

**THE INFLUENCE OF GREEN PROCUREMENT PRACTICES ON ORGANISATION
PERFORMANCE IN MANUFACTURING SECTOR: A CASE STUDY OF LODHIA STEEL
COMPANY IN ARUSHA**

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**MBA-Procurement and Supplies Management Dissertation
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PERFORMANCE IN MANUFACTURING SECTOR: A CASE STUDY OF LODHIA STEEL
COMPANY IN ARUSHA**

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MBA-PSM0012/2019**

**A Dissertation Submitted in Partial Fulfilment of the Requirements for the Degree of Masters of
Business Administration in Procurement and Supplies Management of the Institute of Accountancy
Arusha**

November, 2020

DECLARATION

I, Flora Kipuyo, declare that A Research report entitled “**The Influence of Green procurement practices on organisation performance in manufacturing sector: A case study of Lodhia Steel Company in Arusha**” is my original work and has not been submitted and will not be presented to any college, institution or university other than the Institute of Accountancy Arusha for academic Purpose.

SIGNATURE _____

DATE_____

CERTIFICATION

I, the undersigned certify that I have read the research report and hereby recommend for acceptance of the research entitled "**The Influence of Green procurement practices on organisation performance in manufacturing industry: A case study of Lodhia Steel Company in Arusha**" in the fulfilment of the requirements for the award of Master of Business Administration – Procurement and Supplies Management.

Name: Mr. Catholic Sumuni

(Supervisor)

Signature: _____

Date: _____

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DEDICATION

This study is dedicated to assemblage of people who contributed to one way or another to accomplishing my dream of becoming a Master Degree holder in Procurement and Supply Chain Management. Namely my parents, Mr. and Mrs. Gerson L. Kipuyo who build the foundation of education, my husband Mr. Rogastian Msafiri Sisya and our lovely children Ivan and Ivanna R. Msafiri for their patience and support during all the time of my study, as I had many dull late evenings and short weekends with them. I must admit that your collective support made this study possible and they deserve credit for their contribution. May almighty God continue to bless the work of your hands. AMEN.

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ABSTRACT

The study assesses green procurement practices on organizational performance in steel manufacturing sector taking a case study of Lodhia Steel Company in Arusha. Specific objectives were to examine contribution of organizational efforts towards green Procurement practices, to find out the effect of failure to implement Green procurement in Lodhia Steel Company and to investigate the factors hindering the adoption of green procurement at Lodhia Steel Company

Study adopted qualitative methods research approach and case study design. Targeted population was suppliers at Lodhia Steel Company; where by 50 suppliers were sampled. The study used structured questionnaire during data collection. Data were analyzed using Descriptive and a linear regression model.

Study revealed that Lodhia Company has ability in applying policy statement of green procurement as its efforts towards green procurement adoption. Also, the company give suppliers training on matters of green procurement. Company found to provide sufficient resources for green procurement. Environment pollution and degradation and decrease compliance with environmental laws are the huge effect of failure to implement Green procurement. Also increase environmental expenses, misuse of natural resources and decrease quality of environmentally friendly supplies was found to be the effect of failure to implement Green procurement. Moreover, study revealed that cost of the procedure affects adoption of Green Procurement. Also, top management support affects Adoption of Green Procurement.

Major conclusions from the study imply that Lodhia Company has a lot of contribution on efforts towards green Procurement practices. Also, there are effects associates with failure of implement green procurement practises; these include mass production of harmful products which adversely harm environment, human and animals' health. It is recommended that, Lodhia Company should consider green procurement as a critical investment and set aside adequate financial resources in its budgeting process. Lodhia company top management should also support the use of green products and services.

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LIST OF ABBREVIATIONS

CIPS	Chartered Institute of Purchasing and Supplies
CO2	Carbon dioxide
EABL	East Africa Breweries Limited
GP	Green Procurement
GPP	Green Procurement Practise
GSCM	Green Supply Chain Management
IAA	Institute of Accountancy Arusha
IT	Information Technology
MBA	Master in Business Administration
SME	Small and Medium Enterprise
UK	United Kingdom
URT	United Republic of Tanzania
USA	United States of America
WHO	World Health Organization

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter highlights the main points of the study it gives the background of the study, statement of the research problems, research objectives, research hypotheses, significance of the study, limitations of the study, scope and organization of the study.

1.2 Background to the study

Globally, Green procurement is based on the belief that companies can simultaneously benefit from elements of economics, environment and society according to Adu (2019). CIPS (2017), on the other hand defines green procurement as a consideration to the environmental, social and economic consequences of design, materials used (renewable and non-renewable) manufacturing methods, logistics and disposal. Amin (2016) says, utilization of green procurement has been quite limited such that a decade ago, only some high-profile organizations mainly chemical firms and/or those firms in the consumer goods sectors that have experienced green consumer pressures directly in order to practice it.

In an organisation, the manufacturing function plays a crucial role in building competitive advantage and improving efficiency in particular. Practitioners and scholars have gradually become aware of how manufacturing companies and their vendors have an effect on the environment, the economy and society in particular (Baum, 2015). Manufacturing companies face environmental issues that force them to switch to a green procurement in order to attain the competitive advantage. In manufacturing sectors, a number of researches have been carried out to promote green procurement (Susana, 2016).

Green Procurement is one of the emerging procurement problems; it involves buying environmentally friendly products and services, selecting contractors and setting environmental criteria in a contract. It involves taking into consideration environmental and social issues as well as economic concerns in procurement choices. Green procurement compares products, services or contracts with quality, cost, technology and environmental effect. Green procurement policies apply to all companies, irrespective of their activities and size (Galle, 2015). According to

Coddington (2016), green procurement refers to the purchase of products or services that have less impact on the environment than the standard equivalent over their entire life cycle. It includes integrating environmental problems into price, performance and quality buying choices. Green procurement practices examine the materials, substances and chemicals in the products and services that they provide to manufacturing and process-oriented companies (Thomson, 2016).

Manufacturing industries can promote the environmental efficiency of products and services through green procurement by expressing environmental preferences. Environmental buying is described as operations that include in the purchasing process the decrease, reuse and recycling of products (Ho et al, 2010). Green procurement was a logical expansion, according to Odhiambo (2018), and many manufacturing companies are working to enhance the environmental efficiency of their activities and products. As the company advantages of these attempts become more widely recognized, green procurement in the private sector continues to develop (Lucas, 2017).

According to Sarkis (2018), buying choices will affect the green supply chain by buying products that are either recyclable or reusable or have already been reused. Green procurement is a solution for businesses that are environmentally friendly and economically conservative. It is the notion of obtaining a range of products and services that in the manufacturing industry diminishes the adverse environmental impact. It needs the manufacturing industry to conduct an environmental impact assessment of a product at all the different phases of its life cycle. This implies taking into account the cost of obtaining raw materials and production, transportation, storage, processing, use and disposal of the item. Green products decrease waste, enhance energy efficiency, decrease toxic by-products, contain recycled or reusable material (Gatari and Were, 2014). Green procurement is embedded in the pollution prevention principle, which seeks to decrease hazards to human health and the environment (Bolton, 2015).

