Determinants of Supply Chain Management Ethical Practices Implementation in Government Ministries in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other University.

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DEDICATION

To my family for love, encouragement and support during my studies

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LIST OF ACRONYMS AND ABBREVIATIONS

ANOVA	Analysis of Variance
CIPS	Chartered Institute of Purchasing and Supplies
CSR	Corporate Social Responsibility
DPADM	Division for Public Administration and Development Management
FMCG	First Moving Consumer Goods
KISM	Kenya Institute of Supplies Management
OHS	Organization Health and Safety
PPAB	Public Procurement Advisory Board (PPAB)
PPARB	Public Procurement Administrative Review Board
PPDA	Public Procurement Disposal Act
PPOA	Public Procurement Oversight Authority (PPOA)
SCME	Supply Chain Management Ethics
SCM	Supply Chain Management
SRM	Supply Relationship Management

ABSTRACT

The current procurement management system in Kenya ministries is deficient of SCM ethical practices inclination and there is need for ministries to employ ethical consideration to create a favorable environment for effective delivery of various public services (Anthony, 2009). The general objective of the study was to establish the determinants of supply chain management ethical practices implementation in government ministries in Kenya. The study specifically; determined the influence of supplier relationship management; assessed the influence of employees' competency; established the influence of market pressure; determined the influence of health and safety measures and investigated the influence of regulatory framework on implementation of supply chain management ethical practices in government ministries in Kenya. The study employed a descriptive and co relational survey design. The study population comprised 42 ministries. The study applied a multistage sampling technique involving a combination of purposive and stratified random sampling technique to select the sample size of 21 ministries and 144 respondents. These included procurement manager, finance manager, and senior administrative staff from each ministry hence leading to a sample size of 144 respondents. Questionnaires were used as the main data collection instruments and a pilot study was undertaken to pretest the questionnaires for validity and reliability. Descriptive statistics were used aided by Statistical Package for Social Scientists (SPSS) to compute percentages of respondents' answers. Inferential statistics using, multiple regression and correlation analysis were applied to aid examining the relationship between the research variables. Tables and charts were used to present the analyzed results. The study's findings indicate that lack of supplier relationship management, low level of employees' competency, market pressure, weak health and safety measures, and low level of compliance with supply chain management regulatory

framework. The study recommended the need for implementation of effective supplier relationship management strategies, training of supply chain management staff, and avoidance of market influence during procurement process, implementation of high standards health and safety measures and increasing the level of compliance with the supply chain management regulations.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the study

Supply Chain Management Ethical practices is the management of suppliers and supply relationships with strategies, programmed, and metrics that better align supplier business conduct with purchaser standards, with the goal of reducing the purchaser's overall risk of corporate integrity failure in the supply chain (Carasco &Callaghan, 2008). The current procurement management system in Kenyan ministries is deficient of SCM ethical inclination and ministries should, therefore, employ ethical consideration to create a favorable environment for effective delivery of various public services (Anthony, 2009). The general objective of the study is to determine the implementation of supply chain management ethical practices in government ministries in Kenya. The study aims to specifically; determine the influence of supplier relationship management; assess the influence of employee competency; establish the influence of market pressure; determine the influence of health and safety measures and to investigate the influence of regulatory framework on implementation of supply chain management ethics in government ministries in Kenya.

1.1.1 Supply Chain Management

Supply Chain Management (SCM) has been growing in importance since the early 1990s, although the approach, or rather the concept, was introduced back in the early 1980s (Wood, 2009). The approach of SCM is derived from the fact that there are dependencies between levels in channels from the point-of-origin to the point-of-

consumption (Lambert, 2008). Usually in supply chain management, the point-of-origin refers to suppliers or manufacturers, while the point-of-consumption refers to consumers, customers or end-users in a supply chain (Min &Mentzer, 2008).

supply chain management is seen as a business philosophy that strives to integrate the dependent activities, actors, and resources between the different levels of the points of origin and consumption in channels. This means that supply chain management comprises different kinds of dependencies between and across companies in channels from manufacturers/suppliers to customers/consumers. Mentzer et al; (2008) argue that the definitions of supply chain management can be classified into three categories, namely; a management philosophy, the implementation of a management philosophy, and a set of management processes.

Supply chain management used to be simple compared to what it is today (Levy &Grewal, 2007). More recently, a broader approach of supply chain management has been addressed in order to incorporate other business functions. For example, Mentzer et al; (2008) define supply chain management as a systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole. With this definition, the focus of supply chain management is still on the different levels and the business operations within the channel from the point-of-origin to the point-of-consumption. Explicit reference to other channels has rarely been

addressed in the academic literature. However, Svensson (2009) argues that SCM is a business philosophy that simultaneously should address the overall bi-directional dependencies of activities, actors, and resources on an operational, tactical, and strategic level, from the point-of-origin to the point-of-consumption in and between channels (Carter,2007).

1.1.2 Supply Chain Management Ethical Practices

Supply chain management ethics entails ethical principles that ensures that the individuals entrusted in running of the supply chain activities perform their tasks within the stipulated legal framework which ensures best practices are upheld (Svensson, 2008).Many enterprises around the world are unaware of how effective supply chain ethical practices and compliance programme can help them avoid costly recalls and brand damage that results from supply chain ethics scandals (Callaghan, 2009). Supply Chain Management Ethical Practices is the management of suppliers and supply relationships with strategies, programme, and metrics that better align supplier business conduct with purchaser standards, with the goal of reducing the purchaser's overall risk of corporate integrity failure in the supply chain. Corporate integrity failure embraces any enterprise-level scandal involving a violation of compliance, ethics, or corporate responsibility standards. Most companies today do a pretty good job of managing these three risk categories within their own four walls. However, these very same companies often fall far short when it comes to managing and mitigating corporate integrity risk in their supply networks (Carasco & Callaghan, 2008).

A supply chain management ethical practice is of crucial importance in today's business practices. For example, the revelations of transgression by well-known companies have once again led society to focus on the practices of its major corporate entities. The business practices of these companies have now led to them becoming infamous, such as: Enron, WorldCom, Arthur Andersen, and Parmalat. In Sweden, a number of companies have confronted ethical concerns in the marketplace and society, such as: HM, IKEA, Skandia, and Systembolaget. In each one of these situations, the point of interest focuses on the incredulity of society at the unethical and in some cases illegal behaviour that has been revealed (Lambert, 2008).

Concerns about the appropriateness of the current theoretical and managerial boundaries of Supply Chain Management (SCM) prompted arguments to extend it has been proposed in different ways, In fact, there has not been any explicit research dedicated to the ethical values and principles (EVP) in the context of SCM as a whole henceforth called SCM-ethical practices. At best, only minor and isolated parts of SCM have been addressed from an ethical. Point of view, there has not been developed any explicit conceptual framework of SCM-ethical practices (Lea, 2009). Wood's (2002) partnership model provides a partial foundation for a conceptual framework of ethics in SCM (that is SCM-ethical practices). The model consists of four levels of commitment to EVP, namely; ethical culture, to and from staff and shareholders, ethical organizational artifacts, and ethics in the marketplace. The partnership model stresses the importance of companies' commitment to EVP. This model has been used as inspiration to outline different orientations of SCM-ethics (Svensson, 2009).

1.1.3 General Development in Supply Chain Management Ethical practices

Two essential aspects in supply chain management (SCM) today may be globalization and ethics. Globalization has led to increased business competition which is one of the factors in the increased concern over ethics in SCM. Arguments to adapt and expand it have been suggested in literature (Robin, 2007).Concerns about some of the theoretical and managerial ethical aspects of SCM may be raised. In fact, there has rarely been any explicit research dedicated to the ethical values and principles of corporate actions andbehaviour in SCM and supply chains as a whole. Traditionally, only minor and isolated parts of SCM and supply chains have been addressed from an ethical perspective (Stainer, 2007).

Nevertheless, Svensson and Baath (2008) introduced and described an empirical framework of SCM ethics. It does not explicitly address the situation of large companies, those widely well-known business organizations in the marketplace and society to monitor and manage the corporate actions and behaviour of other companies in their supply chains. Commonly recognizable companies may be more exposed to criticism and ethical dilemmas due to expectations in the marketplace and society of them being good corporate citizens. The transparency of their supply chains is an aspect that becomes valuable to examine (Robin,2007).There are several potential reasons for the importance of transparency in SCM ethical practices, for example, it may prevent companies from having ethical dilemmas caused by other actors in their supply chains (Schwartz, 2008). These actors may be other companies (e.g. suppliers' suppliers or customers' customers and so forth) with whom the companies are not necessarily

directly engaged in business in their supply chains. In fact, these other companies are often anonymous and may rarely be recognized by the general public in the marketplace and society. Nevertheless, their inappropriate potential, unethical corporate actions and behaviour in supply chains may affect the companies reputations and goodwill in the marketplace and society events that may make their ethical images deteriorate and tarnish their ethical identity among internal such as employees and external such as customers, suppliers and the public (Schwartz,2008).

Consequently, supply chain management ethical practices appear to be of crucial importance in today's corporate actions and behaviour in ongoing business operations (Svensson and Baath, 2008). The transparency of SCM ethical practices may be of additional, and most likely highly essential, value to the widely recognizable and leading companies in supply chains. In Scandinavia, a number of well-known companies such as Ericsson, HM, IKEA, and Nokia – have been confronted with ethical dilemmas in the marketplace and society caused by other companies in their supply chains. Other companies in the region, such as Skandia and Systembolaget, have added internal causes (e.g. bribery and greedy leadership practices) to their ethical dilemmas. The internal corporate actions and behavior of some companies on the global arena have also led to them becoming infamous because of their own questionable and inappropriate corporate actions and behaviour, of some companies such as: Enron, WorldCom, Arthur Andersen, and Parmalat (Shelby, 2009).

Effective application of supply chain management ethical practices is a major challenge facing many organizations around the globe, the level of application of supply chain management ethical practices have been used as a measure of the state of organization corporate image and corporate social responsibility practices hence supply chain management ethical practices is nowadays considered a core factor for business success (Wood, 2009).These days, leading brands are judged by the company they keep. Consumers, investors, business partners, regulators, and media organizations now expect a company and its entire supply chain to be ethical. Sooner or later, every company is bound to find itself part of a supply chain that experiences a significant ethics or compliance violation. When this happens, chances are great that the biggest brand in the chain will get stuck with most of the blame (Winston, 2007).

The supplier generated ethics scandals are probably one of the biggest and least foreseen business risks most leading companies face today (Berenbeim, 2008). The damage can be great, and protective measures can and should be adopted immediately, the good news is that feasible, affordable solutions exist and can be implemented relatively quickly and painlessly in the organization gives greatly emphasis on the role of supply chain management ethical practices on organization performance (Winston,2007).The challenge of supply chain management ethical practices faces both public and private organizations since it incorporates all ethical practices that guide and accompany procurement of goods and services, production activities, warehousing activities and distribution practices. In private sector conflict with supply chain management ethics occurs when ineffective production and distribution practices are employed such as

production of substandard goods that threaten human health and cases of oil spill during transportation and supply of low quality products. In government ministries, supply chain management ethical practices are normally undermined when corrupt procurement practices are employed and procurement regulations guidelines are not followed (Berenbeim, 2007).

1.1.4 The Practice of Supply Chain Management Ethics in Kenya

In Kenya many organizations have not effectively embraced the concept of supply chain management ethical practices hence the employed supply chain management practices do not give much emphasis on environmental issues and consumer health and safety concerns (Petterson, 2011). In Kenya, given its mandate of fostering good governance and sound public administration in development, the Division for Public Administration and Development Management (DPADM) supports setting international standards, carries out comparative policy research and analysis, and assists in building capacity in institutions safeguarding public sector ethics, transparency, and accountability (Kimalu et al, 2009).

The division's activities are predicated on the analysis that corruption is one symptom of poor administration and mismanagement (Kimalu et al, 2009). These situations allow unscrupulous public officials to exploit opportunities for putting self above public interest, contrary to the spirit of public service. Moreover, the division's activities also seek to preserve the integrity of other "honest" public officials by putting into place an "ethics infrastructure" that not only provides guidance for good conduct but also

administratively and legally punishes misconduct(Kimal,et al,2009).The "ethics infrastructure" includes measures to enhance and preserve organizational integrity, access to information that promotes transparency and accountability, and oversight by independent institutions and the public at large. In conducting its activities in this area, the division has tried to best leverage the United Nations' uniquely global membership, through fostering international dialogue and the exchange of experiences (Kimalu et al., 2009).

The Kenyan public sector organizations are required to enhance integrity while executing their respective supply chain management functions (Kapila, 2008). Procurement officers are required to never use their authority or office for personal gain and shall seek to enhance their integrity by; maintaining unimpeachable standards of integrity in all business relationships both inside and outside the organizations in which they are employed (Emmanuel, 2009). Fostering the highest possible standards of professional competence amongst those for whom they are responsible; optimizing the use of resources for which they are responsible to provide the maximum benefit to their employing organization; complying both with the letter and spirit of the law of the country and contractual obligations and by rejecting any business practice which might reasonably be deemed improper (Kapila, 2008).

1.1.5 Public Procurement Oversight Authority

The Public Procurement and Disposal Act, 2005 was enacted and it become operational on 1st January, 2007 with the gazettement of the Public Procurement and Disposal

Regulations, 2006.The Public Procurement and Disposal Act, 2005 created the Public Procurement Oversight Authority (PPOA), the Public Procurement Advisory Board (PPAB) and the continuance of the Public Procurement Complaints, Review and Appeals Board as the Public Procurement Administrative Review Board (PPARB). The PPAB and PPARB are autonomous bodies.

The PPOA is mandated with the responsibility of; ensuring that procurement procedures established under the Act are complied with; monitoring the procurement system and reporting on its overall functioning; initiating public procurement policies and assisting in the implementation and operation of the public procurement system by preparing and distributing manuals and standard tender documents, providing advice and assistance to procuring entities, and develop, promote and support training and professional development of staff involved in procurement (PPOA,2012).To promote application of supply chain management ethical practices in Kenya, the Supplies Practitioners Management Act, 2007 was enacted. The Supplies Practitioners Management Act was assented to law on 22nd October 2007 and became effective on 30th October 2007. This Act regulates both public and private sector procurement practitioners and strives to professionalize procurement practice in Kenya. In terms of the Act, Kenya Institute of Supplies Management (KISM) is tasked with registering and licensing all supplies practitioners operating in Kenya. A supplies practitioner is defined as any person or procuring agent engaged in public or private procurement, purchasing, stores management, logistics, supply chain or related activities (Kapila, 2008).

Effective determinants of SCM ethical practices in public sector organizations helps to promote ethical tendering, accountability, transparency and fairness in tender awards (Moses, 2007). This helps in improving the quality of public service delivery and greater improvement of organizations corporate image. Low emphasis on SCM ethical practices in many Kenyan public sector organizations have led to poor delivery of public services and this has been the major cause of existence of poor service delivery infrastructure such as roads, railway, hospitals and various public institutions (Phillip, 2009).

1.2 Statement of the Problem

Determinants of supply chain management ethical practices remain a key challenge facing many organizations around the Globe. According to KISM (2012), government ministries loose over Ksh 5bilions annually as result of absence of ethical procurement practices. In the year 2012, the ministry of education lost over Ksh 500 Millions for free primary education program, in the year 2010 the Ministry of Energy lost over Ksh.700 Millions in Oil procurement and the Ministry of Youth *Kazi KwaVijana* Program lost over Ksh 100millions ((PPOA,2012). In many government ministries, procurement regulations which includes; Public Procurement and Disposal Act, 2005 (PPDA); Public Procurement and Disposal Regulations, 2006 and the Supplies Practitioners Management Act, 2007 are not effectively enforced and this creates unfavorable environment for the implementation of supply chain management ethical practices.

The role of ethical consideration in Kenyan procurement management approaches remains underexplored and there lacks a guiding framework on how government

ministries should embrace sound SCM ethical practices. The current procurement management system in Kenya ministries is deficient of SCM ethical inclination and ministries should therefore employ ethical consideration to create a favorable environment for effective delivery of various public services (Anthony, 2009). In Kenya, out of the 42 government ministries only less than 15% have made significant efforts in implementing SCM ethical practices. In the rest 85%, much awareness have not been created on the importance of supply chain management ethics and hence many government ministries continue loosing over 30% of procurement expenditure in unethical procurement practices (George,2010).

Studies on supply chain have been carried out by Emmanuel (2009), Kapila (2008), Edward (2009).Moses (2007) and Phillip, (2009), none of the studies have focused on determinants of supply chain management ethical practices implementation in government ministries in Kenya. A major knowledge gap therefore exists on the reason why many public sector organizations have not integrated SCM ethics in their SCM activities. It is hence against this background this study will be undertaken to fill the missing knowledge gap by determining the supply chain management ethical practices implementation in government ministries in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to establish the determinants of supply chain management ethical practices implementation in government ministries in Kenya.

1.3.2 Specific Objectives

1. To find out the influence of supplier relationship management on implementation of supply chain management ethical practices in government ministries in Kenya.
2. To assess the influence of employees competency on implementation of supply chain management ethical practices in government ministries in Kenya.
3. To establish the influence of market pressure on implementation of supply chain management ethical practices in government ministries in Kenya.
4. To determine the influence of health and safety measures on implementation of supply chain management ethical practices in government ministries in Kenya.
5. To investigate the influence of regulatory framework on implementation of supply chain management ethical practices in government ministries in Kenya.

1.4 Hypotheses

1. H_o Supplier relationship management does not significantly relate to the implementation of supply chain management ethical practices.
2. H_o Employee competency does not significantly relate to the implementation of supply chain management ethical practices.
3. H_o Market pressure does not significantly relate to the implementation of supply chain management ethical practices.
4. H_o Health and safety measures does not significantly relate to the implementation of supply chain management ethical practices.

5. H_o Regulatory framework does not significantly relate to the implementation of supply chain management ethical practices.

1.5 Justification

Supply chain management ethical practices is a relatively new business practice that enables organizations to manage their suppliers and supply relationships through strategies, programs and metrics that better align supplier business conduct with purchaser standards (Anthony, 2009). The goal is to reduce a procuring entities' overall risk of corporate integrity failure in the supply chain by aligning supplier conduct with purchaser standards in three major areas of corporate integrity: compliance, ethics, and corporate responsibility. In Kenya, many government ministries have not integrated supply chain management ethical practices in their supply chain operations and this has greatly encouraged application of unethical supply chain management practices that negatively influences misappropriation of public funds. The consequences of these have been greatly felt by the general public through low level of customer satisfaction on quality of the delivered public services. This has also impacted negatively on the corporate image of many public sector organizations as result of loss of public confidence and trust on quality of the organization services (Kapila, 2008).

Implementations of effective supply chain ethical practices and compliance programmes can help government ministries to avoid inefficient procurement practices and poor corporate image that results from supply chain ethics scandals such as inefficient procurement practices, procurement of low quality goods and low level of procurement

regulations compliance during tendering process. Public sector organizations that have attempted to embrace supply chain management ethical practices are hindered by various factors that have not been adequately explored (George, 2010). This study is therefore, justified since it will lead to determination of the major factors influencing implementation of supply chain management ethical practices within government ministries in Kenya and this will play a significant role towards sensitizing procurement managers in public entities on the importance of application of supply chain management ethical practices in organizations. The study findings will help procurement managers to design and implement program and services to mitigate risk in the areas of supplier chain functions, ethics and corporate responsibility.

The study will be of great significance to procurement managers and board of directors in various public corporations in Kenya since the study findings will offer a guiding framework for the implementation of supply chain management ethics in government ministries in Kenya. The study is of importance to various supply chain management ethics implementation stakeholders such as, Kenya Institute of supply chain management. United states Agency of International Development Chartered Institute of Purchasing and supply Management (CIPS) World Bank among others since the study findings will help the stakeholders to clearly understand the weakness of supply chain management ethical practices in Kenya public sector and hence determine the appropriate measures to employ to support effective implementation of supply chain management ethical practices within government ministries in Kenya.

1.6 Scope of the Study

The study was undertaken in the 42 ministries. The study population comprised 144 management staff working in all the 42 ministries finance, procurement, and administration departments. The study focused on determinants of implementation of supply chain management ethical practices within government ministries in Kenya. Specifically the study explored the influence of supplier relationship management, employee's competency, market pressure, health and safety measures, and regulatory framework on implementation of supply chain management ethics in government ministries in Kenya.

1.7 Limitations of the Study

The challenges included some of the respondents not filling or completing the questions or some issues being misunderstood, inadequate responses to questionnaires and unexpected occurrences like respondents proceeding on leave before completing the questionnaire. This was mitigated through constant reminder to the respondents during the period they were having the questionnaire. Descriptive research is flexible in that it requires the initial study (the tools and administration of tools) to remain unchanged throughout data collection (Mugenda & Mugenda, 2003).The organization confidentiality policy restricted most of the respondents from answering some of the questionnaires since it was considered to be against the organization confidentiality policy to expose the organization confidential matters. The researcher presented an introduction letter obtained from the university to the organization management and this

helped to avoid suspicion and enable the organization management to disclose much of the information sought by the study.

1.8 Definition of Terms

Market Pressure

Market pressure entails the market forces that influence effective execution of supply chain management practices (Edward, 2010).

Health and Safety

Health and safety entails the health and safety measures employed by organizations during execution of supply chain management practices (Petterson, 2009).

Supply Chain Management Ethical Practices

Supply Chain Management Ethics is the management of suppliers and supply relationships with strategies, programs, and metrics that better align supplier business conduct with purchaser standards, with the goal of reducing the purchaser's overall risk of corporate integrity failure in the supply chain (Carasco & Callaghan, 2008).

Supplier Relationship Management Ethical Practice

Supplier Relationship Management ethical practices is an all-inclusive approach to managing the affairs and interactions with the organizations that supply goods and services (Ammer, 2009).

Regulatory Framework

Regulatory framework is the set of rules and regulations that provide guidelines on how procurement functions should be undertaken in public entities (KISM, 2009).

Employees' Competencies

Employees' competencies are those traits, skills or attributes that employees need to perform their jobs most effectively (Richards, 2013).

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review of the study by reviewing both theoretical and empirical literature from professionals and other researchers on determinants of implementation of supply chain management ethical practices in government ministries in Kenya. A critical review is brought onboard in deeply assessing reviewed literature in relation to the current study and finally the research gaps are established.

2.2 Theoretical Framework

In this section, several theories and models of supply chain management ethical practices are discussed and how they interact with human resource management theories and models.

2.2.1 Supplier Relationship Management

Partnership Model

Partnership model provides a partial foundation for a theoretical framework of ethics in SCM (SCM-ethics). The model as shown in figure 2.1 consists of four levels of commitment to ethical values and Principles (EVP), namely: ethical culture, to and from staff and shareholders, ethical organizational artifacts, and ethics in the marketplace. The partnership model stresses the importance of companies' commitment to EVP. This model and a pre-study have been used as inspiration to outline different orientations of SCM-ethics. Four orientations of SCM-ethics may be distinguished derived from the

relationships of organizations, the industry, the market place, and the society. They are based upon two components (union and connection), all of which apply to both upstream and downstream directions of corporate behaviour and business operations (Wood's, 2002).

A vertical union stresses the EVP in corporate behaviour and business operations in supply chains from the point- of-origin to the point-of-consumption, while the horizontal union stresses the EVP in corporate behaviour and business operations in the resemblance between supply chains or outside supply chains (Wood's,2002).The direct connection of corporate behaviour and business operations accentuate the EVP in isolation, while the indirect connection of corporate behaviour and business operations accentuate the EVP in sequence between supply chains or outside supply chains. In sum, four distinctive orientations of SCM-ethics may be distinguished (Wood's, 2002).

Relationship orientation refers to the vertical unions between EVP of corporate behaviour and business operations (i.e. within a supply chain), but it is limited to direct connections to others EVP in supply chains (i.e. either suppliers or customers). This is the most limited approach of SCM-ethics. Actually, it is limited to dyads such as buyer/seller relationships. The corporate orientation of SCM-ethics at this level is risky, as it only depends upon the atomistic features of EVP in a minor part of supply chains (Wood's, 2002).

