*

*- Purchasing & Supply Manager*

In addition to gaining insights about respondents perspective about sustainable procurement practices, the study went a step further to investigate the dimensions of sustainable procurement practices been implemented by various institution. From the transcript it can be seen that most organizations plays much emphasis on environmental and economic sustainability practices comparatively. Rationale for the adoption of environmental and economic sustainability practices can be attributed to the fact that organization adhere to sustainability requirement as a mode to adhere to regulatory environmental compliance and also as means gain access to new market so as to improve economic gains and productivity of organizations.

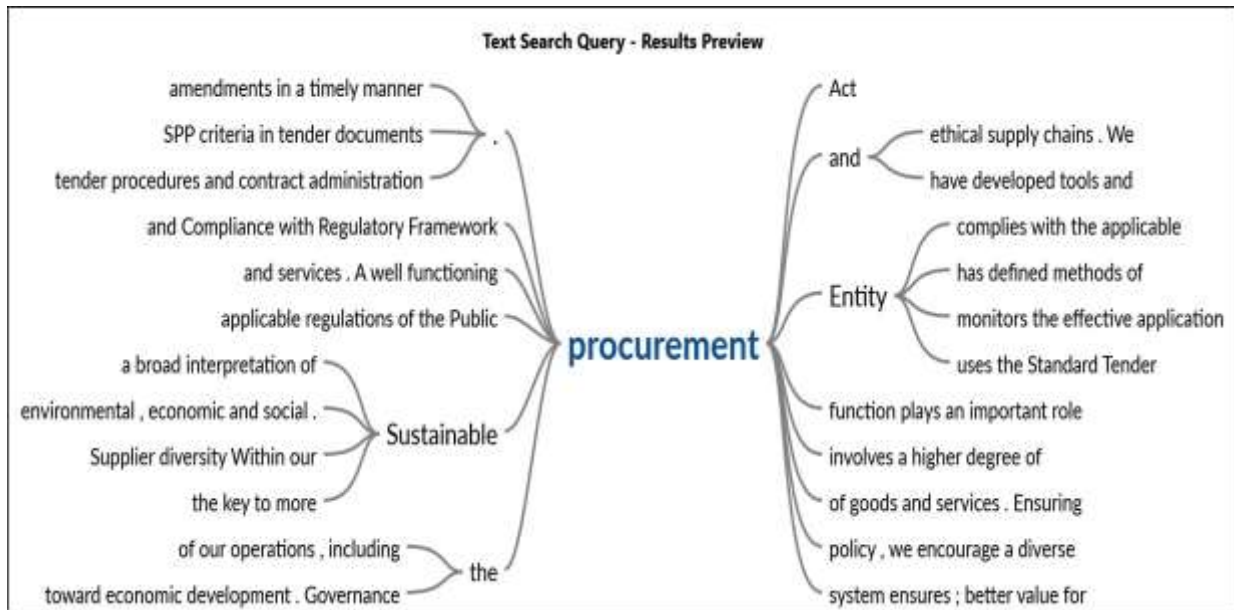
*'Currently, our organization has adopted the concept of sustainability by analyzing our In terms of economic, financial, and social activity, a company's reputation is highly reliant on its supply chain and the long-term success of each and every chain link, for both primary and secondary suppliers.'*

*- Procurement Manager*

*'To environmental sustainability, a transformation in the business culture's ideals, changing from dominance to collaboration, from the philosophy of economic development to the ideology of environmental sustainability, motivates the study and analysis of activities from the organization ecology viewpoint. In a nutshell, environmental protection entails increasing the planet's capacity by using the potential present in multiple species while minimizing biodiversity degradation.'*

*- Procurement Consultant*

Figure 7: Procurement Text Search Query-Results Preview



Source: Field data (2020)

**4.4.7 Role of Top Management in Sustainable Procurement Practices**

The role of top management and institutional support in achieving high degree of sustainability cannot be underestimated. Sustainable practices require significant resource input to achieve stipulated feat and objectives. Management buy – in or lock-in is crucial to the implementation of any strategy especially in public institutions that is characterized by organization opaqueness and complexity. Resource allocation is crucial to the attainment of sustainable procurement practices – management need to approve budgets and financial allocations for the development and maintenance of green core competence and capabilities.

When organizations have the requisite support from institutional heads and authority of management, it shapes the behavior and activities of employees. In addition it transforms the culture and structure of the organization to align with green or sustainability strategy of the firm.

As acknowledged by the respondents institutional and management support is critical to the attainment of organization's goals. The support comes in several forms including the provision of sustainable related training and capacity building and provision of sustainability infrastructure at organization wide. As elaborate by respondents;

*'Our senior management offer procurement officers the requisite training, tools and knowledge to ensure officer discharge their duties efficiently through the following;*

- a. Change management shift towards sustainability standards*
- b. Organizational workplace ethics and Principles*
- c. Foster high level of collaboration between teams*
- d. Building on accountability'*

*- Procurement Manager*

*"Through leadership, the Procurement Entity is empower undertake needed training recommendations in order to create a long-term training plan as well as the capacity to handle their procurement processes. Also, the Procurement Entity appreciates the Sustainable Public Procurement (SPP) policy and management is committed to it. Additionally, the Procurement Entity develops sustainability strategy in line with sector priorities with resources allocated to them. Management implementation of procurement reforms based on Internal Audit reports suggesting improvement. Finally, Management complies with procurement audit reports and suggested improvement and Procurement Entity keeps records for all phases of procurement activities"*

*- Procurement Manager*

*“Senior management offer procurement officers the requisite training, tools and knowledge typically sets the tone for what the organization employees contribute as much to discharge their duties efficiently. To set the right tone for the need to adopt sustainable procurement practices”*

*- Procurement Manager*

*“By organizational institutional support experts of government institutions like the Ministry of Energy, Environmental Protection Agency (EPA) Public Procurement Authority (PPA), Food and Drugs Authority (FDA), Ghana Standards Authority (GSA) are invited during procurement evaluations to provide expert advice”*

*- Purchasing & Supply Chain Manager*

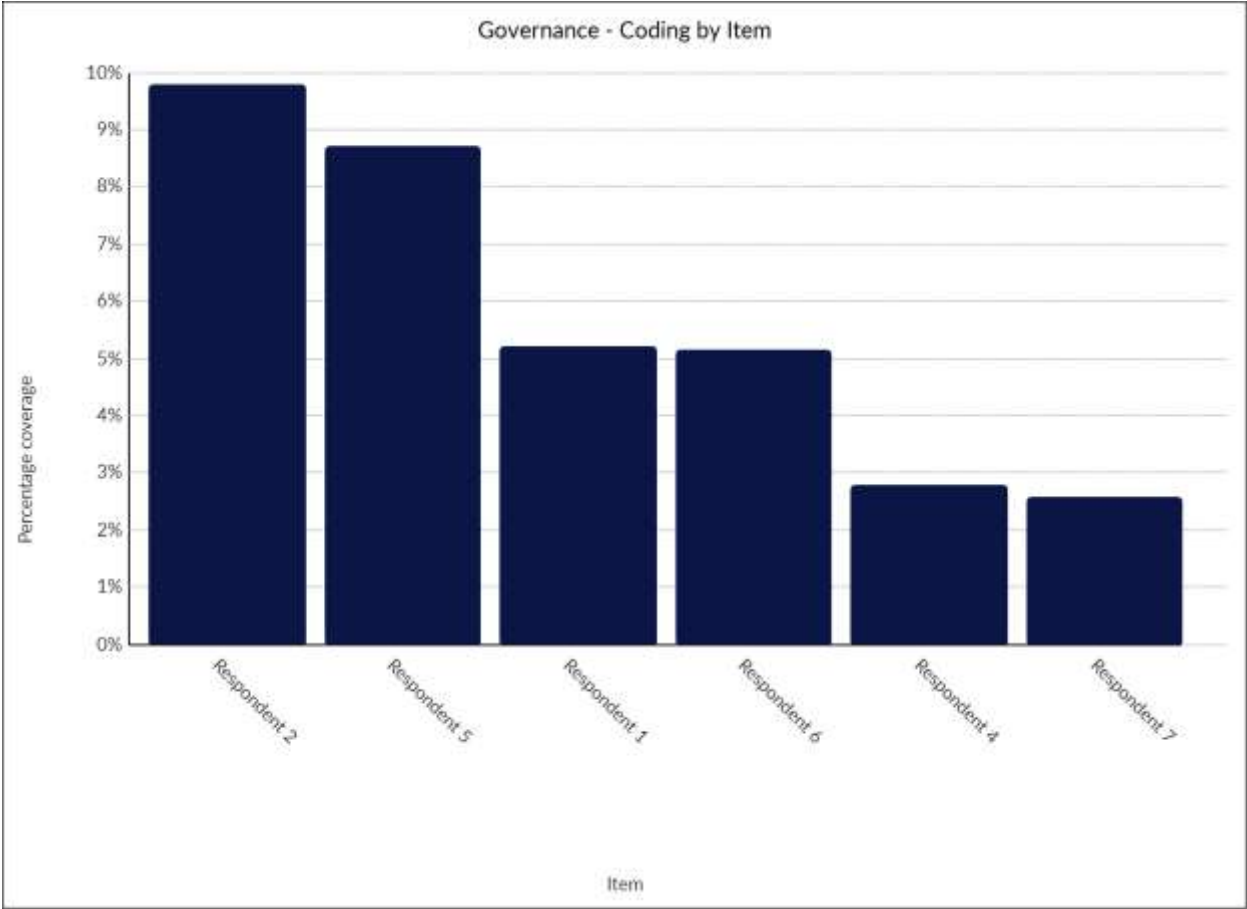
The findings indicate respondents acknowledge the role top management/institutional support plays in accepting and implementation of sustainable procurement practices. However it can be seen that most of the support offered by top management is in the area of sustainability training and development. Revealing these firm have limited green capabilities and therefore requires continuous training to build green capabilities and competence in the area of sustainable procurement.

#### **4.4.8 Governance Mechanism/Framework**

Findings from the study reveal the importance of governance framework or mechanism in safeguarding the interest of parties involved in sustainable procurement practice. Since sustainability practice is undertaken by a single firm and further requires inputs from several key actors within organizational internal and external business environment therefore it is expected all actor behavior in an acceptance manner. To ensure proper adherence to laid down rules, policies

and regulatory requires, there is the urgent need to have in place stringent governance processes and framework geared towards curbing opportunistic behavior and improving the economic gains of focal and periphery firms.

Figure 8: Governance-Coding by Item



Source: Field data (2020)

From respondents the study noticed that most of these governance framework and process are formulated by collective consensus. However these rules and regulation are considered to be

guideline for green procurement alliance. Meaning network actors can decision to either abide by the rules or not and none of participating firm can punish or reward a behavior. As said by respondent during the survey;

*'Our governance framework received support from a potentially significant range of stakeholders, as well as the need to reach agreement on their respective roles. Despite the fact that we had unlimited input during the governance process, the structure adheres to the following guidelines in order to ensure fair governance.'*

- *Procurement Manager*

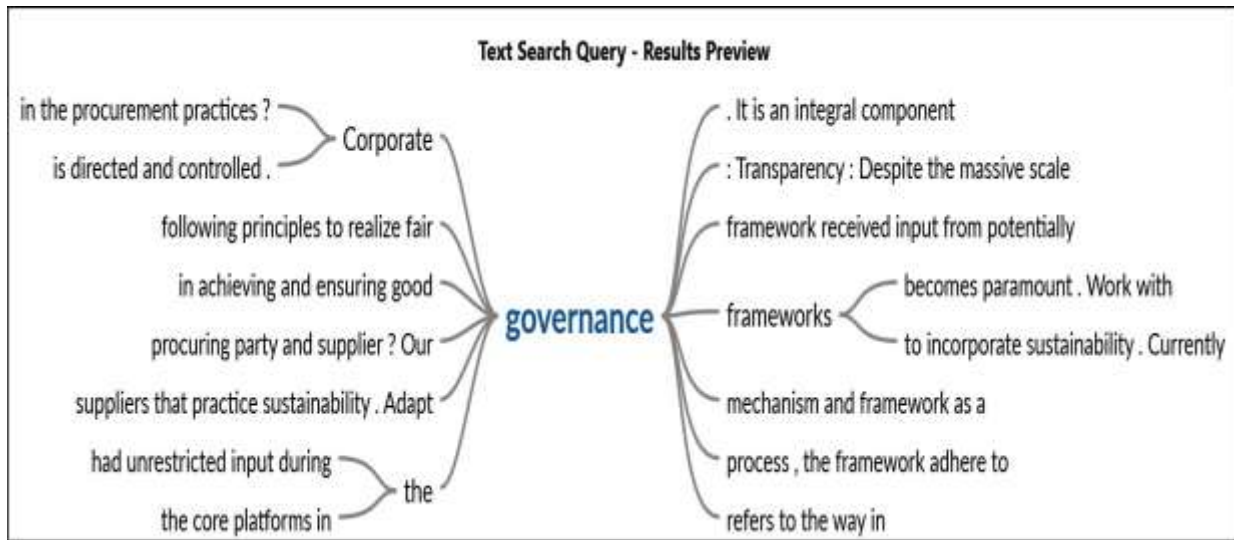
*'Corporate governance mechanism and framework are a structure of laws, procedures and processes by which our organisation is guided and regulated. Corporate Governance refers to the manner in which organisations are managed and to what extent. It identifies who has authority and responsibility, and who makes decisions. In the design of guideline principle for any form of inter-firm relationship is rooted in corporate governance framework'.*

- *Procurement Director*

*'Adapt governing structures to implement sustainability. Currently our organisation constantly requires to outsource main roles, making sustainability one of the central platforms in the governance structures becomes imperative. Work with the outsourced partners to identify and invest in sustainable initiatives, including joint investment where feasible, that support both partners'.*

- *Procurement Director*

Figure 9: Governance Text Search Query-Results Preview



Source: Field data (2020)

#### 4.4.9 Sustainable Procurement Practices and Organization Performance

The central theme of the study is to investigate the effect of sustainable procurement practice on organizational performance in the public sector of Ghana. The quantitative analysis in the earlier section of the chapter indicates the dimension of sustainable procurement practices to some extent have significant effect on organization performance. The outcome of the qualitative analysis augment the findings of the empirical analysis that seeks to reveal that economic, environmental and social sustainable procurement practices has an impact on organizational performance respectively. Respondents acknowledged that the adoption and implementation of sustainable procurement practices to some extent would have an impact on the economic gains of firms.

Continuous sustainable procurement practices enhance the sustainability capabilities of organizations over period. The green core competence and capabilities of organizations is

enriching through constant innovation activities. The practice of sustainable procurement practice augment businesses access to new improve knowledge and resources, these slack resources contributes significantly towards the performance and productivity of organizations in the public sector. Through realignment and reconfiguration of organizational resources and system to integrate sustainability practices that cut across the three dimensions of sustainability frontier offers firms the leverage to build and maintain green competitive advantage. In addition, cost associated to non-compliance litigation and conflicts is reduced to the minimum. And this is supported and acknowledge by the responses from our respondents;

*‘Through our Effective Planning organization cost is reduced, health and safety. Those same four main dimensions that allow best-practice procurement our organization distinguish apart are skills and culture, category management and execution, processes and programs, and integration and alignment’.*

- *Procurement Director*

*‘Yes we have achieved very high effective Planning on procurement, Cost reduction in all procurement over the years, and finally promoted a high level of health and safety standards within our organization’*

- *Procurement Director*

*‘Yes it affects the operational and functional activities of our organization, since Traditionally, procurement has been based on cost-benefit analysis. The mission and task of sustainable procurement activities is to incorporate environmental and social aspects into the procurement process, with the goal of mitigating negative effects on health, social circumstances, and the environment, as well as saving valuable costs for public sector*

*organisations and the general public. Sustainable procurement is an important aspect of governments' and UN organisations' broader drive for sustainable growth.*

*- Procurement Consultant*

*“Sustainable procurement practices affect positively our organizational operations and functional activities SP activities are positively linked to our operational financial success. The global market share and an organization's success has become an important part of the SP structure and by securing a “space” and certain flexibility to innovate”.*

*- Procurement Consultant*

*“Sustainable procurement practices in our business are a pragmatic instrument. Integrated development environment, regional, and local dynamics aids the company in understanding the consumer and forecasting better for the future. When we draft legislation that are useful to both the environment and community it has learnt the current holes in the corporate environment, and the inherent possibilities that could be filled by marketing creativity, or product development”.*

*- Purchasing and Supply Manager*

#### **4.5 Summary of Chapter 4**

The chapter 4 presents the empirical and qualitative findings of the study – the outcome of the quantitative and qualitative analysis is reported in this section. Quantitative analyses conducted included exploratory factor analysis, confirmatory factor analysis and correlation analysis. In addition regression and t-statistical test is performed. Qualitative analyses centered on thematic content analysis technique. The initial descriptive statistics, normality test, reliability and validity

test indicates the data is valid and reliable. The data acquired from field survey was divulge of common method bias, multicollinearity and outliers.

The outcome of the exploratory factor analysis and confirmatory factor analysis provide validation for the measurement and structural model of the study the factor loading obtained passed the benchmark index of 0.5. Correlation analysis indicates there is significant relationship between variables although this doesnot equals casuality. In addition, hierarcial regression analysis is employed to examine the direct relationship between the dimensions of sustainable procurement practices and organizational performance. It further examine the moderating effect of top management commitment and relational governance.

The outcome of the regression analysis indicated economic sustainability had the significant effect on organization performance as opposed to other dimensions of SPP. Furthermore top management commitment has major moderating effect on the effect of economic and social sustainable procurement practices on organizational performance. However relational governance couldnot moderate the effect of economic and social sustainable procurment practices on organizational performance.

Finally the qualitative outcome augment the quantitative findings by offering insights into the extent of SPP implementation and qualitative benefits organizations have achieve. Ke issues identified included role of trust in the exchange of information and knowledge in an analog institution and in absence of collaboration framework.

## **Chapter 5: Discussion, Conclusion and Recommendations**

### **5.1.1 Introduction**

The chapter five of the study discusses the empirical findings and their consequences. Findings from the research indicate acknowledge significance of sustainable procurement practices on the performance of functional activities of organizations, specifically in the public sector. The study further highlights there are a relationship among the scopes of sustainable procurement within organization efficiency and activities. Furtherance to the outcome reveals the extent top management commitment and relationship governance moderate the positive relationship among the sustainable dimensions of procurement practices (as a result, fiscal, social, and environmental factors all play a role on sustainability) and firm performance. Implication of the study can be form in both theory and practice. In theory it contributes to studies in social capital and relational exchange theory by re-echoing the relevance of external parties, relational exchanges and available slack resources to the productive and competitiveness of organization.