Green procurement includes addressing the natural environment impact of supply chain management (Hervani, Helms & Sarkis 2015). A large literature in the private sector has explored sustainability engagement in supply chain management and has highlighted benefits in the form of risk reduction and enhancement of performance. Supply chain management sustainability requires an organization to assess the environmental impact of product at all different stages of its lifecycle. This assessment takes into account the costs of securing raw materials and the manufacture, transport, storage, handling, use and disposal of the product.

In developing countries like Tanzania, public and private organisations have therefore shown increasing environmental apprehension. Improving the environmental features of their activities involves increasing waste management expenses for government and private organisations, Public health issues, safety of workers and the emergence of both local and global acute and chronic environmental issues (Maignan, Hillebrand & McAlister, 2018). Increasing environmental concerns have slowly become component of the institutional culture as a whole and have in turn helped to re-focus government and private organizations policies. Few examples of kinds of environmental effect that can be ascribed to the coordinated operation of supply chain organisations include worldwide warming, waterway pollution, extensive biodiversity loss and reduced air quality. Manufacturing organisations produce big quantities of unnecessary waste or emissions instead of investing in better techniques or methods to avoid their generation at source leads to pollution of the environment (Carter et al, 2012).

Although in Tanzania the steel sector is infant, recent records show a positive growth rate of 16.8 percent in the year 2015 from 14.1 percent in the year 2014 (Nguruse, 2017). This growth contributed by existence of steel manufacturing firms some of which are considered to be true success story not only in Tanzania but also in Africa. According to Pandit (2019), of all steel companies in Tanzania; Lodhia Steel Company formerly known as Steel Centre is taking the lead as the company alone produces 40 percent of the total demand for steel in Tanzania. About 200,000 tons of steel are imported and the rest is locally produced mainly in Dar Es Salaam and Arusha cities. To be able to run its manufacturing process, the company imports raw materials however some of the materials amounting to 60 percent (Pandit 2019), are bought from local suppliers of the so called “chumachakavu” collected direct from streets. This has attracted research interests in the steel sector (Nguruse 2017) however the question of whether people involved in procurement process may or may not impact the environment and to what extent is not answered.

In order to enhance the efficiency of green procurement, businesses need to embrace several green variables in their activities, machinery, staff and ultimately after-sales activities. Thus, it is important to investigate green procurement practices on organizational performance in steel manufacturing sector taking: a case study of Lodhia Steel Company in Arusha

1.3 Statement of the Problem

Despite well detailed roles of procurement function in managing environmental issues, literature insufficiency exists in two important aspects. First, scholars have asserted that even though there is an increase of research attention on sustainable supply chains with various names such as green supply chain management (GSCM) (Al-Ghwayeen and Abdallah, 2018; Ghosh, 2018; Anane, 2020), sustainable supply chain (Zailaniet al, 2012), green innovation (Tang *et al*, 2018) and closed loop supply chains (Giuniperoet al, 2020), insufficient research consideration has been paid specifically on the supply side management (Ghosh, 2018) of a supply chain. For example, Anane (2020) argued that the roles of suppliers in ecosystem management need to be considered in environmental management initiatives.

It is possibly one of the few empirical case studies in Tanzania that attempts to inform the literature on how GP practice has been implemented in the steel sector. Scholars have argued that repetition of previous research works in different settings such as Lodhia Steel Company in Tanzania adds value to the quality of research in supply chain management. The existing scholars work attempts to comprehend the impact of GP practice on financial, operational and environmental performances. However, important aspects of performance related to suppliers' interaction are not sufficiently captured in the literature particularly for manufacturing sector. This research adds value to the literature on GP practice in Tanzania which appears to be under-researched. Studies on green procurement practice in developing and emerging economies are few and even fewer in Tanzania's steel manufacturing sector. Therefore, this study investigated green procurement practices on organization performance taking Lodhia Steel Company as a case study.

1.4 Research Objectives

1.4.1 General objective

To assess the influence of green procurement practices on organizational performance in steel manufacturing sector taking: a case study of Lodhia Steel Company in Arusha.

1.4.2 Specific Objectives

Specific objectives of this study are:

- i. To examine contribution of organizational efforts towards green Procurement practices
- ii. To find out the effect of failure to implement Green procurement in Lodhia Steel Company.
- iii. To investigate the factors hindering the adoption of green procurement at Lodhia Steel Company.

1.5 Research Questions

- i. What are the efforts for contribution of green Procurement practices in Lodhia Steel Company?
- ii. What are the effects of failure to implement Green procurement in Lodhia Steel Company?
- iii. What are the factors hindering the adoption of green procurement at Lodhia Steel Company?

1.6 Scope of the Study

This study was a case study research that is based in the steel manufacturing sector in Tanzania. The data collection was only based on suppliers who supply raw materials to Lodhia Steel Company in Arusha. The study assesses green procurement practices on organizational performance in steel manufacturing sector.

1.7 Limitation of the Study

Because this study was a case study research focusing in the steel sector, there was no room for generalization. However, wherever possible contextual generalization might be made (Yin, 2014). The study did not also involve all steel companies in Tanzania therefore it only answered questions specific to Lodhia Steel Company.

1.8 Significance of the Study

The study was carried out at Lodhia Steel Company in Arusha. Specifically search for the influence of green procurement practices on organizational performance in the steel sector had various contributions. First, to the existing academic literature the study informs on unique steel smelting case that is considered to be an African successful case in the sector. Second, this study informs the policy on the steel sector especially that relates to importation of crude iron ores in order to mitigate the competitive pressures from the damp imports. This was in turn not only improving the market opportunities for the sector but also increase employment opportunities for the youths in the country. Third, this study if becomes successful was a partial fulfilment for the award of Master of Business Administration in Procurement and Supply Management of the Institute of Accountancy Arusha.

1.9 Organization of the Study

This report is comprised of five chapters. Chapter one unveils the problem which informs focuses on the need for the study and its context. It also provides the justification for why to conduct the study. Chapter two presents theoretical literature reviews as well as empirical related studies which at the end reveal the existing gap that necessitate the research to conduct this study. Chapter three describes the research methodology and procedures of data collection as well as analysis. Chapter four represents analysis and discussion of findings and chapter five is about major conclusions and recommendations. References and appendices as well as questionnaires cover the last part of this report

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter involves examination of the previous researcher's work through definition of concepts and terms, theoretical literature review, empirical literature review, research gap and conceptual framework.

2.2 Conceptual Definitions

2.2.1 Procurement

Procurement means buying, purchasing, renting, leasing or otherwise acquiring any goods, works or services by procuring entity and includes all functions that pertain to the obtaining of any goods, works or services, including description of requirements, selection and invitation of tenders preparation and award of contracts (URT, 2011). Furthermore, Procurement may also be referred to as an organizational process in which supplies, materials, and services are secured at the right quantity, quality, time, place, and cost price (Emmett and Sood, 2010).