Channel orientation refers also to the vertical unions between EVP of corporate behaviour and business operations (i.e. within a supply chain). It also comprises indirect

connections to other EVP in supply chains (i.e. either suppliers' suppliers, customers' customers or beyond). This is an extended approach of SCM-ethics compared to the relationship orientation. It includes the whole supply chain from the point-of-origin to the point-of-consumption, all of which consist of the EVP of sequential or connected relationships. The corporate orientation of SCM-ethics at this level is rather sound, but it still neglects the conditions of EVP in the marketplace and society (Wood's, 2002).

Competition (or comparative) orientation goes beyond vertical unions between corporate behaviour and business operations towards horizontal unions of EVP (i.e. between supply chains). It comprises direct connections to EVP in other supply chains. This is a broadened approach of SCM ethics compared to relationship and channel orientations. It stresses the importance of EVP in the marketplace. It has also an emphasis on the EVP of competitors (Wood's, 2002).

Environment orientation refers to the horizontal unions between EVP of corporate behaviour/business operations and the society. It comprises indirect connections to EVP in the society. This is the broadest approach of SCM ethics compared to the previous orientations. It stresses the importance of EVP in the society as a whole. It also has an emphasis on the EVP of other industries and other marketplaces (Wood's, 2002).

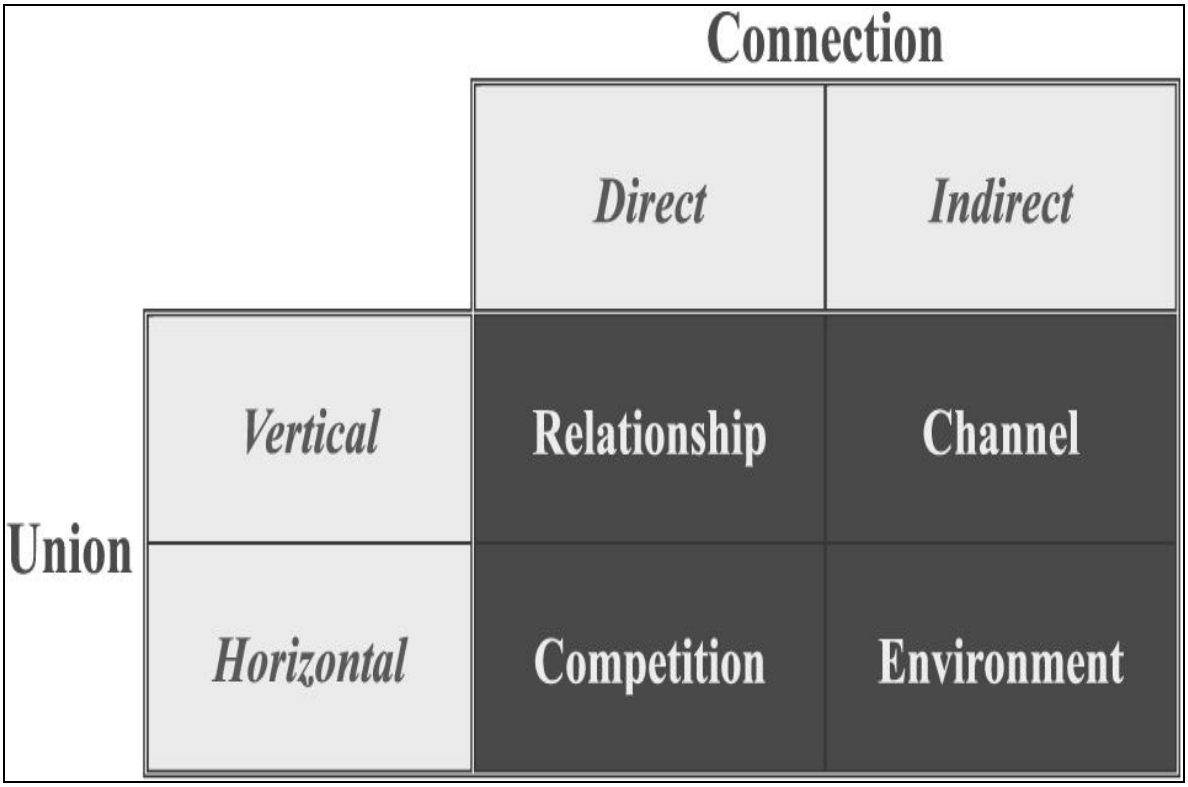

Figure 2.1Partnership Model

Source: Wood's (2002)

2.2.2 Employee Competency

Ethical Decision- making Model

According to Somers (2009,) ethical decision-making model requires managers and other organization employees to work through the following steps; identifying the dilemma by first looking at the dilemma and gather as much information to clarify the problem. Applying the code of conduct or code of ethics after having a clearer picture of the nature of the problem needed to consult the code of ethics for employees' profession. Determining the nature and dimensions of the dilemma and seek

consultation. Sometimes the dilemma may involve other agencies or other professionals. This is a situation where one must consult with supervisor or director. Generate possible actions by brainstorming possible solutions to the problem/dilemma. Consider the possible consequences of all options and determine a course of action. This stage involves looking at all the options and the consequences of actions for all relevant parties, clients, colleagues, agency, and profession among others. Consider the rights and responsibilities of all people involved. It is critical to consider the balance between rights and responsibilities of workers and clients. Evaluate the selected course of action by reviewing selected course of action and finally implement the course of action (Somers, 2009). There is also a common law responsibility of a duty of care towards clients. This duty exists and is owed at all times by all staff catering for the needs of others. Ethical issues do arise from time to time and it is up to you to be able to recognize it to then to be able to discuss the issue with an appropriate person (Somers, 2009). The model is represented in the following figure 2.2.

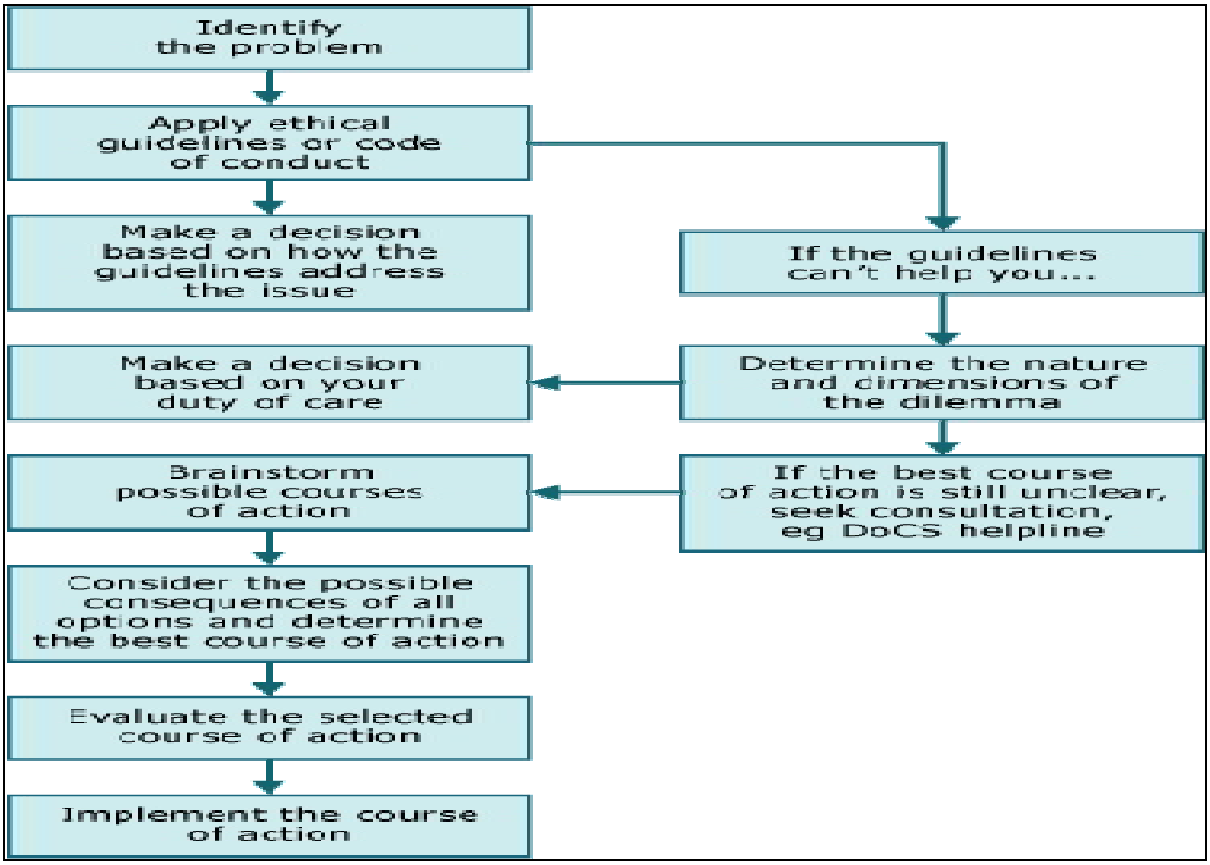

Figure 2.2 Ethical Decision Making Model

Source: Somers (2009)

2.2.3 Market Pressure Models

The 4R Marketing Model

Four factors marketing model is focused on the customer. Many people believe that the shift is trending away from the company, and more towards the customers, and so some companies have shifted from focusing on the four P's of marketing, and moved to the four R's of marketing. As this is a relatively new idea, there are a few different versions of the cycle (Lane, 2008). According to Lane (2008) the version tend to focus on some combinations of 4Rs which are; recognition, reputation, relationship, research,

relevance, and reward. All of these concepts deal with how a customer would interact with the company and its product/service (Lane, 2008).

The model as shown in figure 2.3 divides marketing activities into four primary arenas: Research, Recognition, Reputation, and Relationship. Any marketing carried out should focus on at least one or preferably more of these. Showing the model components in a circle with clockwise moving arrows implies a few things (Lane, 2008). First of all, no component is either more or less important than another. Second, though reason indicates that the place to start would be "Research," use of the model can start in any of the quadrants with the logical next step being in a clockwise direction so that research contributes to recognition, which contributes to reputation which contributes to relationship which contributes to research…and so on. In practice, the model does not follow such a tidy stepwise progression activities for all 4 Rs will most likely be pursued simultaneously (Lane, 2008).

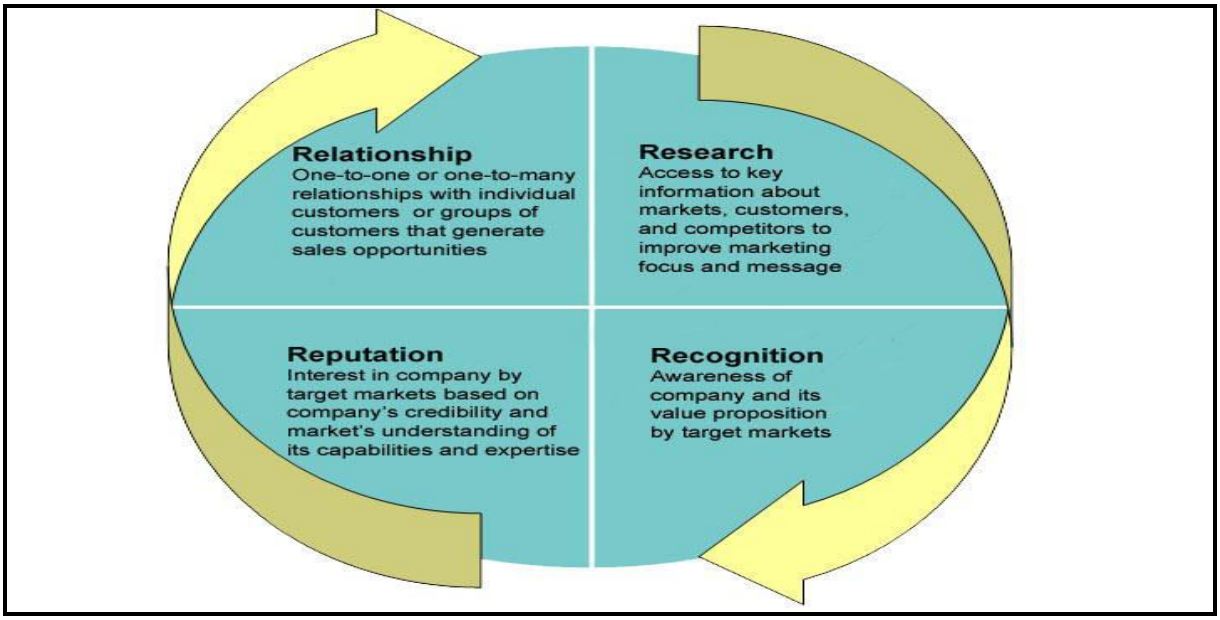

Figure 2.3 4R Marketing Model

Source: Lane (2008)

2.2.4 Health and Safety

The 4P-Model of Determinants in Public Codes of Ethics

The Göran and Greg (2004) content analysis of codes of ethics in public Sweden revealed a few aggregated determinants, which may be labeled as the 4P-model of determinants in public sector codes of ethics. The principal determinants and the 4Ps correspond to major sectors in the society. The seven identified determinants relate to four principal sectors of a society, namely; public community sector refers to the focus of a public organization's internal operations on a strategic, tactical and operational level; private corporate sector refers to an external public that consists of the companies in the business sector of the society; private citizen sector refers to an external public

that consists of the individuals in the society; and political/policy conduct sector – refers to the civic behaviour within the public organization or in the society. This means that this determinant is both internal and external.

Most of the determinants of public codes of ethics belong to internal determinants and the P of public community sector comprises philosophy; labour environment; leadership responsibility (including politicians); employer responsibility; and equality. This area sets the framework for the ways in which one is expected to deal when one works with colleagues within the organization. It is a set of principles by which one should try to maximize one's involvement. It provides guidelines for one's responsibilities as an employee and/or as a manager and/or as a leader. The focus is on developing all staff equally in order to achieve their maximum potential with regard to the fact that people have different needs and wants from their work lives (Göran & Greg, 2004). The involvement includes the public, comprises the private corporate and citizen sectors. In these areas, the focus is upon such items as "citizens as a focus", "supplier relations", "treat outside publics as ourselves", "freedom of information", "protect the natural environment", "interaction with all publics" and "sponsorship". The aim is to delineate for staff the expected types of behaviours' when interacting with those individuals outside of the organization (Göran & Greg, 2004).

As public organizations are subject to much more public scrutiny than private organizations, the need for a code of ethics may be seen to be less pressing. The emergence of administrative reform has created pressures on public organizations to

become more cost-effective, more cost-efficient, more commercial, more competitive, more market oriented, more business-like, which raises the issue of ethical versus unethical behaviour by public sector organizations. Traditionally, the existing political and administrative scrutiny mechanisms in place for public sector organizations have been presumed to be sufficient to curb or discourage such behaviour. Yet, as this transition to a more market-focused public sector occurs, then so could one expect the evolution of business ethics practices in this sector: practices that one could speculate would tend to imitate those practices observed in the private sector of business. If the activities of the public sector are tending to be predicated more on the activities of the private sector, then as well one could surmise that there may be a tendency towards congruence in their ethical artifacts (Göran& Greg, 2004).

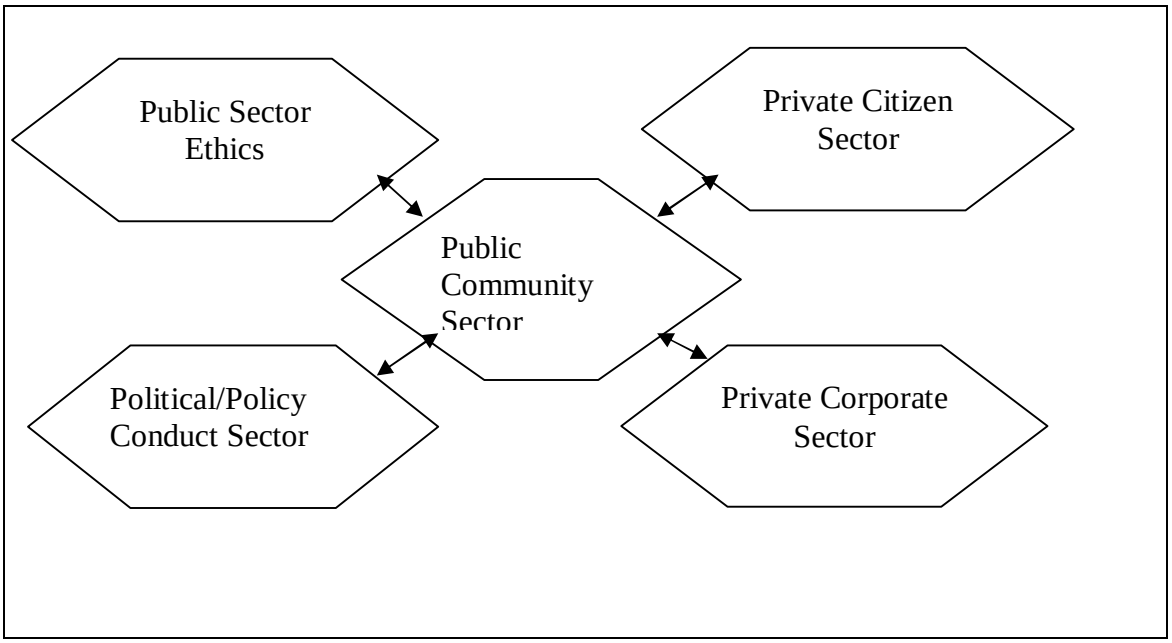

Figure 2.4 The 4P-Model Determinants in Public Codes of Ethics

Source: Göran & Greg (2004)

Occupational Health and Safety Quality Model for Process Improvement

Health and safety entails the health and safety measures employed by organizations during execution of supply chain management practices (Petterson, 2009). Lea (2009) designed an Occupational Health and Safety OHS Quality Model for Process Improvement in organizations. The OHS quality model for process improvement has three main elements as input, process, and output. Input or activity measures: Examples are: how many risk assessments are conducted; how much safety training is done; and how many safety meetings have been scheduled. It is not easy to demonstrate a direct relationship between the input and the resulting outcome, or identify underlying problems (Lea, 2009).

Process or focus area measures: These measure indicators within the process and, in doing so, focus on the predominant types of injuries that can be expected to happen (such as strains and sprains) and illnesses (such as deafness). They also monitor practices and behaviours associated with core activities, such as manual handling and repetitive work. The focus should cover all core risks and any measures of how effective risk reduction is (for example, isolation deviations). Risk control measures can only be deemed effective if a significant reduction in specific injuries or illnesses can be clearly shown (Lea, 2009).Output or action plan measures: These measure outputs in terms of the achievement of objectives. Such performance measures can be used to track progress towards achieving a goal, and can relate to individual performance as well as operations performance (Lea, 2009).

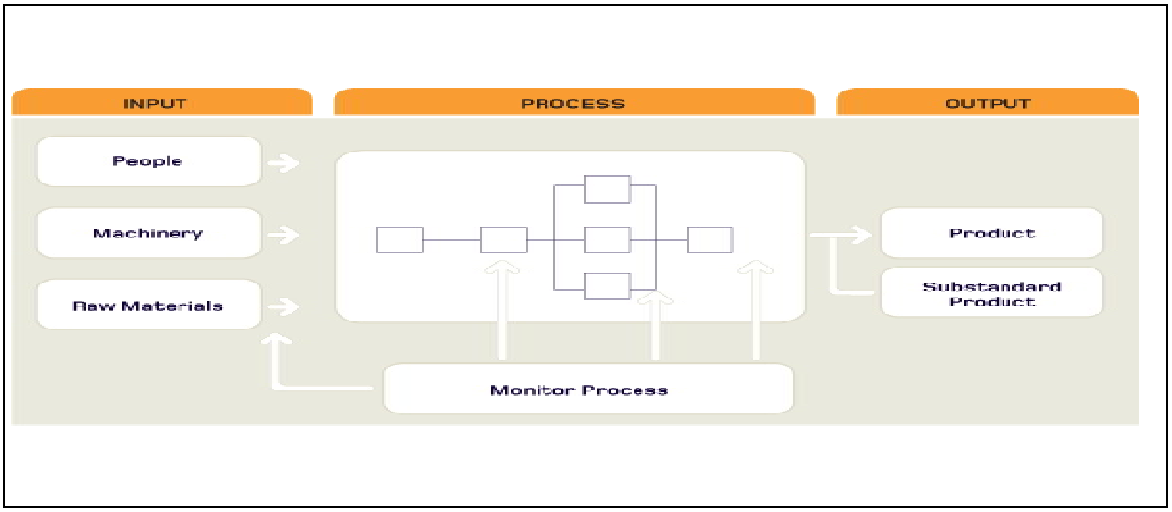

Figure 2.5: OHS Quality Model for Process Improvement

Source: Lea (2009)

2.2.5 Regulatory Framework

The Stakeholder Theory of Corporate Social Responsibility

The stakeholder theory of corporate social responsibility (CSR) emphasizes a broadest of social responsibilities for business. Stakeholders, as used in this theory, refer to those individuals or groups who may affect or are affected by the organization (Amaeshi, Osuji & Nnodim, 2008). They include a wide variety of interests, and as suggested by Mullins (2009), may be grouped under six main headings which includes employees, shareholders, consumers, government, community and the environment, as well as groups such as suppliers, trade unions, business associates and even competitors. In this regard, CSR can be broadly defined as an organization's commitment to operate in an econ.omically and environmentally sustainable manner while recognizing the interests of its stakeholders. In line with this broader definition of CSR, global brands like Nike,

GAP, Adidas, and McDonalds are often under intense pressure from groups working for responsible supply chain management. Much of this pressure is channeled through the supply chain, since the pressure groups sometimes find it difficult to reach the global brands directly.

To this end, they rely on indirect tactics such as targeting the sourcing activities of these brands and their seeming exploitation of cheap labour conditions in developing countries. These attacks, which have been quite successful in recent times, hack on the reputation of these firms (e.g. Nike‘s case2). They engender negative public sentiments and invariably resentments towards the global brands following irresponsible behaviours along their supply chain. These negative perceptions of firms persist, irrespective of the locus of the guilty suppliers on the supply chain spectrum of the primary purchasing firm. This image tends to put firms under pressure to bear indefinite responsibilities for their wide and long supplier networks. Firms, therefore, do everything possible to protect their brands including accounting for the seeming irresponsible behaviors of their suppliers, as shown in the current wave of social reports across industries (Amaeshi, Osuji & Nnodim, 2008).

2.3 Conceptual Framework

Supplier Relationship Management is an all-inclusive approach to managing the affairs and interactions with the organizations that supply goods and services. This includes communications, business practices, negotiations, methodologies, and systems that are used to establish and maintain a relationship with a supplier. Benefits include lower

costs, higher quality, better forecasting and less tension between the two entities that result in a win-win relationship (Ammer, 2009). Supplier relationship management enhances effective communication between procurement management staff in government ministries and this helps in implementation of ethical business practices.

Market pressure entails the market forces that influence effective execution of supply chain management practices. Change of demand and supply forces leads to availability or lack of certain goods and services. Hoarding of goods and service is key unethical practice employed by stores operators to sell goods when the demand is high and supply is low. A market environment with corrupt suppliers leads to increased level of bribery and delivery of substandard goods and this undermines ethical practices in the supply chain (Edward, 2010).