### **5.1.2 Research Discussion and Findings**

#### ***5.1.2.1 Summary of Findings***

The outcome of the empirical and qualitative analysis reveals organizations are aware of the the unfavourable consequences of their activities pertaining to environmental issues and society. The acknowledgement to the phenomenon has led to the deliberate implementation of several sustainability policies and initiatives. These underlying contributory factors in the adoption of sustainability practices are to transform operational activities and further maintain competitive edge in the business environment. In compliance to regulatory requirements organization

formulate plan and strategies that are sustainable in nature. As elaborate earlier the role of procurement function in achieving organization's sustainability goals or objectives cannot be underestimated. And this findings is in support of studies such as Isalm et al (2019) and Leal Filho et al (2019) that argues the relevances of sustainable procurement practices in organization quest to survive the green economy.

The study found organizational age, education background of employee and age has an impact on the performance firms. And this is support of findings in broader organization and management literature that seek to advance the argument that organization's age, education and age of employee places critical role in its performance (Thong & Wong, 2018; BouLlular, beltran – Martin & Escrig – Tena, 2016). Organizations with high talent that possess superior knowledge are documented to outperform its peer in terms of knowledge creation, innovation capabilities and core competence development.

When organizations have requisite human capital coupled with an agile sustainability plan and program there is high propensity of an improvement in firm performance. Regarding age, enterprise with relatively younger employee in some case happens to be risk tolerant and this characteristic if manage well can improve firm innovation and experimentation processes, and this is especially relevant in design and commercialization of green products and services. Organization age plays a crucial role because in most cases firms in their maturity stage have the requisite organizational infrastructure and systems to initiate and facilitate sustainability practices. However, this is always not true since some start-up enterprises are basically established as green enterprises. The findings emphasis economic SP practices have a positive consequence on the performance of organizations. With the exception of non-profit firms, almost all enterprises are

established for the purpose of making profit through the minimization of input and maximizing output. As postulated in sustainability literature (Meehanl & Bryde, 2010; Islam et al, 2019), economic gains serve as a contributory factor to the adoption of sustainability practices. In view of sustainable procurement practices organizations make economic gains by mitigating future cost that might arise from non-compliance to regulatory and environmental requirements.

#### **5.1.2.1.1 Economic SPP and Organizational Performance**

In addition, implementation of sustainable practice enables firms to gain access to external partners that are green conscious and possess the competence to transform the green agenda and strategy of organization, and procurement serves as the gate keeper in the partner selection process. The role of procurement is to identify and select supplier and service providers that possess adequate skills in green business model innovation to augment internal sustainability processes. Gaining asses to these slack resources organization can rejuvenate its internal capabilities (Kannan, 2020). Organizations with high performing capabilities in area of sustainability and green innovation are able to commercialized services and products to boost revenue generation and optimize cost processes.

Inasmuch as economic procurement sustainability practices have an impact on organizational performance, environmental sustainability performance is documented to have no effect on organization performance.

#### **5.1.2.1.2 Environmental SPP and Organizational Performance**

Finding highlights that environmental sustainable procurement practice does not impact the performance positively as form in previous studies. Rationale for this assertion can be attributed to the nature of organization understudy. Previous research found a connection between the environmental sustainable procurement practices in relation to the performance of the organisation and the examined relationship using private sector enterprises. These outcome contradict studies conducted by Islam et al (2019); Thong & Wong (2018). The organizational characterizes and dynamism of private and public sector enterprise plays a role in which dimension of sustainable procurement practice to be engaged. Private enterprises consider environmental sustainability as significant activity because these firms happen to be produces and manufacturers of items; public sector organization most consumes these products. Sustainable procurement activities in public sector are to validate if suppliers and service providers complain to sustainability requirements and compliance.

#### **5.1.2.1.3 Social SPP and Organizational Performance**

Social sustainable procurement practices are also found not to impact the performance of public sector institutions. It is interesting to ascertain social sustainability dimension of organization does not impact performance of firm. Providing equitable and fair working environment for both internal and external stakeholder is at the core of sustainability principles and practices. These activities turn to enrich the reputation of organization by offering support to communities and further restricting its product specification to community accepted level. Offering stakeholders equitable environment provide the lock-in for stakeholder commitment. With interaction between stakeholders both internal and external organizations are obliged to build data of product, service

requirement and expectation. Gaining access to this knowledge aids in the design and deployment of responsible innovative products and services.

#### **5.1.2.1.4 Moderating Effect of Top Management Commitment on Organizational Performance**

To augment the findings in the direct model that examines the effect of economic sustainable procurement practices on firm performance is positively moderated by top management commitment. Findings reveal that commitment from top management and institutional authority is essential to initiating and gaining from sustainable procurement practices. By gaining top management buy – in organization can gain access to the needed resources and support to boost green processes. In addition institutional support can influence the reconfiguration and realignment of organizational processes, practices and systems to integrate sustainable procurement practices.

The findings contribute to this study's findings and further research that emphasis on the involvement of management in achieving sustainable procurement practice (e.g Brammer & Walker, 2012). The commitment of management extend and shape high level thinking model of employees by shaping micro and macro sustainability behavior and orientation of firm and individuals. Relevant system and key performance index are constant monitor and review to ensure sustainable procurement practices fits in business and corporate strategy.

One intriguing findings from the study is the inability of top management commitment to moderate the non-significant effect environmental and social sustainability procurement practices on firm performance. Having in place friendly work environment for employees is of paramount interest

to management and other stakeholders; however, it is surprising to unearth there no such relationship in this case. The analog nature of public sector enterprise makes it challenging in some cases to initiate social changes regarding work environment since most management personnel do not have the requisite authority or power to make such changes. Furthermore institution changes regarding social sustainability take some effort and time to implement and as such its impact on organizational performance is challenging to ascertain in early stages.

#### **5.1.2.1.5 Moderating Effect of Relational Governance**

More so, the study investigates the relationship between the aspects of sustainable procurement activities and operational success, relational governance plays a moderating role. The mode of governance is critical to survive of any form of exchange between independent parties. Studies have acknowledged economic governance mechanism impact negative on the performance of alliance that possess significant amount of knowledge property or knowledge assert. Relational governance presents a novel approach to govern inter- firm exchanges in an era of sustainability. Findings from the empirical and qualitative analysis reveals relational governance can moderate the impact of environmental SPP on firm performance.

In the direct model environmental sustainable procurement practice did not have any impact in relation to the performance of organisations in the public sector. Various characteristics and mechanism of relational governance present organizations the relevant leverage to build and maintain trust in an organizational alliance. Trust is essential if explicit and implicit information can be shared between parties. In addition focal firm can derive the necessary merit from inter – firm alliance through utilization of slack resources. Relational trust is enhanced through the practice and adhering to relational governance framework. By gaining and utilizing this sustainable

oriented knowledge asset public enterprise are able to draft and implement cutting edge sustainability policies, strategies and frameworks.

The interpersonal properties of interpersonal governance contribute heavily on acquisition and utilization of social capital available in an organization's network. The adoption of this approach aids in overcoming the issues of exploitation and opportunisms associated with contractual governance and other forms of governance. The findings contributes to study conducted by Zenger & Poppo (2014) that assert that relational governance perform effective in network with significant knowledge properties/asset. Environmental sustainability is a practice that requires significant amount of knowledge, human capital and expertise that a single organization cannot possess. Therefore this shortage is addresses through continuous interaction with key stakeholders in an organization's business landscape. To derive benefit from these alliance and exchanges requires having in place a proper safeguarding mechanism, rewards and punishment scheme and governance framework.

Inasmuch as relational governance set the tone to enrich the effect of environmental sustainable procurement practice on firm performance, it fails to moderate the effect of social sustainable procurement practice, economic sustainable procurement practice on firm performance respectively. The non-significant moderating effect is due to the rationale that most enterprise although adhere to the exchange of information and knowledge as a tool to build network wide competence and capabilities, it still take deliberate measure to prevent its core technology or knowledge to be exposed. Organizations still initiate measure to safeguard and prevent the dissemination of technologies that influence the competitive edge and competitive advantage of firm. Although there is high level of engagement between firm regarding sustainability, the

competitor mental model of network actors/members prevent the exchange of core technologies and knowledge needed to boost network wide sustainability economy gains.

### **5.1.3 Contribution of the Study**

### **5.1.4 Implication For Theory**

This study mainly focused on examining the effects of fiscal, social, and environmental considerations sustainable procurement practices in relation to the performance of an organization. It further examines the moderating roles of relational governance and Top Management Commitment to sustainability on organisational performance. To achieve the above focus the study adopted the following underpinning theories include: Relational Exchange Theory, Network Social Capital Theory and Institutional Theory

**Firstly, the Institutional Theory** is one of the prime organizational theories selected based on the reviews of literature and exploring the enablers of Sustainable Procurement Practices and organizational performance as well as its impacts on the organization at large. Institutional Theory supported the Sustainable Procurement Practices and organizational performance as it points out the SPP indicators that aid organisations in gaining the credibility and skills they need to stay afloat. It is conclusive that, improving credibility is beneficial on organizations develop their working relationships and stakeholder relationships by ensuring secure access to better opportunities, minimizing costs, and improving their credibility and stakeholder relationships (Sherer and Lee, 2002; Staw and Epstein, 2000). It is on the strength of this that Relational Governance and Top Management Commitment are seen as appropriate moderators with the outcome tendency of influencing significantly the outcomes of the performance of organization.

**Secondly, the Relational Exchange Theory** rest on the premise that parties involves in an alliance to some extent are involved in some form of exchanges. The study found that, these exchanges within these networks or inter-firm alliance provide parties the relevant leverage to ensure parties attach some level of importance to the relationship. The adoption of this theory further encourages parties to devote the necessary resources towards the success, development and maintenance of such alliance (Anderson & Narus, 1984; 1990; Lambe et al, 2000). As a result, norms associated with the formation, maintenance, and standardisation of the interaction between the exchange partners are found to be present in relational exchange theory (Macneil, 1980; Brown et al., 2000). Literature review concluded that, The above strategy stresses the significance of vertically and horizontally connections between persons, as well as internal and external relationships within and among community groups and organisations' (Woolcock and Narayan 2000).

**Finally, the Social Capital Theory perspective** considers networks together with shared norms, values and understandings that facilitate cooperation within or among groups. Each actor in the network contributes some form of resources, these resources accumulate into collective resources and serves as backbone for the collective social capital. The Social Capital aspect unearths interpersonal relationships, a common sense of belonging, a shared knowledge, shared norms, shared beliefs, loyalty, solidarity, and reciprocity are all characteristics of well-functioning social communities (Schneider & Somers, 2006; Choi et al, 2001; Pathak et al, 2007; Holland, 1992). Its adoption is found on the fact that social value is generated through the interactions from the diverse members of any community. This circumstance makes a community more dynamic to tackle and solve its social dilemmas, and social entrepreneurs. These outcomes identify the chances social capital provides, take advantage of it, and lead the social changes their communities (OECD, 2001). It is conclusive based on the study's findings that, Social capital in social networks is

considered as the collective utilization of network knowledge and information to enrich the innovation outcome of individual actors.

Applying significance of the fundamental features of social networks, including certain density, centrality, and continuity, as well as a collection of assumptions on how to better characterize and explain social phenomenon of interest, is needed. As a result networks setting attributes and situations do not influence the actors individually, but they all work in a hierarchical way to condition the final outcome (OECD, 2001). It is established dependent on the research that, Social capital includes trust within public institutions specifically, and trust among employees and citizens, as well as social networks, cooperative norms and aspects of governance.

Social resources maintain the environment in which other capitals can flourish. For instance, investment in social resources can provide an expectable corporate climate, enable collective action to promote the resource distribution that is efficient, stimulate the manufacture of public properties and induce the preservation of shared assets. Increasing social capital is especially relevant with respect to integrity and transparency of public procurement institutions. Public procurement can contribute to social resources through good governance, and by supporting trust in public institutions.

In summary, the results of the research have implication on both theoretical and practical. Findings from the study contribute to Institutional Theory by emphasis also on significance of institution support systems as well as mechanism. Senior management commitment or institutional support plays crucial part in the transaction and implementation of current technologies as well as innovation. It further elucidates on how the commitment and institutional support shapes and

transform organizational system. Culture and policies in take a sustainability dimension in a green era.

It further re-echoes the relevance of network social capital in performance of focal firm in inters-firm alliance. Interaction between actors in network wide enhances exchanges and boost relational trust relevant to the acquisition and dissemination of superior knowledge and information through network actors. The engagement of actors in firm – supplier network boost the compliance capabilities of focal firm and peripherals. The increasing involvement of network actors in sustainability network enriches the skills and competence of procurement officers and entire institutions.

In addition, it augments the relevance of relational exchange, relational trust and relational capital on the performance of organizations, especially in the public sector. Relational exchange is crucial to transmission and diffusion of information and superior knowledge between network actors. The study emphasizes the effect of relational exchanges on organization performance.

### **5.1.5 Implication for Practice**

The foremost objective underpinning the research is to examine the impact of economic, social and environment sustainable procurement practices on performance of organizations. It further examines the moderating roles of relational governance and top management commitment to sustainability on organisational performance in Ghana's public sector. The study found that even though there is no composite legal framework for SPP, there were some SPP requirements for certain goods, services and works which were largely influenced by standalone laws in Ghana.

This research has practical consequences in the following areas of management operations for improvement as well as the required frameworks are adopted. In additional arguments, this analysis attempts to UN earth the applied research enquiries underlining the study; the influence of fiscal, social and environmental sustainable procurement practices on organizational performance and the degree to which relational governance and top management commitment moderates the relationship between economic, social and environmental sustainable procurement practices and organizational performance. This research highlights facets of sustainable procurement processes that need particular consideration while offering insights into their current state.

According to the results, sustainable procurement platforms in the public sectors are very strong with respect to the social and environmental scopes of sustainability. Additionally, the diversity and human right dimensions needs improvement for any meaningful organisational performance. Such revelations of information could guide appropriate stakeholders such as regulatory institutions, civil society organisations service providers, heads and Managers of organizations, purchasing officials, and the Public Procurement Authority (PPA) on areas of excellence that need particular attention, as well as facets of relevant procedures that will need to be consolidated and strengthened. As a result, organizational attention and money can be better directed toward solving perceived areas of poor performance, thus improving overall performance sustainable procurement platforms.

Additionally, there's the cross-sectorial collaboration. Relationships within the network of cooperation revealed the relative performance of the individual sectorial organisations varies based on their areas of expertise. The level and significance in performance as a result of the moderating

effects of relational governance and top management commitments provides an Inter-sectorial learning is an option. Sustainable procurement framework, particularly in the areas pertaining to social and environmental dimensions can be aided by the exchange of information and experiences between industries.

Inter-sector educational programs, conferences, and workshops will help people learn about each other and share their experiences. Collaboration is the key to success regulatory institutions, civil society organisations, service providers, heads and Institutional management, procurement staff, and the Public Procurement Authority (PPA), as well as procurement managers and other related personnel in the public sector, should pool their knowledge and knowledge to address the problems that face successful implementation and practice of efficient procurement. The leadership of the regulatory industries, as well as the Public Procurement Authority (PPA), will help to promote inter-sector exchange of expertise and experience by providing the right organizational atmosphere.

This study adds to the small body of knowledge on competitive public procurement in emerging countries; also discover SPP effects on performance of organizations as well as the moderating roles of relational governance and top management commitment to sustainability on organisational performance in Ghana's public sector. The study is again important because the findings provide, if not all, some prerequisites needed to mainstream the reforms in the public sector of Ghana and other emerging economies.

The study contributes to public administration by strengthening inefficiencies in public procurement procedures and harmonizing relationships between the central government, its parasternal departments, and the private sector in the interest of citizens' immediate and long-term

welfare. This thesis lays the foundation for further studies on the relationship between competitive public procurement and emerging economies.

This is to contribute to Ghana's efforts to achieve Sustainable Development Goal Twelve (12) and Target 12.7 of the Sustainable Development Goals (SDGs), which aims to encourage sustainable public procurement activities in line with national policies and objectives. In light of the findings established by this study, the following recommendations and policy directions are made.

The study foremost recommend that appropriate legal document or manual should be developed to facilitate smooth application of the SPP policy into action. Unlike as detailed by the Public Procurement Amendment Act 2016 (Act 914), the legal document or manual should clearly outline its objectives and principles, specific criteria for common goods, services and works, and monitoring mechanisms. Secondly, the needed funds should be sourced by government and judiciously committed to training and sensitization of stakeholders especially law makers, procurement officers and suppliers to facilitate the integration of sustainable procurement strategy.

The research also proposes that PPA should take advantage of the rate at which the general public use social media to educate all stakeholders on sustainable public procurement. Again, government through PPA must develop a vigorous monitoring and evaluation guideline with relevant indicators and well-defined responsibilities. These guidelines must have comprehensive mechanisms for capturing and managing data to support results-based monitoring and evaluation towards accountability and transparency in implementing SPP.

### **5.1.6 AN OPERATIONAL FRAMEWORK TOWARDS ACHIVING SIGNIFICANCE ORGANISATIONAL PERFORMANCE ON SPP ADOPTION FOR PUBLIC SECTOR ORGANISATIONS**

Sustainable Procurement Practices as documented in the literature are concerned with the integration of sustainability practices in procurement practices. As highlighted in earlier chapters SPP can takes the form of economic, social or environmental sustainability procurement practice. The findings reveal although organizations acknowledge the need to adopt and implement sustainable procurement practices, its effect on organizational processes and functions can be said to be moderate.

The degree of success of implementation has not met expectation of various stakeholders. Factor contributing to this low degree of performance or efficiency can be attributed to diverse factors arises from stakeholders both within and outside the organization. To enhance the outcome following the adoptions pertaining to SPP, the study suggests formation of green procurement network/ecosystem comprising of sustainability oriented suppliers/service providers, regulatory agencies, public institutions and community. The model focuses on the utilization of relational asset to boost sustainable procurement practices outcome. Relational asset of inter-organizational network is argued to influence the performance of both focal and periphery firms (Sodden, Parade & Huhtamaki, 2019).

The relational governance model proposed for this study is geared towards enriching collaboration between relevant stakeholders in the sustainability landscape; it further aim at improving the efficiency of resource allocation and exchanges. Proper conflict management mechanism is core aspect of this model. Relational governance aside offering platform to exchange resources divulge

of opportunism, it also enable conflicts to be address in a cost-effective manner through proactive approach.