2.2.2 Green procurement

Marron (2013) defines green procurement as the purchasing of products or services which have a lower impact on the environment over their whole life cycle than the standard equivalent. It involves the integration of environmental issues into purchasing decisions based on price, performance and quality. Increasing costs of waste management, worker safety and public health concerns, and the emergence of acute and chronic environmental problems both locally and globally are just a few of the issues spurring on local communities to improve the environmental characteristics of their operations (Maignan et al., 2012). Green procurement is defined as an environmentally conscious purchasing initiative that tries to ensure that purchased products or materials meet environmental objectives set by the purchasing firm, such as reducing the sources of wastages, promoting recycling, reuse, resource reduction, and substitution of materials (Kannan *et al.*, 2008).

2.2.3 Green procurement practices

Sustainable procurement practices have been implemented through various approaches as Product lifecycle concept, the cycle starts at the designing of product. According to (Srivastara, 2007), literatures related to green design emphasize both environmentally conscious design and life cycle assessment/analysis.

In designing a product, the designing team can change the raw materials or substances used during the manufacturing to be less toxic, more environmentally friendly. Some terminologies are related to design for green such as design for environment or Eco Design. An example of green product is hybrid due to the increasing demand and decreasing amount of petroleum, automobile manufacturers needed to redesign the engine that consumes no or less gas ending up with a hybrid car out of the production. On automobile design, McAuley (2013) discussed the green design of automobile, which tend to change to advanced lightweight materials and fewer materials in vehicle design. In designing a product, the manufacturing company needs a high level of cooperation with their suppliers.

2.3 Theoretical Literature Review

A theoretical framework refers to how the researcher develops thoughts on what the possible answers could be, these thought and theories are then clustered into themes that frame the subject. The study was guided by the Natural Resource Base Theory.

2.3.1 Natural Resource Base Theory

Natural-resource-based theory a theory of competitive advantage based upon the firm's relationship to the natural environment. It is composed of three interconnected strategies: pollution prevention, product stewardship, and sustainable development. McDougall, Wagner and MacBryde (2019) indicated that competitive advantage depends on the match between distinctive internal (organizational) capabilities and changing external (environmental) circumstances. However, it has only been during the past decade that a bonafide theory, known as the resource-based view of the firm, has emerged, articulating the relationships among firm resources, capabilities, and competitive ad-vantage. Recent environmental challenges facing the world have

led to scrutiny of human economic activity, especially manufacturing. Manufacturing industries in the world are increasing their production.

The increased production from manufacturing industries might not be ecologically sustainable. Such production stressed the earth's natural systems beyond recovery. As such procurement practices in manufacturing industries must change to green procurement for the aim of promoting organizational performance in manufacturing industry as well as reserving the planet's basic ecological systems. This theory is relevant to this study since the researcher aims at assessing the influence of green procurement practices on organizational performance in manufacturing industry.

2.3.2 Procurement of environmentally preferred goods

Lemmet (2012) study revealed a diversity of environmental impacts at various stages of a products life cycle. The purchase of remanufactured ink cartridges by the French Ministry of Education has led to a decrease in the amount of waste generated at the manufacturing stage. The construction (Yorkshire and Humber Region, UK, and Oregon, USA) demonstrate significant impacts related to the reduction of CO2 emissions, of waste production, and of water consumption. The Ferrara study (Italy) and the recycled paper case (São Paulo, Brazil) show positive environmental impacts distributed throughout the life-cycle.

Vincent and Abbie (2011) proposed that sustainable procurement practices necessitate the appropriate order in pursuit of procurement activities to match with policies and best practices as to first conform with and surpass all relevant legislation and regulatory requirements including environmental, social, health and safety policies. It also cut on environmental impact while maximizing economic and social advantage through entrenching appropriate sustainability standards within the procurement practice.

2.3.3 Organizational Support

Bolton, (2008) argues that implementing a green procurement program means changing policies and procedures. For it to be successful, it is essential that management supports the initiative fully. In addition, those charged with making purchasing decisions must be involved in the implementation process. Their suggestions and support are critical. For an organization to

implement a green procurement program, it must have commitment from all levels, including senior management and purchasing agents.

The Commitment to purchase green encourages organizations to continuously improve the environmental sustainability of their purchasing decisions. Given its business and environmental benefits, Green Procurement has many benefits that it comes along with. For governments, Green Procurement can help to: Reduce any negative and unintended impacts on the environment like pollution and deterioration of local air quality; Support companies that provide products and services that have fewer environmental impacts and stimulate "green," innovative product development and business development; Save the amount of money spent on cleaning up pollution, by preventing it in the first place; also this sends a message to manufacturers and service providers that consumers will recognize their environmental efforts; Create a scale effect, thus reducing production costs by the sheer scale of demand for green products (Marron, 2013).

Therefore, for private companies, Green Procurement helps the organization in making the sustainable purchasing choices, establish, implement and evaluate a formalized green procurement strategy, selecting suppliers; and environmental concerns for some key purchasing areas (Nasiche and Ngugi, 2014).

2.4 Empirical Literature Review

2.4.1 Foreign Studies

Procurement executives rarely consider the environmental impact of procurement. This will trigger many environmental issues such as emissions of carbon dioxide, climate change, greenhouse impacts, pollution, and deforestation (Shiau, 2018). Green Procurement is defined as procurement that is consistent with the principles of sustainable development, such as ensuring a strong, healthy and just society, living within environment.

Vaghefi (2015) conducted a critical inquiry into Malaysia's green GDP and sustainability. The study used survey research design to generate information through a questionnaire on one hundred and fifty businesses. The descriptive statistics and percentage analysis were used for the data analysis and the hypotheses were tested using t-test statistic. The findings disclosed that inability to enforce green procurement in businesses leads them to buy products and services that are environmentally unfriendly. In fact, this sort of procurement products and services leads to

environmental issues in Malaysia, including climate change, greenhouse effects, pollution and deforestation. Environmental issues in Malaysia are difficult issues. For example, Malaysia's carbon dioxide emissions were greater than the worldwide average in Malaysia's energy industry. Green procurement practices should therefore be implemented to minimize environmental issues

In his research entitled "Government Green Procurement," Kahlenborn (2013) discovered that owing to the absence of green procurement procedures, the organisation faces many limitations. The author also noted that organisations incur expenses by failing to meet inner and external norms; failing to comply with environmental and social legislation; failing to handle the organization's danger and reputation; failure to create fresh, dynamic economies; failure to guarantee future safety of sustainable supply and failure to provide maximum community and economic advantages

Walker and Brammer (2009) investigated sustainable procurement in the United Kingdom public sector. This was done using a questionnaire that drew on established scales for 'Purchasing Social Responsibility' which was developed by Bolton (2008). The survey was administered across the UK public sector, and 106 responses were received from procurement officers. The analysis of quantitative and qualitative survey data revealed there was significant variation across public sector agencies in the nature of sustainable procurement practice. Local authorities had particularly strong emphasis on buying from local and small suppliers relative to other sectors, health looked generally lower in many categories and education appeared to have something of an emphasis on environmental aspects of sustainable procurement. Cost was found to be the leading barrier to sustainable procurement, and top management support the leading facilitator.