Health and safety entails the health and safety measures employed by organizations during execution of supply chain management practices. Application of poor production processes, transportation process, and storage processes conflicts with sound supply chain ethical practices and this threatens human life in cases of food and other Fast Consumer Moving Goods (FMCG) (Petterson, 2009). Regulatory framework is the set of rules and regulations that provide guidelines on how procurement functions should be undertaken in public entities. In Kenya, procurement regulatory framework comprises Public Procurement and Disposal Act, 2005 (PPDA) Public Procurement and Disposal Regulations, 2006 (GOK, 2006) and the Supplies Practitioners Management Act, 2007 (KISM, 2009). These regulations govern the choice of suppliers, products and the methods and procedures to be used to communicate with suppliers (Patrick, 2009). Low

level of procurement regulations compliance by government ministries and lack of effective enforcement of regulations implementation by the government encourages cases of unethical supply chain management practices. Most ministries also fail to take legal responsibility and this leads to undermining of supply chain management ethical practices in Kenya (Kapila, 2008). The hypothesized constructs and their respective casual paths are illustrated in the following figure 2.6.

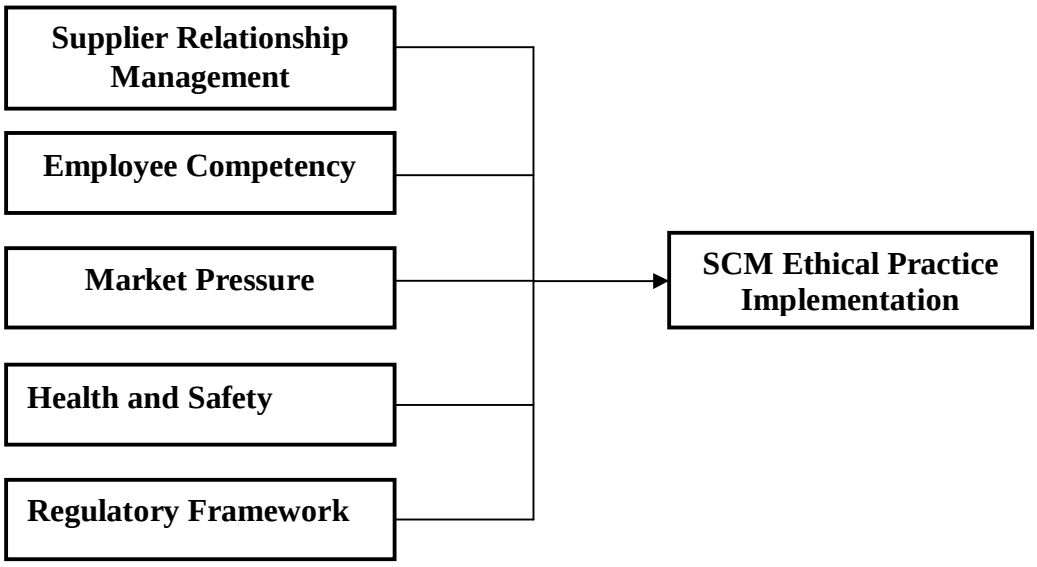

Figure 2.6 Conceptual Relationships of Constructs

2.4 Empirical Review

Business ethics is a subject that recently has been thrust into prominence in industrialized economies around the world, due to the revelations of the practices of some of the major corporations operating within the USA (De George, 2007).The demise of large, high profile corporations and the subsequent revelations of impropriety are not new. Enron and Arthur Andersen are just actors in the latest business drama that features opportunity turned to greed and then, ultimately, turned to tragedy. The actions of these companies have led other companies to examine their own ethical standards and artifacts, in an effort to ensure that they too do not become news, makers because they have not spent enough time and given enough focus to their own ethical behaviour (Michael, 2008).

One of the first indicators that a company is beginning to focus on ethical behaviour is to establish a code of ethics. It is the artifact that announces to all, an interest in business ethics by a corporation. To this effect, numerous writers have proposed the notion that a code of ethics should exist as a means of enhancing the ethical environment of an organization (Adams, Tashchian & Stone, 2009). Since the early 1960s in the USA, there have been codes of ethics in many companies (De George, 2007). In Britain, their development occurred later in the last century, more as a response to the stock market crashes of the late 1980s than anything else (Donaldson& Davis, 2009). In Sweden, however, this concept of the use of codes of ethics has not been investigated prior to this study. One study has been published in the wider area of business ethics (Brytting, 2007), but it appears that there has been nothing specifically done on codes of ethics in

the Swedish marketplace. Companies implement codes because they value them and perceive that they are important to the organization. If companies do have this view of their codes, then one could expect that they would be committed to them (Wood, 2008). Brytting (2007) found that having an ethical code does have a positive impact on the ethical behaviour of organizations.

There are various facets of business ethics both internal and external. For example, Robin and Reidenbach (2007) develop a multidimensional scale for improving evaluations of business ethics, while Hunt (2009) developed a corporate ethics scale. On the one hand, “business ethics” has an external emphasis. In particular, business ethics considers the gap between companies' ethical actions and behaviour in ongoing business operations and the marketplace's/society's perceptions of the companies' ethical actions and behaviour in their business operations. “Corporate ethics”, on the other hand, has an internal emphasis. In particular, corporate ethics considers the gap between the management's ethical actions and behaviour and the employees' perception of the management's ethical actions and behavior in ongoing business operations (Robin&Reidenbach, 2007).

Wood's (2008) partnership model provides a support for the transparency of SCM ethical practices. It points out essential corporate areas of business ethics. It consists of four areas of commitment to business ethics, which consider ethical culture; ethics between staff and shareholders; ethical organizational artifacts and Ethics in the marketplace. Principally, it stresses the importance of companies' commitment to

business ethics in direct internal and external relationships. Svensson (2008) introduces a framework of SCM ethics that goes beyond the direct relationships, and looks towards the indirect ones that may affect companies' business operations in supply chains. It consists of four approaches that may be derived from: the relationships of organizations; the industry; the marketplace and the general society.

Göranand Greg, (2011) developed a conceptual framework of organizations' corporate and business ethics across organizations and divided it into four separate but at the same time interconnected principal areas as; across organizations; ethical structures; ethical processes; and ethical performance. The conceptual framework was continuous as it contained a series of consecutive organizations that were seen as mutually interdependent,that is one depends upon the other, and vice versa. It goes beyond corporate judicial boundaries and refers to the ongoing attention to ethical concerns across organizations. Göran & Greg (2011), in their conceptual framework that incorporates corporate and business ethics across organizations should be supported by the area of “structures” that underpin and nurture ethical business practices in and between organizations. These structures lay the groundwork to develop, manage, and monitor ethical business practices across organizations as a whole (Göran & Greg, 2011).

Across organizations, it is not an easy task to determine what may be classified as ethical or unethical business practices across organizations as a whole. An essential factor is that there are expectations and perceptions that vary between organizations.

These expectations and perceptions also vary in the marketplace and societies that surround organizations, and that influence the predominant belief or conviction of what may, or may not, be seen as ethical business practices (Solomon& Martin, 2008).

The area of “ethical structures” consists of the following sub-areas: a code of ethics; ethical audits; ethics ombudsman; ethics committee; ethics training committee; and support to whistle-blowers (Lea, 2009).The area of “ethical structures” is intended to support organizations' ethical concerns across organizations. There is need for ethical structures that surround the modes in which organizations strive to inculcate corporate and business ethics. Without them, there are no supports in place to create ethical processes and evaluate ethical performance. This area serves as a support that the organization and its staff should be able to relate to at the strategic, tactical, and operational levels of business practices. It is a point of reference to other stakeholders in the marketplace and society (Lea, 2009).

The area of “ethical processes” consists of the following sub-areas: ethical performance appraisal; staff education; aid in strategic planning; consequences for a breach; communication of the code to organization workers; dissemination of the code to new staff; dissemination of the code to customers; dissemination of the code to suppliers; communication of the code to other stakeholders; and revision of the code (Solomon & Martin, 2008). There is need to support the staff of the organization in different ways; otherwise they will not know the corporate standpoint on ethical business practices. In particular, staff may not know how to act and behave in situations requiring ethical considerations. Organizations need to be aware that ethical values and principles change

over time and vary across contexts. It is therefore, crucial to create processes that contribute to regulating organizations' ethical business practices but also; there must be structures in place to support staff in their ethical actions and behaviours (Le Menestrel, 2009).

The area of “ethical performance” consists of the following sub-areas: resolving ethical dilemmas; assist the bottom line; and effectiveness of the code. Different stakeholders in the marketplace and society examine the economic performance of organizations. Profit should be the natural performance measure of their business practices (Lea, 2009). As Le Menestrel (2009) note, there is no contradiction between ethical concerns and profits. Governments establish taxation regimes that in essence are designed to ensure that businesses practices contribute to maintenance of the society of which they are a part (Solomon & Martin, 2008). Yet, profit does not guarantee that the business practices undertaken by organizations to achieve this profit are in the best interests of the society, such that they are ethical. Society goes through a set of checks and balances to ensure that the profit declared by the organizations has been earned in ways that do not compromise the integrity of the organization, the shareholders, the stakeholders and the society in general (Göran& Greg, 2011).

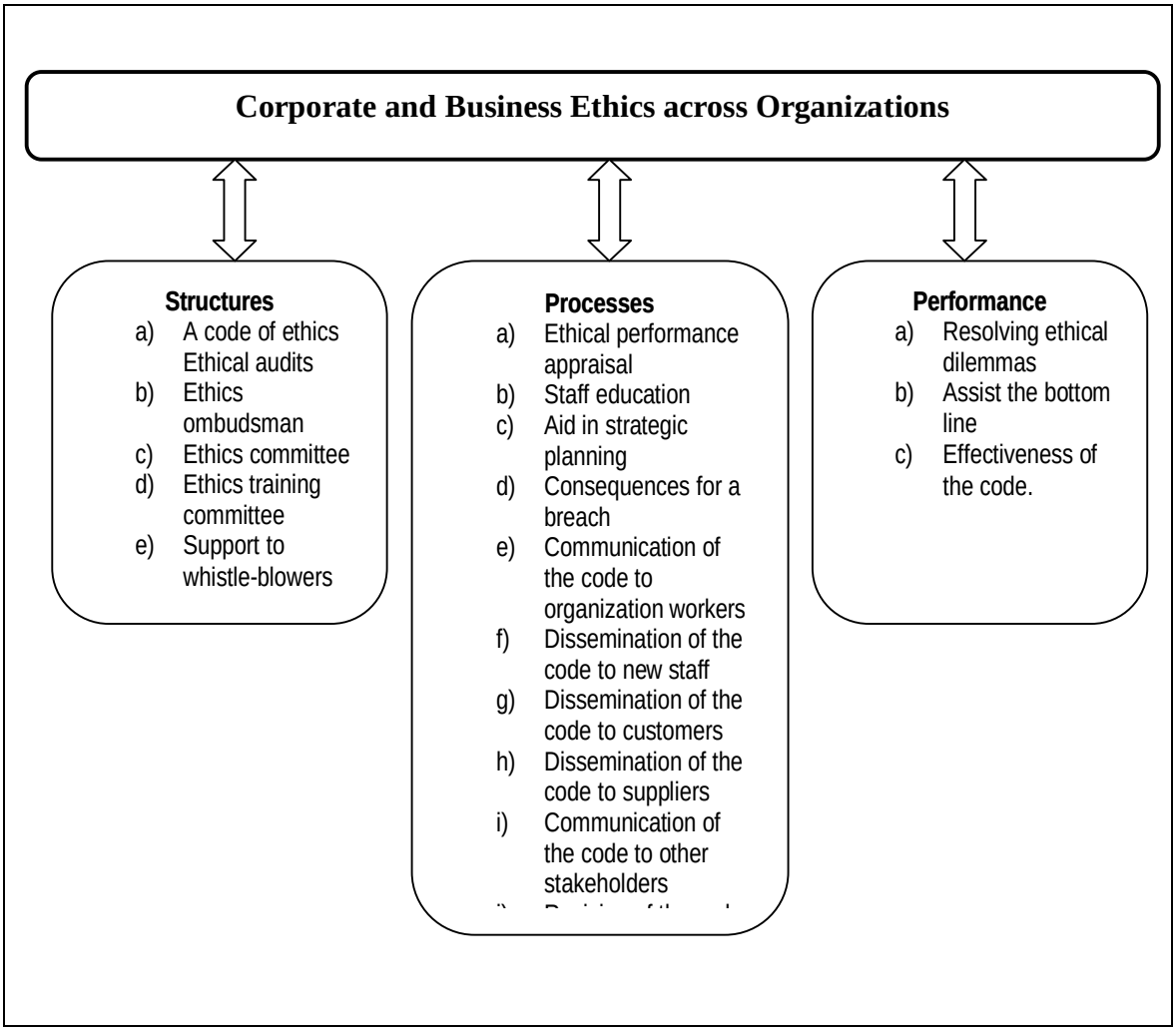

Figure 2.7 Structure, Processes and Performance

Githui (2012) found that the rise of supply chain management and procurement in Kenya has given rise to a number of unethical business practices that violates codes of conduct. For instance when tendering processes is not executed in a transparent manner, then suppliers may have chances and vantages to solicit for consideration by advancing

bribes and other forms of corruption. According to Gray et al (1997), transparency, fair treatment in bidding and awards of tenders, accountability and responsible purchasing and supply have a positive implication on procurement processes in any organization and could thus result into increased performance and delivery. This is not possible without employing ethical theories and principles which form the basis and foundations of ethical organizations (Githui, 2012).

To be fair during the bidding process, the Government, through the Public Procurement Oversight Authority (PPOA) has established guidelines when selecting a contractor. These guidelines include the hiring of minority owned companies which include female owned companies. The company has to have established Equal Opportunity hiring policies and must not have a history of unfair treatment of bidders (Fisher & Lovell, 2009). Another thing the government must do when selecting a contractor it must spread the wealth among the contractors. This assures that all contractors and their companies are fairly treated when being considered for a contract. The possibility is good that the smaller, minority: owned companies will eventually be chosen to work on a contract. Now all we have to do is make sure that the person that awards the contract is also fair and impartial, and not influenced by outside parties (Githui, 2012).

2.5 Critique of the Review

According to Amaeshi, Osuji and Nnodim, (2008) stakeholder theory of corporate social responsibility (CSR), the critical question is how to define or limit the scope of corporate social responsibility within the context of the operations of public sector organizations.

Many public sector organizations only adhere to one code of conduct or the other. These codes are usually voluntary initiatives by the organizations, either alone or in association with other firms in the same or similar industry and hence corporate social responsibility activities do not account as part of public sector organizations legal responsibility.

The conceptual framework of organizations' corporate and business ethics across organizations by Göran and Greg, (2011) is incomplete, and is, therefore, seen as a basis for further development and refinement in incorporating ethical structures, ethical processes, and ethical performance across organizations, which to our knowledge has not been raised before in organizational chain management. The inherent structures, processes, and performance require ongoing monitoring and revision of the business practices across organizations in order to determine whether the current relationships, business operations, and behaviours in and between organizations are ethical or unethical. On an overall level, the conceptual framework should be seen as a continuous and iterative process and therefore, a more comprehensive framework is required to address all the factors affecting the implementation of supply chain management ethics.

According to Githui (2012) there are some impediments associated with the current procurement management and thus ethical consideration could help re-engineer the whole system. Githui, (2012) study failed to address the major factors affecting implementation of supply chain management ethic in public sector organizations in Kenya. The theoretical literature and the empirical studies demonstrates that little emphasis has been given to the concept of supply chain management ethics within

public sector organizations and hence a more comprehensive study is required to effectively address the impediments to the application of supply chain management ethical practices.

2.6 Research Gaps

Ethical concerns are an important area in business practices and research endeavors in the field of organizational supply chain management. In particular, ethical concerns become evident in situations of asymmetric relationships across organizations. Previous studies restricted their research undertakings into ethical perspective but not the whole process such as Göranand & Greg, (2011) conceptual framework of corporate and business ethics across organizations; Amaeshi, Osuji & Nnodim, (2008) stakeholder theory of corporate social responsibility and Githui, (2012) Responsible purchasing and supply chain management in Kenya, with a critical analysis of the ethical considerations in procurement management. This demonstrates that there lacks of specific study that has successfully addressed the major determinants of supply chain management ethical practices in public sector organizations in Kenya and this has left a major knowledge gap on effective implementation of supply chain management ethical practices in public sector organizations in Kenya.

The bottom is that there is a need for a more comprehensive study that gives recommendations on how government ministries could successfully embrace the concept of supply chain management ethical practices through management of supplier relationship management, employee competence, management of market pressure,

application of health and safety measures and taking regulatory framework. This study will narrow its research undertakings into these factors where a major knowledge gap exists in order to strengthen determinants of supply chain management ethical practices in government ministries in Kenya.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1: Introduction

This chapter explores the methodological approach of the study and it comprises the design, population, sample and sampling technique, data collection and instrumentation, and data analysis and presentation.

3.2 Research Philosophy

My research interest were in supply chain management. I am fascinated by the process of discovering determinant of supply chain management ethical practices implementation in government ministries in Kenya. I believe that a descriptive and correlation research design can be used in gathering quantitative data, in describing the items that determine implementation of supply chain ethical practices in government ministries in Kenya.

3.3 Research Design

The study adopted a descriptive and correlation research design since the study intended to gather quantitative data that described the nature and characteristics of determinants of implementation of supply chain management ethical practices within government ministries in Kenya. According to Severna (2003), descriptive survey research design the type of design used to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a

situation. Kothari (2003) describes descriptive research as including surveys and fact-finding enquiries adding that the major purpose of descriptive research is description of the state of affairs as it exists at present. The study considered this design appropriate since it facilitated towards gathering of reliable data describing the true characteristics of determinants of supply chain management ethical practices within government ministries in Kenya.

Correlational research design comprises collecting data to determine whether, and to what extent, a relationship exists between two or more quantifiable variables. Correlational research uses numerical data to explore relationships between two or more variables. The degree of relationship is expressed in terms of a coefficient of correlation. If the relationship exists between variables, it implies that scores on one variable are associated with or vary with the scores on another variable. The exploration of relationship of the relationship between variables provides insight into the nature of the variables themselves as well as an understanding of their relationships. If the relationships are substantial and consistent, they enable a researcher to make predictions about the variables (Brewer, 2000).

Correlational research is aimed at determining the nature, degree, and direction of relationships between variables or using these relationships to make predictions. Correlational studies typically investigate a number of variables expected to be related to a major, complex variable. Those variables which are not found to be related to this major, complex variable are omitted from further analysis (Cohen & Manion, 1989).On

the other hand, those variables which are found to be related to this major, complex variables are further analyzed in a causal-comparative or experimental study so as to determine the exact nature of the relationship between them. In a correlational study, hypotheses or research questions are stated at the beginning of the study. The null hypotheses are often used in a correlational study. Correlational study does not specify cause-and-effect relationships between variables under consideration. It merely specifies concomitant variations in the scores on the variables (Brewer, 2000). The study applied correlational research since it aimed at determining the nature, degree, and direction of relationships between research variables. The study investigated the relationship that existed between the independent variables; Supplier Relationships, Employee competence, Market Pressure, Health and Safety, Regulatory Framework and constant of regression and Supply Chain Management Ethics which was the dependent variable.

3.4 Population

The target population comprised all the ministries in current Kenya government which totals to 42 according to inspectorate of State Corporation (2012). (See Appendix V with the list of Government Ministries as per the Year 2012). The study considered the 42 ministries since they facilitate execution of public services through their respective public enterprises to the general public. Most ministries have also been facing supply chain management ethical practices problems that have greatly hindered delivery of quality public services (Arthur, 2009). The ministries strategic location in Nairobi and organization structure made it suitable to gather reliable and accurate information that

reflected the major determinants of supply chain management ethical practices within government ministries in Kenya.

The study population comprised staff in procurement department, finance department and administration department in Job group K and above. The study targeted staff in these departments since they were the ones involved in execution of the ministry supply chain management practices and thus stood high chances of providing reliable information on determinants of supply chain management ethical practices in government ministries in Kenya. Secondly job group K in government ministries is considered as management level hence they possess requisite qualifications and information provided is reliable. The target population was divided into three categories as shown in table 3.1. Sampling frame is the source list, it is a group of items or respondents from which sample has to be drawn; it constitutes all the components of the target population (Dempsey, 2003). In this study, the sampling frame was a list of 21 ministries sourced from the Inspectorate of State Corporation.

Table 3.1 Target Respondents

Category	**Target Respondents**
Procurement Department	155
Finance Department	169
Administration Department	156
Total	**480**

Source; Inspectorate of State Corporation (2012)

3.5 Sample and Sampling Technique

The study applied a multistage sampling technique involving a combination of purposive and stratified random sampling techniques to select the sample size for the study. In multi-stage sampling, samples are selected by using combinations of different sampling methods .A multi-stage sampling technique is a sampling technique carried out in phases and usually involves more than one sampling method. Multi-stage sampling technique is usually carried out in large and diverse populations where sampling is done in two or more stages. The study considered this sampling technique since the respondents were obtained from different ministries and in different departments.

In a multi stage, sampling techniques the sample is taken in more than one step. The first selected sample units are called the primary units, and then a sample of subunits is selected from these primary units. In this study, purposive sampling was applied to select a total of 21 ministries and then stratified sampling technique was applied to group the respondents into three departments and finally simple random sampling was applied to select the individual respondents comprising the sample size for the study.

The study applied a non-probability sampling design by applying a purposive sampling technique to select a sample size of 21 ministries. Non-probability sampling represents a group of sampling techniques that help researchers to sele-ct units from a population that they are interested in studying. Collectively, these units form the sample that the researcher studies (Graham, 2003). According to Vause (2002), for

multi-purpose survey, the sample size should be determined on the basis of those variables in the sample that are likely to have greatest variability and if the likely proportion is not known, it can be assumed that 50% of the sample have the specified attribute i.e. the worst scenario. According to Mugenda and Mugenda (2008), the following formula in equation 1 can be used to determine the sample size when the population is less than 10,000.

$$n = \frac{Z^2 Pq}{e^2}$$

…… *Equation 1*

Where;

n = the desired sample size (if the target population is greater than 10,000)
z = the standard normal deviate at the required confidence level
P = the proportion in the target population estimated to have characteristics being measured
q =1-p
d =the level of statistical significance test

$$n = \frac{Z^2 Pq}{d^2} = \frac{(1.282)^2 (0.5)(0.5)}{(0.1)^2} = 41$$

Since the target population is less than 10,000, then the effective sample size will be:

$$nf = \frac{n}{1 + \frac{n-1}{N}} = \frac{41}{1 + \frac{41}{40}} = 21$$

This is 21 x 100 = 50%

42

The study then adopted purposive sampling technique to select a total of 21 ministries.

The study used a purposive sampling technique to select three departments from each of the 21 ministries. The main goal of purposive sampling is to focus on particular characteristics of a population that are of interest and facilitates collection of data for purposes of addressing the research questions. Purposive sampling helps in gathering accurate and reliable data since the chosen respondents' exhibit the right characteristics required to answer the research questions. The study considered a purposive sampling technique since implementation of supply chain management ethics a technical activity of procurement mangers and top organization management staff and hence non-probability sampling method like purposive sampling will help in selecting respondents with technical knowledge and experience on determinants of supply chain management ethical practices within government ministries in Kenya. The study applied a stratified sampling technique to stratify the respondents into three departments as; Procurement staff, Finance staff and Administrative staff. Simple random sampling was finally applied to select a sample of 30% of the population from each stratum leading to a total of 144 respondents. A sample size of 30% is justifiable. According to Graham (2002), 30% of the sample gives unbiased representation of all respondents' opinions in the target population and this assists in generalization of research findings when the study design is descriptive.

$$n = \frac{Z^2 Pq}{e^2} = \frac{(1.4325)^2 (0.5) (0.5)}{(0.05)^2} = 205.2064$$

$$nf = \frac{n}{} = \frac{205.2064}{} = 144 \text{ approximately}$$

$$1+\frac{n-1}{N} \qquad \frac{1+204.2064}{480}$$

This is 30%

Table 3.2: Sample Size

Ministry	**Procurement Dept.**	**Finance Dept.**	**Adm. Dept.**	**Total**
Public Health	2	3	4	
Medical Services	2	3	2	
Agriculture	2	2	2	
Gender	2	3	2	
Roads	2	2	2	
Works	2	3	2	
Finance	3	2	3	
Planning	2	3	3	
Tourism	2	2	2	
Immigration	3	3	2	
Special Programmes	2	3	2	
Labour	2	2	2	
Youth	3	2	3	
Trade	2	2	2	
Home Affairs	2	2	2	
Lands	2	3	2	
Local Government	2	2	2	
Wildlife	2	3	2	
Information	3	2	3	
Energy	2	2	2	
Environment	2	2	2	
Total	**45**	**52**	**47**	**144**

3.6 Data Collection Method

Data collection instrument is a device used to collect data in an objective and a systematic manner. For the purpose of research, data collection instruments can be

questionnaires, interviews, schedules and available records (Morris, 2001). In this study, the main data collection instruments were questionnaires containing both open- ended and closed-ended questions with the quantitative section of the instrument utilizing both a nominal and a Likert-type scale format. The Likert-type format was selected because according to Kiess and Bloomquist (2009), this format yields equal-interval data, a fact that allows for the use of more powerful statistics to test research variables. Questionnaires were preferred since according to Kothari (2006), the information obtained from questionnaires is free from bias and researchers' influence and thus accurate and valid data were gathered. The questions addressed by the questionnaires sought to find out factors influencing implementation of supply chain management ethical practices, in government ministries in Kenya. Primary data are the actual information that is obtained for the purpose of the research study. Primary data were gathered through the use of questioning method in form of a semi structured questionnaire (open and close-ended questions). The questionnaires were self, administered to a total of 144 respondents and later picked for data analysis.