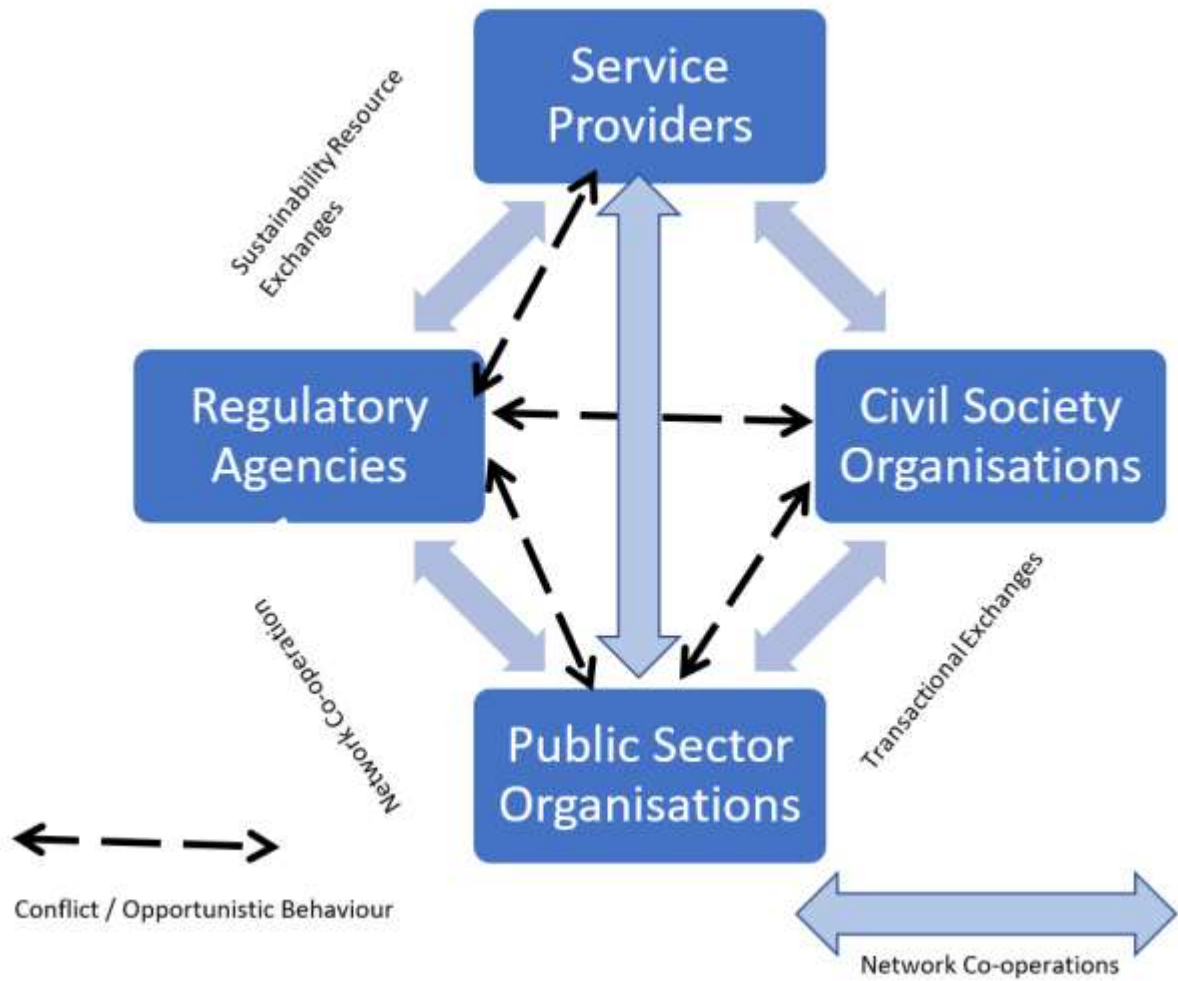
The relational governance model proposed is centred on sustainability cooperation between organizations (public enterprises/institutions) and network conflict resolution mechanism. On sustainability cooperation front, organizations or public institutions are to establish deliberate partnership with key suppliers or service providers in the sustainability landscape. These suppliers or service provider should be identified and selected based on their green competence and capabilities. Selecting sustainable compliance supplier and supplier would lead to the establishment of green procurement network. The establishment of green procurement network is crucial since it offers the necessary platform for resource mobilization and exchanges. It further impact on the asymmetry of power and information across such inter-organizational network.

In addition to ensure effective cooperation and collaboration between network actors, there should be consensus on the scope of communication, exchanges and collaboration among actors. Clear communication channels and exchange medium should be mutual agreed upon by every member of sustainable procurement network. By so doing, the issues of opportunistic behaviour would be mitigated promoting network wide trust. Trust among network members would enrich the facilitation and diffusion of information. Relational trust is enhanced as a result of constant cooperation which enables focal institution to utilize relational capital and gains it offers. Organization is able to gain and utilize relational asset in such sustainability alliance. Having in place green procurement network would aid organization to align it green agenda to core capabilities and competence. And further utilize accrue network social capital.

Summarily, resources and information exchange that is necessary for attaining high degree of sustainable procurement practices in public institutions can be attain through deliberate cooperation and collaboration between sustainable oriented stakeholders in both internal and external business landscape. It allows policy makers, supplier/service providers, public institutions and civil society to interact and enact sustainability policies and strategies that are accepted network- wide. Input from different agencies and institutions provide the high level credible every sustainability policy or program deserves.

One critical hurdle that hinders the performance of inter-organizational network is conflicts among network actors. Conflict among members is a recipe for the low degree of information transmission and diffusion. Gains made through mutual understanding and relational trust is eroded in the advent of conflict since it breeds mistrust. Relational governance addresses the issue of network conflict through the decentralization of power among network members. Through decentralization approach, actor perceived to possess a high level of resources and capabilities cannot dictate the pace at which resource mobilization, allocation and exchanges take place.

**An operational framework towards achieving significance organisational performance on  
spp adoption for public sector organisatio**



*Adapted Relational Governance Framework: Source: Author*

Figure 10: An operational framework: Relational Governance Framework

### **5.1.7 Conclusion**

The research examined the effects of all the three sustainability dimensions on the performance of organizations in making corporate success in sustainable procurement processes. It further examined the moderating role of top management commitment and relational governance. Combining quantitative and qualitative data techniques, the research collected and examined data from key informants in the procurement landscape in the Ghanaian public sector. The data acquired was subjected to the test of structural model and stated hypotheses for the study were further tested. The subsequent outcome of the study indicates that some scopes of the sustainability framework (i.e., economic, social and environmental) have an effect on organizational performance. From the findings, economic sustainability has an impact on organizational performance. However social and environmentally sustainable procurement practice have no effect on organizational performance. Surprisingly, relational governance is able to moderate the impact of environmental sustainability procurement practices on the performance of an organisation. In addition, top management commitment moderates the connection amid economic sustainable procurement practices and organizational performance.

### **5.1.8 Limitations and future Research**

Although the study makes some interesting additions to the body of literature on sustainable procurement practices and organisational performance, there are some shortcomings that need to be discussed in future research. This study used data from the public sector, therefore, limiting our understanding of sustainable procurement practices in private sector especially in an emerging economy. Also, future studies should utilize longitudinal data to examine how factors change over

time. Future studies should include the adoption and utilization of secondary data regarding public sector, sustainable procurement practices being highly relevant.

Finally, future studies should also consider undertaking comparative research among developing countries to accumulate insights and highlight important topics, including the effect of competitive procurement activities on the overall success of public and private sector organizations, along with their respective strengths and limitations. A comparative analytical methodology is thought to have the potential to enable a comprehensive and all-encompassing view, allowing for precise and valid conceptualization of problems associated with sustainable procurement practices. Furthermore, the knowledge gained from such research can be used to potentially devise a broad variety of strategies for dealing with organizational inefficiency in terms of success. This will be a unique addition, as there are few inter-sectorial comparative analyses in the existing literature on competitive procurement activities. Zhu and Saris (2006) published a related study, but theirs focused on the private sector and was confined to the environmental dimension.

In addition, future studies should consider the effect of sustainability mobility coupled with other conditional process variables to examine the effect of sustainable procurement practices on organizational performance. Inasmuch as sustainable procurement practices are acknowledged to impact the broader sustainability practices of organization, there is a dearth of literature examining the impact of SPP on public innovation. It is recommended for future studies to explore this dimension.

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## APPENDICES

### APPENDIX A: SUMMARY OF LIST OF APPENDICES

No.	APPENDIX LIST	TITLE OF DESCRIPTION
1	APPENDIX A:	SUMMARY OF LIST OF APPENDICES
2	APPENDIX B:	WEB-BASED SURVEY INSTRUMENT
3	APPENDIX C:	PRE-TESTING LETTER
4	APPENDIX D:	TELEPHONE INTERVIEW INSTRUMENT
5	APPENDIX E:	SAMPLE WEB-BASED SURVEY PARTICIPANT REMINDER LETTER
6	APPENDIX F:	ADVANCE LETTER TO CHARTERED INSTITUTE OF PURCHASING AND SUPPLY (CIPS) GHANA
7	APPENDIX G:	CONFIRMATORY TELEPHONE INTERVIEW INSTRUMENT
8	APPENDIX H:	PARTICIPANT CONSENT FORM
9	APPENDIX I:	PARTICIPANT INFORMATION SHEET
10	APPENDIX J:	LETTER TO GATEKEEPER
11	APPENDIX K	STATISTICAL COMPUTATIONS AND OUTCOME

## APPENDIX B: WEB-BASED SURVEY INSTRUMENT



Plot 2, Arko Close off Nelson Mandela  
Avenue, near food & Drugs Authority  
Gulf House area, South Legon  
**Web:** <https://nibs.edu.gh/>  
**Email:** [info@nibs.edu.gh](mailto:info@nibs.edu.gh) Tel: +233 (0) 560-911-174

### LETTER OF CONSENT: PARTICIPANT

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

Dear Procurement Professional, Staff, or Consultant,

You are invited to participate in this online survey about your experiences **procurement professionals, staff, and consultants**. Your inputs are regarded as highly valuable to this study as it will substantially help towards exploring effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large.

The study is being conducted by a PhD candidate of Noble International Business School. The purpose of this survey is purely for academic purposes only. The questionnaire has two sections, Section A and Section B: Biographical information, which will take approximately 10 to 15 minutes in total to complete. All information collected through this study will be treated confidentially; no respondents will be identifiable in the results. The study is approved by the Noble International Business School Research Committee.

A summary of the web-based survey results will be provided upon request, which will include the factors that examines the relationship between sustainable procurement practices and Organisational Performance.

Your participation in the online survey is entirely voluntary and there will be no consequences for you if you choose not to participate. You can **CLICK** survey Link **BELOW**

Thank you for your valuable contribution in advance.

Yours sincerely,



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## SECTION A

### Sustainable Procurement Practices (SPP): (Independent Variable)

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree

Codes	Items	1	2	3	4	5	6	7
<b>(Economic)</b>								
<b>EcSPP1</b>	Our organization considers the costs of management, procurement, and other costs in its operations.	1	2	3	4	5	6	7
<b>EcSPP2</b>	My organization favours suppliers that rate highly on sustainability during the tender process.	1	2	3	4	5	6	7
<b>EcSPP3</b>	We have a written procurement policy stating our commitment to purchasing sustainable goods & services.	1	2	3	4	5	6	7
<b>EcSPP4</b>	My organization has integrated sustainability into its procurement process.	1	2	3	4	5	6	7
<b>EcSPP5</b>	My organization specifies sustainability criteria in its contract notices.	1	2	3	4	5	6	7
<b>EcSPP6</b>	We have made our suppliers aware of our sustainable procurement policy and practices.	1	2	3	4	5	6	7

**Source:** Kai-Chong Thong and Wai-Peng Wong 2018. Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia. *Sustainability* **2018**, **10**, 2781; doi:10.3390/su10082781, [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability). (Q1)

**Source:** Joanne Meehan<sup>1</sup> and David Bryde 2010. Sustainable Procurement Practice. *Business Strategy and the Environment. Bus. Strat. Env.* **20**, 94–106 (2011) Published online 3 May 2010 in Wiley Online Library ([wileyonlinelibrary.com](http://wileyonlinelibrary.com)) DOI: 10.1002/bse.678 (Questions: Q2 to Q6).

**Adapted from:** see Koplín et al., 2007; Preuss, 2007; Maxwell et al., 2006; Veleva et al., 2003; Wilkinson et al., 2001.

Codes	Items (Environmental)	1	2	3	4	5	6	7
EnSPP1	Our Organization is responsible and committed to operate sustainably and environmental friendly.	1	2	3	4	5	6	7
EnSPP2	Environmental sustainability is critical to our success	1	2	3	4	5	6	7
EnSPP3	Environmental sustainability is a key priority of our organization	1	2	3	4	5	6	7
EnSPP4	Our organisation prefers its suppliers to have environmental certifications.	1	2	3	4	5	6	7
EnSPP5	The organisation actively shares good environmental practice experiences with its partners.	1	2	3	4	5	6	7

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure. *Business Strategy and Environment*. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment. (Questions: Q1 to Q3). Adapted from:

Based on a review of the literature, the study adapted five items to measure **Sustainability Core Values** (SCV) (e.g., Arjaliès & Mundy, 2013; Jollands et al., 2015)

**Source:** Kai-Chong Thong and Wai-Peng Wong 2018. Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia. **Sustainability 2018, 10, 2781**; doi:10.3390/su10082781, [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability). (Q4-Q5)

Codes	Items (Social)	1	2	3	4	5	6	7
SoSPP1	This organization, when selecting partners, gives priority to those who comply with and support laws, regulations, and standards on social sustainability.	1	2	3	4	5	6	7
SoSPP2	The organization has established a healthy and safe management system.	1	2	3	4	5	6	7
SoSPP3	The organization often engages in community charity work.	1	2	3	4	5	6	7
SoSPP4	It is our moral obligation to implement sustainability practices (e.g., use of renewable energy, preserving biodiversity)	1	2	3	4	5	6	7

**Source:** Kai-Chong Thong and Wai-Peng Wong 2018. Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia. **Sustainability 2018, 10, 2781**; doi:10.3390/su10082781, [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability). (Q1-Q3)

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure.

Business Strategy and Environment. 2019;28:143–154. wileyonlinelibrary.com/journal/bse © 2018 John Wiley & Sons, Ltd and ERP Environment. **(Questions: Q4). Adapted from:** Based on a review of the literature, the study adapted five items to measure **Sustainability Core Values (SCV)** (e.g., Arjaliès & Mundy, 2013; Jollands et al., 2015).

**Organizational Performance (OP): (Dependent Variable)**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

<b>Codes</b>	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>OP1</b>	Improvement in stakeholders and users satisfaction	1	2	3	4	5	6	7
<b>OP2</b>	Reduction in the number of complaints or claims from stakeholders and users	1	2	3	4	5	6	7
<b>OP3</b>	Employees in this organization learn new procedures and processes introduced in their jobs within a short period	1	2	3	4	5	6	7
<b>OP4</b>	Employees in this department try to constantly update their skills and abilities	1	2	3	4	5	6	7

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<b>OP5</b>	Employees in our organization have multiple skills that can be applied to tasks corresponding to other jobs	1	2	3	4	5	6	7
<b>OP6</b>	Employees gets a lot of support from managers if they want to try new ways of doing things	1	2	3	4	5	6	7

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**Source and Adapted from:** Juan Carlos Bou-Llugar, Inmaculada Beltrán-Martín, Vicente Roca-Puig and Ana Belén Escrig-Tena (2016). Single- and Multiple-Informant Research Designs to Examine the Human Resource Management–Performance Relationship. *British Journal of Management*, Volume 27, 646-668.. **(Q1-Q5)**

**Source and Adapted from:** Catherine L. Wang, Chaminda Senaratne and Mohammed Rafiq (2015). Success Traps, Dynamic Capabilities and Firm Performance. *British Journal of Management*, Volume 26, pages 26–44. **(Q6)**.

**Relational Governance (RG): (Moderating Variable)**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

Codes	Items	1	2	3	4	5	6	7
<b>RG1</b>	Our organization has an extremely collaborative relationship with its partners and suppliers.	1	2	3	4	5	6	7
<b>RG2</b>	We rely on our mutual understanding with partners and suppliers to assign roles and responsibilities of each in the relationship.	1	2	3	4	5	6	7
<b>RG3</b>	We manage unexpected events by relying on our mutual understanding with partners and suppliers.	1	2	3	4	5	6	7
<b>RG4</b>	Remedies for failure to perform are based on our mutual understanding with partners and suppliers.	1	2	3	4	5	6	7
<b>RG5</b>	Our firm and partners discuss and resolve conflicts jointly.	1	2	3	4	5	6	7
<b>RG6</b>	A cooperative collaboration with partners and suppliers is important for the relationship.	1	2	3	4	5	6	7
<b>RG7</b>	Our firm and partners maintain and develop the cooperative relationship of mutual trust.	1	2	3	4	5	6	7

**Source:** Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements?. *Strategic management journal*, 23(8), 707-725. **Question (Q1).**

**Adapted from: Macneil IR. 1978 and Anderson JC, Narus JA. 1990).** 1. Macneil IR. 1978. Contracts: adjustment of long-term economic relations under classical, neoclassical and relational contract law. *Northwestern University Law Review* 72: 854–905. 2. Anderson JC, Narus JA. 1990.

A model of the distributor's firm and manufacturer firm working partnerships. *Journal of Marketing* 54: 42–58. **Question (Q1)**

**Source:** Ashwin W. Joshi and Alexandra J. Campbell (2003), Effect of Environmental Dynamism on Relational Governance in Manufacturer-Supplier Relationships: A Contingency Framework and an Empirical Test. *Journal of the Academy of Marketing Science*. Volume 31, No. 2, pages 176-188. **Questions (Q2-Q5). Adapted from: Lusch and Brown 1996).** Lusch, Robert E and James R. Brown. 1996. "Interdependency, Contracting, and Relational Behavior in Marketing Channels." *Journal of Marketing* 60 (October): 19-38. **Questions (Q2-Q5).**

**Source:** S Leimeister, T Böhmman, H Krcmar (2008), Is Outsourcing Governance In Innovation-Focused Relationships – An Empirical Investigation. *ECIS, 2008 - pdfs.semanticscholar.org*. **Question (Q6). (Adapted from: Goles and Chin, 2005),(Poppo and Zenger, 2002), (Lee and Kim, 1999), (Lee et al., 2004). Question (Q6).**

**Source:** M Chi, J Zhao, JF George, Y Li, S Zhai (2017). The influence of inter-firm IT governance strategies on relational performance: The moderation effect of information technology ambidexterity- *International Journal of Information Management* 2017 – Elsevier. **Question (Q7).** **Adapted from:** Cao et al., 2013; Cao& Lumineau, 2015; Deng et al., 2013) **Questions (Q7).**

### **Top Management Commitment (TMC): Moderating Variable**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree

Codes	Items	1	2	3	4	5	6	7
TMC1	Our Top Management extends full support for sustainability practices	1	2	3	4	5	6	7
TMC2	Our Top Management consistently assesses the sustainability impacts of our operations	1	2	3	4	5	6	7
TMC3	Our Top Management shows behavior that indicates sustainability as a competitive advantage in our operations	1	2	3	4	5	6	7
TMC4	Our organization’s Top Management has a great understanding of stakeholders' sustainability practices for operations	1	2	3	4	5	6	7

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure. *Business Strategy and Environment*. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment.