Niemann (2016) conducted a study on drivers and barriers of green procurement implementation in Mozambique manufacturing industry with the objective of exploring the drivers and barriers to the implementation of green procurement implementation in the Mozambique manufacturing industry. A descriptive qualitative study was conducted in the form of semi-structured interviews with one senior manager in eight different organizations in the industry. The study identified four drivers and eight barriers within the Mozambique context. The most important drivers are corporate social responsibility, internal organizational policies, and board and top management support culture, costs and government legislations were identified as the barriers with the greatest impact. The key factors that influence and prevent the adoption of green procurement practices

are identified and prioritized. Corruption is identified as a barrier, but little if any existing research is available on it. Government legislations is also considered a barrier in the Mozambique manufacturing industry, whereas existing research indicate that governments are drivers. The researcher recommended that in order to improve the implementation of green procurement there should be an effort on the policy formulation and enforcement by the government.

The study was limited by the respondents' rate was low and the confidentiality of the information which was difficult to get so the researcher in addressing this will try to put more effort to those who are concerning in the organization. The current study aimed at assessing the influence of green procurement practices on organizational performance in manufacturing industry.

Kannan *et al.*, (2008) from Malaysian manufacturing sector, examined the effect of four drivers, namely regulations, customer pressures, social responsibility, and expected business benefits on green purchasing in the population of 569 was drawn from the International Organization for Standardization 14001 certified manufacturing firms in Malaysia. Out of 569 firms, 132 (23.2 percent) positively responded for the mail survey on green procurement. The empirical findings of the study suggested that green procurement is affected by the drivers namely regulation, customer pressure, expected business benefits, and firm ownership. The results also suggested that, although Malaysian firms showed a high level of social responsibility. It did not constitute a genuine driver for these firms to adopt green procurement. The results of the paper provide insights into why Malaysian firms adopt green procurement activities. It also provides policy makers and managers with a list of drivers that can be used as directions for setting up appropriate policies that encourage firms to adopt green procurement initiatives.

Nderitu and Ngugi (2014) did a study on Effects of Green Procurement Practices on organization Performance in Manufacturing Industry in Kenya. The study seeks to establish the contribution of green procurement concepts to performance of the East African Breweries Limited (EABL). The study adopted descriptive research design. The target population was 122 employees of the EABL while the sample size considered was 37 which represented 30% of the target population. The findings revealed that performance of manufacturing industry is a contribution of more than one factor.

Green procurement attributes contributes to performance excellence. Competence of the staff members on green procurement concepts was essential contributor to the effects of green procurement to performance. EABL as an organization with already laid down ICT infrastructure and with a system that allows Supplier participation had increased contribution of green procurement to 29% of organizational performance. However due to high costs it was noted that the capital expenditure on green procurement was yet to make a high impact to east Africa Breweries Limited (EABL). The study recommends that organizations should have competent professional workforce, extensive investment in Information and Communication Technology (ICT) infrastructure, systems of supplier management and strategic investment approach to Green Procurement in order to realize the positive effects of green procurement.

Juma and Nyachombamachira (2016) on their study about factors affecting implementation of green procurement programs in the manufacturing industry in Kenya using case study of coca-cola bottling limited in Nairobi. The results of the findings revealed that organizational support was important in ensuring effective implementation of green procurement. This was supported by only 35% which means that if there is no support from top management, then implementation will not be effective. From the findings, it was thus established that there is a strong relationship between environmentally friendly products and green procurement programs at 40%. The research recommends that the Coca-Cola Bottling, Nairobi Ltd stakeholders should give attention to the organizational support of the Coca-Cola Bottling, Nairobi Ltd. This is because the organizational support is one of the determinants of green procurement programs. The manufacturing industry should align both legal and fiscal policies to enhance faster green procurement uptake in the private sector: The regulatory mechanism should take the form of rules, laws, sanctions and incentives that when enforced will result in constraints and inducement to organizations to make necessary changes in their structures and processes.

Green procurement in public organisations and industries around the globe is growing rapidly. Green procurement is a new idea and sustainability improvement initiatives have been adopted (Klassen, 2016). Lack of consciousness is the most important obstacle between procurement executives to implement green procurement procedures. According to Perera (2017), the biggest obstacle of green procurement methods is the economic obstacles in the form of cost or price, absence of budget, absence of funds. Other obstacles to green procurement in current literature

include: lack of knowledge, time pressure, and lack of dedication to top leadership and absence of guidance (Srivastava, 2017). Furthermore, prior scientists have recognized barriers such as no enforcement code for implementing green procurement (Susana, 2016), such as no enforcement code for implementing green procurement. Chua, (2011) recorded as follows the difficulties facing green procurement execution in China; the scheme of mandatory procurement has an excessive impact of exclusion and a legitimacy issue under Chinese procurement and accreditation legislation.

The Chinese public procurement parallel legal framework poses some issues for the wider implementation of the green procurement policy; and the means to enforce sustainable procurement are restricted. According to Nahum (2015), the primary variables that hinder the application of green procurement are: inadequate organisation of broad strategies to guarantee that everyone is conscious of the training policy; guidance to assist all those engaged in procurement to comprehend sustainable procurement; throughout life, in the context of sustainable procurement, the lack of periodic audits and tracking of the organisation can result in further advancement in this region. As an organisational strategy that supports and educates suppliers / creates markets that connect with other organisations to learn from their experience pooling procurement by forming a consortium where appropriate

2.4.2 Local studies

According to Juma and Nyachombamachira (2016) studied on the effects of Green Public Procurement implementation in Tanzania using case study of Morogoro Municipal Council. The study tried to assess the implementation of green public procurement in Tanzania a case study of Morogoro municipal council by looking at few factors affecting the implementation of green procurement practice which are Staff awareness in green procurement practice, top Management awareness on green procurement practice, staff training on green procurement practice and Policies for green procurement practice. The study revealed that the awareness of green public procurement is very low to the lower level staff not only them but also the top management are not aware at all in green public procurement. However, there are no training performed to impart knowledge and skills to employees to simplify the implementation of the green public procurement, there are no any policies, legislation and regulations in place addressing green procurement practice. In order to get remedies, the government is required to plan training

programs, awareness creation campaigns, set policies to address green public procurement. Juma and Nyachombamachira (2016) in their study also conclude that the public procurement act, regulations and policies should give guidelines to simplify and cartelize the application of green public procurement.

Otanez and Glantz (2018) in their study on social responsibility in tobacco production in Tanzania and Malawi concluded that the tobacco industry uses green supply chains to make tobacco farming in developing countries appear sustainable while continuing to purchase leaf produced with child labour and high rates of deforestation. The study noted that strategies to counter green supply chain schemes include securing implementing protocols for the World Health Organization (WHO) Framework Convention on Tobacco Control to regulate the companies' practices at the farm level. The methodology used included an analysis of tobacco industry documents, industry websites and interviews with tobacco farmers in Tanzania and tobacco farm workers, farm authorities, trade unionists, government officials and corporate executives from global tobacco leaf companies in Malawi.