3.7 Pilot Study

A pilot study was undertaken to pretest data collection instrument for validity and reliability. According to Sekeran (2003), a pilot study is necessary for testing the reliability of data collection instruments. Joppe (2000) explains reliability of research as determining whether the research truly measures that which it was intended to measure or how truthful the research results are. Pilot study is thus conducted to detect weakness in design and instrumentation and to provide accurate data for selection of a sample

(Cooper & Schindler, 2003). The validity of the questionnaires was determined using construct validity method. Construct validity is the degree to which a test measures an intended hypothetical construct (Cozby, 2001).Using a panel of "experts" familiar with the construct is a way in which this type of validity can be assessed; the experts can examine the items and decide what that specific item is intended to measure (Cozby, 2001).

The study used different groups of experts in the field of supply chain, management ethics and issued them with the questionnaires. The experts were required to assess if the questionnaires helps in establishing the determinants of supply chain, management ethical practices within government ministries in Kenya.The coefficient of the data gathered from the pilot study was computed with assistance of Statistical Package for Social Sciences (SPSS). A coefficient of above 0.5 was obtained and this indicated that the data collection instruments were valid (Zinbarg, 2005). The recommendations from the SCME experts and the pilot study respondents were used to improve on data collection instruments. Data validity played an important role towards generalization of the gathered data to reflect the true characteristics of the study problem.

The reliability of the questionnaires was determined using test-retest method. A reliable measurement is one that if repeated a second time gives the same results as it did the first time (Mugenda &Mugenda, 2008). Test-retest reliability is a measure of reliability obtained by administering the same test twice over a period of time to a group of individuals (Moskal&Leydens, 2000).The scores from Time 1 and Time 2 can then be

correlated in order to evaluate the test for stability over time. (Moskal&Leydens, 2000).Test-retest reliability is the degree to which scores are consistent over time, it indicates score variation that occurs from testing session as a result of errors of measurement (Cozby, 2001).The preliminary or first draft of questionnaires was given to a panel of five experts in the field of supply chain management. These experts were asked to review the instrument and make recommendations for improving its validity. These recommendations were then incorporated into a second draft of the instrument which was then given to a small sample of relevant professions. This pilot sample was asked to comment on the ease with which they understood and completed test items. Where relevant, these comments were incorporated into a third draft of the test instrument. This third draft was constituted the final test instrument where the open-ended questions on the survey instrument were analyzed qualitatively; that is, they were simply reported for each of the three groups of the respondents.

3.7.1 Reliability

The study conducted factor analysis to select a subset of variables from a larger set based on the original variables with the highest correlations with, the principal component factors. Reliability analysis was conducted using Cronbach's alpha to determine whether the data gathered on each variable had a significant relationship with the determinants of supply chain management ethical practices.

Reliability is the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the

results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable (Joppe, 2000).

Kirk and Miller (1986) identify three types of reliability referred to in quantitative research, which relates to: the degree to which a measurement, given repeatedly, remains the same the stability of a measurement over time; and the similarity of measurements within a given time period. Charles (1995) adheres to the notions that consistency with which questionnaire items are answered or individual's scores remain relatively the same can be determined through the test-retest method at two different times. This attribute of the instrument is actually referred to as stability. If we are dealing with a stable measure, then the results should be similar. A high degree of stability indicates a high degree of reliability, which means the results are repeatable.

Joppe, (2000) detects a problem with the test-retest method which can make the instrument, to a certain degree, unreliable. She explains that test-retest method may sensitize the respondent to the subject matter, and hence influence the responses given. Similarly, Crocker and Algina (1986) note that when a respondents answer a set of test items, the scores obtained represent only a limited sample of behaviour. As a result, the scores may change due to some characteristic of the respondent, which may lead to errors of measurement. These kinds of errors reduced the accuracy and consistency of the instrument and the test scores. Hence, it is the researcher's responsibility to assure high consistency and accuracy of the tests and scores (Golafshani, 2003). To measure the reliability of the gathered data, Cronbach's alpha was applied.

Cronbach's α(alpha) is a coefficient of internal consistency. Suppose that we measure a quantity which is a sum of K components (*K-items* or *testlets*): $X = Y_1 + Y_2 + \cdots + Y_K$. Cronbach's α is defined as

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum_{i=1}^{K} \sigma_{Y_i}^2}{\sigma_X^2}\right)$$

where σ_X^2 the variance of the observed total test scores, and $\sigma_{Y_i}^2$ the variance of component *i* for the current sample of persons.

If the items are scored 0 and 1, a shortcut formula is[4]

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum_{i=1}^{K} P_i Q_i}{\sigma_X^2}\right)$$

where P_i is the proportion scoring 1 on item *i*, and $Q_i = 1 - P_i$. This is the same as KR-20.

Alternatively, Cronbach's α can be defined as

$$\alpha = \frac{K\bar{c}}{(\bar{v} + (K-1)\bar{c})}$$

where K is as above, $\bar{v}$ the average variance of each component (item), and $\bar{c}$ the average of all covariances between the components across the current sample of persons (that is, without including the variances of each component).

A commonly accepted rule of thumb for describing internal consistency using Cronbach's alpha is as follows.

Cronbach's alpha	**Internal consistency**
$\alpha \geq 0.9$	Excellent (High-Stakes testing)
$0.7 \leq \alpha < 0.9$	Good (Low-Stakes testing)
$0.6 \leq \alpha < 0.7$	Acceptable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

However, a greater number of items in the test can artificially inflate the value of alpha and a sample with a narrow range can deflate it, so this rule of thumb should be used with caution:

3.8 Data Analysis and Presentation

The study generated both quantitative and qualitative data. Descriptive statistics data analysis method was applied to analyze numerical data gathered using closed-ended questions. Descriptive analyses are important since they provide the foundation upon which correlational and experimental studies emerge; they also provide clues regarding the issues that should be focused on leading to further studies (Mugenda&Mugenda, 2008). Descriptive statistics helped to compute measures of central tendencies and measures of variability in order to determine how independent variables affect the dependent variable (Bell, 2007). The Statistical Package for Social Sciences (SPSS) computer software was used for analysis of study variables. SPSS Version 17 has got

descriptive statistics features that assist in variable response comparison and gives clear indication of response frequencies. Statistical Package for Social Sciences version 17, offers extensive data handling capabilities and numerous statistical analyze procedures that analyses small to very large data statistics (Bell, 2007).

The data were cleaned, coded, categorized per each of the research variables. The study conducted factor analysis to select a subset of factors from a larger set, based on which original factors have the highest correlations using the principal component method. Reliability analysis was conducted using Cronbach's alpha to determine whether the data gathered on each variable had a significant relationship with what was being measured. Further inferential statistics were done using multiple regression correlation analysis. Multiple Linear Regression model was employed to establish the significance of the independent variables on the dependent variable. Pearson correlation was applied to establish the strength of the linear relationship between each of the independent variables and the dependent variable. The findings were presented using tables, since tables are user friendly and show response frequencies as well as percentages of the respondents' opinions on determinants of supply chain management ethical practices in government ministries in Kenya.

The following multiple regression model as shown by equation 2 was applied:

$$Y= B0 + B1X1 + B2X2 + B3X3 + B4X4 + B5X5 + \acute{\varepsilon}. \quad \text{.....Equation 2}$$

Where:

Y=Supply Chain Management Ethical practices (Dependent Variable)

X1 = Supplier Relationship Management (Independent Variable)

X2 = Employee Competence (Independent Variable)

X3 =Market Pressure (Independent Variable)

X4= Health and Safety (Independent Variable)

X5=Regulatory Framework (Independent Variable)
B0 = Constant of Regression (Independent Variable)
έ. = Error Term

CHAPTER FOUR

4.0 DATA ANALYSIS INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter describes the processes, techniques and procedures applied to analyze, present, and interpret data gathered using the questionnaires. The chapter explains quantitative data analysis, cross tabulation tables, percentages and means scores.

4.2 Response Rate

Simple random sampling was used to select a sample of 30% of the population from each stratum translating to a total of 144 questionnaires being administered to various government ministries in Kenya. 139 questionnaires were returned. Five questionnaires were not returned from these ministries namely Agriculture, Special Programme and Home affairs, Department of finance, procurement and administration, 2, 1, 2 respectively. Therefore the response rate is computed as:

$$\frac{139}{144} \times 100 = 96.5\%$$

The high response rate (96.5%) could be attributed to the researcher personally administering the data collection tools and making a close follow-up with the respondents. According to Geus (2004), self-administered questionnaire attract low non-response rate and influence gathering of accurate and reliable information on the study problem.

4.3 Pilot Study Results

Pilot study conducted to pretest the tool for data collection. In twenty ministries the response was 18/20 x 100 = 90%. Four questionnaires were administered in five ministries randomly selected. The questionnaire tool returned a highly acceptable score since all coefficients are above 0.75.An internal consistency technique using Cronbach's alpha was then applied to measure the reliability of all the questionnaires issued to different groups of pilot respondents. According to Zinbarg (2005), Cronbach's alpha is a coefficient of reliability that gives an unbiased estimate of data generalizability. An alpha coefficient higher than 0.75 indicates that the gathered data have a relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population (Joppe, 2000). Data reliability played an important role towards generalization of the gathered data to reflect the true characteristics of the study problem (Zinbarg, 2005). The result are presented in the following table 4.1.

Table 4.1 Reliability Analysis

Reliability Statics	**Cronbach's Alpha Value**
Supplier Relationship management (SCM_2)	0.76
Employee Competence (SCM_3)	0.780
Market Pressure (SCM_4)	0.80
Health and Safety (SCM_5)	0.916
Regulatory Framework (SCM_6)	0.742

4.4 Respondents Background Information

4.4.1 Respondents' Experience

The study found out that it was important to determine how long the respondents had been in working in the government ministries. This was to ascertain to what extent their responses could be relied upon to make conclusions for the study based on their working experience. From the study findings as indicated in figure 4.1, majority (50.4%) of the respondents' years of work was 11-15 years, 24.5% 6-10 years, 17.3% had worked for 16 years, and above, and finally 7.9% of the respondents had worked for less than 5 years as shown in figure 4.1. This indicated that majority of the respondents had worked in the government ministries for a long time and thus understood technical issues on factors determining implementation of supply chain management ethical practices in the ministry. This was in tandem with findings by Braxton (2008) that respondents with a high working experience assist in providing reliable data on the sought problem since they have technical experience on the problem being investigated by the study.

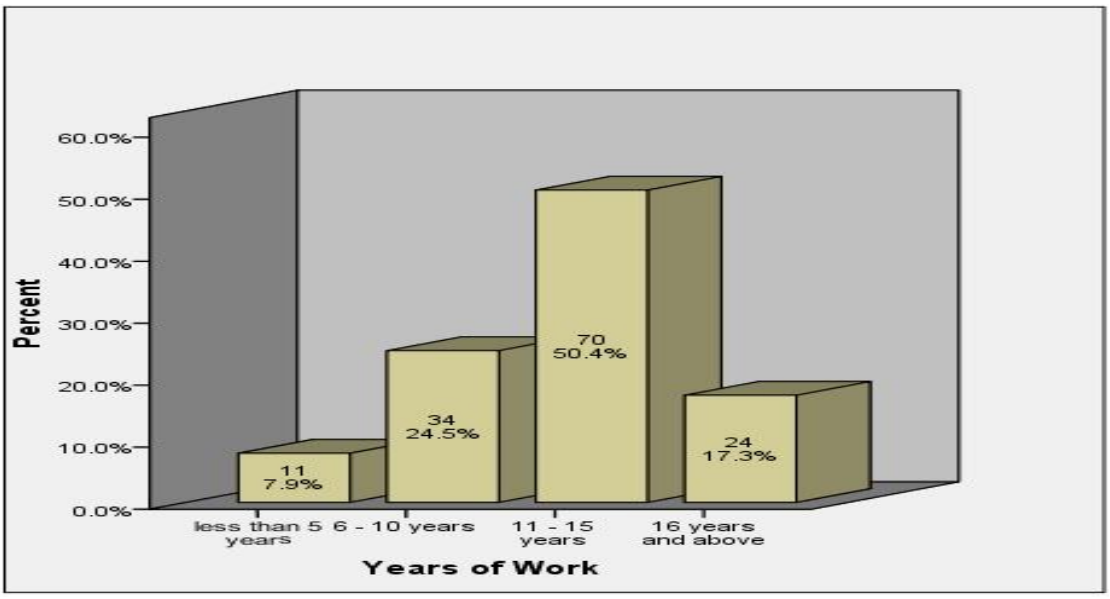

Figure 4.1 Respondents' Experience

4.4.2 Age of Respondents

The study further found it was important to establish the age of the respondents in order to determine that the data gathered reflected the opinions of all employees on supply chain management in the organization. From the study findings as indicated in figure 4.2, majority (41.7%) of the respondents were in the age category of 41-50 years, followed by 37.4% in the age category of 31-40 years, then 12.2% with the age category of 51 years and above and finally 8.6% in the age category of 18-30 years as indicated in figure 4.2.

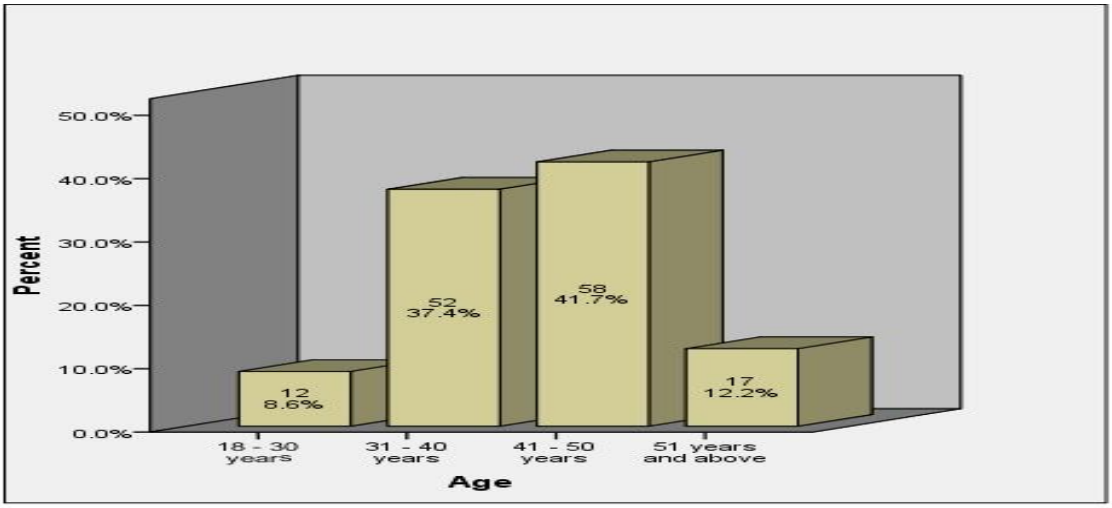

Figure 4.2 Age of Respondents

4.4.3 Education Level

The study sought to establish the highest education level held by the organization employees, this was to ascertain if they were equipped with relevant knowledge and skills on supply chain management ethical practices. From the study findings as indicated in figure 4.3, majority (75%) of the respondents had professional education qualifications like Certified Public Accountants and only 25% had Charted Institute of Purchasing and Supplies Management as shown in figure 4.3. This demonstrated that most of the respondents were not professionals in supply chain management related field since most of the respondents were qualified professionals in accounting field. This echoed findings by Kapila (2008) that lack of certified supply chain management professionals is a critical problem that affects supply chain management ethical practices in many public sector organizations.

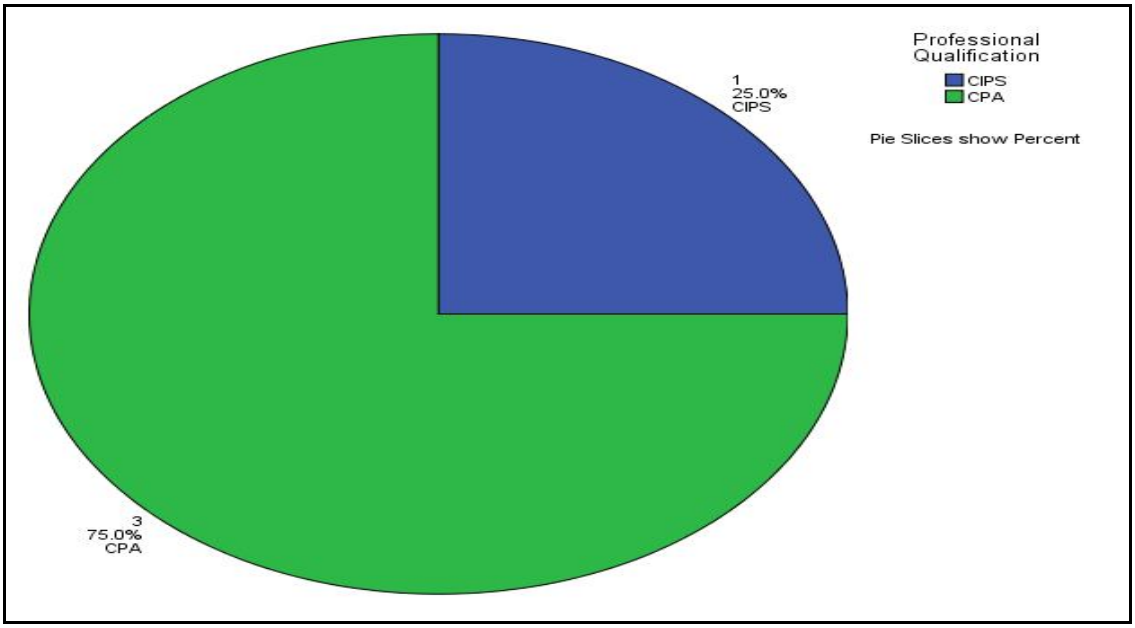

Figure 4.3 Education Level of respondents

4.4.4 Respondents Departments

The study further found that it was important to determine the respondents departments in order to establish that if the respondents from the crucial ministries departments concerned with the implementation of supply chain management ethical practices were included in the study. From the study findings as indicated in figure 4.4, majority (36.7%) of the respondents were from the procurement department, followed by 35.3% of the respondents from finance department and finally 28.1% of the respondents were from administration department. This demonstrated that majority of the respondents from the three departments participated in the study and this was a clear indication that data were gathered from the respondents with technical knowledge and skills on supply chain management ethical practices.

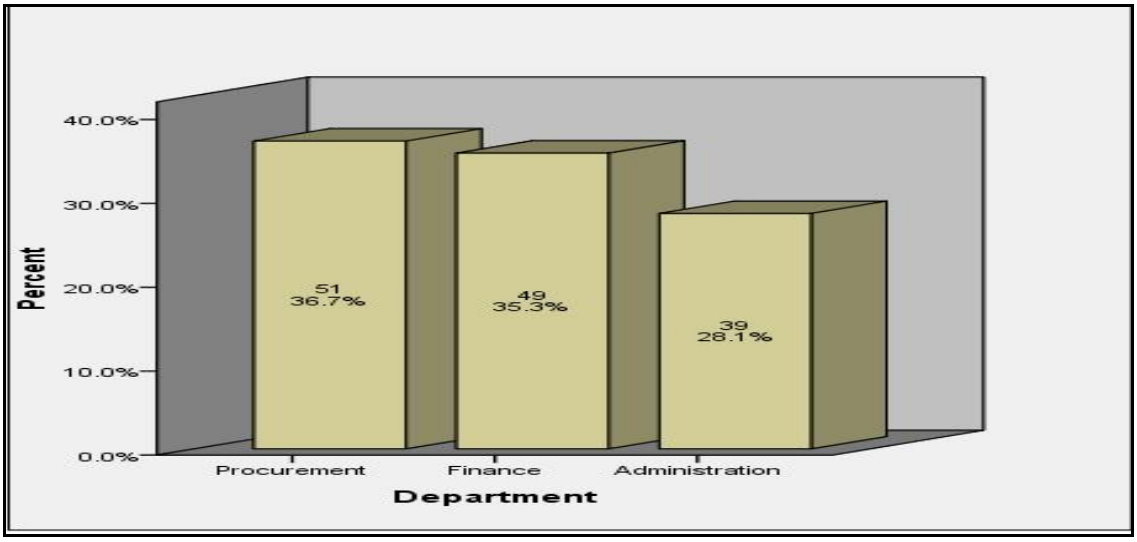

Figure 4.4 Respondents' Department

4.5 Requisite Analysis

4.5.1 Reliability and Factor Analysis

Factor analysis was used to reduce a large number of variables to a smaller number of factors for modeling purposes and to select a subset of variables from a larger set, based on which original variables had the highest correlations with the principal component factors. Reliability analysis was conducted using Cronbach's alpha to determine whether the data gathered on each variable had a significant relationship with determinants of supply chain management ethical practices. Factor loadings are the correlations between the original variables and the factors, and the key to understanding the nature of a particular factor. Factor analysis was also used to find factors/item among observed variables in order to reduce the number of variables. Factor analysis groups variables with similar characteristics together (Hare, 1998). The study used factor analysis to

produce a small number of factors from a large number of variables which were capable of explaining the observed variance in the larger number of variables. The produced factors were then used for further analysis. Factor loading is the correlation between the original variables and the factors, and the key to understanding the nature of a particular factor. Squared factor loadings indicate what percentage of the variance in an original variable is explained by a factor (Rummel, 2002).

4.5.1.1 Factors Loading for the Construct Supplier Relationship Management

The table 4.2 shows Cronbach's alpha values of all items before and after extraction of item with a factor loadings value of less than 0.4. Factor analysis helped to select a subset of variables from a larger set, based on which original variables had the highest correlations with the principal component factors. Table 4.1 indicates that the Cronbach's alpha value of all supplier relationship management items remained as 0.777 since all the item had a factor loading value of more than 0.4 and there were no item which were removed. According to Kaiser (1974), factor loading values that are greater than 0.4 should be accepted and values below 0.4 should lead to collection of more data or help the researcher to determine the values to include. Values between 0.5 and 0.7 are mediocre, values between 0.7 and 0.8 are good, values between 0.8 and 0.9 are great, and values above 0.9 are superb. Kaisen (1974) recommends 0.4 as minimum acceptable values. Since the entire item had a factor loading of above 0.40, all the supplier collaboration items were retained by the study and used for subsequent data analysis.