**Adapted from:** Following Griffith, Yalcinkaya, and Calantone (2010) and Colwell and Joshi (2013), eight items were adapted to measure top management commitment to sustainability

### Organizational Identity (OI): Control Variable

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree

Codes	Items	1	2	3	4	5	6	7
OI1	My organization's employees are proud of the company history about sustainability	1	2	3	4	5	6	7
OI2	Our Organization has carved out a significant position with respect for sustainability practices	1	2	3	4	5	6	7
OI3	Our organization's employees are responsible and committed to operate sustainably	1	2	3	4	5	6	7

**Source:** Kai-Chong Thong and Wai-Peng Wong, (2018) Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia, Sustainability, 2018 - mdpi.com.

**Adapted from:** Chang, C.H.; Chen, Y.S. Green organizational identity and green innovation. Manag. Decis. 2013, 51, 1056–1070. [CrossRef]

## Stakeholder Pressure (SP): Control Variable

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

Codes	Items	1	2	3	4	5	6	7
SHP1	We actively adopt Government and Regulatory Bodies requirements that promote sustainability practices.	1	2	3	4	5	6	7
SHP2	Our Employer exerts significant pressure on all suppliers to promote sustainability practices as a source of competitive advantage.	1	2	3	4	5	6	7
SHP3	We actively participate in civil societies activities that promote sustainability practices	1	2	3	4	5	6	7

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure. *Business Strategy and Environment*. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment. **Adapted from:** Finally, seven items were

adapted from prior studies to measure stakeholder pressure for sustainability (Rodrigue et al., 2013; Sarkis, Gonzalez-Torre, & Adenso-Diaz, 2010; Sharma & Henriques, 2005).

### **Section B: Biographical information**

1. What is your gender?  Male  Female

2. What is your age bracket?  Below 20years  21-25years  26-30years

31-35years  36-40 years  41 and above years

3. What is your level of education?  PhD  Masters  Bachelors  Diploma

Senior High School  If other

If other please specify .....

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure. *Business Strategy and Environment*. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment. **(Q4-Q7). Adapted from:** ‘‘Organisational Size was measured by referring to the number of employees, the nature of the organisation in terms of multinational and local, and industry type representing manufacturing and services organisations (e.g., Lisi, 2015). **(Q4-Q7)**

4. What is the total number of employees in your organization?

Less than 20    21-50    50-99    100 and above

5. How long has your organization been in operation?  0-5 years    6-10 years    11-

15 years    16-20 years    Above 21 years

6. What is the nature of your organization's operation?

Total Government Owned    Public Private Partnership    Government divestiture

7. What is the industry type of your organization's operation?

Production    Manufacturing    Services

## APPENDIX C: PRE-TESTING LETTER



Plot 2, Arko Close off Nelson Mandela  
Avenue, near food & Drugs Authority  
Gulf House area, South Legon

**Web:** <https://nibs.edu.gh/>

**Email:** [info@nibs.edu.gh](mailto:info@nibs.edu.gh) Tel: +233 (0) 560-911-174

### **RE: PRE-TEST: WEB-BASED SURVEY AND TELEPHONE INTERVIEW**

#### **INSTRUMENT**

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

Dear Participant,

I would like to invite you to participate in the pretesting of the web-based survey and telephone interview instrument for my PhD study. I am a PhD candidate at Noble International Business School. Your comments will significantly assist in improving the quality of these two data collection instruments.

Please pre-test the following attached documents:

- ❖ Advance Letter for CIPS-Ghana Secretariate
- ❖ Confirmatory letter (to be used when making appointments with respondents for telephone interviews)
- ❖ Participant Consent Form

- ❖ Telephone interview questionnaire labelled “confidential”
- ❖ Web-based survey instrument
- ❖ Sample reminder to be sent to sample population
- ❖ Advance letter to Chartered Institute of Purchasing and Supply (CIPS) Ghana
- ❖ Letter to gatekeeper
- ❖ Participant Information Sheet

your experiences as a **procurement professional, staff, or consultant**. Your inputs are regarded as highly valuable to this study as it will substantially help towards exploring effects and relationship between Sustainable Procurement Practices and Organizational Performance as well as the moderating effects of Relational Governance and Organizational Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms can be utilised to improve the outcome of sustainable procurement practices and Organisation Performance at large.

The web-based survey will be sent to the CIPS Ghana database of the procurement portal on the CIPS Ghana database of the procurement portal through identified gatekeeper (by email) who have direct contact with the target population.

A phone interview for viewpoints of procurement experts, practitioners and senior managers in the procurement industry will be conducted after the web-based survey.

The process for conducting the interview is:

1. An Advance Letter will be sent to CIPS Ghana database of the procurement portal. The purpose of this letter is to invite them to participate in the study, prompt them of the importance of the study and inform them that I will be following up with a telephone call.

2. The Participant Information Sheet and Consent form will be sent together with the Advance Letter to potential respondents.
3. Each of the potential respondents will be called to arrange a time to conduct the telephone interview. In some cases, the interview may be conducted at the time or a later agreed time. The confirmatory document will be used during this stage.
4. Prior to beginning the telephone interview, respondents will be asked for permission to record the interview. Recording will enable an accurate account of issues discussed and assist with the error control process.
5. The respondent will not receive a copy of the semi-structured telephone interview instrument.
6. Any sentences in italics within the telephone interview instrument are prompts for the interviewer.
7. Any text highlighted in yellow or shaded indicates changes are yet to be made.
8. The researcher will make all the phone calls and conduct the telephone interviews.

Please feel free to make any comments and corrections directly on the web-based survey and telephone interview questionnaire or send me an email if you prefer. If you have any questions when working through this telephone interview questionnaire, you can send an email to [aswanzy@phd.nibs.edu.gh](mailto:aswanzy@phd.nibs.edu.gh), [swanzy2383@yahoo.com](mailto:swanzy2383@yahoo.com) or [swanzyawozum@gmail.com](mailto:swanzyawozum@gmail.com) . It would greatly be appreciated if you could complete all the attached documents and **return them by 12:00 noon on Tuesday 31 December 2019**. Please **send them to the email shown above**.

Please feel free to provide your comments anywhere in the white spaces of the questionnaire and on this cover page. The key guidelines provided on the next page may be useful when undertaking the pre-testing.

Thank you for assisting to improve the quality of the data collection related documents for this important study.

Yours sincerely,



**Researcher,  
Swanzzy Awozum  
PhD in Business Administration  
Email: [aswanzy@phd.nibs.edu.gh](mailto:aswanzy@phd.nibs.edu.gh)  
Cell: 0244666914**

**Research Supervisor,  
Theodora Akweley Asiamah, PhD  
Assistant Professor of Management,  
Director, DBL Program  
T: +233 (0) 578688811  
E: [theodora.nibs.edu.gh](mailto:theodora.nibs.edu.gh)**

**Questions/issues for pre-testing the web-based survey, telephone interview questionnaire  
and all other attached documents**

Comments arising from your evaluation will be used to improve the questionnaire. Potential issues have been divided into three categories.

### **A. Layout**

1. Does the layout of the questionnaire make it easy to read (for example font size and line spacing)?
2. Do the question numbers flow in a chronological order?
3. Are the questions in a logical order?
4. Will the layout of the document make it easy for the interviewer to use?
5. Are the transitions between sections smooth?
6. Are all the instructions clear and noticeable for the interviewer?
7. Are there any spelling and grammatical errors?

### **B. Completing the questionnaire**

1. How long did the questionnaire take to read through?
2. Are any of the questions unclear or ambiguous?
3. Are any questions difficult to answer?
4. Did you object to answering any of the questions?
5. Is the language appropriate for the proposed sample?
6. Are any of the questions showing bias?

### **C. Purpose of the questionnaire**

1. Did you consider that any major topics had been omitted?
2. Are any of the questions irrelevant that should therefore be omitted?
3. Did you understand the focus of the questionnaire?

4. Are there any other issues you'd like to comment on?

Source: Cahoon (2004, p.454).

## SAMPLE WEB-BASED SURVEY QUESTIONNAIRE

### SECTION A

#### Sustainable Procurement Practices (SPP): (Independent Variable)

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

Codes	Items	1	2	3	4	5	6	7
	<b>(Economic)</b>							
<b>EcSPP1</b>	Our organization considers the costs of management, procurement, and other costs in its operations.	1	2	3	4	5	6	7
<b>EcSPP2</b>	My organization favours suppliers that rate highly on sustainability during the tender process.	1	2	3	4	5	6	7
<b>EcSPP3</b>	We have a written procurement policy stating our commitment to purchasing sustainable goods & services.	1	2	3	4	5	6	7

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<b>EcSPP4</b>	My organization has integrated sustainability into its procurement process.	1	2	3	4	5	6	7
<b>EcSPP5</b>	My organization specifies sustainability criteria in its contract notices.	1	2	3	4	5	6	7
<b>EcSPP6</b>	We have made our suppliers aware of our sustainable procurement policy and practices.	1	2	3	4	5	6	7

---

**Source:** Kai-Chong Thong and Wai-Peng Wong 2018. Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia. *Sustainability* **2018**, **10**, 2781; doi:10.3390/su10082781, [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability). (Q1)

**Source:** Joanne Meehan<sup>1</sup> and David Bryde 2010. Sustainable Procurement Practice. *Business Strategy and the Environment. Bus. Strat. Env.* **20**, 94–106 (2011) Published online 3 May 2010 in Wiley Online Library ([wileyonlinelibrary.com](http://wileyonlinelibrary.com)) DOI: 10.1002/bse.678 (Questions: Q2 to Q6).

**Adapted from:** see Koplín et al., 2007; Preuss, 2007; Maxwell et al., 2006; Veleva et al., 2003; Wilkinson et al., 2001.

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Codes	Items (Environmental)	1	2	3	4	5	6	7
<b>EnSPP1</b>	Our Organization is responsible and committed to operate sustainably and environmental friendly.	1	2	3	4	5	6	7
<b>EnSPP2</b>	Environmental sustainability is critical to our success	1	2	3	4	5	6	7
<b>EnSPP3</b>	Environmental sustainability is a key priority of our organization	1	2	3	4	5	6	7

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<b>EnSPP4</b>	Our organisation prefers its suppliers to have environmental certifications.	1	2	3	4	5	6	7
<b>EnSPP5</b>	The organisation actively shares good environmental practice experiences with its partners.	1	2	3	4	5	6	7

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**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure.

Business Strategy and Environment. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment. **(Questions: Q1 to Q3). Adapted from:** Based on a review of the literature, the study adapted five items to measure **Sustainability Core Values (SCV)** (e.g., Arjaliès & Mundy, 2013; Jollands et al., 2015)

**Source:** Kai-Chong Thong and Wai-Peng Wong 2018. Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia. **Sustainability 2018, 10, 2781; doi:10.3390/su10082781, [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability). (Q4-Q5)**

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<b>Codes</b>	<b>Items (Social)</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
<b>SoSPP1</b>	This organization, when selecting partners, gives priority to those who comply with and support laws, regulations, and standards on social sustainability.	1	2	3	4	5	6	7
<b>SoSPP2</b>	The organization has established a healthy and safe management system.	1	2	3	4	5	6	7

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<b>SoSPP3</b>	The organization often engages in community charity work.	1	2	3	4	5	6	7
<b>SoSPP4</b>	It is our moral obligation to implement sustainability practices (e.g., use of renewable energy, preserving biodiversity)	1	2	3	4	5	6	7

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**Source:** Kai-Chong Thong and Wai-Peng Wong 2018. Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia. *Sustainability* 2018, 10, 2781; doi:10.3390/su10082781, [www.mdpi.com/journal/sustainability](http://www.mdpi.com/journal/sustainability). (Q1-Q3)

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure.

*Business Strategy and Environment*. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment. (Questions: Q4). **Adapted from:** Based on a review of the literature, the study adapted five items to measure **Sustainability Core Values (SCV)** (e.g., Arjaliès & Mundy, 2013; Jollands et al., 2015)

**Organizational Performance (OP): (Dependent Variable)**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree

Codes	Items	1	2	3	4	5	6	7
OP1	Improvement in stakeholders and users satisfaction	1	2	3	4	5	6	7
OP2	Reduction in the number of complaints or claims from stakeholders and users	1	2	3	4	5	6	7
OP3	Employees in this organization learn new procedures and processes introduced in their jobs within a short period	1	2	3	4	5	6	7
OP4	Employees in this department try to constantly update their skills and abilities	1	2	3	4	5	6	7
OP5	Employees in our organization have multiple skills that can be applied to tasks corresponding to other jobs	1	2	3	4	5	6	7
OP6	Employees gets a lot of support from managers if they want to try new ways of doing things	1	2	3	4	5	6	7

**Source and Adapted from:** Juan Carlos Bou-Llugar, Inmaculada Beltrán-Martín, Vicente Roca-Puig and Ana Belén Escrig-Tena (2016). Single- and Multiple-Informant Research Designs to Examine the Human Resource Management–Performance Relationship. *British Journal of Management*, Volume 27, 646-668.. (Q1-Q5)

**Source and Adapted from:** Catherine L. Wang, Chaminda Senaratne and Mohammed Rafiq (2015). Success Traps, Dynamic Capabilities and Firm Performance. British Journal of Management, Volume 26, pages 26–44. (Q6)

**Relational Governance (RG): (Moderating Variable)**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

Codes	Items	1	2	3	4	5	6	7
<b>RG1</b>	Our organization has an extremely collaborative relationship with its partners and suppliers.	1	2	3	4	5	6	7
<b>RG2</b>	We rely on our mutual understanding with partners and suppliers to assign roles and responsibilities of each in the relationship.	1	2	3	4	5	6	7
<b>RG3</b>	We manage unexpected events by relying on our mutual understanding with partners and suppliers.	1	2	3	4	5	6	7
<b>RG4</b>	Remedies for failure to perform are based on our mutual understanding with partners and suppliers.	1	2	3	4	5	6	7

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<b>RG5</b>	Our firm and partners discuss and resolve conflicts jointly.	1	2	3	4	5	6	7
<b>RG6</b>	A cooperative collaboration with partners and suppliers is important for the relationship.	1	2	3	4	5	6	7
<b>RG7</b>	Our firm and partners maintain and develop the cooperative relationship of mutual trust.	1	2	3	4	5	6	7

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**Source:** Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements?. *Strategic management journal*, 23(8), 707-725. **Question (Q1).**

**Adapted from: Macneil IR. 1978 and Anderson JC, Narus JA. 1990).** 1. Macneil IR. 1978. Contracts: adjustment of long-term economic relations under classical, neoclassical and relational contract law. *Northwestern University Law Review* 72: 854–905. 2. Anderson JC, Narus JA. 1990. A model of the distributor’s firm and manufacturer firm working partnerships. *Journal of Marketing* 54: 42–58. **Question (Q1)**

**Source:** Ashwin W. Joshi and Alexandra J. Campbell (2003), Effect of Environmental Dynamism on Relational Governance in Manufacturer-Supplier Relationships: A Contingency Framework and an Empirical Test. *Journal of the Academy of Marketing Science*. Volume 31, No. 2, pages 176-188. **Questions (Q2-Q5).** **Adapted from: Lusch and Brown 1996).** Lusch, Robert E and James R. Brown. 1996. "Interdependency, Contracting, and Relational Behavior in Marketing Channels." *Journal of Marketing* 60 (October): 19-38. **Questions (Q2-Q5).**

**Source:** S Leimeister, T Böhmman, H Krcmar (2008), Is Outsourcing Governance In Innovation-Focused Relationships – An Empirical Investigation. *ECIS, 2008 - pdfs.semanticscholar.org*.

**Question (Q6).** (Adapted from: Goles and Chin, 2005),(Poppo and Zenger, 2002), (Lee and Kim, 1999), (Lee et al., 2004). **Question (Q6).**

**Source:** M Chi, J Zhao, JF George, Y Li, S Zhai (2017). The influence of inter-firm IT governance strategies on relational performance: The moderation effect of information technology ambidexterity- *International Journal of Information Management 2017 – Elsevier*. **Question (Q7).**

**Adapted from:** Cao et al., 2013; Cao& Lumineau, 2015; Deng et al., 2013) **Questions (Q7).**

**Top Management Commitment (TMC): Moderating Variable**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

Codes	Items	1	2	3	4	5	6	7
<b>TMC1</b>	Our Top Management extends full support for sustainability practices	1	2	3	4	5	6	7
<b>TMC2</b>	Our Top Management consistently assesses the sustainability impacts of our operations	1	2	3	4	5	6	7

<b>TMC3</b>	Our Top Management shows behavior that indicates sustainability as a competitive advantage in our operations	1	2	3	4	5	6	7
<b>TMC4</b>	Our organization's Top Management has a great understanding of stakeholders' sustainability practices for operations	1	2	3	4	5	6	7

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure.

Business Strategy and Environment. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment.

**Adapted from:** Following Griffith, Yalcinkaya, and Calantone (2010) and Colwell and Joshi (2013), eight items were adapted to measure top management commitment to sustainability

**Organizational Identity (OI): Control Variable**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

Codes	Items	1	2	3	4	5	6	7
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<b>OI1</b>	My organization's employees are proud of the company history about sustainability	1	2	3	4	5	6	7
<b>OI2</b>	Our Organization has carved out a significant position with respect for sustainability practices	1	2	3	4	5	6	7
<b>OI3</b>	Our organization's employees are responsible and committed to operate sustainably	1	2	3	4	5	6	7

**Source:** Kai-Chong Thong and Wai-Peng Wong, (2018) Pathways for Sustainable Supply Chain Performance—Evidence from a Developing Country, Malaysia, Sustainability, 2018 - mdpi.com.

**Adapted from:** Chang, C.H.; Chen, Y.S. Green organizational identity and green innovation. Manag. Decis. 2013, 51, 1056–1070. [CrossRef]

### **Stakeholder Pressure (SP): Control Variable**

Please indicate the extent to which you agree or disagree with the following set of questions.

You may rate your level of agreement or disagreement on a scale of 1-7.

**The questions are measured in a seven-point scale Likert type where 1=Strongly Disagree, 2=Disagree, 3=More or Less Disagree, 4=Not Sure, 5= More or Less Agree, 6=Agree and 7=Strongly Agree**

<b>Codes</b>	<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
SHP1	We actively adopt Government and Regulatory Bodies requirements that promote sustainability practices.	1	2	3	4	5	6	7

SHP2	Our Employer exerts significant pressure on all suppliers to promote sustainability practices as a source of competitive advantage.	1	2	3	4	5	6	7
SHP3	We actively participate in civil societies activities that promote sustainability practices	1	2	3	4	5	6	7

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure.

Business Strategy and Environment. 2019;28:143–154. [wileyonlinelibrary.com/journal/bse](http://wileyonlinelibrary.com/journal/bse) © 2018 John Wiley & Sons, Ltd and ERP Environment. **Adapted from:** Finally, seven items were adapted from prior studies to measure stakeholder pressure for sustainability (Rodrigue et al., 2013; Sarkis, Gonzalez-Torre, & Adenso-Diaz, 2010; Sharma & Henriques, 2005).

**Section B: Biographical information**

8. What is your gender?  Male  Female

9. What is your age bracket?  Below 20years  21-25years  26-30years

31-35years  36-40 years  41 and above years

10. What is your level of education?  PhD  Masters  Bachelors  Diploma  
  
 Senior High School  If other

If other please specify .....