Also, in Tanzania, the statistics indicate that environmental issues have not been fully addresses and that there are still challenges facing effective adoption of green procurement in Tanzania (Gitau, 2019). Despite the important role green procurement plays in ensuring environmental performance and public health and safety, yet not much research had been conducted in Tanzania leading to insufficient empirical literature on factors hindering adoption of green procurement in manufacturing industry (Stephen & Helen, 2017).

2.5 Conceptual Framework

The conceptual framework illustrates the dependent and independent variables. The dependent variable in this study is effective organization performance Lodhia Steel Company in Arusha. The independent variables are Contribution of organizational efforts, effect of failure to implement Green procurement and the factors hindering the adoption of green procurement

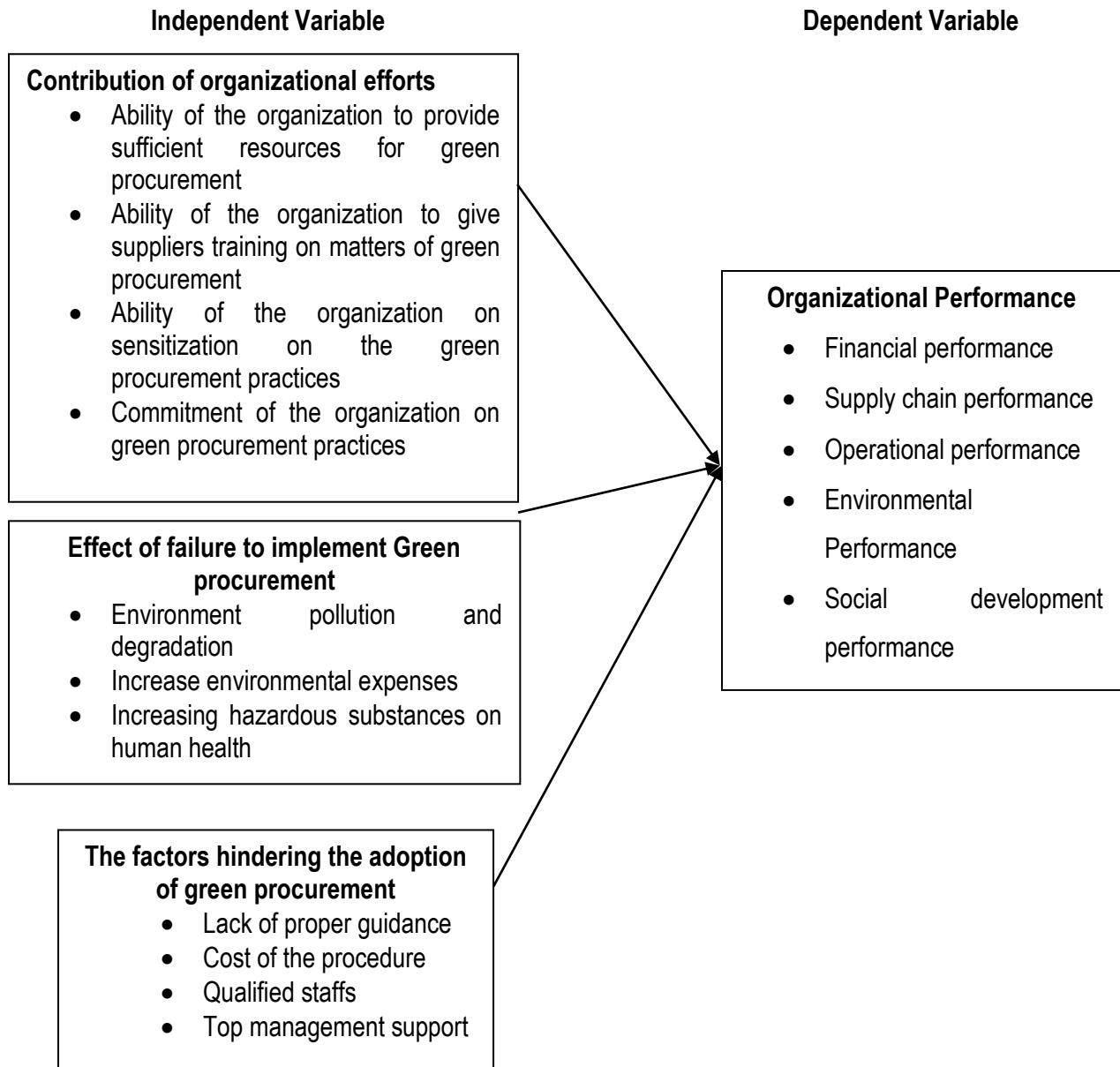


Figure 2.1: Conceptual Framework

2.5.1 Operationalization of Variables

2.5.1.1 Contribution of organizational efforts towards green Procurement practices

The organization needs to put much efforts in order to combat the issue of green procurement through the various means like ability of the organization to provide sufficient resources for green procurement, ability of the organization to give suppliers training on matters of green procurement,

ability of the organization on sensitization on the green procurement practices and commitment of the organization on green procurement practices

2.5.1.2 Effect of failure to implement Green procurement

Normally, the failure to implement green procurement had effects on environment pollution and degradation, increase environmental expenses and increasing hazardous substances on human health

2.5.1.3 The factors hindering the adoption of green procurement

Factors hindering adoption of green procurement include lack of proper guidance, absence of enforcement to green procurement, cost of the procedure and prolonging procedures during adoption of green procurement. Also, qualified staff is not sufficient and commitment from top management is not as supposed to be which hinders adoption of green procurement, and lastly, top management support, in the procurement and Green procurement literature, a comparable function is given to pinnacle management assist, management and pinnacle management assist to be important in the implementation of sustainable procurement. If managers are supportive and incorporate sustainable procurement in their techniques or goal putting, challenge groups will indeed procure sustainably

2.6 Research Gap

The above review shows that there is an empirical gap to be addressed as far as the green procurement practice as concerned in manufacturing industry. Many scholars have concentrated their studies (Shiau, 2018; Vaghefi, 2015; Kahlenborn, 2013; Otanez and Glantz, 2018) about green procurement practices mainly in the developed countries such as United Kingdom, Malaysian and other part of Africa including Mozambique and Kenya. To the knowledge of the researcher, in Tanzania no studies have been done based particularly on influence of the green procurement practices in steel manufacturing industry. Hence, this leaves a gap for the author to carry out the study based on Lodhia still Company in Arusha. It is this gap that has motivated the researcher to conduct a new research on the influences of green procurement practices on organizational performance in manufacturing industry using a case study of Lodhia still Company in Arusha.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describe various methods that were used in this study in conducting research. It describes research design research paradigms, types of measurements, data collection methods and approach, types of data, population of the study, sample and sample size, sampling procedure, reliability, validity, management and analysis of data.