Since the factor loading values obtained were between 0.528 and 0.752, factor analysis was appropriate for the data and there were no items that were discarded. Table 4.2

shows that after retaining all the item, further reliability analysis gave similar Cronbach's alpha value of 0.777 and this demonstrated that the obtained data on the entire supplier collaboration item was reliable since the obtained Cronbach's alpha value of 0.777was above 0.60. This concurred with Zinbarg (2005) that an alpha coefficient higher than 0.60 indicates that the gathered data had relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population on determinants of supply chain management ethical practices in government ministries. The study, therefore, considered all the seven item notably organization commitment in payment of suppliers**,** supplier development**,** quality of goods and services**,** supplier commitment**,** communication with suppliers**,** supplier performance and supplier collaboration to be reliable in determining how supply collaboration affects implementation of supply chain management ethical practices in government ministries in Kenya.

Table 4.2 Factors Loading for the Construct Supplier Relationship Management

α before	Items	Factor loadings	α after
.777	1) Organization commitment in payment of suppliers	.752	.777
	2) Supplier / Buyer Development	.727	
	3) Quality of goods and services	.692	
	4) Supplier Commitment	.683	
	5) Communication with suppliers	.606	
	6) Supplier Performance	.574	
	7) Supplier Collaboration	.528	

4.5.1.2 Factors Loading for the Construct Employees' Competence

Table 4.3 shows the Cronbach's alpha values of employee's competence and factor loading of the 7 employees' competence item. The higher the absolute value of the loading, the more the factor contributes to the variable. Table 4.2 illustrates that the Cronbach's alpha value of employees competency before and after removal of item with a factor loading value of less than 0.4. Table 4.2 shows that the Cronbach's alpha value changed from 0.581 to 0.632 after the removal of item with factor loadings of less than 0.40. These item included business ethic skills with factor loadings of 0.362 and employees job description with factor loadings of 0.158. According to Kaiser (1974), factor loading values that are greater than 0.4 should be accepted and values below 0.4 should be rejected. Kaisen (1974) recommend 0.4 as minimum acceptable values. The

study, therefore, considered the five items namely; efficiency of procurement functions**,** knowledge skills on supply chain management functions**,** employee qualifications**,** employees training on professional Ethical Practices and rate of employee training as the most reliable employees' competency items. The new Cronbach's alpha value of 0.632 demonstrated that the obtained data on all the supplier collaboration indicators were reliable and this satisfied Zinbarg (2005), that an alpha coefficient higher than 0.60 indicates that the gathered data on employees competence had relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population to determine implementation of supply chain management ethical practices in government ministries.

Table 4.3 Factors Loading for the Construct Employees' Competence

α before	Items	Factor loadings	α after
.581	1) Efficiency of procurement functions	.743	.632
	2) Knowledge & skills on SCM functions	.724	
	3) Employee qualifications	.716	
	4) Employees training on professional Ethical Practices	.483	
	5) Rate of employee training	.446	
	6) Business ethic skills	.362	
	7) Employees job description	.158	

4.5.1.3 Factors Loading for the Construct Market Pressure

On Market Pressure factors, the reliability and factor analysis results were as presented in table 4.4. This shows Cronbach's alpha values before and after removal of item with a factor loading value of less than 0.4. It shows that the Cronbach's alpha value changed from 0.698 to 0.804 after the removal of item with factor loadings of less than 0.40. These item included; private corporate sector, nature of industry, public community sector operations, awareness of company and its values proposition and information access. This concurred with Kaiser (1974) factor loading values that are greater than 0.4. Should be accepted and values below 0.4 should be rejected. The new Cronbach's alpha value of, 0.804 demonstrated that the obtained data on all the market pressure item were

reliable and this satisfied Zinbarg (2005) that an alpha coefficient higher than 0.60 indicates that the gathered data had relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population on how market pressure determines supply chain management ethical practices in government ministries.

Table 4.4 Factors Loading for the Construct Market Pressure

α before	**Items**	**Factor loadings**	**α after**
.698	1) Relationship with individual customers	.838	.804
	2) Demand and supply of goods and services	.742	
	3) Leadership accountability	.689	
	4) Competition	.639	
	5) Political/ Policy Conduct Sector	.628	
	6) Interest in company by target market	.624	
	7) Suppliers influence	.600	
	8) Private Corporate Sector	.328	
	9) Nature of Industry	.061	
	10) Public Community Sector Operations	.033	
	11) Awareness of company and its values proposition	-.015	
	12) Information Access	-.011	

4.5.1.4 Factors Loading for the Construct Health and Safety Factors

On health and safety, the reliability and factor Analysis results were as presented in table 4.5.These presents health and safetyCronbach's alpha values before and after removal of item with a factor loading value of less than 0.4. It shows that the Cronbach's alpha value changed from 0.722 to 0.751 after the removal of item with factor loadings of less than 0.40. The item removed included; assessment of the environmental impact of organization activities**,** goods storage and handling procedure**,** quality improvement activities**,** and training on safety measures and health and safety policies.

This was in agreement with Andy (2005), that factor loading values that are greater than 0.4 should be accepted and values below 0.4 should be rejected. The new Cronbach's alpha value of 0.751 indicated that, they obtained data on all the health and safety items were reliable and this satisfied Zinbarg (2005), that an alpha coefficient higher than 0.60 indicates that the gathered data had relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population on how health and safety determines supply chain management ethical practices in government ministries.

Table 4.5 Factors Loading for the Construct Health and Safety Factors

α before	Items	Factor loadings	α after
.722	Evaluation of quality of procured goods and services	.710	.751
	Proper disposal procedure	.640	
	Health and safety measures	.615	
	Employees welfare program	.608	
	Emergency measures	.595	
	Identification of substandard goods	.586	
	Monitoring of service delivery process	.583	
	Risk control measures	.382	
	Assessment of the environmental impact of organization activities	.302	
	Goods storage and handling procedure	.293	
	Quality improvement activities	.254	
	Training on safety measures	.233	
	Health and Safety policies	.145	

4.5.1.5 Factors Loading for the Construct Regulatory Framework Factors

On Regulatory Framework the reliability and factor Analysis Results are presented in table 4.6.Regulatory framework factors Cronbach's alpha values before and after removal of item with a factor loading value of less than 0.4 are presented. The analysis results indicate that the Cronbach's alpha value changed from 0.574 to 0.631 after the removal of item with factor loadings of less than 0.40. The item removed included; level of procurement regulation compliance and procurement policies are up-to-date. The

removal of item with a factor loadings value of less than 0.4 is in line with Andy (2005), who argues that factor loading values that are greater than 0.4 should be accepted and values below 0.4 should be rejected. The new Cronbach's alpha value of 0.631 indicated that the obtained data on all the Regulatory Framework items were reliable and this satisfied Zinbarg (2005) that an alpha coefficient higher than 0.60 indicates that the gathered data had relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population on how regulatory framework factors determines supply chain management ethical practices in government ministries.

Table 4.6 Factors Loading for the Construct Regulatory Framework Factor

α before	**Items**	**Factor loadings**	**α after**
.574	1) There is transparency and accountability	.776	.631
	2) Procurement Procedures are followed to the letter	.678	
	3) No cases of loss of procurement funds	.656	
	4) Procurement regulations awareness	.545	
	5) There is efficiency in procurement process	.530	
	6) Level of procurement regulation compliance	.180	
	7) Procurement Policies are up to date	.017	

4.5.1.6 Factors Loading for the Construct Supply Chain Management Ethical Practices

On Supply Chain Management ethical practices, the reliability and factor analysis results are presented in table 4.7.Itshows that Supply Chain Management ethical practices Cronbach'**s** alpha values before and after removal of item with a factor loading value of less than 0.4. The Cronbach's alpha value changed from 0.545 to 0.638 after the removal of item with factor loadings of less than 0.40. The item removed included; presence of corporate responsibility standards**,** presence of integrity capacity and procurement process is influence by market. The removal of item with a factor loading value of less than 0.4 was in tandem with Andy (2005) that factor loading values that are greater than 0.4 should be accepted and values below 0.4 should be rejected. Since the entire item had a factor loading of 0.40 and above, the entire supply chain item were retained by the study and used for subsequent data analysis. The new Cronbach's alpha value was thus 0.638 and this indicated that the obtained data on all the supply chain management items was reliable and this satisfied Zinbarg (2005) that an alpha coefficient higher than 0.60 indicates that the gathered data had relatively high internal consistency and could be generalized to reflect opinions of all respondents in the target population on how the respondents rated the SCM ethical practices item in government ministries in Kenya.

Table 4.7 Factors Loading for the Construct Supply Chain Management Ethical Practices

α before	Items	Factor Loading	α after
.545	1) High level of regulation compliance	.782	.638
	2) There is high corporate integrity	.706	
	3) Presence of effective health and safety measures	.642	
	4) There is relationship between suppliers and supply relationship	.509	
	5) Strong organization culture	.494	
	6) There is effective production and distribution practices	.374	
	7) Presence of corporate responsibility standards	.270	
	8) Presence of integrity capacity	.159	
	9) Procurement process is influence by market	.084	

4.5.2 Multicollinearity

According to Sekaran (2003), a correlation of +1 implies a perfect positive linear relationship between variables. As presented in table 4.35, all the independent variables had a strong positive correlation with implementation of supply chain management

ethical practices in government ministries which are the dependent variable (p-values < 0.01). Table 4.8 demonstrates that supplier relationship management was found to have a statistically significant strong positive correlation with implementation of supply chain management ethical practices (r=0.442, p-value = 0.000). Employees' competence had strongest positive correlation with implementation of supply chain management ethical practices (r = 0.932). This correlation was found to be statistically significant at 93% significance level (p-value = 0.000). Market pressure had a negative correlation with implementation of supply chain management ethical practices (r=-.227). The relationship was found to be statistically significant at -22.7% significance level (p-value = 0.000). Health and safety had a negative correlation with implementation of supply chain management ethical practices (r=-.076). Regulatory framework had a positive correlation with implementation of supply chain management ethical practices (r=.350).

The correlation analysis results implies that supplier relationship management, employees' competence and regulatory framework had the greatest influence in the implementation of supply chain management ethical practices in government ministries. Factors such as market pressure and health and safety did not directly influence implementation of supply chain management ethical practices in government ministries when supplier relationship management, employees' competence, and regulatory framework issues were being complied.

The highest correlation value of (r = 0.932) of employees competence was as result of a higher variance inflation factor of 200.826 and higher beta coefficient of .420. This

implied that employees' competence negatively affected the correlations of other independent variables leading to a case of multicollinearity. Multicollinearity is a problem in multiple regressions that develops when one or more of the independent variables are highly correlated with one or more of the other independent variables. If one independent variable is a perfect linear combination of the other independent variables; that is, if it is regressed on the other independent variables and the resulting R2 = 1.0, then the matrix of intercorrelations among the independent variables is singular and there exists no unique solution for the regression coefficients (Ethington, 2012). Multicollinearity increases the standard errors of the coefficients. Increased standard errors in turn means that coefficients for some independent variables may be found not to be significantly different from 0, whereas without multicollinearity and with lower standard errors, these same coefficients might have been found to be significant and the researcher may not have come to null findings in the first place (Schroeder,1990). The higher correlation value implied that employees' competence affected implementation of supply chain management Ethical Practices at 93% significance level. This was found to have a negative influence on correlations values of other independent variables since other variables also affected implementation of supply chain management Ethical Practices. According to Ethington (2012) if there are two or more variables that will have a VIF around or greater than 5, one of these variables must be removed from the regression model. The study, therefore, removed the employees' competence and conducted further regression analysis using other variables.

Table 4.8 Correlations

Correlations							
		SCM_1	**SCM_2**	**SCM_3**	**SCM_4**	**SCM_5**	**SCM_6**
SCM_1	Pearson Correlation	1	.442**	.522**	.195*	.257**	.414**
	Sig. (2-tailed)		.000	.000	.021	.002	.000
	N	139	139	139	139	139	139
SCM_2	Pearson Correlation	.442**	1	.932**	-.312**	.172*	.397**
	Sig. (2-tailed)	.000		.000	.000	.043	.000
	N	139	139	139	139	139	139
SCM_3	Pearson Correlation	.522**	.932**	1	-.227**	.241**	.478**
	Sig. (2-tailed)	.000	.000		.007	.004	.000
	N	139	139	139	139	139	139
SCM_4	Pearson Correlation	.195*	-.312**	-.227**	1	-.076	-.068
	Sig. (2-tailed)	.021	.000	.007		.377	.424
	N	139	139	139	139	139	139
SCM_5	Pearson Correlation	.257**	.172*	.241**	-.076	1	.350**
	Sig. (2-tailed)	.002	.043	.004	.377		.000
	N	139	139	139	139	139	139
SCM_6	Pearson Correlation	.414**	.397**	.478**	-.068	.350**	1
	Sig. (2-tailed)	.000	.000	.000	.424	.000	
	N	139	139	139	139	139	139
**. Correlation is significant at the 0.01 level (2-tailed).							
***. Correlation is significant at the 0.05 level (2-tailed)**							

4.6 Descriptive Analysis

The purpose of descriptive statistics is to enable the researcher to meaningfully describe a distribution of scores or measurements using indices or statistics. The type of statistics or indices used depends on the type of variables in the study and the scale of measurement. Measures of central tendency are used to determine the typical or expected score or measure from a sample of measurements or a group of scores in a study. Measures of central tendency are used to give expected summary statistics of variables being studied. The commonly used measures of central tendency are mode, mean and median. The researcher in this study used mean/average and percentages to present the study findings on factors determining management ethical practices in government ministries.

4.6.1Contsruct Supplier Relationship Management

Supplier Relationship Management is an all-inclusive approach to managing the affairs and interactions with the organizations that supply goods and services. These include communications, business practices, negotiations, methodologies, and systems that are used to establish and maintain a relationship with a supplier. Supplier relationship management enhances effective communication between procurement management staff and suppliers of various goods and services in government ministries and this supports implementation of ethical business practices in the supply chain. Since suppliers are key stakeholders of the government ministries, building and maintaining good supplier relationship management practices determines the extent to which supply chain management ethical practices are implemented in the public sector.

On the extent to which the supplier relationship management influenced the determinants of supply chain management ethical practices in government ministries, the study asked the respondents to indicate the extent to which supply relationship management issues were handled within the ministries. A Likert scale of 1 to 5 (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent) was used. The key issues dealt with included; supplier collaboration, communication with suppliers, supplier collaboration, supplier performance, quality of goods and services, supplier commitment and organization commitment in payment of suppliers.

The findings were presented in table 4.9.On the extent to which supplier collaboration influenced supplier relationship management to affect the implementation of supply chain management ethical practices in government ministries,0.7percent of the respondents indicated that supplier collaboration did not affect the implementation of supply chain management ethical practices, 2.9percent of the respondents indicated that supplier collaboration affected implementation of supply chain management ethical practices to a small extent, 45.3percent of the respondents indicated that supplier collaboration affected implementation of supply chain management ethical practices to a moderate extent,48.9 percent of the respondents indicated that supplier collaboration affected implementation of supply chain management ethical practices to a large extent and 2.2percent of the respondents indicated that supplier collaboration affected implementation of supply chain management ethical practices to a very large extent. This indicated that supplier collaboration practices were not undertaken in many government ministries and this hindered implementation of Supply Chain Management

ethical practices. These finding echoed findings by Hunt (2009) that low level of supplier collaboration in public sector organizations creates unsupportive environment for the implementation of ethical supply chain management practices.

On communication with suppliers, 1.4 percent of the respondents indicated that there was no communication with supplier, 5.8 percent of the respondents indicated that there was communication with supplier at a small extent, 74.1 percent of the respondents indicated that there was communication with supplier at a moderate extent, 16.5 percent of the respondents indicated that there was communication with supplier at a Large extent, 2.2 percent of the respondents indicated that there was communication with supplier at a very large extent which influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya. These was in agreement with Göran and Greg, (2011) that regular communication with suppliers and maintenance of effective communication systems that helped in monitoring suppliers activities plays a key role towards supporting implementation of supply chain management Ethical Practices in many organizations.

On supplier performance, 2.2 percent of the respondent indicated that supplier performance did not influence the implementation of Supply Chain Management Ethical Practices in government ministries, 7.9 percent of the respondents indicated that supplier performance influenced the implementation of Supply Chain Management Ethical Practices in government ministries to a small extent, 43.2 percent of the respondents indicated that supplier performance influenced the implementation of

Supply Chain Management Ethical Practices in government ministries to a moderate extent, 45.3 percent of the respondent indicated that supplier performance influenced the implementation of Supply Chain Management Ethical Practices in government ministries to a large extent while 1.4 percent of the respondent indicated that supplier performance influenced the implementation of Supply Chain Management Ethical Practices in government ministries to a very large extent. This concurred with Solomon and Martin (2008) that implementation of effective supplier performance management systems helps in monitoring suppliers' activities and this promotes implementation of Supply Chain Management Ethical Practices in organizations.

On quality of goods and services,0.1 percent of the respondents indicated that the quality of goods and services offered by the suppliers did not influence the implementation of Supply Chain Management Ethical Practices to a large extent in government ministries in Kenya, 5.0 percent of the respondents indicated that the quality of goods and services offered by the suppliers influenced the implementation of Supply Chain Management Ethical Practices to a small extent in government ministries in Kenya, 33.8 percent of the respondents indicated that the quality of goods and services offered by the suppliers influenced the implementation of Supply Chain Management Ethical Practices to a moderate extent in government ministries in Kenya, 56.1 percent of the respondents indicated that the quality of goods and services offered by the suppliers influenced the implementation of Supply Chain Management Ethical Practices to a large extent in government ministries in Kenya while 5.0 percent of the respondents indicated that the quality of goods and services offered by the suppliers influenced the implementation of

Supply Chain Management Ethical Practices to a very large extent in government ministries in Kenya. This was in agreement with Lea (2009) that application of effective quality management systems encourages delivery of quality goods and services by the suppliers and this supports implementation of Supply Chain Management Ethical Practices.

On Supplier commitment, 0.7percent of the respondents indicated that supplier commitment did not influence the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya, 7.2percent of the respondents indicated that supplier commitment influenced the implementation of Supply Chain Management Ethical Practices to a small extent in government ministries in Kenya, 48.2 percent of the respondents indicated that supplier commitment influenced the implementation of Supply Chain Management Ethical Practices to a moderate extent in government ministries in Kenya, 41.7percent of the respondents indicated that supplier commitment influenced the implementation of Supply Chain Management Ethical Practices to a large extent in government ministries in Kenya while 2.2percent of the respondents indicated that supplier commitment influenced the implementation of Supply Chain Management Ethical Practices to a very large extent in government ministries in Kenya. This echoed Fisher and Lovell (2009) that increased level of supplier commitment leads to implementation of Supply Chain Management Ethical Practices in organizations.

The study further found that, 0 percent of the respondents indicated the organization commitment in payment of suppliers did not have influence on the implementation of

Supply Chain Management Ethical Practices in government ministries in Kenya, 5.8 percent of the respondents indicated the organization commitment in payment of suppliers influenced the implementation of Supply Chain Management Ethical Practices to a small extent in government ministries in Kenya, 35.3 percent of the respondents indicated the organization commitment in payment of suppliers influenced the implementation of Supply Chain Management Ethical Practices to a moderate extent in government ministries in Kenya, 55.4 percent of the respondents indicated the organization commitment in payment of suppliers influenced the implementation of Supply Chain Management Ethical Practices to a large extent in government ministries in Kenya while 3.6 percent of the respondents indicated the organization commitment in payment of suppliers influenced the implementation of Supply Chain Management Ethical Practices to a very large extent in government ministries in Kenya. These findings supported findings by Githui (2012) that commitment in payment of suppliers is a major problem affecting implementation of Supply Chain Management Ethical Practices in government ministries in Kenya.

Table 4.9, therefore, indicates that majority of the respondents with an average percentage of 46.65, 43.98, and 2.76 rated all the supplier relationship management factors to influence the implementation of supplier management to a moderate extent, a large extent, and a very large extent respectively. Further, majority (93.39%) of the respondents indicated that the major factors influencing supply-supplier relationship management affect implementation of Supply Chain Management Ethical Practices to a large extent included; supplier collaboration, communication with suppliers, supplier

performance, quality of goods and services, supplier commitment and organization commitment in payment of suppliers. These findings concurred with Göran and Greg, (2011) that issues such as; lack of supplier collaboration, poor communication with suppliers, and absence of effective supplier performance systems and lack of effective quality management affects implementation of Supply Chain Management Ethical Practices in many public sector organizations. The study, therefore, concluded that factors such as supplier collaboration, communication with suppliers, supplier performance, quality of goods and services, supplier commitment and organization commitment in payment of suppliers influenced how supplier relationship management affected implementation of Supply Chain Management Ethical Practices in government ministries.

Table 4.9 Supplier Relationship Management

Supplier Relationship Management	**1**	**2**	**3**	**4**	**5**	**Total**
Supplier collaboration	0.7	2.9	45.3	48.9	2.2	100
Communication with suppliers	1.4	5.8	74.1	16.5	2.2	100
Supplier performance	2.2	7.9	43.2	45.3	1.4	100
Quality of goods and services	0.1	5.0	33.8	56.1	5.0	100
Supplier commitment	0.7	7.2	48.2	41.7	2.2	100
Organization commitment in payment of suppliers	0	5.8	35.3	55.4	3.6	100
Average	**1.02**	**5.76**	**46.65**	**43.98**	**2.76**	**100**

4.6.2 Employees' Competency

Employees' competency is those traits, skills or attributes that employees' need to perform their jobs most effectively. Employees' competencies include; intellectual competencies and what employee needs to know to perform the functions of the job. Interpersonal competencies which are skills required to get along effectively with others. Leadership competencies which are the skills required to lead others. Organizational competencies are the competencies that relate to the ability to effectively organize and manage work and work-related activities. Self-management competencies involve the ability of the employees to be able to direct themselves toward the accomplishment of goals and specific work assignments. Self-management competencies include the making of effective judgments, the ability to adapt and be flexible as new requirements emerge, and the ability to effectively plan and organize their work to achieve required results (Leigh, 2013).

To assess the influence of employees' competency on implementation of Supply Chain Management Ethical Practices in government ministries in Kenya, the study rated key employees' competency factors in SCM. These included; knowledge and skills on SCM functions, employees' qualifications, efficiency of procurement functions, rate of employees' training and employees training on professional Ethical Practices. Analysis results are presented in table 4.10. On knowledge and skills on supply chain management functions, 2.9percent of the respondents indicated that knowledge and skills on Supply Chain Management functions did not influence the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya, 43.2

percent of the respondents indicated that knowledge and skills on Supply Chain Management functions influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya to a small extent whereas 40.3 percent to a moderate extent, while 10.8percent of the respondents indicated that knowledge and skills on Supply Chain Management functions influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya to a large extent while 2.9 percent to a very large extent.

It was identified that, 0.7percent of the respondents indicated that, employees qualification had no influence on the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya, 49.6 percent of the respondent indicated that, employees qualification had influence on the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya to a small extent and 43.9 percent of the respondent to a moderate extent, 2.9 percent of the respondents indicated that, employees qualification had influence on the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya to a large extent while 2.9percent of the respondents indicated that, employees' qualification had influence on the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya to a very large extent.

On efficiency of procurement functions, 0.7percent of the respondents indicated that efficiency of procurement functions does not have an influence on the implementation of Supply Chain Management Ethical Practices Kenya government in ministries,

2.2percent of the respondents indicated that efficiency of procurement functions influences the implementation of Supply Chain Management Ethical Practices in Kenya government ministries to a small extent, 12.9percent of the respondents indicated that Efficiency of procurement functions influences the implementation of Supply Chain Management Ethical Practices in Kenya government ministries to a moderate extent, 83.5 percent of the respondents indicated that Efficiency of procurement functions influences the implementation of Supply Chain Management Ethical Practices in Kenya government ministries to a large extent, and 1.4 percent of the respondents indicated that Efficiency of procurement functions influences the implementation of Supply Chain Management Ethical Practices in Kenya government ministries to a very large extent.