**Source:** Chaminda Wijethilake and Tek Lama 2018. Sustainability core values and sustainability risk management: Moderating effects of top management commitment and stakeholder pressure.

Business Strategy and Environment. 2019;28:143–154. wileyonlinelibrary.com/journal/bse © 2018 John Wiley & Sons, Ltd and ERP Environment. **(Q4-Q7). Adapted from:** ‘*Organisational Size was measured by referring to the number of employees, the nature of the organisation in terms of multinational and local, and industry type representing manufacturing and services organisations (e.g., Lisi, 2015). (Q4-Q7)*

11. What is the total number of employees in your organization?

Less than 20  21-50  50-99  100 and above

12. How long has your organization been in operation?  0-5 years  6-10 years  11-

15 years  16-20 years  Above 21 years

13. What is the nature of your organization’s operation?

Total Government Owned  Public Private Partnership  Government divestiture

14. What is the industry type of your organization's operation?

Production  Manufacturing  Services

## **TELEPHONE INTERVIEW INSTRUMENT**

### **SECTION 2: INTERVIEW GUIDE**

#### **Begin interview**

Good, thank you. Then we will commence the interview with a set of questions on the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment in your organisation.

**I would like to begin by asking you questions about how your understanding of sustainable procurement practices and its related dimensions in general.**

1. Can you tell me about your experience in relation to sustainable procurement practices and its related dimensions in this organisation?

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2. What dimension of sustainable procurement practices does your organization places much emphasizes?

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3. Does the practice of sustainable procurement practices affect the operational and functional activities of your organization?

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4. Do you consider your organization as a sustainable one?

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5. To what extent does senior management offer procurement officers the requisite training, tools and knowledge to ensure officer discharge their duties efficiently?

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6. Does your organization have in place mechanism and framework to guide the relationship and exchange between internal and external parties involved in the procurement practices?

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7. If yes, can you elaborate on some of the mechanism and process instituted to ensure safeguard of information and exchanges between procuring party and supplier?

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---

**Closing statement and question**

That completes the questions for our interview. Do you have other comments that you would like to make concerning the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment in your organisation?

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Finally, do you have any general comments you would like to make?

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A summary of the phone interview results will be provided upon request. The summary will also include the viewpoints of other experienced procurement professionals, staff, and consultants in the industry. If you would like to receive a copy of the summary of this report, please provide your email address (this will be kept confidential).

**Email address:** \_\_\_\_\_

**THANK YOU FOR YOUR PARTICIPATION**

## APPENDIX D: TELEPHONE INTERVIEW INSTRUMENT



Plot 2, Arko Close off Nelson Mandela  
Avenue, near food & Drugs Authority  
Gulf House area, South Legon

**Web:** <https://nibs.edu.gh/> **Email:** [info@nibs.edu.gh](mailto:info@nibs.edu.gh) **Tel:** +233 (0) 560-911-174

### LETTER OF CONSENT FOR TELEPHONE INTERVIEW INSTRUMENT: PARTICIPANT

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

Dear Participant,

You are invited to participate in this Telephone Interview about your experiences as a **procurement professionals, staff, and consultants**. Your response are regarded as highly valuable to this study as it will substantially help towards exploring effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large.

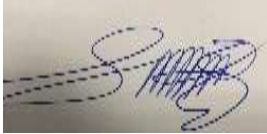
The study is being conducted by a PhD candidate of Noble International Business School. The purpose of this survey is purely for academic purposes only. The Telephone Interview Instrument has two sections; section 1-introduction and section 2- interview guide questions made up of seven (7) questions, which will take approximately 10 to 15 minutes in total to complete. All information collected through this study will be treated confidentially; no respondents will be identifiable in the results. The study is approved by the Noble International Business School Research Committee.

A summary of the web-based survey results will be provided upon request, which will include the factors that examines the relationship between sustainable procurement practices and Organisational Performance.

Your participation in the online survey is entirely voluntary and there will be no consequences for you if you choose not to participate.

Thank you for your valuable contribution in advance.

Yours sincerely,



**Researcher,**  
**Swanzzy Awozum**  
**PhD in Business Administration**  
**Email: [aswanzy@phd.nibs.edu.gh](mailto:aswanzy@phd.nibs.edu.gh)**  
**Cell: 0244666914**

**Research Supervisor,**  
**Theodora Akweley Asiamah, PhD**  
**Assistant Professor of Management,**  
**Director, DBL Program**  
**T: +233 (0) 578688811**  
**E: [theodora.nibs.edu.gh](mailto:theodora.nibs.edu.gh)**

## SECTION 1: INTRODUCTION

Code number -----

Date of interview-----/-----/2020

Time interview started -----am/pm

Time interview ended -----am/pm

Total length of interview -----minutes

## INTRODUCTION

Good morning/afternoon Mr/Mrs\_\_\_\_\_, I am Swanzzy Awozum a PhD Candidate in Business Administration, calling from the Noble International Business School (NIBS) about the study on understanding and exploring the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. *[pause for response]*.

I sent a participant consent form and information sheet to you in an email. At an earlier time, you indicated that you would be willing to participate in an interview now.

*Yes, go to “Recording the interview”*

Is this still a convenient time for you?

No go to “Better time”

### **Better time**

I am able to arrange a more convenient time to do this interview. Otherwise, is it possible for you to recommend another person experienced procurement professionals, staff, and consultants in or outside your organisation to have the interview done?

*Yes schedule appointment or contact recommended person*

-----  
 No thank you for your time

Yes go to begin interview

### **Recording the interview**

Before we begin, can you consent to the recording of this interview? This will help ensure accuracy of the proceedings.

*No explain the significance of recording to achieve accuracy. Prompt respondent concerning how recording will enable correct interpretation of results and that transcripts could be sent to them to confirm the exactness of the recording before data processing. Also assure respondent that all data will be safely kept and destroyed after five years.*

Are you able to continue?

## SECTION 2: INTERVIEW GUIDE

### Begin interview

Good, thank you. Then we will commence the interview with a set of questions on the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment in your organisation.

**I would like to begin by asking you questions about how your understanding of sustainable procurement practices and its related dimensions in general.**

1. Can you tell me about your experience in relation to sustainable procurement practices and its related dimensions in this organisation?

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2. What dimension of sustainable procurement practices does your organization places much emphasizes?

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3. Does the practice of sustainable procurement practices affect the operational and functional activities of your organization?

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4. Do you consider your organization as a sustainable one?

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5. To what extent does senior management offer procurement officers the requisite training, tools and knowledge to ensure officer discharge their duties efficiently?

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6. Does your organization have in place mechanism and framework to guide the relationship and exchange between internal and external parties involved in the procurement practices?

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7. If yes, can you elaborate on some of the mechanism and process instituted to ensure safeguard of information and exchanges between procuring party and supplier?

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**Closing statement and question**

That completes the questions for our interview. Do you have other comments that you would like to make concerning the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment in your organisation?

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Finally, do you have any general comments you would like to make?

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A summary of the phone interview results will be provided upon request. The summary will also include the viewpoints of other experienced procurement professionals, staff, and consultants in the industry. If you would like to receive a copy of the summary of this report, please provide your email address (this will be kept confidential).

**Email address:** \_\_\_\_\_

**THANK YOU FOR YOUR PARTICIPATION**

## APPENDIX E: SAMPLE WEB-BASED SURVEY PARTICIPANT REMINDER LETTER



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### **SAMPLE REMINDER TO BE SENT TO SAMPLE POPULATION**

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

Dear Procurement Professional, staff, or consultant,

One week ago you received an e-mail message asking for your experiences procurement professionals, staff, and consultants. Your inputs are regarded as highly valuable to this study as it will substantially help towards exploring effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large.

This message has gone to everyone in the selected sample population. Since no personal data is retained with the surveys for reasons of confidentiality, we are unable to identify whether or not you have already completed the survey. If you have already completed the survey, thank you for your contribution. If you would still like to participate, the link to the survey is provided below.

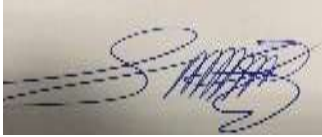
Your input will generate a better understanding of the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large. We have attached the participant information sheet for your perusal.

A summary of the web-based survey results will be provided upon request, which will include the factors that examines the relationship between sustainable procurement practices and Organisational Performance.

Your participation in the online survey is entirely voluntary and there will be no consequences for you if you choose not to participate. You can **CLICK** survey Link **BELOW**

Thank you for your valuable contribution in advance.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Swanzzy Awozum', is shown on a light-colored background.

**Researcher,**  
**Swanzzy Awozum**  
**PhD in Business Administration**  
**Email: [aswanzy@phd.nibs.edu.gh](mailto:aswanzy@phd.nibs.edu.gh)**  
**Cell: 0244666914**

**Research Supervisor,**  
**Theodora Akweley Asiamah, PhD**  
**Assistant Professor of Management,**  
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**T: +233 (0) 578688811**  
**E: [theodora.nibs.edu.gh](mailto:theodora.nibs.edu.gh)**

**APPENDIX F: ADVANCE LETTER TO CHARTERED INSTITUTE OF PURCHASING  
AND SUPPLY (CIPS) GHANA**



Plot 2, Arko Close off Nelson Mandela  
Avenue, near food & Drugs Authority  
Gulf House area, South Legon

**Web:** <https://nibs.edu.gh/> **Email:** [info@nibs.edu.gh](mailto:info@nibs.edu.gh) Tel: +233 (0) 560-911-174

**ADVANCE LETTER TO CHARTERED INSTITUTE OF PURCHASING AND SUPPLY  
(CIPS) GHANA**

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

Dear CIPS-Ghana,

We are writing to request your support for an important study on pertaining to gain access to your database of experienced **procurement professionals, staff, and consultants under the CIPS-Ghana platform of members.** Your support would highly be valuable to this study as it will substantially help source for the right experienced procurement professionals, staff, and consultants under the CIPS-Ghana platform of members for their response towards exploring effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment.

This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large. The study is being conducted in fulfilment of a Doctor of Philosophy degree for Swanzy Awozum.

The study is being conducted by a PhD candidate of Noble International Business School. The purpose of this survey is purely for academic purposes only. The data collection is in two folds 1: Quantitative study: questionnaire which has two sections, Section A and Section B: Biographical information, and a Qualitative Study: Telephone Interview Instrument has two sections; section 1- introduction and section 2- interview guide questions made up of seven (7) questions, each will take approximately 10 to 15 minutes respectively to complete.

All information collected through this study will be treated confidentially; no respondents will be identifiable in the results. The study is approved by the Noble International Business School Research Committee.

A summary of the survey results will be provided upon request, which will include the factors that examines the relationship between sustainable procurement practices and Organisational Performance.

Your support in this survey is entirely voluntary and there will be no consequences for you if you choose not to participate.

Thank you for your valuable contribution in advance.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Swanzky Awozum', is written over a set of horizontal dashed lines on a light-colored background.

**Researcher,**  
**Swanzky Awozum**  
**PhD in Business Administration**  
**Email: [aswanzy@phd.nibs.edu.gh](mailto:aswanzy@phd.nibs.edu.gh)**  
**Cell: 0244666914**

**Research Supervisor,**  
**Theodora Akweley Asiamah, PhD**  
**Assistant Professor of Management,**  
**Director, DBL Program**  
**T: +233 (0) 578688811**  
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## APPENDIX G: CONFIRMATORY TELEPHONE INTERVIEW INSTRUMENT



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### CONFIRMATORY LETTER

#### TELEPHONE LOG

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

**CONFIRMATORY LETTER TELEPHONE LOG** Date 1: \_\_\_\_\_/\_\_\_\_\_/ 2020

Respondent's Name : \_\_\_\_\_

Time1: \_\_\_\_\_ am /pm

Position : \_\_\_\_\_

Date 2: \_\_\_\_\_/\_\_\_\_\_/ 2020

Organisation : \_\_\_\_\_

Time2: \_\_\_\_\_ am /pm

Telephone : \_\_\_\_\_

Date 3: \_\_\_\_\_/\_\_\_\_\_/ 2020

Email : \_\_\_\_\_

Time3: \_\_\_\_\_ am /pm

Good morning/afternoon Mr/Mrs\_\_\_\_\_, I am Swanzy Awozum a PhD Candidate in Business Administration, calling from the Noble International Business School (NIBS) about the study on understanding and exploring the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. I am calling you to ask whether you are willing to participate in this important study.

Other professionals who form part of the **procurement professionals, staff, and consultants under CIPS-Ghana** are also being invited. Your contribution is valuable to this major study as it

will provide important insights into understanding and exploring the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. *[Pause and wait for response]*

In appreciation of your participation in this study, a summary report will be provided to you upon request. The summary will include the range of issues influencing the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment as well as to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large and policy. The study will be conducted by an interview over the telephone.

The Telephone Interview Instrument has two sections; section 1-introduction and section 2-interview guide questions made up of seven (7) questions, which will take approximately 10 to 15 minutes in total to complete. If you are interested in participating in this study we can start the interview now or we can plan another convenient time for me to call you back.

Are you interested in participating in this important study? *[Pause and wait for response]*

**If respondent says YES  
If respondent asks to arrange other time**

1. When would be a better time for you?

Date : \_\_\_\_\_

Respondent's time : \_\_\_\_\_

My time: \_\_\_\_\_

**Then go to Questionnaire material  
If respondent says NO**

1. Is there anyone else in your organisation that may be interested in participating in this study?

**YES**

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

**NO Go to Declaration B**

**DECLARATION A**

Thank you for your valuable time in assisting me  
in this study. I will contact you again on

**DECLARATION B**

Thank you for your time

*[ mentioned agreed date and time above no.1 ]*

## APPENDIX H: PARTICIPANT CONSENT FORM:

### Procurements Professionals, Staff, and Consultants under CIPS-Ghana: Directors, Managers, Experts in the Procurement Industry



Plot 2, Arko Close off Nelson Mandela  
Avenue, near food & Drugs Authority  
Gulf House area, South Legon

Web: <https://nibs.edu.gh/> Email: [info@nibs.edu.gh](mailto:info@nibs.edu.gh) Tel: +233 (0) 560-911-174

### PARTICIPANT CONSENT FORM

#### TELEPHONE INTERVIEW: Procurements Professionals, Staff, and Consultants under CIPS-Ghana: Directors, Managers, Experts in the Procurement Industry

By signing this form, I agree to the following:

1. I agree to take part in the research study named above.
2. I have read and understood the 'Information Sheet' for this study.
3. The nature and possible effects of the study have been explained to me.
4. I understand that the study involves me taking part in an audio recorded telephone interview (approximately 10 to 15 minutes duration) on the exploring effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment.
5. I also understand that I will have the option of reviewing the transcripts from the recorded telephone interview.
6. I understand that participation in this study involves no risk.
7. I understand that all research data (recordings and transcripts) will be securely stored with researcher, for the purposes of the award of doctoral degree with Noble International Business School (NIBS) for five years from the publication of the study results, and will then be destroyed.
8. Any questions that I have asked have been answered to my satisfaction.
9. I understand that the researcher(s) will maintain confidentiality and that any information I supply to the researcher(s) will be used only for the purposes of the research.
10. I understand that the results of the study will be published so that I cannot be identified as a participant.

11. I understand that my participation is voluntary and that I may withdraw at any time without any effect, and if I so wish may request that any data I have supplied to date be withdrawn from the research.

If you wish to take part in the research study, please sign the attached consent form and send it back to the researcher by the [aswanzy@phd.nibs.edu.gh](mailto:aswanzy@phd.nibs.edu.gh), [swanzy2383@yahoo.com](mailto:swanzy2383@yahoo.com) or [swanzyawozum@gmail.com](mailto:swanzyawozum@gmail.com)

Participant's name: \_\_\_\_\_

Participant's signature: \_\_\_\_\_

Date: \_\_\_\_\_


### **Statement by Investigator**

I have explained the project and the implications of participation to this volunteer and I believe that the consent is informed and that he/she understands the implications of participation.

If the Investigator has not had an opportunity to talk to participants prior to them participating, the following must be ticked.

The participant has received the Information Sheet where my details have been provided so participants have had the opportunity to contact me prior to consenting to participate in this project.

Investigator's name: Swazy Awozum

Investigator's signature: 

Date: \_\_\_\_\_

## **APPENDIX I: PARTICIPANT INFORMATION SHEET:**

### **Procurements Professionals, Staff, and Consultants under CIPS-Ghana: Directors, Managers, Experts in the Procurement Industry**



Plot 2, Arko Close off Nelson Mandela Avenue, near food & Drugs Authority Gulf House area, South Legon

**Web:** <https://nibs.edu.gh/> **Email:** [info@nibs.edu.gh](mailto:info@nibs.edu.gh) Tel: +233 (0) 560-911-174

## **PARTICIPANT INFORMATION SHEET:**

### **Procurements Professionals, Staff, and Consultants under CIPS-Ghana: Directors, Managers, Experts in the Procurement Industry**

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

#### **Invitation**

You are invited to participate in a research study investigating the effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment. This study is being conducted in partial fulfilment of a Doctor of Philosophy degree. The study will involve participating in a telephone interview where you will be asked a series of questions about your experiences as a procurement professional, staff, or consultant under CIPS-Ghana: Directors, Managers, Experts in the Procurement Industry. All information obtained will be treated confidentially and anonymously. The study is being conducted by Swanzy Awozum, a PhD candidate supervised by Dr Theodora Akweley Asiamah, at the Noble International Business School (NIBS).

#### **What is the purpose of this study?**

The purpose of this study aims at providing relational governance framework to enhance the practice of sustainable procurement practices and its impact on organizational performance. It

further examines the moderating roles of relational governance and top management commitment to sustainability on organizational performance.

### **Why have I been invited to participate?**

As part of a selected sample of Procurements Professionals, Staff, and Consultants under CIPS-Ghana: Directors, Managers, Experts in the Procurement Industry, you have been identified as someone whose experience and opinion would be a valuable contribution to the study. The input from yourself and other participants will be beneficial in exploring effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large.

It is important to understand that your involvement in this study is voluntary. While we would be pleased to have you participate, we respect your right to decline. There will be no consequences to you should you decide not to participate. Also, there are no specific risks anticipated with participation in this study. However, if you find any part of the study distressing please inform us.

### **What will I be asked to do?**

In this study you will be asked to provide your views in a telephone interview on the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large. The telephone interview will take about 10 to 15 minutes. In order to ensure accuracy and avoid the risk of inaccurate interpretation, the responses will be audio recorded with your consent and permission. The recordings will not be used for any other purpose except for transcription comments. Furthermore, please be assured that all responses will only be used for research purposes and will not be attributed to the name of any participant or organisation.

**Are there any possible benefits from participation in this study?**

The study has policy implications for exploring the effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large.

The feedback and information you provide in this study will lead to a better understanding of the effects and relationships between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment. This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large. Additionally, will also help to develop a checklist for managers and policy makers who are directly and indirectly connected to the Procurement Professionals, Staff, and Consultants under CIPS-Ghana: Directors, Managers, Experts in the Procurement Industry.