3.2 Research Area

This study was conducted at Lodhia Steel Company located in Arusha because the company is considered to be a true successful case not only in Tanzania but also in East Arica. Convectional literature also supports that studies related to GP practice may obtain different results depending of the sector that is being investigated. For example, the steel sector will reveal different forms of human accidents from the food processing sector. Similarly, a study of one business firm is different from another firm. Thus, an attempt to investigate GP practice is well suited if undertaken in a case study rather than generalised data.

3.3 Research Design

The research adopted a case study research design to come up with the relevant data for analysis. It emphasizes on quality in the collection and analysis of data and it is used when collecting data using open –ended questionnaires. This is in accordance to Mugenda and Mugenda (2005), who assert that a case study type of research design is considered the most appropriate because it describes in quantitative terms the degree to which variables are related. Furthermore, Yin (2009), states that a study design is the best choice in studying a single unit in detail and it is also the research design where a combination of data collection instruments can be used. Therefore, the selections of case study design based on the fact that case study focuses on a particular situation or phenomenon and this make it possible to investigate problem in their natural setting. Numbered data can be analyzed using specific statistical procedures. The approach was useful as it requires little time in the data collection process as well as covers large groups in a short period.

3.4 Research Approach

The study employed quantitative approach. According to Bacon-Shone (2015), quantitative methods involve the processes of collecting, analyzing, interpreting and writing the results of a study using various designs including survey and experimental research design.

3.5 Research population, Sample and Sampling Methods

3.5.1 Research Population

Populations imply the collection of all items from which the sample is taken to represent some unique characteristics (Duberet *al.*, 2008). Thus, to get the reliable characteristics of the population, researchers collect data from a sample. A sample is a sub-set of a specific population. The general idea for sampling is that a scientist can draw conclusions about the entire population by choosing some of the components in a population. The target population in this study included suppliers from Lodhia still Company in Arusha.

3.5.2 Research Sample and Sampling Methods

The study used non probability sampling specifically purposive sampling technique. According to Foley (2018) purposive sampling, also known as judgmental, selective, or subjective sampling is a form of non-probability sampling in which researchers rely on their own judgment when choosing members of the population to participate in their study. This sampling method requires researchers to have prior knowledge about the purpose of their studies so that they can properly choose and approach eligible participants. Purposive sampling technique was used in this study to enables the researcher to include in the study only those members of the population who are assumed information rich cases. Therefore, purposive sampling technique enabled the researcher to select the respondents from Lodhia still Company in Arusha.

3.5.3 Sample Size

Sample is a group of people, objects, or items that are taken from a larger population for measurement. The sample should be representative of the population to ensure that we can generalize the findings from the research sample to the population as a whole. According to Morse (1994) a sample size of 30-50 is allowed for a study that used questionnaire to collect data. The sample size for this study was 50 respondents from suppliers at Lodhia Steel Company.

Therefore, the researcher believes to collect adequate data about the influence of green procurement practices on organizational performance in manufacturing industry.

3.6 Data Collection Methods

Primary and Secondary data were collected in this study. Primary data are those data which are collected afresh and for the first time, and thus are regarded to be origin in character (Kothari, 2004). The data were collected through questionnaires so as to obtain the original information from the respondents. Questionnaires refer to a series of written questions through which respondents should answer in their timely convenience. In this case, the researcher employed closed-ended English questionnaires. In order to get better views, the researcher used a five-point Likert scale.

3.7 Data Analysis Methods

Data analysis involves computation of certain measures along with searching for patterns of relationships that exist between the dependent variable and independent variables. Quantitative data were cleaned, coded, entered and analysed using Statistical Package for Social Science (SPSS, Version 25.0). SPSS was used because it is fast and flexible and provides more accurate analysis resulting in dependable conclusions. The data were analysed according to variables and objectives of the study. Descriptive statistics were used to analyse, present and interpret data. Descriptive analysis involved the use of frequency distribution tables and cross tabulation which generated values between dependent and independent variables used in the study.

3.8 Reliability and Validity of Data

3.8.1 Reliability

Reliability requires the use of standardized information collection instruments and survey procedures that are designed to enhance consistency. Cronbach's alpha test was used for quantitative data. Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are (Joppe, 2010). The researcher therefore used both reliability and validity in her study so as to ensure accuracy information at various points.

3.8.2 Validity

In 2009, Sekaran define validity as a truthfulness of findings or the extent to which the instrument is relevant in measuring what it is supposed to measure. The content of validity of the data collection instrument was determined through discussing the research instrument with the researcher experts in the university. The valuable comments, corrections, suggestions that was given by the researcher experts assisted in the validation of the instrument.

3.9 Ethical Consideration

In research, it is important and necessary to act ethically as ethics ensures that participants are treated with dignity and respect during the course of study. Saunders (2009) argues that ethical issues are very important to be considered in the study such as voluntary participation, no harm to the participants, ensuring anonymity and confidentiality and avoiding dishonesty. During the study, the researcher declared to the respondents that information they provide were confidential and no harm posted on them. Self-willingness for the respondents was considered by the researcher as there was no one to be forced to respond rather politely requested to respond to questions given and/or asked. Researcher obtained written permission from the Directorate of Postgraduate Studies to conduct this research, in order to ensure that it is a legal exercise.

CHAPTER FOUR

FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings in reference to the research questions and research objectives found in chapter one. The chapter is divided in two sections. The first one presents the descriptive information about the study from respondents while the second one presents the results in relation to the objectives of the study. This section presents data as observed from the field and assign meaning to each numerical, categorical and nominal data. It involves a discussion of survey results and possible case events from unique unit of analysis. For example, a supplier that has served Lodhia Steel Company for long time will explain the critical moments related to how GP practice and philosophy has helped to improve supply chain performance of the organizations involved.

4.2 Demographic characteristics of Respondents

This section describes the demographic variables of respondents such as sex, age, education, marital status, income as well as duration at work. This is important because it is crucial to know the features of the study population in relation to the study theme as also; they have influence on GP and organisational performance in steel sector in Tanzania.

4.2.1 Sex of respondents

Table 4.1 represents sex of the owner of a supplying company to Lodhia Steel Company. About 62 percent of respondents revealed that ownership of suppliers to Lodhia was men and only 38 percent of ownership was for women. This indicates that majority of the owners who supplying to Londia Company are Male.

Table 4.1 Sex of respondents

Sex	Frequency	Percent
Male	31	62.0
Female	19	38.0
Total	50	100.0

4.2.2 Age of respondents

Most owners of the supply side SMEs were observed to be at the age between 41-50 years and this was supported by 38 percent of responses. About 16 percent of owners of those who supplied to Lodhia were less than 18 years. This is shown in table

Table: 4.2 Age of respondents

Age	Frequency	Percent
Less than 18 years	8	16.0
31-40 years	7	14.0
41-50 years	19	38.0
Over 50 years	16	32.0
Total	50	100.0

4.2.4 Education of Respondents

Education level of the owners was measured in terms of formal qualifications used in our education system. About 38 percent of the owners had education level of secondary education or equivalent. The rest had education below that level and particularly, 24 percent of responses were obtained from those with only primary education as portrayed in Table 4.3.