On the rate of employees' training, 0.7 percent of the respondents indicated that the rate of employees' training did not influence the implementation of supply chain management in Kenya government ministries, 7.2 percent of the respondents indicated that the rate of employees' training influenced implementation of supply chain management, to a small extent in Kenya government ministries, 84.2 percent of the respondents indicated that the rate of employees' training influenced implementation of supply chain management, to a moderate extent in Kenya government ministries, 7.2 percent of the respondents indicated that the rate of employees' training influenced implementation of supply chain management, to a large extent in Kenya government ministries while 0.7 percent of the respondents indicated that the rate of employees training influenced implementation of supply chain management, to a very large extent in Kenya government ministries. Further, on employees' training on professional Ethical

Practices, 1.4percent of the respondents indicated that employees' training on professional Ethical Practices, did not have an influence on the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 64.7 percent of the respondents indicated that employees' training on professional Ethical Practices, influenced the implementation of Supply Chain Management Ethical Practices to small extent in government ministries in Kenya, 25.9 percent of the respondents indicated that employees' training on professional Ethical Practices, influenced the implementation of Supply Chain Management Ethical Practices to moderate extent in Kenya government ministries, 6.5percent of the respondents indicated that employees' training on professional Ethical Practices, influenced the implementation of Supply Chain Management Ethical Practices to large extent in Kenya government ministries while 1.4percent of the respondents indicated that employees training on professional Ethical Practices, influenced the implementation of Supply Chain Management Ethical Practices to very large extent in Kenya government ministries.

Of those who responded, 41.44%, 22.18% and 1.86%indicated that employees' competency factors influence the implementation of supplier management to a moderate extent, to a large extent and to a very large extent respectively. These competence factors influencing supplier relationship management to affect implementation of supply chain management Ethical Practices to a large extent included; knowledge and skills on SCM functions, employees' qualifications, efficiency of procurement functions, rate of employees training and employees training on professional Ethical Practices

These findings concurred with Kapila (2008) who indicates that lack of knowledge and skills on SCM functions, lack of employees' qualifications, poor efficiency of procurement functions, low rate of employees training and employees training on professional Ethical Practices affects implementation of Supply Chain Management Ethical Practices in many public sector organizations. The study deduced that the major factors affecting implementation of Supply Chain Management Ethical Practices in many public sector organizations include lack of employees' qualifications, poor efficiency of procurement functions, low rate of employees training and lack of employees training on professional Ethical Practices.

Table 4.10 Employees' Competency

Employees' competency	**1**	**2**	**3**	**4**	**5**	**Total**
Knowledge and skills on SCM functions	2.9	43.2	40.3	10.8	2.9	100
Employees' qualifications	0.7	49.6	43.9	2.9	2.9	100
Efficiency of procurement functions	0.7	2.2	12.9	83.5	1.4	100
Rate of employees' training	0.7	7.2	84.2	7.2	0.7	100
Employees' training on professional Ethical Practices	1.4	64.7	25.9	6.5	1.4	100
Average	**1.28**	**33.38**	**41.44**	**22.18**	**1.86**	**100**

4.6.3 Market Pressure

Market pressure entails the market forces that influence effective execution of Supply Chain Management practices. Change of demand and supply forces leads to availability

or lack of certain goods and services. Hoarding of goods and service is key unethical practice employed by stores operators to sell goods when the demand is high and supply is low. A market environment with corrupt suppliers leads to increased level of bribery and delivery of substandard goods and this undermines ethical practices in the supply chain (Edward, 2010).

Market pressure is the interface of supply and demand in the market place. Few suppliers will always tend to dictate the conditions of the market and this creates unfavorable environment for the implementation of Supply Chain Management Ethical Practices. To establish the influence of market pressure on implementation of supply chain management Ethical Practices in Kenya government ministries. The study asked the respondents to indicate the extent to which market pressure factors affected the implementation of Supply Chain Management Ethical Practices in Kenya government ministries. The market pressure factors that were dealt with included; leadership accountability**,** interest in company by target market**,** relationship with individual customers, awareness of company and its values proposition**,** suppliers influence**,** competition**,** political/policy conduct sector**,** demand and supply of goods and services.

The analyzed results are presented in table 4.11.As can be noted from table 4.11, 1.4 percent of the respondents indicated that leadership and accountability had no influence on the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 1.4percent of the respondents indicated that at a small extent, leadership and accountability had influence on the implementation of supply chain

management Ethical Practices in Kenya government ministries, 4.3percent of the respondents indicated that at a moderate extent, leadership and accountability had influence on the implementation of supply chain management Ethical Practices in Kenya government ministries while50.4 percent of the respondents indicated that at a very large extent, leadership and accountability had influence on the implementation of supply chain management Ethical Practices in Kenya government ministries. Similarly, 42.4 percent of the respondents at a very large extent, leadership, and accountability influenced implementation of supply chain management Ethical Practices in Kenya government ministries.

On the interest in company by target market, 0percent of the respondents stated that interest in company by target market did not influence the implementation of supply chain management Ethical Practices at a large extent in Kenya government ministries, 2.9percent of the respondents stated that interest in company by target market influenced the implementation of supply chain management Ethical Practices at a small extent in Kenya government ministries, 6.5percent of the respondents stated that interest in company by target market influenced the implementation of supply chain management Ethical Practices at a moderate extent in Kenya government ministries, 89.2 percent of the respondents stated that interest in company by target market influenced the implementation of supply chain management Ethical Practices at a large extent in Kenya government ministries. On the relationship with individual customers 1.4percent of the respondents stated that interest in company by target market influenced the implementation of supply chain management Ethical Practices at a very large extent in

Kenya government ministries. 1.4percent of the respondents stated that relationship with individual customers had no influence on the implementation of supply chain management Ethical Practices in Kenyan government ministries. A further 1.4 percent of the respondents stated that relationship with individual customers influenced the implementation of supply chain management Ethical Practices to a small extent in Kenya government ministries, 0.1 percent of the respondents stated that relationship with individual customers influenced the implementation of supply chain management Ethical Practices to a moderate extent in Kenya government ministries, while 84.2 percent of the respondents stated that relationship with individual customers influenced the implementation of supply chain management Ethical Practices to a very large extent in Kenya government ministries.

On suppliers influence, 0.7percent of the respondents indicated that suppliers influence, had no influence the implementation of supply chain management Ethical Practices in Kenya government ministries, 0.7percent of the respondents indicated that suppliers influence, influenced the implementation of supply chain management Ethical Practices in Kenya government. Likewise, at a small extent and 2.9 percent of respondent stated to a moderate extent, 50.4 percent of the respondents indicated that suppliers influence, influenced the implementation of Supply Chain Management Ethical Practices in the government of. Likewise, at a large extent and 45.3 percent of respondents stated to a very large extent. On competition, 0percent of the respondents indicated that, competition had no influence on implementation of supply chain management Ethical Practices in the Kenya government ministries in Kenya, 2.2 percent of the respondents

indicated at a small extent, competition had an influence on implementation of Supply Chain Management Ethical Practices in the Kenya government ministries, 2.2 percent of the respondents indicated at moderate extent, competition had an influence on implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 18.7 percent of the respondents indicated at a large extent, competition had an influence on implementation of Supply Chain Management Ethical Practices in Kenya government ministries.77.0 percent of the respondents indicated at a very large extent, competition had an influence on implementation of Supply Chain Management Ethical Practices in Kenya government ministries.

On political/policy conduct sector, 0percent of the respondents indicated that political/policy conduct sector did not influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 2.2percent of the respondents indicated that at a small extent, political/policy conduct sector influenced the implementation of supply chain management Ethical Practices in Kenya government ministries, 15.8percent of the respondents indicated that at moderate extent, political/policy conduct sector influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 76.3 percent of the respondents indicated that at a large extent, political/policy conduct sector influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries. While 5.8percent of the respondents indicated that at a very large extent, political/policy conduct sector influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries.

On demand and supply of goods and services, 0.7percent of the respondents indicated that demand and supply of goods and services had no influence in the implementation of Supply Chain Management Ethical Practices in Kenya ministries, 0.7percent of the respondents indicated that demand and supply of goods and services at small extent influenced the implementation of Supply Chain Management Ethical Practices in Kenya ministries, 0.7percent of the respondents indicated that demand and supply of goods and services at moderate extent influenced the implementation of Supply Chain Management Ethical Practices in Kenya ministries. 5.0percent of the respondents indicated that demand and supply of goods and services at large extent influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries and 92.1 percent of the respondents indicated that demand and supply of goods and services at very large extent influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya.

Majority of the respondents with an average percentage of 4.64, 43.27 and 49.74 rated all the market pressure factors to influence the implementation of supply chain management Ethical Practices to a moderate extent, to a large extent and to a very large extent respectively. This indicated that majority 97.65% of the respondents posited that the major factors influencing market pressure to affect implementation of Supply Chain Management Ethical Practices included; Leadership accountability, interest in company by target market, relationship with individual customers ,suppliers influence, competition, political/policy conduct sector and demand and supply of goods and service.

These findings are in tandem with Lane (2008) arguments that factors such as Leadership accountability, interest in company by target market, relationship with individual customers, suppliers influence, competition, political/policy conduct sector and demand and supply of goods and service influence market pressure affect implementation of Supply Chain Management Ethical Practices in many public sector organizations. The study hence alluded that the major factors influencing market pressure to affect implementation of supply chain management Ethical Practices included; Leadership accountability, interest in company by target market, relationship with individual customers ,suppliers influence, competition, political/policy conduct and demand and supply of goods and service.

Table 4.11 Market Pressure

Market Pressure	**1**	**2**	**3**	**4**	**5**	**Total**
Leadership accountability	1.4	1.4	4.3	50.4	42.4	100
Interest in company by target market	0	2.9	6.5	89.2	1.4	100
Relationship with individual customers	1.4	1.4	0.1	12.9	84.9	100
Suppliers influence	0.7	0.7	2.9	50.4	45.3	100
Competition	0	2.2	2.2	18.7	77	100
Political/policy conduct sector	0	2.2	15.8	76.3	5.8	100
Demand and supply of goods and services	0.7	0.7	0.7	5.0	92.1	100
Average	**1.05**	**1.64**	**4.64**	**43.27**	**49.74**	**100**

4.6.4 Health and Safety

Health and safety entail the health and safety measures employed by organizations during execution of supply chain management practices. Application of poor production processes, transportation process, and storage processes conflicts with sound Supply Chain Ethical practices and this threatens human life in cases of food stuffs and other Fast Consumer Moving Goods (FMCG) (Petterson, 2009). High standards of quality are emphasized to meet the requirements of end user of the product in supply chain management, in particular green procurement has recently gained momentum in addressing the shortcoming previously encountered.

To determine the influence of health and safety measures on implementation of supply chain management Ethical Practices in government ministries. Respondents were asked to indicate the extent to which health and safety issues influences the implementation of supply chain management Ethical Practices in government ministries in Kenya. The issues dealt with included; training on safety measures, health and safety measures, goods storage and handling procedures, risk control measures, identification of substandard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programs, emergency measures, monitoring of service delivery process and quality improvement activities. Table 4.12 shows that, on health and safety measures, 1.4percent of the respondent indicated that Health and safety measures had no influence on the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya, 13.7percent of the respondent indicated that at small extent health and safety measures had influence on the implementation of

Supply Chain Management Ethical Practices in government ministries in Kenya, 80.6 percent of the respondents indicated that at moderate extent Health and safety measures had influence on the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya, 3.6percent of the respondent indicated that at large extent health and safety measures had influence on the implementation of Supply Chain Management Ethical Practices in government ministries of Kenya while 0.7percent of the respondents indicated that at very large extent health and safety measures had influence on the implementation of Supply Chain Management Ethical Practices in government ministries of Kenya.

On risk control measures, 0.7 percent of the respondent indicated that risk control measures did not influence the implementation of Supply Chain Management Ethical Practices in government ministries of Kenya, 35.3percent of the respondents indicated that at small extent of risk control measures influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya. 60.4 percent of the respondents indicated that at moderate extent of risk control measures influenced the implementation of Supply Chain Management Ethical Practices in government ministries of Kenya, 2.9 percent of the respondents indicated that at large extent of risk control measures influenced the implementation of Supply Chain Management Ethical Practices in government ministries of Kenya, 0.7 percent of the respondents indicated that at a very large extent of risk control measures influenced the implementation of Supply Chain Management Ethical Practices in government ministries of Kenya.

On identification of substandard goods, 5.8percent of the respondents indicated that identification of substandard goods had no influence on the implementation of Supply Chain Management Ethical Practices, 47.5 percent of the respondents indicated that at small extent that identification of substandard goods influenced the implementation of Supply Chain Management Ethical Practices and 30.2 percent of respondent at moderate extent respectively within government ministries in Kenya, 14.4percent of the respondents indicated that at larger extent that identification of substandard goods influenced the implementation of Supply Chain Management Ethical Practices while 2.2percent of the respondents indicated that at very large extent that identification of substandard goods influenced the implementation of Supply Chain Management Ethical Practices.

On proper disposal procedures, 0.7percent of the respondents indicated that proper disposal procedures did not influence the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya while 5.0 percent of the respondents indicated at small extent, that proper disposal procedures influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya, 37.4 percent and 36.0 percent of the respondents indicated at large extent, and moderate extent respectively that proper disposal procedures influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries and, 20.9percent of the respondents indicated at very large extent, that proper disposal procedures influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries.

On evaluation of quality of procured goods and services, 2.2 percent of the respondents indicated that evaluation of quality of procured goods and services did not influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 21.6 percent of the respondents indicated that at small extent evaluation of quality of procured goods and services influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 51.1 percent of the respondents indicated that at moderate extent evaluation of procured goods and services influenced the implementation of Supply Chain Management Ethical Practices in government ministries of Kenya, 19.4 percent of the respondents indicated that at large extent evaluation of quality of procured goods and services influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya and 5.8 percent of the respondents indicated that at very large extent evaluation of quality of procured goods and services influenced the implementation of Supply Chain Management Ethical Practices in government ministries in Kenya.

On employees' welfare programs, 0.7percent of the respondents indicated that employees' welfare programs will not influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 16.5percent of the respondents indicated that at small extent the employees' welfare programs will influences the implementation of Supply Chain Management Ethical Practices in Kenya government, 59.0 percent of the respondents indicated that at moderate extent the employees' welfare programs will influences the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 21.6percent of the

respondents indicated that at large extent the employees' welfare programs will influences the implementation of Supply Chain Management Ethical Practices in Kenya government ministries and 2.2percent of the respondents indicated that at very large extent the employees' welfare programs will influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries.

On emergency measures, 38.8 percent of the respondents stated that at not at all had Emergency measures influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries and 54.0 percent of respondents stated that only a small extent had the measures influenced. 4.3percent of the respondents stated that at moderate extent emergency measures influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 2.9 percent of the respondents stated that at large extent emergency measures influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, while 0percent of the respondents stated that at very large extent emergency measures influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries.

On Monitoring of service delivery process, 2.2percent of the respondents indicated that monitoring of service delivery process had no influence the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 13.7percent of the respondents indicated that at small extent monitoring of service delivery process influenced the implementation of Supply Chain Management Ethical Practices in Kenya

government ministries, 65.5 percent of the respondent indicated that at moderate extent monitoring of service delivery process influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries, 17.3percent of the respondents indicated that at large extent monitoring of service delivery process influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries in, and 1.4percent of the respondents indicated that at very large extent monitoring of service delivery process influenced the implementation of Supply Chain Management Ethical Practices in Kenya government ministries.

Of those who responded, 48.38%, 14.93% and 4.84%indicated that health and safety factors influence the implementation of supply chain management Ethical Practices to a moderate extent, to a large extent and to a very large extent respectively. These health and safety factors include; Health and safety measures, risk control measures, identification of substandard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programs, emergency measures and monitoring of service delivery process.

These findings are in agreement with Brytting (2007) who argues that implementation of effective health and safety measures, risk control measures, identification of substandard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programs, emergency measures and monitoring of service delivery process in helps in implementation of Supply Chain Management Ethical Practices in many public sector organizations. The study hence deduced that the major factors

influencing health and safety to affect implementation supply chain management Ethical Practices included; health and safety measures, risk control measures, identification of substandard goods, proper disposal procedures, evaluation of quality procured goods and services, employees' welfare programs, emergency measures and monitoring service delivery process.

Table 4.12 Health and Safety

Health and Safety	**1**	**2**	**3**	**4**	**5**	**Total**
Health and safety measures	1.4	13.5	80.6	3.6	0.7	100
Risk control measures	0.7	35.3	60.4	2.9	0.7	100
Identification of substandard goods	5.8	47.5	30.2	14.4	2.2	100
Proper disposal procedures	0.7	5.0	36.0	37.4	20.9	100
Evaluation of quality of procured Goods and services	2.2	21.6	51.1	19.4	5.8	100
Employees welfare programs	0.7	16.5	59.0	21.6	2.2	100
Emergency measures	38.8	54.0	4.3	2.9	0	100
Monitoring of service delivery	2.2	13.7	65.5	17.3	1.4	100
Average	**6.56**	**25.91**	**48.38**	**14.93**	**4.84**	**100**

4.6.5 Regulatory Framework

Regulatory framework is the set of rules and regulations that provide guidelines on how procurement functions should be undertaken in public entities. In Kenya, procurement regulatory framework comprises Public Procurement and Disposal Act, 2005 (PPDA) Public Procurement and Disposal Regulations, 2006 (GOK, 2006) and the Supplies Practitioners Management Act, 2007 (KISM, 2009). These regulations govern the choice of suppliers, products and the methods and procedures to be used to communicate with

suppliers (Patrick, 2009). Legal issues are emphasized as tools of regulatory framework in SCM. There are organizations charged with the responsibility of regulating issues of supply chain management in order to enhance Ethical Practices in SCM.

Efforts were directed towards establishing the determination of regulatory framework on implementation of supply chain management Ethical Practices in Kenya government ministries. Respondents were asked to indicate the extent to which regulatory framework factors determined the implementation of implementation of supply chain management Ethical Practices in government ministries of Kenya and the results are presented in table 4.13. The factors that were of interest include; procurement regulations awareness, there is efficiency in procurement processes, there is transparency and accountability, no loss case of procurement funds, and procurement policies are up-to-date. Table 4.13 demonstrates that, on the awareness of procurement regulations, 78.4 percent of the respondents indicated that, the awareness of procurement regulation does not at all determine the implementation of supply chain management Ethical Practices in the government ministries of Kenya. 15.1 percent of the respondents indicated to a small extent did the awareness of procurement regulation determine the implementation of supply chain management Ethical Practices in the government ministries in Kenya. 4.3 percent of the respondent indicated that to a moderate extent did the awareness of procurement regulation determined the implementation of supply chain management Ethical Practices in the government ministries. 1.4 percent of the respondents indicated that to a large extent did the awareness of procurement regulation determined the implementation of supply chain management Ethical Practices in the government

ministries in Kenya and 0.7 percent of the respondent indicated that to a very large extent did the awareness of procurement regulation is high which determined the implementation of supply chain management Ethical Practices in the government ministries.

On the efficiency in procurement processes, 0.7percent of the respondents indicated, in efficiency in procurement processes, had no determination on the implementation of supply chain management Ethical Practices in the government ministries in Kenya, 21.6percent of the respondent indicated, small extent in efficiency in procurement processes, which determined the implementation of supply chain management Ethical Practices in the government ministries of Kenya, 64.0 percent of the respondents indicated, moderate extent in efficiency in procurement processes, which determined the implementation of supply chain management Ethical Practices in the government ministries, 11.5percent of the respondent indicated, large extent in efficiency in procurement processes, which determined the implementation of supply chain management Ethical Practices in the government ministries in Kenya and 2.2 percent of the respondent indicated, very large extent in efficiency in procurement processes, which determined the implementation of supply chain management Ethical Practices in the Kenya government ministries.

On Transparency and accountability, 0 percent of the respondents indicated that transparency and accountability had no determination on the implementation of supply chain management Ethical Practices in the government ministries in Kenya, 14.4 percent

of the respondents indicated small extent in transparency and accountability which determined the implementation of supply chain management ethical practices in Kenyan government ministries.

Majority (77.7), percent of the respondents indicated, moderate extent in transparency and accountability which determined the implementation of supply chain management Ethical Practices in the government ministries in Kenya, 5.0 percent of the respondent indicated, large extent in transparency and accountability which determined the implementation of supply chain management Ethical Practices in Kenya government ministries, and 2.9 percent of the respondents indicated, very large extent in transparency and accountability which determined the implementation of supply chain management ethical Practices in the government ministries only. 0.7percent of the respondents indicated there was no loss of procurement funds that had no determination in the implementation of supply chain management ethical Practices in the government ministries.

However, another 58.3 percent of the respondents also indicated at small extent there was no loss procurement funds and 30.9 at moderate extent that determined the implementation of supply chain management Ethical Practices in the government ministries, 7.9percent of the respondents indicated at large extent there was no loss of procurement funds that determined of supply chain management Ethical Practices in the government ministries while 2.2 percent of the respondents indicated at very large extent

there was no loss of procurement funds that determined the implementation of supply chain management Ethical Practices in the government ministries.

The study indentified that 0percent procurement policies are up-to-date and that did not determine the implementation of supply chain management Ethical Practices in the government ministries, 1.4percent at small extent, procurement policies are up-to-date and determined the implementation of supply chain management Ethical Practices in the government ministries. Majority (73.4 percent), and minority (17.3 percent), indicated that at large extent and moderate extent respectively procurement policies are up-to-date and influenced the implementation of supply chain management Ethical Practices in the government ministries, 7.9percent indicated that at very large extent procurement policies are up to date and influenced the implementation of supply chain management Ethical Practices in the government ministries.

Table 4.11 indicates that majority of the respondents with an average percentage of 38.84, 19.84, and 3.12 rated all the regulatory factors to influence the implementation of supply chain management Ethical Practices to a moderate extent, to a small extent and to a large extent respectively. This hence indicated that majority 61.86% of the respondents indicated that the major factors influencing regulatory framework to affect implementation of supply chain management Ethical Practices included; procurement regulations awareness, awareness of procurement regulation is high, efficiency in procurement processes, transparency, and accountability, cases of loss of procurement funds and procurement policies are-up-to date. These findings concurred with findings

by Kapila, (2008) that implementation of supply chain management Ethical Practices in many government ministries was hindered by lack of procurement regulations awareness, lack of efficiency in procurement processes, lack of transparency and accountability, increased cases of loss of procurement funds, and lack of updated procurement policies. The study hence deduced that the major factors determining regulatory framework to affect implementation of supply chain management Ethical Practices included; procurement regulations awareness, awareness of procurement regulation is high, efficiency in procurement processes, transparency and accountability, cases of loss of procurement funds and procurement policies are up to date

Table 4.13 Regulatory Framework

Regulatory Framework	**1**	**2**	**3**	**4**	**5**	**Total**
Procurement regulations awareness. The awareness of procurement regulation is high.	78.4	15.1	4.3	1.4	0.7	100
There is efficiency in procurement processes	0.7	21.6	64.0	11.5	2.2	100
There is transparency and accountability	0	14.4	77.7	5.0	2.9	100
No Cases of loss of procurement funds	0.7	58.3	30.9	7.9	2.2	100
Procurement policies are up-to-date	0	1.4	17.3	73.4	7.9	100
Average	**26.6**	**22.16**	**38.84**	**19.84**	**3.18**	**100**

4.6.6 Supply Chain Management Ethical Practices

Supply Chain Management Ethical Practices is the management of suppliers and supply relationships with strategies, programme, and metrics that better align supplier business conduct with purchaser standards, with the goal of reducing the purchaser's overall risk of corporate integrity failure in the supply chain (Carasco & Callaghan, 2008). To determine the extent to which supply chain management Ethical Practices were implemented in government ministries in Kenya, the study asked the respondents to indicate the extent to which the Supply Chain Management Ethical Practices issues were implemented in government ministries. The SCM issues included; relationship between suppliers and supply relationship**,** high corporate integrity**,** effective production and distribution practices, strong organization culture**,** presence of effective health and safety measures and high level of regulations compliance.