**Are there any possible risks from participation in this study?**

There are no foreseeable specific risks associated with your participation in this study.

**What if I change my mind during or after the study?**

If you decide to discontinue your participation in this study at any time, you may do so without providing an explanation. You may also, if you so wish, at this time, ask that any data you have provided to date be removed from the study.

**What will happen to the information when this study is over?**

All audio recordings and transcripts from the telephone interview including any hard copies of transcripts will be stored on the Noble International Business (NIBS) campus in locked cabinets accessible only by the researchers.

Computer files will be password protected and stored on a secure server in the Noble International Business (NIBS) campus. Five years after publication of the report of the project all transcripts and field notes will be shredded, computer files deleted and audio recordings deleted. All information collected will be treated confidentially by the researchers.

### **How will the results of the study be published?**

This study constitutes the source of primary information and data for the student investigator's doctoral thesis. A summary of the study results could be provided to participants upon request. Also, the findings from this study will be published through a variety of conference papers and journal articles.

Please understand that participants will not in any way be identified in the publication of the results of this study.

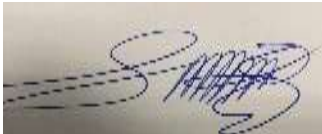
### **What if I have questions about this study?**

If you would like to discuss any aspect of this study please contact the student investigator.

You are welcome to contact us to discuss any issue relating to the research study.

**Thank you for taking the time to consider this study. If you wish to take part in it, please sign the attached consent form. This information sheet is for you to keep.**

Yours sincerely,



**Researcher,  
Swanzzy Awozum  
PhD in Business Administration  
Email: [aswanzy@phd.nibs.edu.gh](mailto:aswanzy@phd.nibs.edu.gh)  
Cell: 0244666914**

**Research Supervisor,  
Theodora Akweley Asiamah, PhD  
Assistant Professor of Management,  
Director, DBL Program  
T: +233 (0) 578688811  
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## APPENDIX J: LETTER TO GATEKEEPER



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Gulf House area, South Legon

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### LETTER TO GATEKEEPER

**Research Topic: The effect of Sustainable Procurement Practices on Organizational Performance in the public sector of Ghana: The Moderating role of Relational Governance and Top Management Commitment.**

Dear Gatekeeper,

We are writing to request your support for an important study on pertaining to gain access to your database of experienced **procurement professionals, staff, and consultants under the CIPS-Ghana platform of members.** Your support would highly be valuable to this study as it will substantially help source for the right experienced procurement professionals, staff, and consultants under the CIPS-Ghana platform of members for their response towards exploring effects and relationship between Sustainability Practices on Organizational Performance and the moderating effects of Relational Governance and Top Management Commitment.

This research is important, as it will help to develop a better understanding of how relational governance mechanisms and top management commitment can be utilised to improve the outcome of Organisation Performance at large. The study is being conducted in fulfilment of a Doctor of Philosophy degree for Swanzy Awozum.

The study is being conducted by a PhD candidate of Noble International Business School. The purpose of this survey is purely for academic purposes only. The data collection is in two folds 1: Quantitative study: questionnaire which has two sections, Section A and Section B: Biographical information, and a Qualitative Study: Telephone Interview Instrument has two sections; section 1- introduction and section 2- interview guide questions made up of seven (7) questions, each will take approximately 10 to 15 minutes respectively to complete.

All information collected through this study will be treated confidentially; no respondents will be identifiable in the results. The study is approved by the Noble International Business School Research Committee.

A summary of the survey results will be provided upon request, which will include the factors that examines the relationship between sustainable procurement practices and Organisational Performance.

Your support in this survey is entirely voluntary and there will be no consequences for you if you choose not to participate.

Thank you for your valuable contribution in advance.

Yours sincerely,



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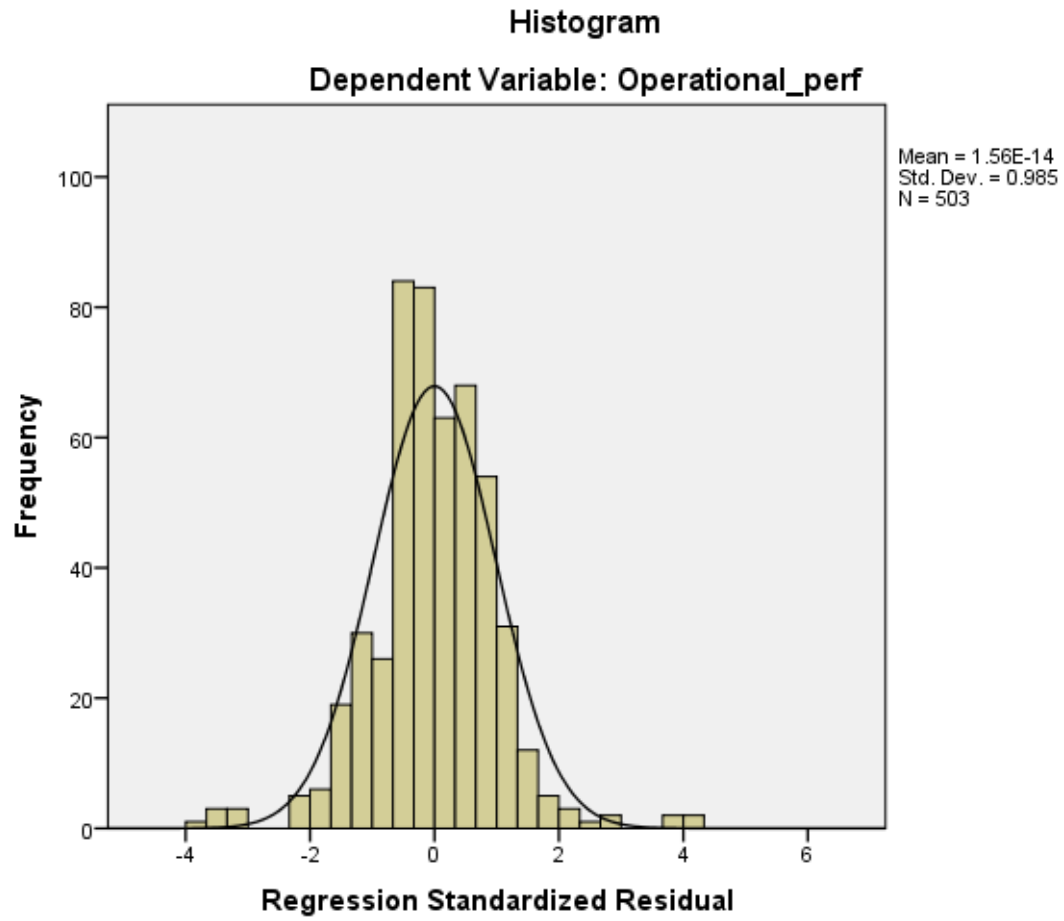
**Research Supervisor,**  
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**APPENDIX K STATISTICAL COMPUTATIONS AND OUTCOME**

**Residuals Statistics<sup>a</sup>**

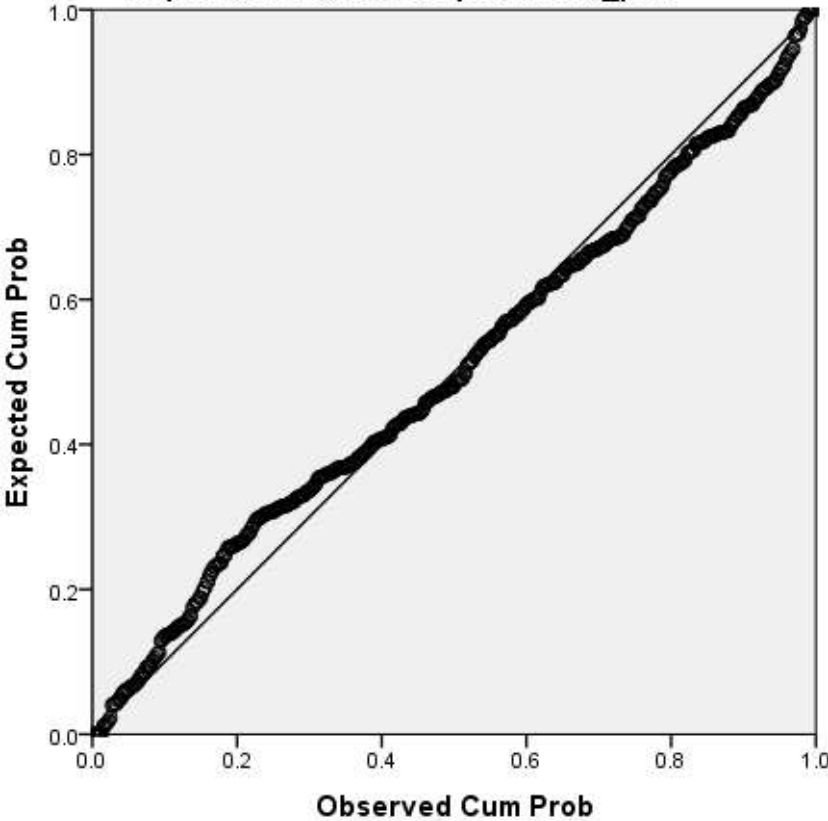
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Predicted Value	2.7423	5.7759	4.3643	.33741	503
Std. Predicted Value	-4.807	4.183	.000	1.000	503
Standard Error of Predicted Value	.038	.308	.079	.036	503
Adjusted Predicted Value	2.6525	5.7933	4.3628	.33822	503
Residual	-1.80902	2.07684	.00000	.47764	503
Std. Residual	-3.730	4.283	.000	.985	503
Stud. Residual	-3.757	4.307	.002	1.000	503
Deleted Residual	-1.83472	2.10001	.00156	.49219	503
Stud. Deleted Residual	-3.809	4.386	.002	1.004	503
Mahal. Distance	2.130	200.890	14.970	18.840	503
Cook's Distance	.000	.042	.002	.005	503
Centered Leverage Value	.004	.400	.030	.038	503