Table 4.3: Education of Respondents

Education	Frequency	Percent
Primary School	12	24.0
Secondary school	19	38.0
Diploma level	6	12.0
Degree	8	16.0
Masters	5	10.0
Total	50	100.0

4.2.5 Experience of Respondents

According to table 4, about 36 percent of the suppliers had experience of not less than 10 years in working or rather supplying to Lodhia Group of Companies. Therefore, more than 68 percent of suppliers had above 5 years of working experience and less than 32 percent were considered to have below five years.

Table 4.4: Experience of Respondents

Experience	Frequency	Percent
Below 2 years	9	18.0
2-4 years	7	14.0
5-10 years	16	32.0
Above 10 years	18	36.0
Total	50	100.0

4.3 Contribution of organizational efforts towards green Procurement practices

Descriptive analysis results are presented here with reference to Contribution of organizational efforts towards green Procurement practices using means and standard deviations. The study employed 5 –point Likert scale where a mean of 5 implies that respondents had strongly agreed to the statement in question while a mean of 1 suggests that respondent had strongly disagreed to the statement in question.

In the Table 4.5 results perspective indicated that the overall mean score of all items ranged from 3.50 to 3.74. From the standard deviation scale, the standard deviation of all items did not exceed 1.26 thereby showing considerable variation in the responses of the respondents in relation to Contribution of organizational. Most of the respondents somewhat agreed to the item “Ability of the organization in applying policy statement”, with a mean score of 3.74 , somewhat agreed to the item “Ability of the organization to give suppliers training on matters of green procurement” respondents with a mean 3.68, a mean score of 3.68 also showed that respondents had somewhat agreed to the item “Ability of the organization to provide sufficient resources for green procurement”. Also, respondents with a mean score of 3.52 somewhat agreed to the item “Commitment of the organization on green procurement practices” and respondents with a mean score of 3.5 otherwise agreed with the item “Ability of the organization on sensitization on the

green procurement practices”. This implies that participants were somehow satisfied with the contribution of Lodhia company efforts towards green Procurement practices. For instance, respondents showed that their Lodhia Company always inform them in advance of changes in the purchasing environment and other respondents also showed that they freely shared important information that is of interest with the company.

Table 4.5: Contribution of organizational efforts towards green Procurement practices

STATEMENT	N	Mean	Std. Deviation
Ability of the organization to provide sufficient resources for green procurement	50	3.580	1.0515
Ability of the organization to give suppliers training on matters of green procurement	50	3.6800	1.26878
Ability of the organization on sensitization on the green procurement practices	50	3.5000	1.11117
Ability of the organization in applying policy statement	50	3.7400	1.25860
Commitment of the organization on green procurement practices	50	3.5200	1.12920

*N = number of respondents

4.4 Effect of failure to implement Green procurement

This section sought to find out the effect of failure to implement Green procurement in Lodhia Company. The following findings are presented in the table below 4.6.

Table 4.6: Effect of failure to implement Green procurement

Statement	N	Mean	Std. Deviation
Environment pollution and degradation	50	3.7800	1.01599
Increase environmental expenses	50	3.5800	1.27919
Decrease quality of environmentally friendly supplies	50	3.4200	1.16216
Decrease compliance with environmental laws	50	3.7800	1.21706
Misuse of natural resources	50	3.5200	1.18218
Increasing hazardous substances on human health	50	3.6200	1.22708

From the table 4.6 above, the researcher wanted to know effect of failure to implement Green procurement. Majority of the respondents with mean 3.78 agreed that environment pollution and degradation and decrease compliance with environmental laws are the huge effect of failure to implement Green procurement.

Furthermore, in the Table 4.6 results perspective indicated that the overall mean score of all items ranged from 3.42 to 3.78. Respondents somewhat agreed to the item “Increasing hazardous substances on human health”, with a mean score of 3.62. Other agreed to the item Increase environmental expenses” with a mean 3.58, a mean score of 3.52 also showed that respondents had somewhat agreed to the item “Misuse of natural resources”. Also, respondents agree with mean 3.42 to the statement “decrease quality of environmentally friendly supplies”.

4.5 The factors hindering the adoption of green procurement

The four independent variables that were included in regression model revealed a value of r-square 72.5% which indicates that the model is suitable for explaining the independent variables of the adoption of Green Procurement. This implied those other factors which were not included in this study contribute 27.5% of the adoption of green Procurement. Therefore, further studies should concentrate to assess those other factors (27.5%) which adoption of green Procurement at Lodia Steel Company.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.851 ^a	.725	.700	.60833

Table 4.8 is a summary of the analysis of the model. The significant value at 5% level of significance and 95% of confidence level was 0.000. Table 4.8 depicts that the model is statistically significant as the significant level is less than 5% level of significance.

Table 4.8: ANOVA

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.847	4	10.962	29.621	.000 ^a
	Residual	16.653	45	.370		
	Total	60.500	49			
a. Predictors: (Constant), Lack of proper guidance, Qualified staffs, Cost of the procedure, Top management support						
b. Dependent Variable: Adoption of green procurement						

Table 4.9 below explains the overall relationship between the independent variables and the dependent variable and the significance of each relationship. The Table depicts that cost of the procedure and top management supports are prominent in adoption of Green Procurement since their significance levels are less than 0.05.

Table 4.9: Regression

	Un-standardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.032	.431		4.717	.000
Lack of proper guidance	-.325	.179	-.144	-1.813	.076
Qualified staffs	-.022	.093	-.020	-.238	.813
Cost of the procedure	.259	.102	.438	2.547	.014*
Top management support	.380	.155	.413	2.451	.018*
Dependent Variable: Adoption of green procurement					
*Variable is significant					

Using the results above, we have the regression equation as:

$$Y = 2.032 + 0.259X_1 + 0.380X_2$$

Whereby Y = Adoption of Green Procurement

X₁ = Cost of the procedure

X_2 = Top management support

According to the regression equation established, taking all factors into account with constant at zero, outcomes will be 122.18. Cost of the procedure affect adoption of Green Procurement by 0.259. While top management support will result in .380 affect Adoption of Green Procurement.

4.5 Discussion of Findings

This section describes and discusses in detail the implication of each finding analysed based on the objectives pre-determined in this study. Among others, the objectives are aiming at discussing the relationship between GP practice and organisational performance broken down into three specific goals such as procurement of environmentally friendly products, supplier collaboration and the two combined on how they influence performance in the organisation.

4.5.1 Contribution of organizational efforts towards green Procurement practices

Study revealed that Lodhia Company has ability in applying policy statement of green procurement as its efforts towards green procurement adoption. Also, the company give suppliers training on matters of green procurement. Company found to provide sufficient resources for green procurement. Furthermore, the study found that company has commitment on green procurement practices. Lodhia Company has found to have ability on sensitization on the green procurement practices. This implies that Lodhia Company has a lot of contribution on efforts towards green Procurement practices.

The findings agreed with Nderitu & Ngugi, (2014) who investigated the impacts of green procurement practices on an organisation performance in manufacturing sector and found that the establishment of procurement policy that relates to environmental sustainability leads organization performance excellent. Obtained product or services that meet the green requirement or policy improve performance of manufacturing industry. The finding agrees with Berns (2013) who found that the acquisition of green procurement products and services improves manufacturing industries.