As indicated on Table 4.14, 84.2 percent of the respondents indicated suppliers and supply relationship is not implemented within the government ministries of Kenya. 4.3 percent of the respondents indicated suppliers and supply relationship was implemented to a small extent within the government ministries in Kenya, 5.8 percent of the respondents indicated suppliers and supply relationship was implemented to a moderate extent within the government ministries in Kenya, 5.8 percent of the respondents indicated suppliers and supply relationship was implemented to a large extent within the government, 0 percent of the respondents indicated suppliers and supply relationship was implemented to a very large extent within the government ministries.

Of those responding, on corporate integrity, 1.4 percent of the respondents indicated that high corporate integrity was not at all implemented. 53.2 percent of the respondents indicated that high corporate integrity was implemented to a small extent, 36.0percent of the respondents indicated that high corporate integrity was implemented to a moderate extent, 5.8 percent of the respondents indicated that high corporate integrity was implemented to a large extent, 3.6 percent of the respondents indicated that high corporate integrity was implemented to a very large extent.

On effective production and distribution practices, 0.1percent of respondents felt that effective production and distribution practices were not at all implemented. 41.7 and 51.8 percent of respondents felt that effective production and distribution practices were implemented to a small extent and to a moderate extent, 5.0 percent of respondents felt that effective production and distribution practices were implemented to a large extent while 1.4 percent of respondents felt that effective production and distribution practices were implemented to a very large extent.

On strong organization culture, 0percent of respondents felt that strong organization culture was not at all implemented in government ministries. 3.6 percent of respondents felt that strong organization culture was implemented to a small extent in government ministries. 7.9 percent of respondents felt that strong organization culture was implemented to a moderate extent in government ministries. Forty one point seven per cent of respondents felt that strong organization culture was implemented to a large

extent in government ministries. 46.8 percent of respondents felt that strong organization culture was implemented to a very large extent in government ministries.

On the presence of effective health and safety measures, 0 percent of respondents indicated that health and safety measures were not at all present. 51.8 per cent of respondents indicated that health and safety measures were present to a small extent, 37.4 percent of respondents indicated that health and safety measures were present to a moderate extent. 8.6 percent of respondents indicated that health and safety measures were present to a large extent and 2.2 percent of respondents indicated that health and safety measures were present to a very large extent. Finally, 46.8 percent of respondents felt that high level of regulations compliance was not at all implemented and this negatively affected effective implementation of supply chain management Ethical Practices. 4.7 percent of respondents felt that high level of regulations compliance was implemented to a small extent and this negatively affected effective implementation of supply chain management ethical Practices, 7.9 percent of respondents felt that high level of regulations compliance was implemented to a moderate extent and this negatively affected effective implementation of supply chain management ethical Practices, 3.6 percent of respondents felt that high level of regulations compliance was implemented to a large extent and this negatively affected effective implementation of supply chain management Ethical Practices, and 37 percent of respondents felt that high level of regulations compliance was implemented to a very large extent and this negatively affected effective implementation of supply chain management Ethical Practices. On average, 22.8 percent and 26.55 percent of the respondents indicated that

the supply chain management ethic issues were not implemented in government ministries.

Table 4.14, therefore, indicates that majority of the respondents with an average percentage of 22.08, 26.55, and 24.46 felt that supply chain management Ethical Practices was not at all, to a small extent and to a moderate extent respectively experienced in the government ministries. This indicated that majority 73.09% of the respondents indicated that supply chain management Ethical Practices issues such as relationship between suppliers and supply relationship, high corporate integrity, effective production and distribution practices, Strong organization culture, presence of effective health and safety measures and high level of regulations compliance were not experienced in government ministries and this was a clear indication that implementation of supply chain management Ethical Practices was a major problem facing many government ministries in Kenya.

These supported findings by Moses (2007) that lack of implementation of supply chain management Ethical Practices in government ministries is evidenced by existence of poor relationship between suppliers and supply relationship, lack of high corporate integrity, lack of effective production and distribution practices, absence of strong organization culture, lack of presence of effective health and safety measures and low level of procurement regulations compliance. The study, therefore, alluded that existence of poor relationship between suppliers and supply relationship, lack of high corporate integrity, lack of effective production and distribution practices, weak organization

culture, absence of effective health and safety measures and low level of procurement regulations compliance hinders effective implementation of supply chain management Ethical Practices was a major problem facing many government ministries in Kenya.

Table 4.14 Supply Chain Management Ethical practices

Supply Chain Management Ethical practices	**1**	**2**	**3**	**4**	**5**	**Total**
There is a relationship between suppliers and supply relationship	84.2	4.3	5.8	5.8	0.00	100
There is high corporate integrity	1.4	53.2	36.0	5.8	3.6	100
There is effective production and distribution practices	0.1	41.7	51.8	5.0	1.4	100
Strong organization culture	0.00	3.6	7.9	41.7	46.8	100
Presence of effective health and safety measures	0.00	51.8	37.4	8.6	2.2	100
High level of regulations of suppliers compliance	46.8	4.7	7.9	3.6	37	100
Average	**22.08**	**26.55**	**24.46**	**11.75**	**15.1**	**100**

4.6.7 Q-Q-Plot

Q-Q Plot is a plot of the percentiles (or quintiles) of a standard normal distribution against the corresponding percentiles of the observed data. If the observations follow approximately a normal distribution, the resulting plot should be roughly a straight line with a positive slope. The quantile-quantile or q-q plot is an exploratory graphical device used to check the validity of a distributional assumption for a data set. In general, the basic idea is to compute the theoretically expected value for each data point based on the

distribution in question. If the data indeed follow the assumed distribution, then the points on the q-q plot will fall approximately on a straight line (Scott, 2013). The dependent variable is normally distributed – since most of the data lie on the straight line. That since the dependent variable is normally distributed; it is in order to fit a linear regression model.

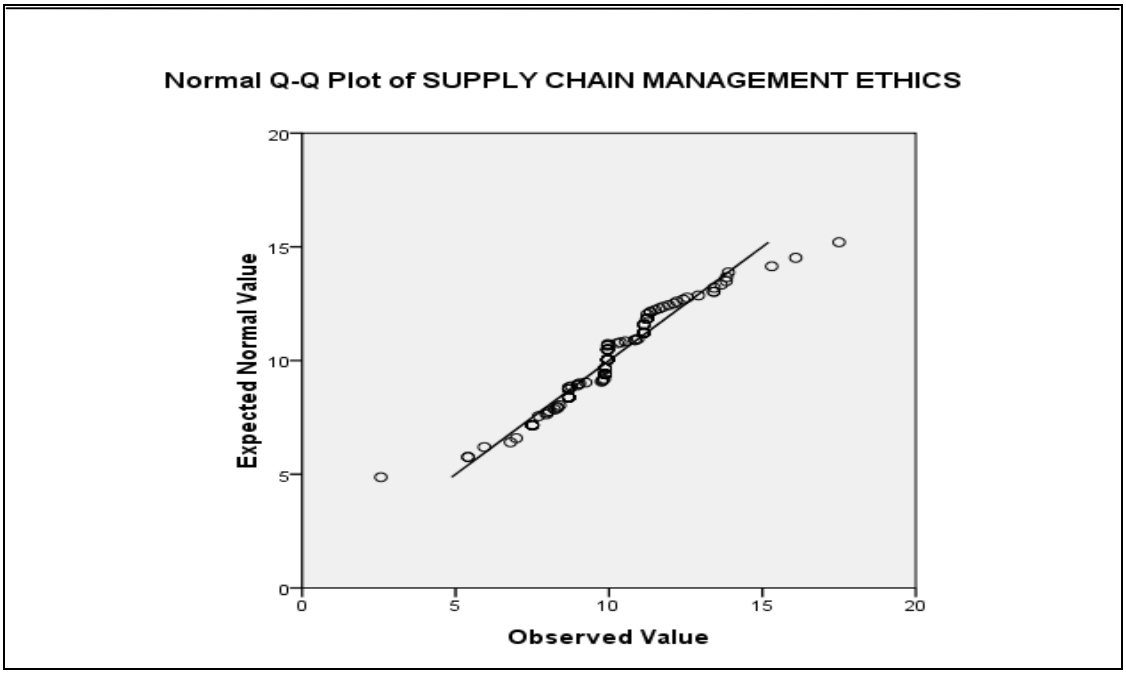

Figure 4.5 Q-Q Plot of Supply Chain Management Ethical Practices

4.7 Inferential Analysis

Inferential statistics are a set of methods used to make generalization, estimate, prediction, or decision. Inferential statistics are techniques that allow the use of samples to make generalizations about the populations from which the samples were drawn.

Inferential statistics were conducted through the use of correlation analysis to determine the relationship between the independent and the dependent variables. Unlike descriptive statistics, which are used to describe the characteristics (i.e. distribution, central tendency, and dispersion) of a single variable, inferential statistics are used to make inferences about the larger population based on the sample. Since a sample is a small subset of the larger population (or sampling frame), the inferences are necessarily error-prone. Typically, inferential statistics deals with bivariate and multivariate analysis of variables. There are different types of inferential statistics that are used. The type of inferential statistics used was dictated by the type of variable (i.e. nominal, ordinal, interval/ Ratio). While the type of statistical analysis is different from these variables, the main idea is to determine how one variable compares to another (Joppe, 2000).

4.7.1 Correlation Analysis

4.7.1.1 Correlation Analysis for Construct Supplier Relationship Management

Table 4.15 shows that the Pearson correlation coefficient was 0.442. This is a clear indication that supplier relationship management has a positive correlation with implementation of supply chain management Ethical Practices (p-values < 0.05). The scatter plots (appendix III) shows the significance of supplier relationship management versus supply chain management Ethical Practices. As indicated in the figure, all the plots are on the first quadrate and the line of best fit shows an estimate line that is positively increasing. These findings indicate that there is a positive linear relationship

between the supplier relationship management and implementation of supply chain management Ethical Practices as shown in figure 4.5.

Table 4.15 Correlation analysis on Supplier Relationship Management

		Supply chain management ethical practices	**Supplier relationship management**
Supply chain management Ethical Practices	Pearson Correlation	1	.442
	Sig. (2-tailed)		.000
	N	139	139
Supplier relationship management	Pearson Correlation	.442	1
	Sig. (2-tailed)	.000	
	N	139	139
Correlation is significant at the 0.01 level (2-tailed).			

4.7.1.2 Correlation analysis for Construct Employee's Competence

Table 4.16 shows that the Pearson correlation coefficient was 0.522. This is a clear indication that employees' competence has a positive correlation with implementation of supply chain management Ethical Practices (p-values < 0.05). The scatter plots (appendix III) shows the correlation of employees' competence versus supply chain management Ethical Practices. As indicated in the figure, all the plots are on the first quadrate and the line of best fit shows an estimate line that is positively increasing. These findings indicate that there is as strong positive correlation between employees' competence and implementation of supply chain management Ethical Practices.

Table 4.16 Employee Competence Correlations

		Supply chain management Ethical Practices	Employee's competence
Supply chain management ethical practices	Pearson Correlation	1	.522
	Sig. (2-tailed)		.000
	N	139	139
Employee competence	Pearson Correlation	.522	1
	Sig. (2-tailed)	.000	
	N	139	139

Correlation is significant at the 0.01 level (2-tailed).

4.7.1.3 Correlation Analysis for Construct Market Pressure

As shown in table 4.17 the Pearson correlation coefficient was 0.195. This indicates that that market pressure has a positive correlation with implementation of supply chain management Ethical Practices (p-values < 0.05). The scatter plots (appendix III) shows market pressure versus supply chain management Ethical Practices. As indicated in the figure, all the plots are on the first quadrate and are concentrated together. This is a clear indication that there is as strong positive correlation between market pressure and implementation of supply chain management Ethical Practices.

Table 4.17 Market Pressure Correlation

		Supply chain management Ethical Practices	**Market pressure**
Supply chain management Ethical Practices	Pearson correlation	1	.195
	Sig. (2-tailed)		.021
	N	139	139
Market pressure	Pearson Correlation	.195	1
	Sig. (2-tailed)	.021	
	N	139	139
Correlation is significant at the 0.05 level (2-tailed).			

4.7.1.4 Correlation analysis for Construct Health and Safety

Table 4.18 shows that the Pearson correlation coefficient was 0.257. This is implies that heath and safety has a positive correlation with implementation of supply chain management Ethical Practices (p-values < 0.05). The scatter plots (appendix III) shows the correlation of health and safety versus supply chain management Ethical Practices. As indicated in the figure, all the plots are on the first quadrate and are concentrated together. This is a clear indication that there is as strong positive correlation between health and safety and implementation of supply chain management Ethical Practices.

Table 4.18 Health and Safety Correlation

		Supply chain management Ethical Practices	Health and safety
Supply chain management Ethical Practices	Pearson Correlation	1	.257
	Sig. (2-tailed)		.002
	N	139	139
Health and safety	Pearson Correlation	.257	1
	Sig. (2-tailed)	.002	
	N	139	139

Correlation is significant at the 0.01 level (2-tailed).

4.7.1.5 Correlation Analysis for Construct Regulatory Framework

Table 4.19 shows that the Pearson correlation coefficient was 0.414. This is indicates that that regulatory framework has a positive correlation with implementation of supply chain management Ethical Practices (p-values < 0.05). The scatter plots (appendix III) shows the correlation of regulatory framework versus supply chain management Ethical Practices. As indicated in the figure, all the plots are on the first quadrate and are concentrated together. This is a clear indication that there is strong positive correlation between regulatory framework and implementation of supply chain management Ethical Practices

Table 4.19 Regulatory Framework Correlation

		Supply chain management Ethical Practices	Regulatory framework
Supply chain management Ethical Practices	Pearson Correlation	1	.414
	Sig. (2-tailed)		.000
	N	139	139
Regulatory framework	Pearson Correlation	.414	1
	Sig. (2-tailed)	.000	
	N	139	139
Correlation is significant at the 0.01 level (2-tailed).			

4.7.2 Regression Analysis

4.7.2.1 Regression Analysis for Construct Supplier Relationship Management

The overall model for the construct supplier relationship management was test. The findings as indicated on the table 4.14 and (scatter plot appendix III) shows the coefficient of determination R Square = 0.195 and R =0.442 at 0.05 a significant level. The coefficient of determination indicated that 19.5 % of the variation on implementation of supply chain management Ethical Practices is explained by supplier relationship management. This shows that there existed a strong positive correlation coefficient between supplier relationship management and implementation of supply chain management Ethical Practices.

The test of beta coefficients (appendix IV) shows that the significant relationship between supplier relationship management and implementation of supply chain

management Ethical Practices is positive. The significance coefficient of supplier relationship management 0.250 is significantly greater than zero since the t statistics 5.770 is greater than 0.05. This demonstrates that supplier relationship management implementation has a positive effect on implementation of supply chain management Ethical Practices. These findings concurred with Göran& Greg, (2011) that effective implementation of supplier relationship management functions greatly supports effective implementation of Supply Chain Management Ethical Practices in many organizations. These findings also corroborate observations by Chang (2009) that implementation of supplier relationship management practices such as supplier collaboration, effective buyer supplier communication, application of effective supplier performance systems and use of effective quality management systems promotes implementation of Supply Chain Management Ethical Practices in many organizations.

Table 4.20 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.442	.195	.190	1.77979479

Predictors: (Constant), supplier relationship management

4.7.2.2 Regression Analysis for Construct Employee's Competence

Table 4.21 presents the regression model of employees competency with the coefficient of determination R2 = 0.272 and R =0.522 at 0.05 a significant level. The coefficient of determination indicates that 52.2 % of the variation on implementation of supply chain

management Ethical Practices is influenced by employee competence (scatter plot appendix III). This shows that there exists a strong positive relationship between employee competence and implementation of supply chain management Ethical Practices.

The test of beta coefficients (appendix IV) shows that there is significant relationship between employees' competence and implementation of supply chain management ethical practices is positive. The coefficient significance of employees' competency .191 is significantly greater than zero since the significance of the t statistics 0.00 is less than 0.05. This demonstrates that the high level of employees' competency has a positive effect on implementation of supply chain management Ethical Practices. These findings are in line with Kapila (2008) that employees competency issues such as Knowledge and skills on SCM functions, knowledge on procurement functions and professional Ethical Practices affects implementation of Supply chain management Ethical Practices.

Table 4.21 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.522	.272	.267	1.69289160

Predictors: (Constant), employee competence

4.7.2.3 Regression Analysis for Construct Market Pressure

Table 4.22 presents the regression model of market pressure with the coefficient of determination R2 = 0.38 and R =0.195 at 0.05 a significant level. The coefficient of determination indicates that 19.5 % of the variation on implementation of supply chain management Ethical Practices is influenced by market pressure (scatter plot appendix III). This shows that there exists a strong positive relationship between market pressure and implementation of supply chain management Ethical Practices.

The test of beta coefficients (appendix IV) shows that the significant relationship between market pressure and implementation of supply chain management Ethical Practices is positive. The coefficient significance of employees' competency .129 is significantly greater than zero since the significance of the t statistics 0.00 is less than 0.05. This demonstrates that the increased market pressure has a positive effect on implementation of supply chain management Ethical Practices. These corroborated findings by Lane (2008) that market pressure factors such as leadership accountability, interest in company by target market, relationship with individual customers, suppliers' influence, competition, political/policy conduct sector demand and supply of goods and service affect implementation of supply chain management Ethical Practices in many public sector organizations.

Table 4.22 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.195	.038	.031	1.94601846
Predictors: (Constant), market pressure				

4.7.2.4 Regression Analysis for Construct Health and Safety

Table 4.23 presents the regression model of health and safety with the coefficient of determination R2 = 0.066 and R =0.257 at 0.05 a significant level. The coefficient of determination indicates that 25.7 % of the variation on implementation of supply chain management Ethical Practices is influenced by health and safety (scatter plot appendix III). This shows that there exists a strong positive relationship between health and safety and implementation of supply chain management Ethical Practices.

The test of beta coefficients (appendix IV) shows that the significant relationship between health and safety and implementation of supply chain management Ethical Practices is positive. The coefficient significance of health and safety .122 is significantly greater than zero since the significance of the t statistics 0.00 is less than 0.05. This demonstrates that application of health and safety measures has a positive effect on implementation of supply chain management Ethical Practices. These echoed findings by Brytting (2007) that implementation of effective health and safety measures,

risk control measures, identification of substandard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programs, emergency measures and monitoring of service delivery process in helps in implementation of supply chain management Ethical Practices in many public sector organizations.

Table 4.23 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.257	.066	.059	1.91781447
Predictors: (Constant), health and safety				

4.7.2.5 Regression Analysis for Construct Regulatory Framework

Table 4.24 presents the regression model of regulatory framework with the coefficient of determination R2 = 0.172 and R =0.414 at 0.05 significant level. The coefficient of determination indicates that 41.4.5% of the variation on implementation of supply chain management Ethical Practices is influenced by regulatory framework issues (scatter plot appendix III). This shows that there exists a strong positive relationship between regulatory framework and implementation of supply chain management Ethical Practices.

The test of beta coefficients (appendix IV) shows that the significant relationship between regulatory framework and implementation of supply chain management Ethical

Practices is positive. The coefficient significance of health and safety 0.395 is significantly greater than zero since the significance of t statistics 0.00 is less than 0.05. This demonstrates that application of regulatory framework measures has a positive effect on implementation of supply chain management Ethical Practices. These concurred with findings by Kapila, (2008) that implementation of supply chain management Ethical Practices in many government ministries is hindered by regulatory framework challenges such a lack of procurement regulations awareness, lack of efficiency in procurement processes, lack of transparency and accountability, increased cases of loss of procurement funds and lack of updated procurement policies.

Table 4.24 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.414	.172	.166	1.80596133

Predictors: (Constant), regulatory framework

4.7.3 ANOVA Test

4.7.3.1 ANOVA for Construct Supplier Relationship Management

The results of Analysis of Variance (ANOVA) for regression coefficients are shown in table 4.25. The analysis result revealed that the significance of that F statistics is 0.00 which is less than 0.05. This implies that there is a significant relationship between

supplier relationship management and implementation of supply chain management Ethical Practices.

Table 4.25 ANOVA for Supplier Relationship

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	105.455	1	105.455	33.291	.000
Residual	433.971	137	3.168		
Total	539.426	138			

Predictors: (constant), Supplier Relationship Management

Dependent Variable: supply chain management ethical practices

4.7.3.2 ANOVA for Construct Employees Competence

Analysis of Variance (ANOVA) results for regression coefficients reveal that the significance of the F statistics is 0.00 which is less than 0.05. This implies that there is a significant relationship between employees' competence and implementation of supply chain management Ethical Practices.

Table 4.26 ANOVA for Employee Competence

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	146.800	1	146.800	51.223	.000
Residual	392.626	137	2.866		
Total	359.426	138			

Predictors: (constant), Employee Competence

Dependent Variable: supply chain management ethical practices

4.7.3.3 ANOVA for Construct Market Pressure

As can be observed in table 4.27 of the Analysis of Variance (ANOVA) for regression coefficients, the results demonstrate the significance of the F statistics is 0.021 which is less than 0.05. This, therefore, implies that there is a significant relationship between market pressure and implementation of supply chain management Ethical Practices.

Table 4.27 ANOVA for Market Pressure

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	20.608	1	20.608	5.422	.000
Residual	518.817	137	3.787		
Total	539.426	138			

predictors: (constant), Market Pressure

Dependent Variable: supply chain management ethical practices

4.7.3.4 ANOVA for Construct Health and Safety

From table 4.28 of the Analysis of Variance (ANOVA) for regression coefficients, the results demonstrate the significance of the F statistics is 0.02 which is less than 0.05. This, therefore, implies that there is a significant relationship between health and safety and implementation of supply chain management Ethical Practices.

Table 4.28 ANOVA for Health and Safety

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	35.358	1	35.358	9.662	.002
Residual	503.888	137	3.678		
Total	539.426	138			

Predictors: (constant), Health and Safety

Dependent Variable: supply chain management ethical practices

4.7.3.5 ANOVA for Construct Regulatory Framework

Table 4.29 shows the Analysis of Variance (ANOVA) for regression coefficients. The results demonstrate the significance of F statistics is 0.00 which is less than 0.05. This implies that there is a significant relationship between regulatory framework and implementation of supply chain management Ethical Practices.

Table 4.29 ANOVA for Regulatory Framework

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	92.601	1	92.601	28.392	.000
Residual	446.825	137	3.261		
Total	539.426	138			

Predictors: (constant), Regulatory framework

Dependent Variable: supply chain management ethical practices

4.8 Overall Model

Multiple regression analysis was used to determine whether independent variables; supplier relationship management (X1), employees competence (X2), market pressure(X3), health and safety(X4), and regulatory framework (X5) simultaneously affect the dependent variable (Y) which is determinant of Supply Chain Management Ethical practices .The sub-section examines whether the multiple regression equation can be used to explain the hypothesis of factors determining supply chain management ethical practices in government ministries. The model used for the regression analysis was expressed in the general form as given below:

$Y= B0 + B1X1 + B2X2 + B3X3 + B4X4 + B5X5 + \acute{\varepsilon}.$

Where:

Y = Supply Chain Management Ethical Practices (Dependent Variable)
X1 = Supplier Relationship Management (Independent Variable)
X2 = Employee Competence (Independent Variable)
X3 =Market Pressure (Independent Variable)
X4= Health and Safety (Independent Variable)
X5= Regulatory Framework (Independent Variable)
B0 = Constant of Regression (Independent Variable)
$\acute{\varepsilon}$. = Error Term

For this model, implementation of supply chain management Ethical Practices was used as the dependent variable (Y) and independent variables included X1, X2, X3, X4, and X5. The relationships between the dependent variable and independent variables, and the results of testing significance of the model were also respectively interpreted. In interpreting the results of multiple regression analysis, the three major elements considered were: the coefficient of multiple determinations, the standard error of estimate and the regression coefficients. R squared was used to check how well the model fitted the data. R squared is the proportion of variation in the dependent variable explained by the regression model. These elements and the results of multiple regression analysis were presented and interpreted accordingly in table 4.33, table 4.34, and table 4.35.