a. Dependent Variable: Operational\_perf

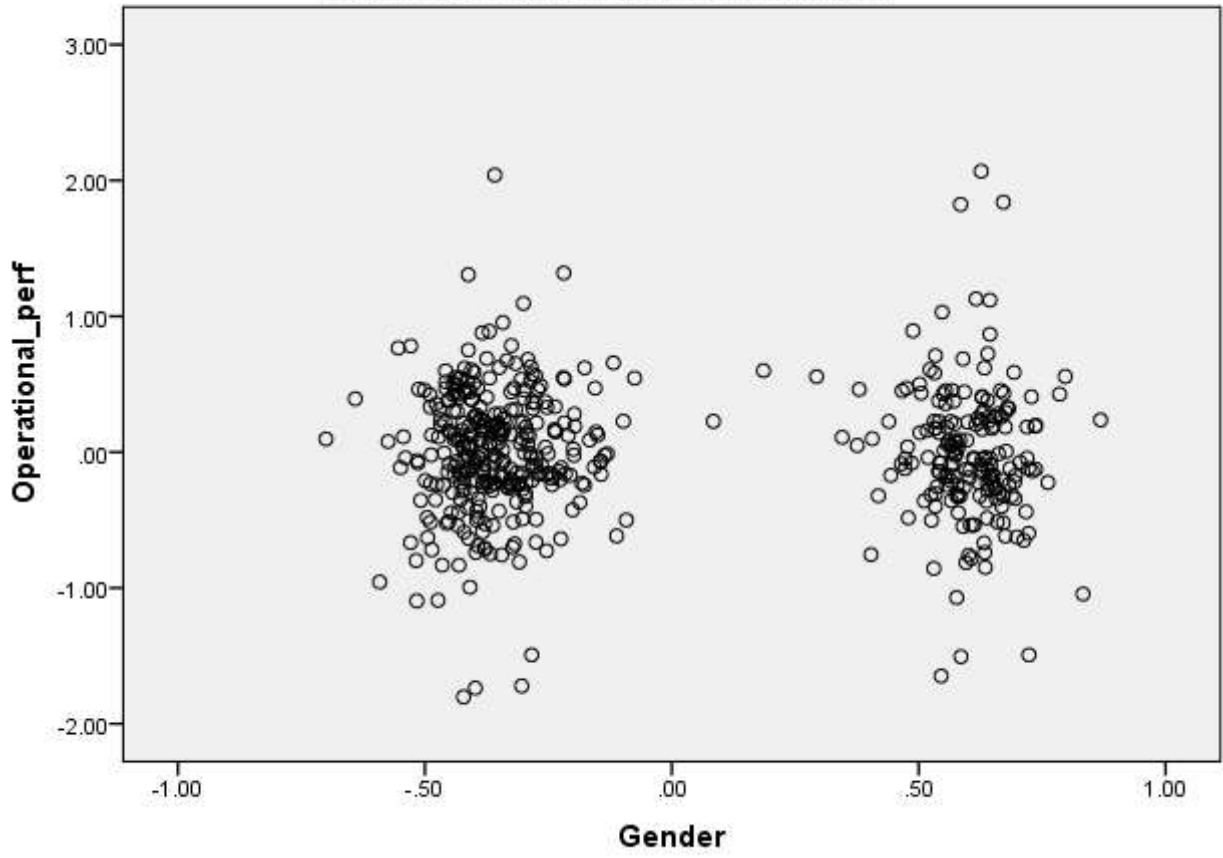


Normal P-P Plot of Regression Standardized Residual

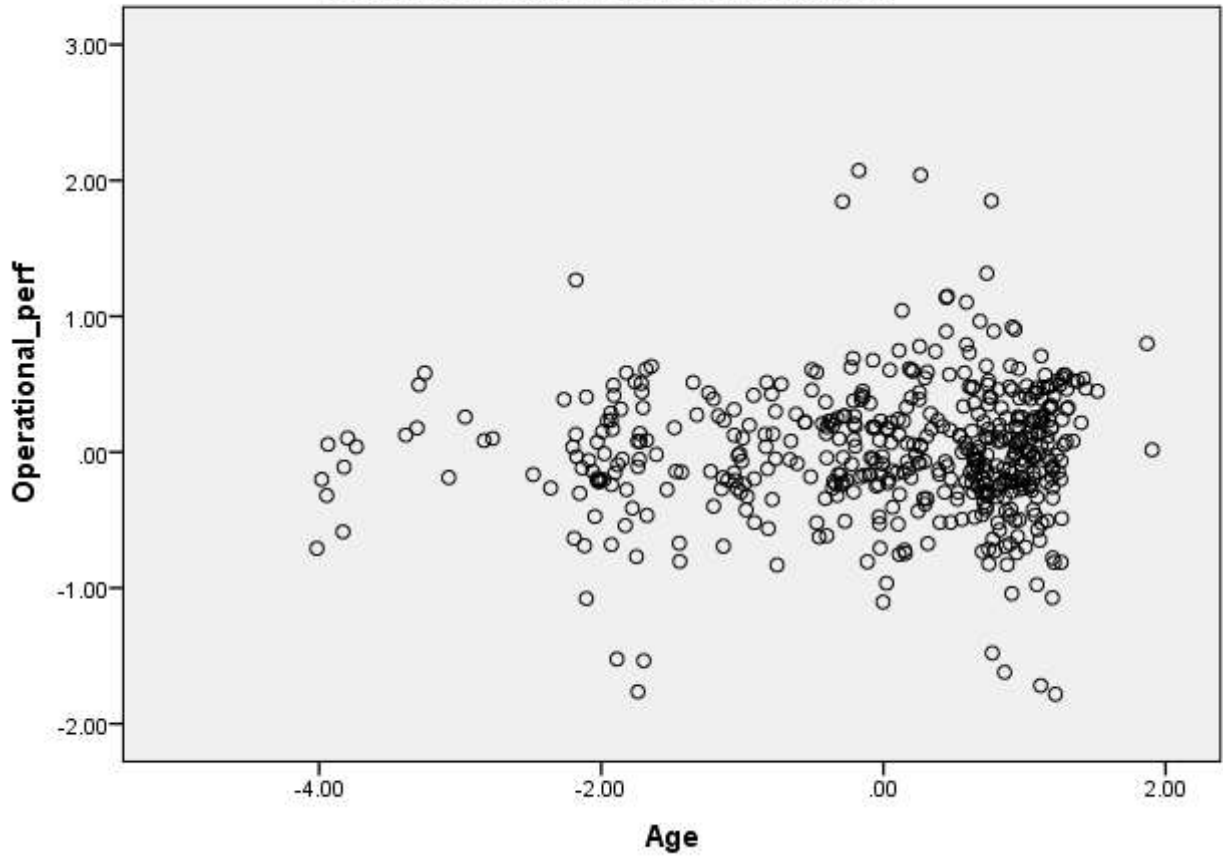
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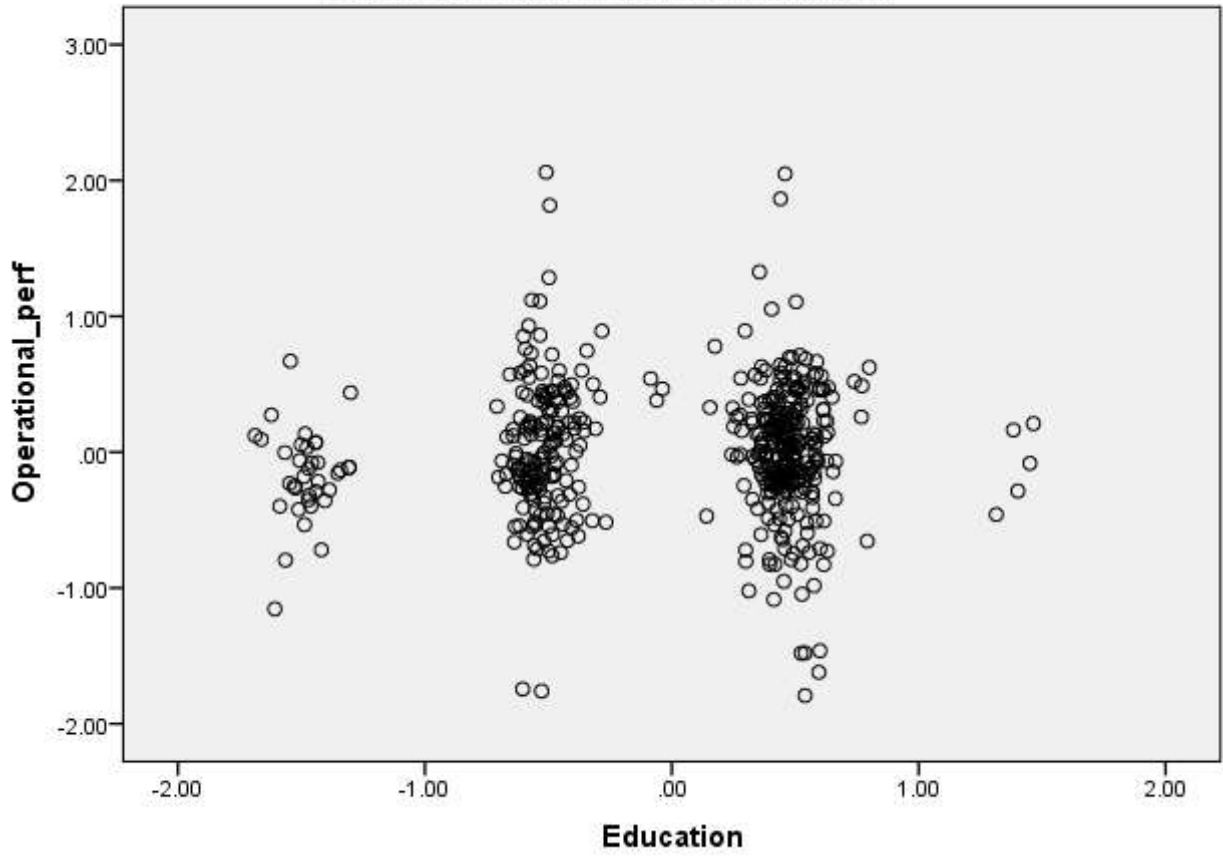
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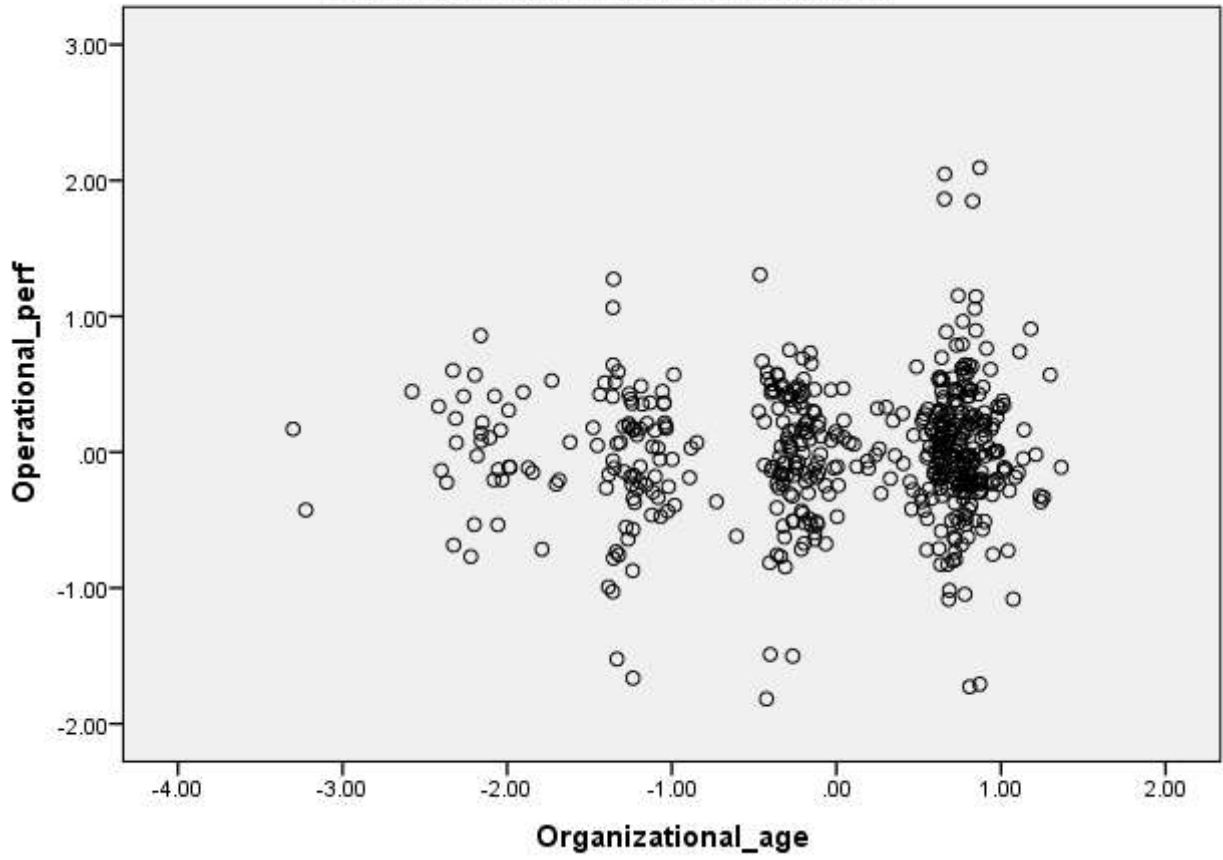
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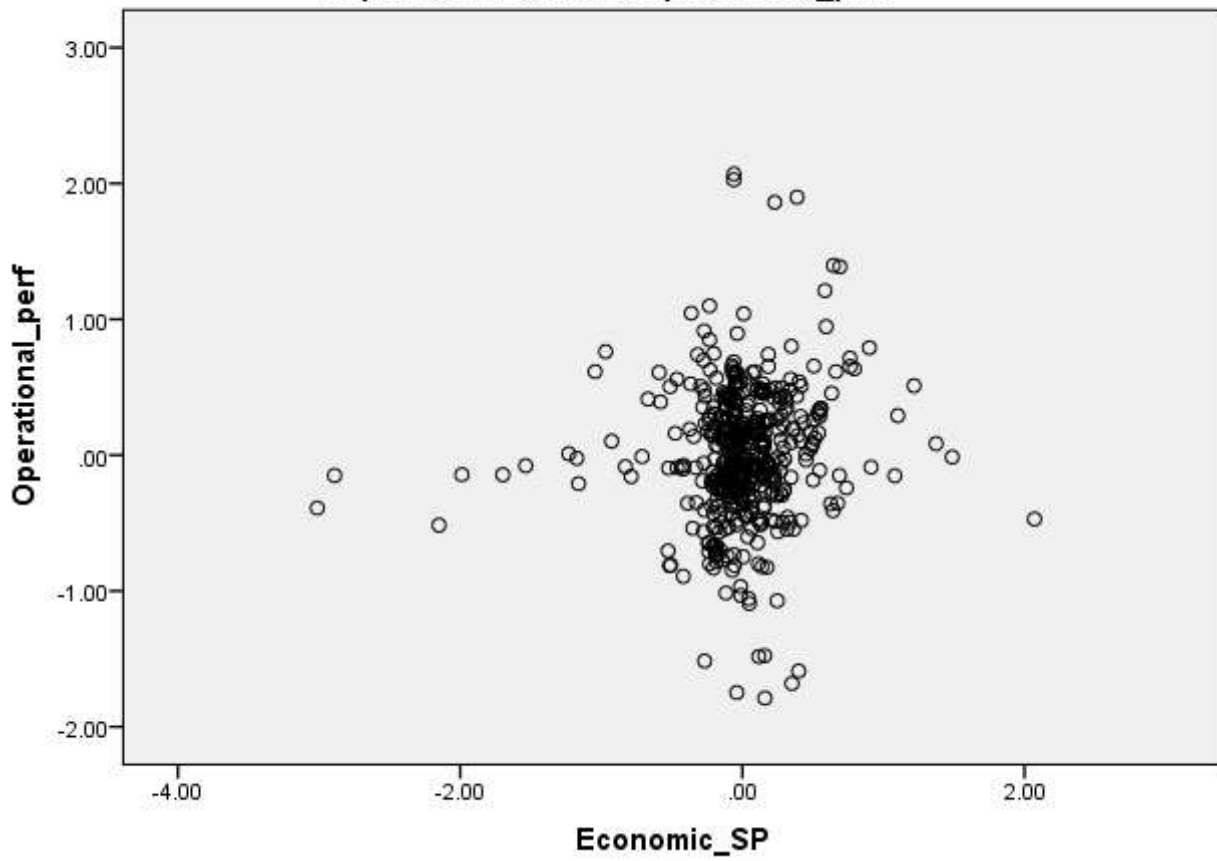
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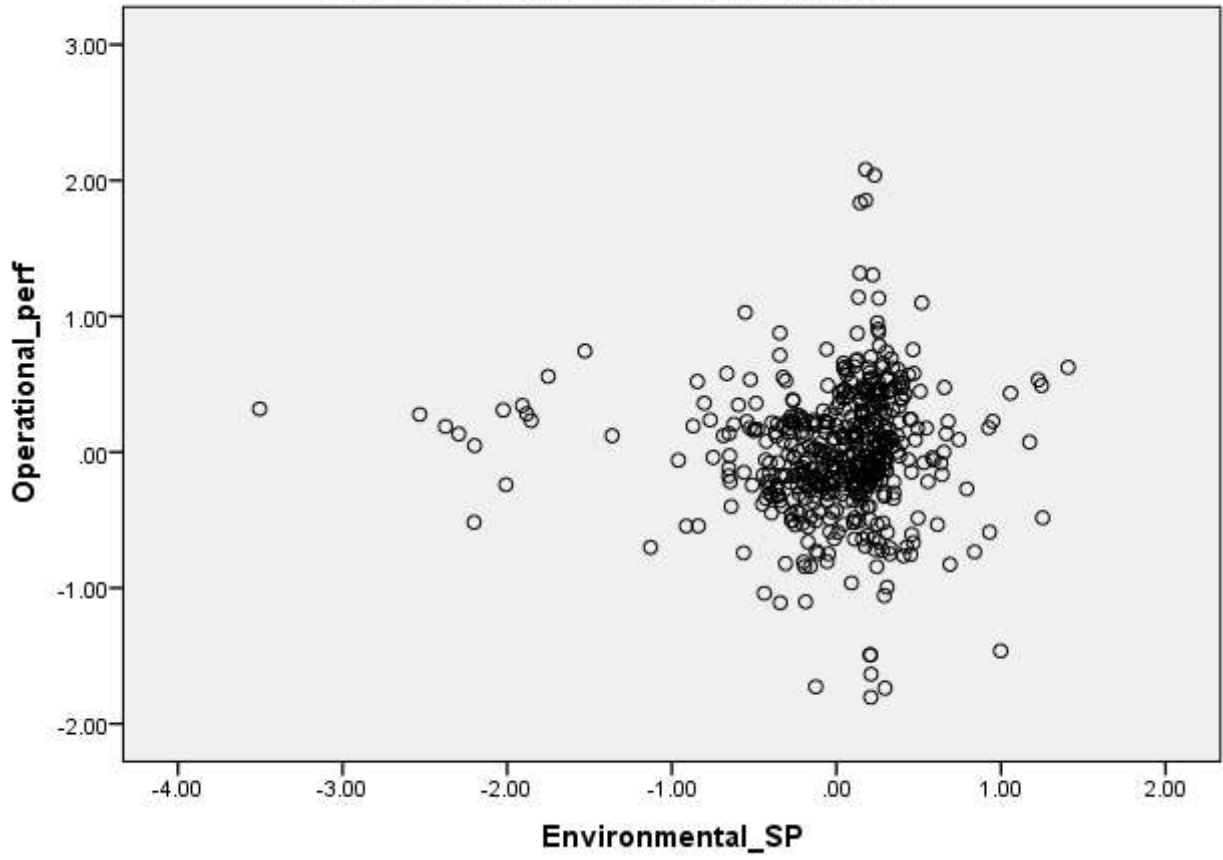
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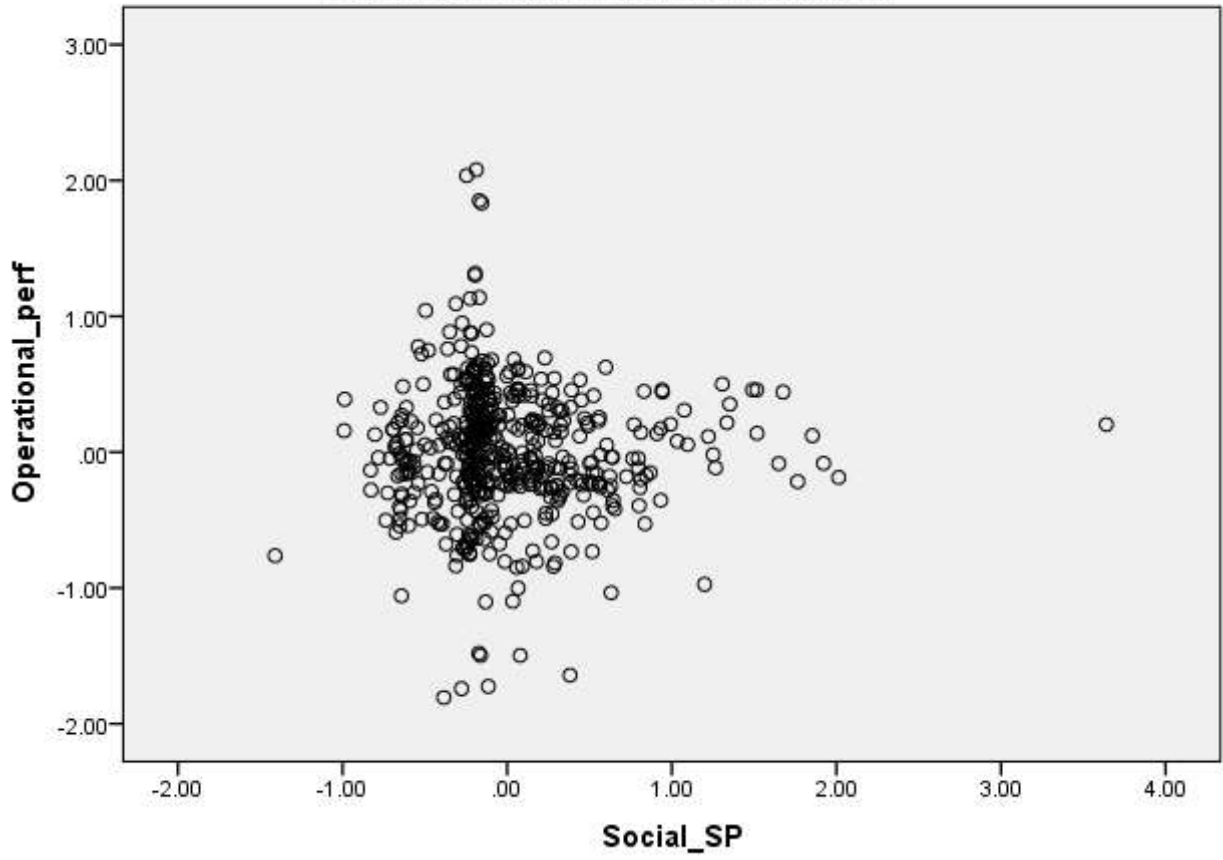
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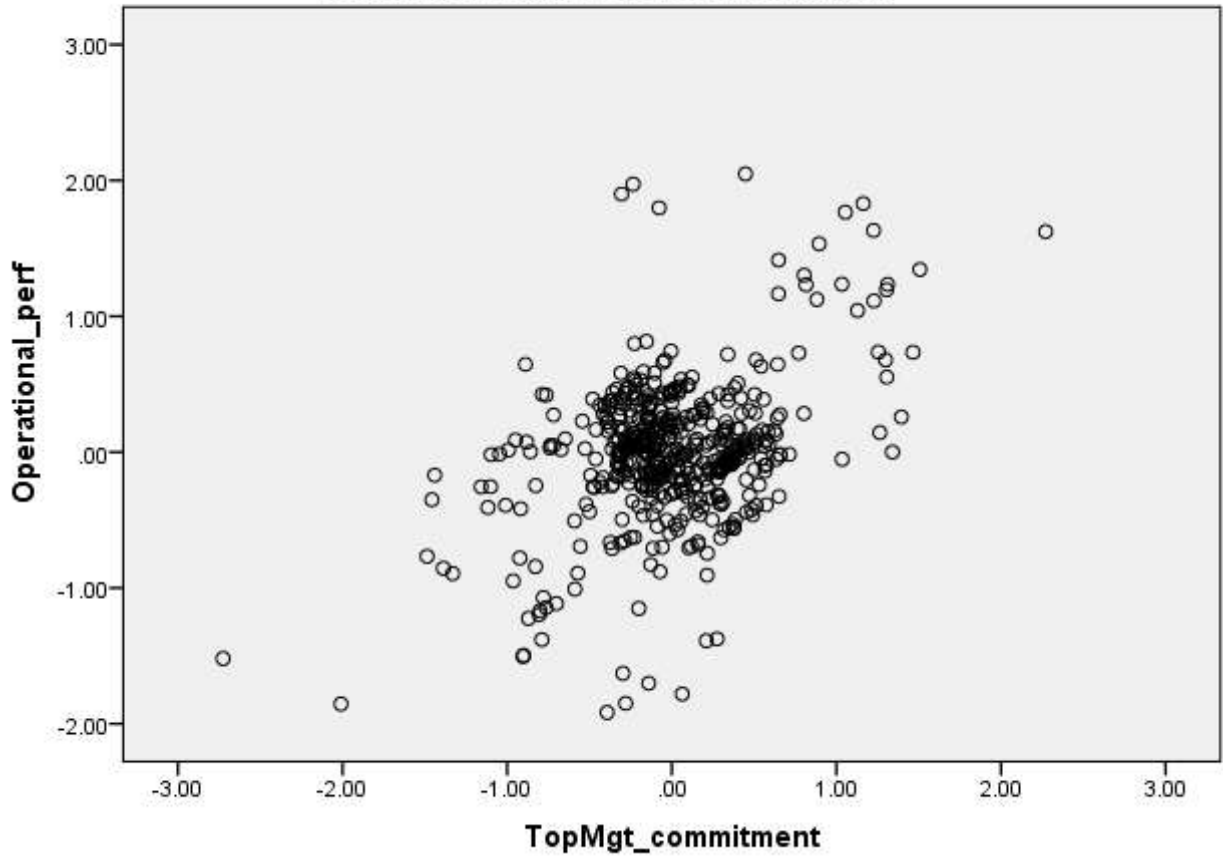