4.5.2 Effect of failure to implement Green procurement

Environment pollution and degradation and decrease compliance with environmental laws are the huge effect of failure to implement Green procurement. Also increase environmental expenses, misuse of natural resources and decrease quality of environmentally friendly supplies was found to be the effect of failure to implement Green procurement.

There are effects associates with failure of implement green procurement practises; these include mass production of harmful products which adversely harm environment, human and animals' health (Bohar, 2015). The study also revealed that that failure to implement green procurement lead to increase hazardous substances on human health and misuse of natural resources.

4.5.3 The factors hindering the adoption of green procurement

Study revealed that cost of the procedure affects adoption of Green Procurement. Also, top management support affects Adoption of Green Procurement. This study is in line with that done by Niemann (2016) who conducted a study on drivers and barriers of green procurement implementation in Mozambique manufacturing industry with the objective of exploring the drivers and barriers to the implementation of green procurement implementation in the Mozambique manufacturing industry. Niemann found that board and top management support culture were identified as the barriers with the greatest impact on green procurement adoption.

Also, the finding is in line with Walker and Rammer (2016), who discovered that the lack of top management assistance and engagement on environmental issues had a negative impact on the green procurement process in companies.

This study is consistence with that done by Baum et al., (2014) and Amin, (2016) who found that that the cost of implementing green procurement proceedings is quite costly. The observation of manufacturing company owners is that green procurement methods are costly (Islam & Siwar, 2013).

CHAPTER FIVE

CONCLUSION, RECOMMENDATIONS, AND CRITICAL EVALUATION OF THE STUDY

5.1 Introduction

This chapter presents the conclusions, recommendations and critical evaluation of the study. This study has focused on the influence of green procurement practices on organizational performance in steel manufacturing sector in Arusha. This chapter presents a conclusion and also provide recommendations of possible solutions to identified problems based on the findings of the research.

5.2 Conclusion

On the contribution of organizational efforts towards green Procurement practices, the study concluded that Lodhia Steel Company has an ability to provide sufficient resources for green procurement, ability of the organization to give suppliers training on matters of green procurement and ability of the organization on sensitization on the green procurement practices therefore, participants were somehow satisfied with the contribution of Lodhia company efforts towards green Procurement practices.

On the issue of the effect of failure to implement Green procurement in Lodhia Steel Company, the study concluded that environment pollution and degradation, increasing hazardous substances on human health, decrease quality of environmentally friendly supplies. The results indicated that manufacturing industry must play a lot to implement the green procurement in order to reduce those effects.

Lastly, the study sought to identify factors hindering adoption of green procurement in manufacturing industry and the researcher discovered that the lack of proper guidance and absence of enforcement or specific code to adopt green procurement hinders adoption of green procurement in manufacturing industry. The study findings also uncovered that the cost of the procedure to adopt green procurement is quite expensive and the procedures for adoption of green procurement are time consuming. Also, the study showed that lack of qualified staff, lack of commitment from top management as well as lack of long-term observation hinders adoption of green procurement in manufacturing industry

5.3 Recommendation

From the study findings, the following recommendations were made on the basis of the conclusions made;

As much as resources are constantly limited, Lodhia Company should consider green procurement as a critical investment and set aside adequate financial resources in its budgeting process. Lodhia company top management should also support the use of green products and services. Furthermore, middle and low-level management should also be involved in formulating and implementing green procurement practices.

At the practical level, this study recommends to the management to be carefully and keep on working based on the existing policies and laws. For example, the internal policy that restricts the purchase of “rail bars” should be cemented and much training on those suppliers with low education should be considered. For instance, training should involve clusters of suppliers depending on their level of education and the modules to be taught.

It is recommended that, the management of Lodhia company should set enough budget for conducting training to its employees concerning on the issues related to green procurement

5.4 Critical Evaluation of the Study

When conducting this study, the researcher was busy with other classroom sessions and other employment responsibilities. Despite of the limited time, the researcher managed to collect adequate information thus the main objective of the study was successful achieved.

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APPENDIX I: QUESTIONNAIRE

Dear respondents,

I am a student pursuing Master of Procurement and Supplies Management at Institute of Accountancy Arusha. I am conducting this research on the influence of green procurement practices on organizational performance in manufacturing industry. In enhancing this study, your delightful response to this questionnaire is of kind importance and remains anonymous towards accomplishing this task.

Thank you for your cooperation.

PART 1: GENERAL INFORMATION (Kindly tick (√) your relevant box)

1. Gender

Male Female

2. Specify your age range

Less than 18 years 19 – 30 years

31 – 40 years 41 – 50 years

Over 50 years

3. Education level

Primary school

Secondary school

Diploma

Degree

Masters

4. Working experience

Below 2 years

2 – 4 years

5 – 10 years

Above 10 years

SECTION A:

The following part seeks to examine contribution of the purchase of environmental friendly raw materials such as “Chuma chakavu” on performance at Lodhia Steel Company. Please put a tick (√) in the appropriate box as the most agreed answer to the following statements: 1=strongly disagree 2= Disagree 3=Neutral 4=Agree 5=strongly agree

QN	FRIENDLY PRODUCTS/RAW MATERIALS	OPTIONS				
		1	2	3	4	5
1.	The bought raw materials are often green; they do not result into common resource accidents.					
2.	From Wastes have often caused environmental damage of the people surrounding					
3.	Supplier of raw material have to follow set standards for them to qualify					
4.	Our Vehicals to transport raw materials are specifically made for that and we do not allow other non-standards vehicles					
5.	Very few suppliers qualify to supply raw materials in our company because of the need to go green.					

SECTION B:

The following part seeks to examine contribution of the green suppliers' collaboration on performance at Lodhia Steel Company. Please put a tick (√) in the appropriate box as the most agreed answer to the following statements: 1=strongly disagree 2= Disagree 3=Neutral 4=Agree 5=strongly agree.

QN	GREEN SUPPLIER COLLABORATION	OPTIONS				
		1	2	3	4	5
1.	We often train/call to discuss about how to supply raw material that are hazardous to the environment.					
2.	We share information about products most frequent.					
3.	We Discus mode of transport to use before transporting raw materials to the company.					
4.	Most often we get offer of free special transport equipment for disposal of materials.					
5.	The loading and offloading of raw materials is done by company staff who are well trained and Offaly trained					

SECTION C:

The following part seeks to the factors hindering the adoption of green procurement at Lodhia Steel Company. Please put a tick (√) in the appropriate box as the most agreed answer to the following statements: 1=strongly disagree 2= Disagree 3=Neutral 4=Agree 5=strongly agree

QN	factors hindering the adoption of green procurement	OPTIONS				
1.	Lack of proper guidance	1	2	3	4	5
2.	Cost of the procedure	1	2	3	4	5
3.	Qualified staffs	1	2	3	4	5
4.	Top management support	1	2	3	4	5

Thanks for your cooperation and God bless you!