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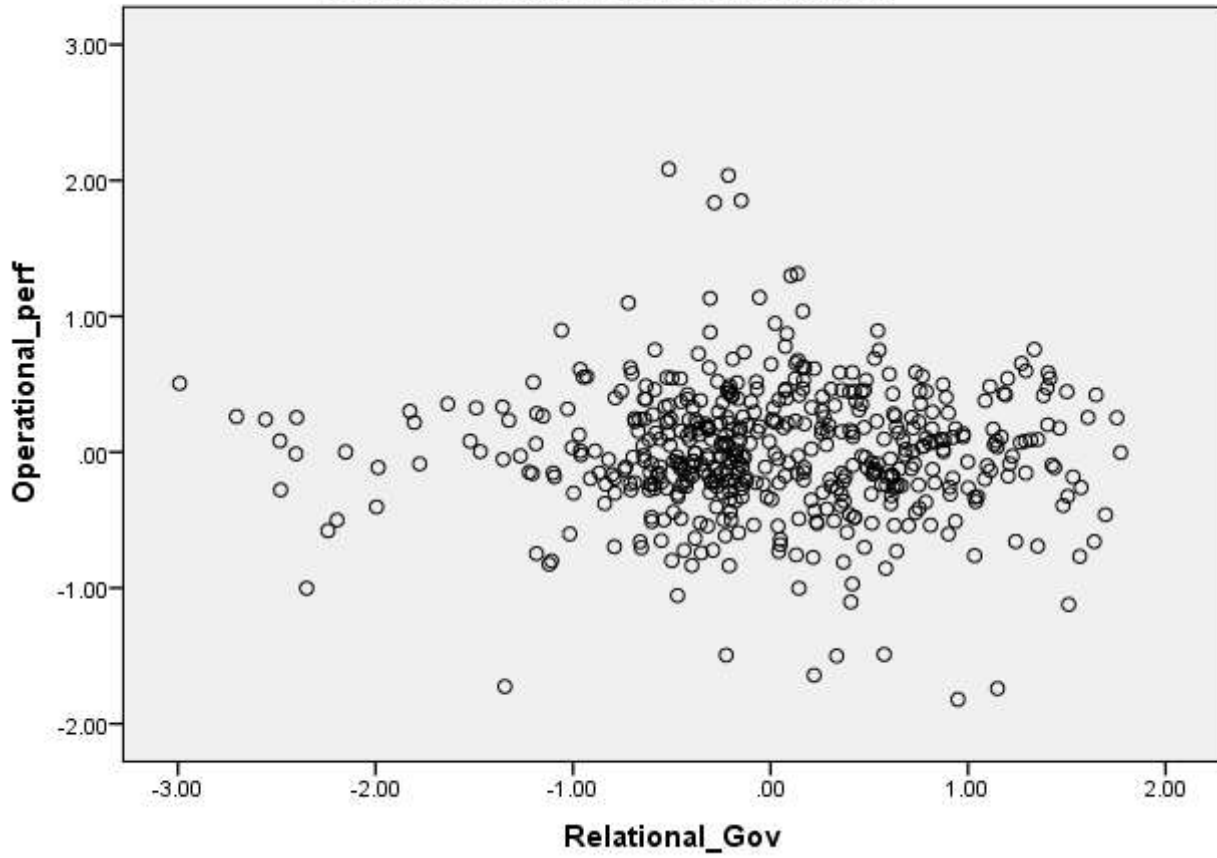
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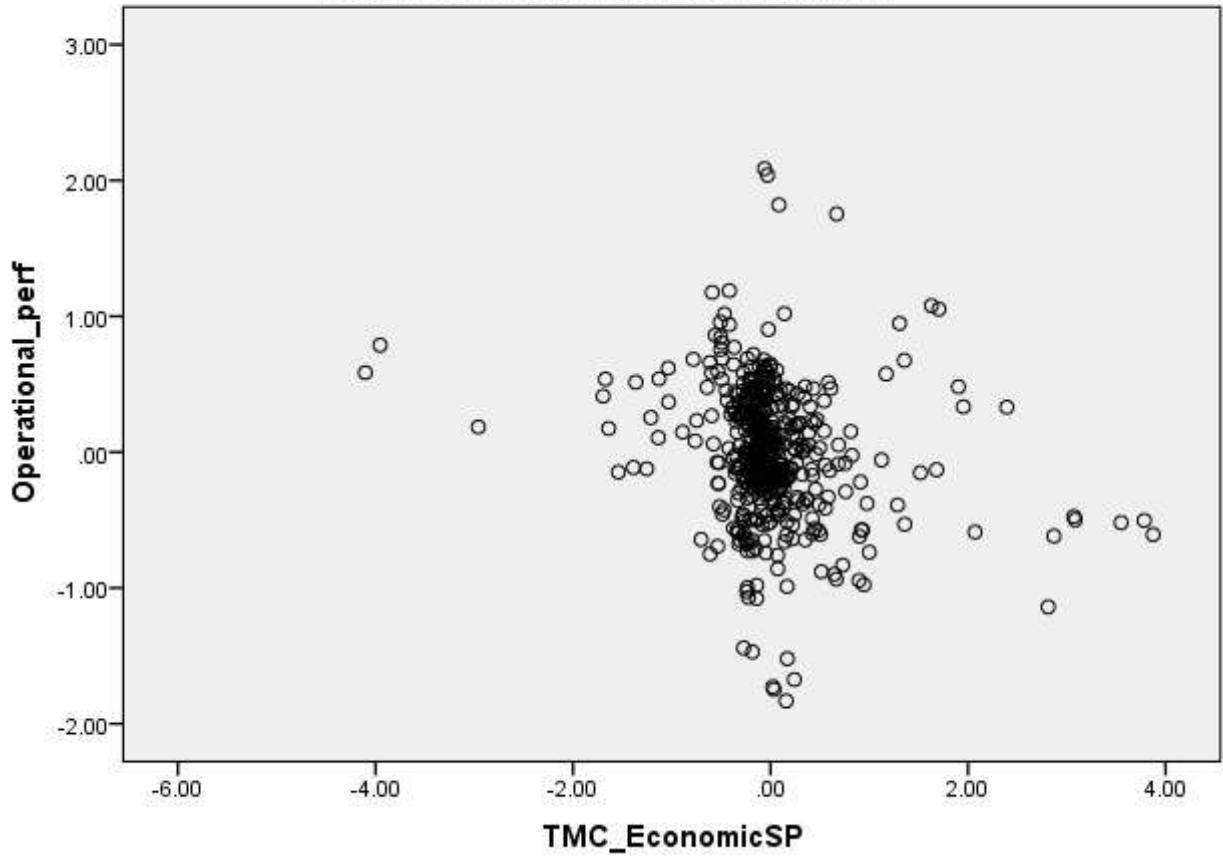
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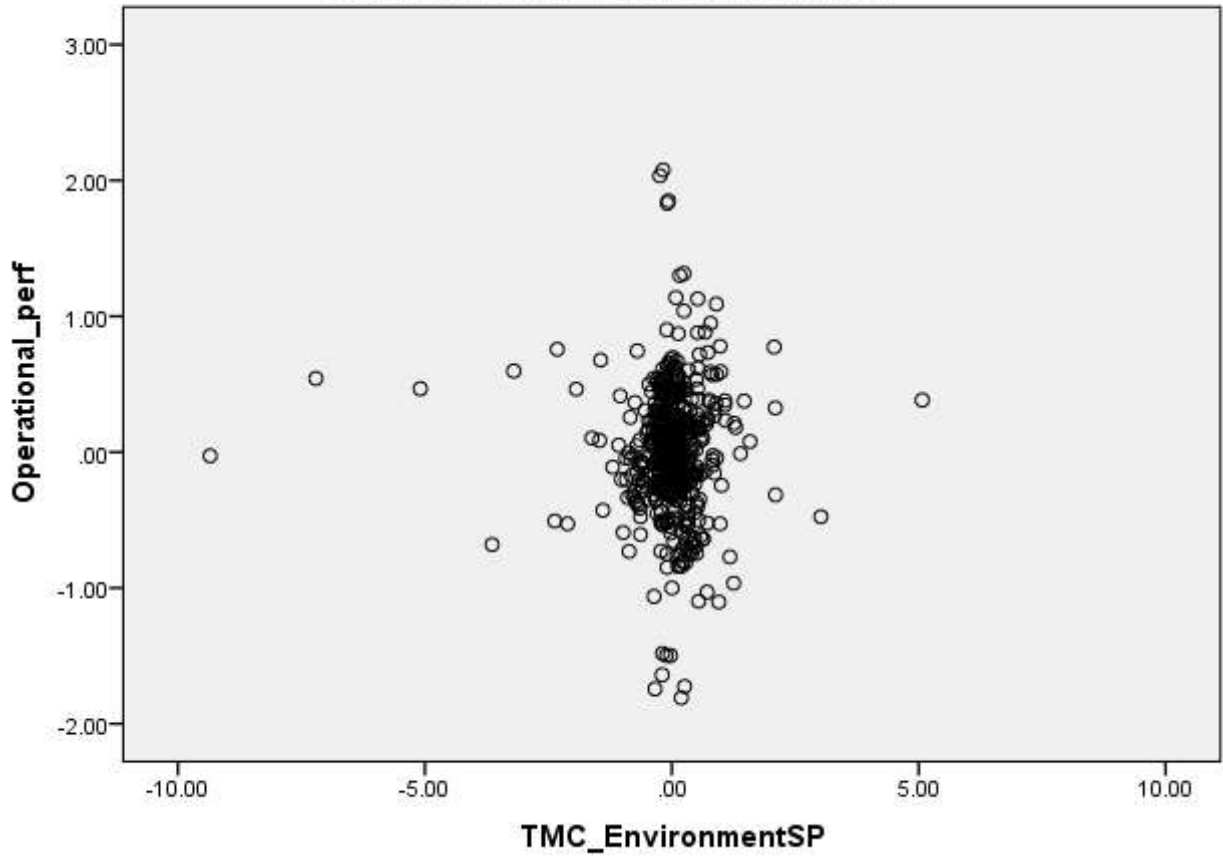
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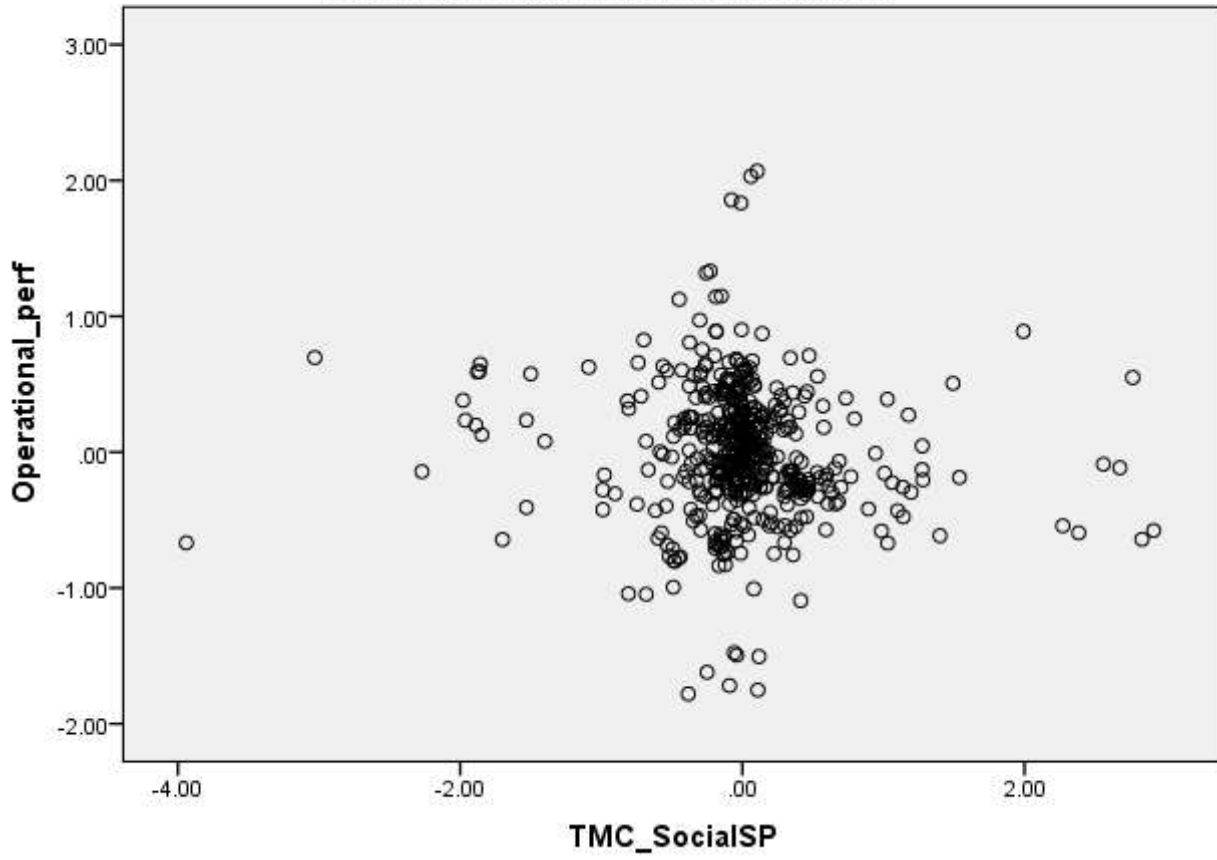
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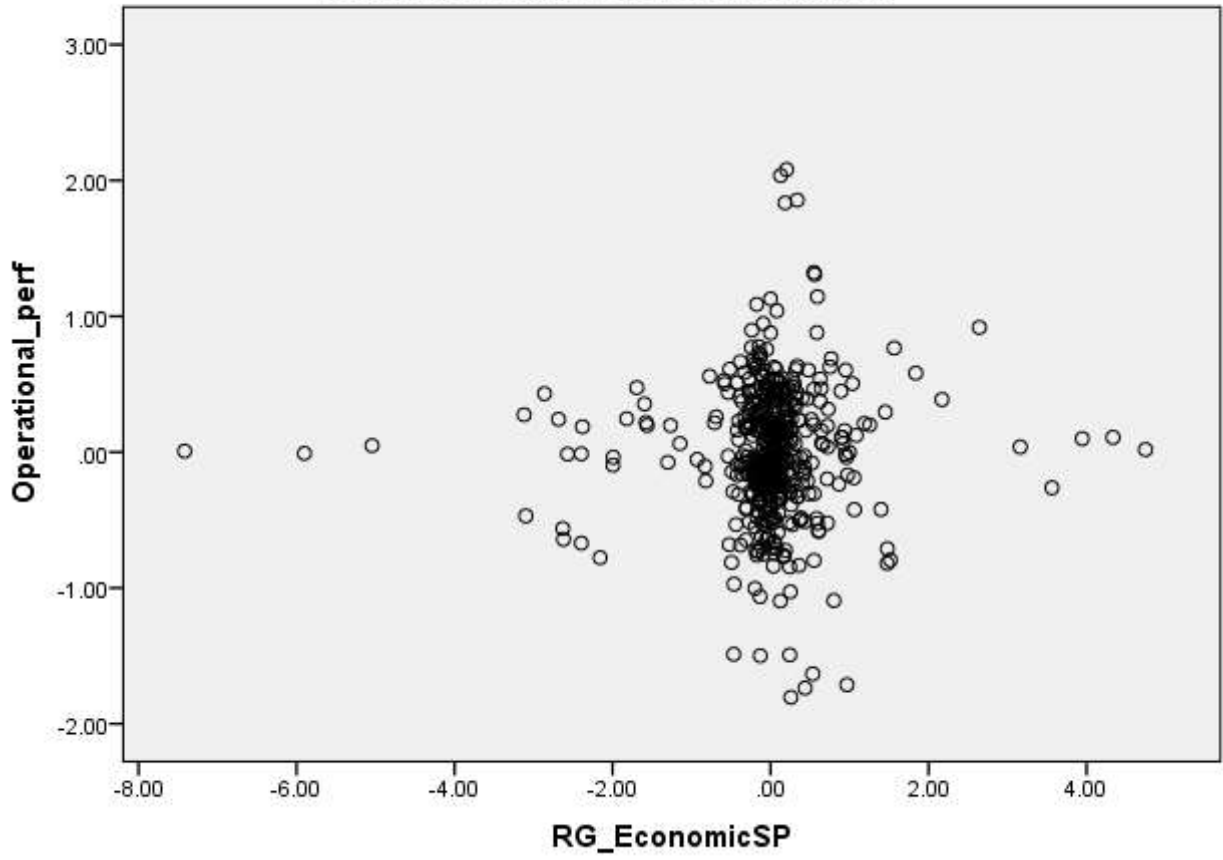
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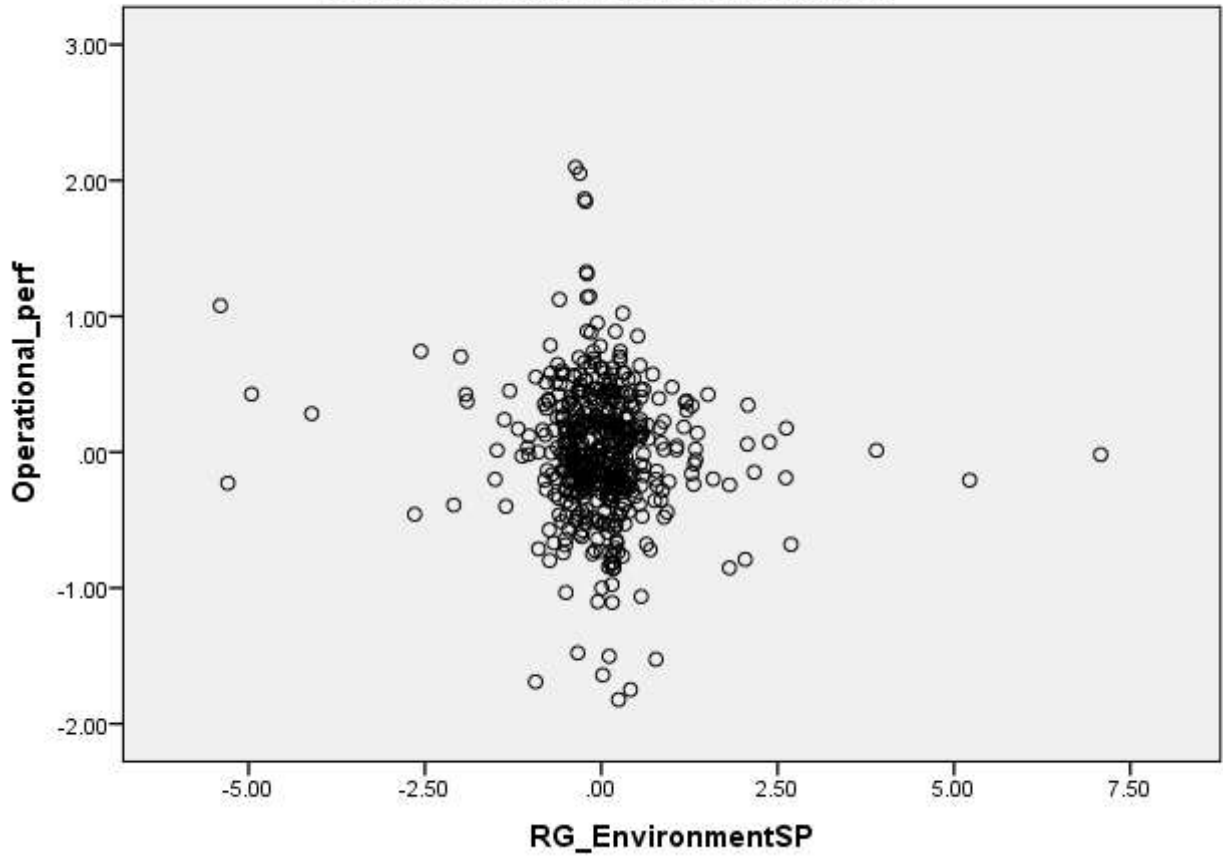
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Partial Regression Plot  
Dependent Variable: Operational\_perf



Partial Regression Plot  
Dependent Variable: Operational\_perf



Partial Regression Plot  
Dependent Variable: Operational\_perf