Table 4.30 reports the model of implementation of supply chain management ethical practices with the coefficient of determination R2 = .978 and R =0.989 at 0.05 significant level. The coefficient of determination indicates that 97.8 % of the variation on implementation of supply chain management Ethical Practices in government ministries can be explained by supplier relationship management (X1), employees' competence (X2), market pressure (X3), health and safety (X4) and regulatory framework (X5). The remaining 2.1% of the variation on implementation of supply chain management Ethical Practices in government ministries is affected by other variables not included in the model. This shows that the model has a good fit since the

value is above 75%.The results of the summary Analysis of Variance (ANOVA) are presented in Table 4.30.

Table 4.30 Regression Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.989	**.978**	**.977**	**1.53696831**

Table 4.31 shows the regression and residual (or error) sums of squares. The variance of the residuals (or errors) is the value of the mean square which is 2844.884. As can be observed in table 4.31, the predictors X1, X2, X3,X4 and X5 represent the independent variables, namely; supplier relationship management (X1), employees competence (X2), market pressure (X3), health and safety (X4) and regulatory framework (X5) which are the factors affecting implementation of supply chain management Ethical Practices. Table 4.34 also provides the data to compute R2 which is SS-regression divided by SS-Total =R2. SS-regression/SS-Total 14224.419. /14540.963=.978. Table 4.34 reports the summary ANOVA and F statistic which reveals the value of F (1.204) is significant at 0.05 confidence level. The value of F is large enough to conclude that the set of independent variables; supplier relationship management (X1), employees competence (X2), market pressure (X3), health and safety (X4) and regulatory framework (X5) are the major factors affecting implementation of supply chain management Ethical Practices in government ministries.

Table 4.31 ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	14224.419	5	2844.884	1.204E3	.000
Residual	316.544	134	2.362		
Total	**14540.963**	**139**			

Table 4.31 evaluates and interprets the standardized coefficients of correlation (beta). In estimating the contribution of each independent variable in the study, it was established that all independent variables significantly contributed to variance of implementation of supply chain management Ethical Practices at significance level of 0.05. However, the relative importance of each independent variable was different. Also, since the significance values are less than 0.01, the coefficients were significant and therefore, the regression equation was:

Y = 0.010 x1 +0.420X2 + 0.321 X3 + 0.080 X4 + 0.170X5

Table 4.34 shows variance inflation factors (VIF) which measure how much the variance of the estimated coefficients are increased over the case of number of correlations among the X variables. In this case, employee competence had a highest VIF of 200.826 and highest beta coefficient of .420.

Table 4.32 Coefficients

Coefficients							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
supplier relationship management	.008	.109	.010	.074	.941	.009	112.290
employee competence	.168	.072	.420	2.328	.021	.005	200.826
market pressure	.193	.034	.321	5.701	.000	.051	19.485
health and safety	.044	.033	.080	1.341	.182	.046	21.927
regulatory framework	.141	.071	.170	1.978	.050	.022	45.581
Dependent Variable: supply chain management Ethical Practices							
Linear Regression through the Origin							

4.9 Optimal Model

After the removal of multicollinearity, the new regression analysis results were as follows; Multicollinearity misleadingly inflates the standard errors. Thus, it makes some variables statistically insignificant while they should be otherwise significant (Schroeder, 1990).In this case employee competence had a highest VIF of 200.826 and highest beta coefficient of .420 thus made other variables to appear insignificant and

hence it was removed from further regression analysis. Table 4.33 shows the model of implementation of supply chain management Ethical Practices with the coefficient of determination R2 = .977 and R =0.989 at 0.05 significance level. The coefficient of determination indicates that 98.9 % of the variation on implementation of supply chain management Ethical Practices in government ministries can be explained by supplier relationship management (X1), market pressure (X3), health and safety (X4) and regulatory framework (X5). The remaining 2.1% of the variation on implementation of supply chain management Ethical Practices in government ministries is affected by other variables not included in the model. This shows that the model has a good fit since the value is above 75%.The results of the summary Analysis of Variance (ANOVA) are presented and interpreted in Table 4.38.

Table 4.33 Regression Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.989	**.977**	**.977**	**1.56191426**

Table 4.34 also provides the data to compute R2 which is SS-regression divided by SS-Total = R2. SS-regression divided by SS -Total 1411. 690 divide by 14540.963=.977. Table 4.38 reports the summary of ANOVA and F statistic which reveals the value of F (1.456) is significant at 0.05 confidence level. The value of F is large enough to conclude that the set of independent variables; supplier relationship management (X1), market pressure (X3), health and safety (X4) and regulatory framework (X5) are the

major factors affecting implementation of supply chain management Ethical Practices in government ministries.

Table 4.34 ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	14200.620	4	3552.905	1.456E3	.000
Residual	329.343	135	2.440		
Total	**14540.963**	**139**			

Table 4.35 evaluates and interprets the standardized coefficients of correlation (beta). In estimating the contribution of each independent variable in the study, it was established that the independent variables namely, supplier relationship management (X1), market pressure (X3), health and safety (X4) and regulatory framework (X5) significantly contributed in variance of implementation of supply chain management Ethical Practices at significance level of 0.05. However, the relative importance of each independent variable was different. Also, since the significance values are less than 0.05, the coefficients were significant and therefore, the regression equation was:

Y = 0.302 x1 +0.365X3 + 0.105 X4 + 0.233 X

The levels of determination of the variables have on implementation of supply chain management ethical practices are .245, .220, 0.58, and .93 respectively with levels of significance being .00, .00, .08, .00. This shows a unit increase in supplier relationship management would result in an increase in implementation of supply chain management ethical practices in government ministries by .245. An increase in market pressure would

result in an increase in implementation of supply chain management ethical practices in government ministries by .220 and increase in regulatory framework would result in an increase in implementation of supply chain management ethical practices in government ministries by .193.

Table 4.35 Coefficients

Coefficients							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Supplier relationship management	.245	.041	.302	5.968	.000	.065	15.286
market pressure	.220	.032	.365	6.795	.000	.058	17.228
health and safety	.058	.033	.105	1.763	.080	.047	21.208
regulatory framework	.193	.069	.233	2.799	.006	.024	41.158
Dependent Variable: supply chain management Ethical Practices							
Linear Regression through the Origin							

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This chapter presents the summary of findings, draws the study conclusions and highlights key recommendations based on the analyzed results on determinants of supply chain management ethical practices in government ministries in Kenya. The chapter also proposes recommendations for further research on ethical practices problems in government ministries.

5.2 Summary of Major Findings

The main objective of the study was to determine the implementation of supply chain management ethical practices in government ministries in Kenya. The study specifically determined the influence of supplier relationship management, assessed the influence of employees' competency, established the influence of market pressure, determined the influence of health and safety measures, and investigated the influence of regulatory framework on implementation of supply chain management ethical practices in government ministries in Kenya. The study identified that, in many government ministries the employed procurement management system was deficient of SCM ethical inclination and this affected creation of a supportive environment for effective delivery of quality public services. The key findings drawn from the five specific objectives are presented as follows.

5.2.1 Supplier Relationship Management

Does supplier relationship management determine the implementation of supply chain management ethical practices in government ministries in Kenya? The study findings indicated that successive implementation of supply chain management ethical practices in government ministries, is hindered by absence of effective supplier relationship management practices. The study further revealed that most government ministries lacked an effective approach of managing suppliers' activities and this led to poor interactions between the organization management and the suppliers. The key notable supplier relationship management challenges that hinder implementation of supply chain management ethical practices in government ministries included; supplier collaboration, communication with suppliers, supplier performance, quality of goods and services, supplier commitment and organization commitment in payment of suppliers.

Majority 46.65%, 43.98% and minority 2.76% of the respondents rated all the supplier relationship management determinants to the implementation of supply chain management ethical practices to a moderate extent, to a large extent and to a very large extent respectively. The major determinants influencing supplier relationship management to determine supply chain management ethical practices to a large extent include; supplier collaboration, communication with suppliers, supplier performance, quality of goods and services, supplier commitment and organizational commitment in payment of suppliers. These findings concurred with Göran and Greg, (2011) that issues such as; lack of supplier collaboration, poor communication with suppliers, and absence of effective supplier performance systems and lack of effective quality management

affect Supply Chain Management ethical practices in many public sector organizations. The study therefore concluded that factors such as supplier collaboration, communication with suppliers, supplier performance, quality of goods and services, supplier commitment and organizational commitment in payment of suppliers influenced how supplier relationship management determined supply chain management ethical practices in government ministries.

5.2.2 Employees' Competence

Employees' competence was noted to have a key influence on the process under which supply chain management ethical practices was determined in many government ministries. Existence of staff with no technical knowledge and skills on supply chain management functions hindered effective integration of business ethical practices with supply chain management functions and this weakened the level of application of supply chain management ethical practices in government ministries. The study identified that lack of effective leadership competencies hindered the ability of top management staff to guide the organization on how to effectively embrace supply chain management ethical practices.

The study identified that the key notable employees' competency factors that hindered implementation of supply chain management ethical practices in government ministries included knowledge and skills on SCM functions, business ethical practice skills, employees' qualifications, efficiency of procurement functions, rate of employees training and employees training on professional ethical practices. This was supported by

majority of the respondents with an average percentage of 41.44, 22.18, and 1.86 who rated all the employees' competency factors to influence the supply chain management ethical practices to a moderate extent, to a large extent and to a very large extent respectively.

This contributed to a total of 65.48% of the respondents who rated the major factors influencing employees' competence to in determining supply chain management ethical practices to a large extent included; knowledge and skills on supply chain management functions, employees' qualifications, efficiency of procurement functions, rate of employees training and employees training on professional ethical practices**.** These findings concurred with Kapila (2008) lack of knowledge and skills on SCM functions, lack of employees' qualifications, poor efficiency of procurement functions, and low rate of employees training and on professional ethical practices determines Supply Chain Management Ethical issues in many public sector organizations. The study deduced that the major factors determining supply chain management ethical practices in many public sector organizations includes lack of employees' qualifications, poor efficiency of procurement functions, low rate of and lack of employees training on professional ethical practices.

5.2.3 Market Pressure

Market pressure was found to have major influence on how supply chain management ethical practices were implemented in government ministries. Market pressure forces such as changes in demand and supply of various goods and services and ethical

practices climate in the market influenced the behaviour of supply chain management staff in government ministries. It was noted that some major suppliers dictated the conditions of the market and this created unfavourable environment for the implementation of supply chain management ethical practices. The study identified that the key notable market pressure issues that determined supply chain management ethical practices included; leadership accountability, interest in company by target market, relationship with individual customers, suppliers influence, competition, political/policy conduct sector and demand and supply of goods and services.

The study found that majority of the respondents with an average percentage of 4.64, 43.27, and 49.74 rated all the market pressure factors that determine supply chain management ethical practices to a moderate extent, to a large extent and to a very large extent respectively. This led to a total of majority 97.65% of the respondents expressing that leadership accountability, interest in company by target market, relationship with individual customers, suppliers influence, competition, political/policy conduct sector demand and supply of goods and service were the major factors influencing market pressure to affect implementation of supply chain management ethical practices in government ministries. These findings concurred with Lane (2008) that, factors such as leadership accountability, interest in company by target market, relationship with individual customers, suppliers' influence, competition, political/policy conduct sector demand and supply of goods and service influence market pressure to affect implementation of supply chain management ethical practices in government ministries in Kenya.

The findings also concurred with Svensson and Baath (2008) and Woods Partnership Model (2002) that ethical practice in the market place influences supply chain management ethical practices in organizations. The study hence alluded that the major factors influencing market pressure to affect implementation of supply chain management ethical practices included; leadership accountability, interest in company by target market, relationship with individual customers, suppliers influence, competition, political,/policy conduct sector demand and supply of goods and service.

5.2.4 Health and Safety

The study noted that successive implementation of supply chain management ethical practices was greatly affected by health and safety measures employed by the government ministries during execution of supply chain management functions. Absence of high standard health and safety measures lowered the quality of supply chain management functions and this influenced delivery of sub-standard goods and provision of low quality services by various suppliers in the government ministries. It was identified that the major health and safety factors affecting implementation of supply chain management ethical practices included; health and safety measures, risk control measures, identification of sub-standard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programme, emergency measures and monitoring of service delivery process.

This was supported by majority of the respondents with an average percentage of 48.38, 14.93, and 4.84 who rated all the health and safety factors that supply chain management

ethical practices to a moderate extent, to a large extent and to a very large extent respectively. This implied that majority 63.15% of the respondents indicated that the major factors influencing health and safety to affect implementation of supply chain management ethical practices included; health and safety measures, risk control measures, identification of substandard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programme, emergency measures and monitoring of service delivery process.

These findings were in agreement with Brytting (2007) that implementation of effective health and safety measures, risk control measures, identification of substandard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programs, emergency measures and monitoring of service delivery process in implementation of supply chain management ethical practices in many public sector organizations. The study hence deduced that the major factors influencing health and safety to affect implementation of supply chain management ethical practices included; health and safety measures, risk control measures, identification of sub-standard goods, proper disposal procedures, evaluation of quality of procured goods and services, employees welfare programme, emergency measures and monitoring of service delivery process.

5.2.5 Regulatory Framework

The study established that the level of compliance with regulatory framework determined how government ministries implemented supply chain management ethical

practices. It was noted that many ministries did not effectively execute their supply chain activities as stipulated in the Public Procurement and Disposal Act, 2005 (PPDA), Public Procurement and Disposal Regulations, 2006 (GoK, 2006) and the Supplies Practitioners Management Act, 2007 (KISM,2009). This hindered application of effective supplier management practices hence creating unfavorable environment for the implementation of supply chain management ethical practices.

The regulatory framework factors that were found to affect implementation of supply chain management ethical practices included; procurement regulations awareness, level of procurement regulations compliance, lack of following the procurement procedures, inefficiency in procurement processes, lack of transparency and accountability, cases of loss of procurement funds and lack of updated procurement policies. This was supported by majority of the respondents with an average percentage of 38.84, 19.84, and 18.72 who rated all the regulatory factors to influence the implementation of supply chain management ethical practices to a moderate extent, to a large extent and to a very large extent respectively. The findings indicated that majority 80.14% of the respondents indicated that the major factors influencing regulatory framework to affect implementation of supply chain management ethical practices included; procurement regulations awareness, awareness of procurement regulation is high, efficiency in procurement processes, transparency and accountability, cases of loss of procurement funds and procurement policies are up to date.

These findings concurred with findings by Kapila, (2008) that implementation of supply chain management ethical practices in many government ministries was hindered by lack of procurement regulations awareness, lack of efficiency in procurement processes, lack of transparency and accountability, increased cases of loss of procurement funds and lack of updated procurement policies. The study hence deduced that the major factors influencing regulatory framework to determine supply chain management ethical practices included; procurement regulations awareness, awareness of procurement regulation is high, efficiency in procurement processes, transparency and accountability, cases of loss of procurement funds and procurement policies are up-to-date.

5.2.6 Supply Chain Management Ethical Practices

The study further identified that the major supply chain management issues that determined the extent to which supply chain management ethical practices were implemented in government ministries included; relationship between suppliers and supply relationship**,** high corporate integrity**,** presence of corporate responsibility standards**,** effective production and distribution practices, strong organization culture, presence of integrity capacity, procurement process is influenced by market**,** presence of effective health and safety measures and high level of regulations compliance. It was finally established that majority of the respondents with an average percentage of 22.08, 26.55 and 24.46agreed all the supply chain management ethical practices issues were not experienced in the government ministries. This indicated that majority (73.09%), of the respondents expressed that supply chain management ethical practices issues such as

relationship between suppliers and supply relationship, high corporate integrity, effective production and distribution practices, strong organization culture, presence of effective health and safety measures and high level of regulations compliance were not experienced in government ministries and this was a clear indication that implementation of supply chain management ethical practices was a major problem facing many government ministries in Kenya.

The above findings corroborated with findings by Moses (2007), that lack of implementation of supply chain management ethical practices in government ministries is evidenced by existence of poor relationship between suppliers and supply relationship, lack of high Corporate integrity, lack of effective production and distribution practices, absence of strong organization culture, lack of presence of effective health and safety measures and low level of procurement regulations compliance. The study alluded that existence of poor relationship between suppliers and supply relationship, lack of high corporate integrity, lack of effective production and distribution practices, weak organization culture, absence of effective health and safety measures and low level of procurement regulations compliance hinders effective implementation of supply chain management ethical practices was a major problem facing many government ministries in Kenya

5.2.7 Optimal Framework

Due to the high multicollinearity, the construct employees' competency was dropped. This means that the dependent construct supply chain ethical practices behaviour is determined by supplier relationship management, market pressure, health and safety and regulatory framework. This was further proved by all other inferential analysis used in this study which confirms the hypothesized statement of the study except for the hypothetical statement employee competency is significantly determines the supply chain management ethical practices which was satisfactorily rejected leading to the drop of the construct employees' competency and the corresponding hypothetical casual path. Thus, the optimal model is presented in the following illustration in the figure 5.1.

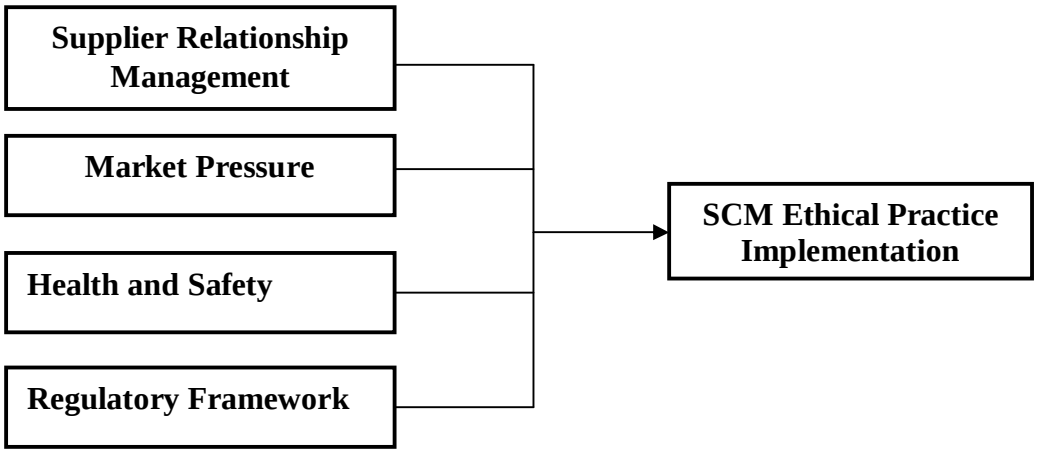

Figure 5.1 Revised Optimal Model

5.3 Conclusion

The major factors affecting effective implementation of supply chain management ethical practices in government ministries in Kenya include; lack of supplier relationship management, low level of employees' competency, market pressure, weak health and safety measures, and low level of compliance with supply chain management regulatory framework. In many government ministries, there is lack of effective supplier relationship management strategies**,** there is low level of corporate integrity**,** there is lack effective corporate responsibility standards**,** there are no proper production and distribution practices, there exists weak organization culture on ethical issues, there is lack high level of integrity capacity, procurement processes are influenced by market forces**,** there lacks effective health and safety measures and the level of procurement regulations compliance is not high.

Supplier relationship management enhances effective communication between procurement management staff in government ministries and this helps in the implementation of ethical business practices. The key notable supplier relationship management issues that affect implementation of supply chain management ethical practices in government ministries include the level of commitment in payment of suppliers, supplier development programme, and quality of the procurement process, existence of effective communication system with suppliers, application of supplier performance management system and implementation of effective supplier collaboration strategies.

Employee competencies are those traits, skills or attributes that employees need to perform their jobs most effectively. The key notable employees' competency factors that hinder implementation of supply chain management ethical practices in government ministries include knowledge and skills on SCM functions, business ethic skills, employees' qualifications efficiency of procurement functions, rate of employees training and employees training on professional ethical practices.

Market pressure entails the market forces that influence effective execution of supply chain management practices. Change of demand and supply forces leads to availability or lack of certain goods and services. A market environment with corrupt suppliers leads to increased level of bribery, extortion and delivery of substandard goods and this undermines ethical practices in the supply chain. The study identified that the key notable market pressure issues that affected implementation of supply chain management ethical practices included; leadership accountability, interest in company by target market, relationship with individual customers, suppliers influence, competition, political/policy conduct sector and demand and supply of goods and services.

Health and safety entail measures employed by organizations during execution of supply chain management practices. The major health and safety issues that affect implementation of supply chain management ethical practices include; lack of effective quality management systems in the ministries supply chain functions, lack of trained supply chain managers on health and safety measures, application of poor goods

storage and handling procedures, lack of effective risk control measures, lack of effective supplier management strategies, use of poor material disposal procedures, lack of effective control systems that supports evaluation of quality of procured goods and services and absence of effective employees welfare programme.

Regulatory framework is a set of rules and regulations that provide guidelines on how procurement functions should be undertaken in public entities. In Kenya, procurement regulatory framework comprises Public Procurement and Disposal Act, 2005 (PPDA), Public Procurement and Disposal Regulations, 2006 (GoK, 2006) and the Supplies Practitioners Management Act, 2007 (KISM, 2009). The major regulatory framework issues that affect supply chain management ethical practices include; low level of procurement regulations awareness, lack of enforcement of the implementation of procurement regulations, poor monitoring of how government ministries implement procurement procedures, lack of increased efficiency, transparency and accountability in the execution of supply chain management ethical practices and lack of effective procurement policies in the ministries.

5.4 Recommendations

The study found out that effective implementation of supply chain management ethical practices in government ministries in Kenya was hampered by, supplier relationship management, employees' competency, market pressure, health and safety measures and regulatory framework. To improve on supplier relationship management, supply chain managers in government ministries should improve on the level of commitment in

payment of suppliers, employ effective supplier development programs, ensure that all goods and services procured are of high quality, award contracts to competent suppliers, employ effective communication system with suppliers, implement effective supplier performance management system and implement effective supplier collaboration strategies. In addition, government ministries should employ effective contract management strategies that contribute towards improvement of the supplier performance in the execution of the awarded tenders. Procurement decision in government ministries should be made objectively free from any personal considerations and the suppliers should be paid promptly. Government procurement managers should also maintain integrity and be fair by making supplier pricing confidential and giving all the suppliers an equal opportunity to compete for tenders.

To improve on the level of employees' competency on supply chain management ethical practices issues, government ministries should recruit and continuously train SCM staff on how to improve on the efficiency of procurement functions, recruit competent staff with Knowledge and Skills on SCM functions and continuously train employees' on professional ethical practices. Senior procurement managers should be recruited on bases of professional qualifications and experience in supply chain management functions. Supply chain staff should be encouraged to pursue professional procurement certifications like Chartered Institute of Purchasing and Supplies Management (CIPS). The ministries should undertake an employee's competency gap analysis in implementation of supply chain management ethical practices in order to determine the critical areas in SCM ethical practices to train the organization staff. The procurement

staff should also be encouraged to attend ethical practices training seminars offered by the Kenya Institute of Management and Chartered Institute of Purchasing and Supplies Management.

Market pressure is the interface of supply and demand in the market place. Few suppliers will always tend to dictate the conditions of the market and this creates unfavorable environment for on the implementation of supply chain management ethical practices. Supply chain managers in government ministries should improve relationship with individual customers, manage the forces of demand and supply of goods and services in the market, employ strategic leadership, manage competition, avoid influence by the political climate, avoid any suppliers influence, and employ effective procurement procedures as per the procurement regulations

To improve on health and safety issues, government ministries should employ effective quality management systems that create a supportive environment for the implementation of effective quality management systems in all ministries supply chain functions. Supply chain managers in government ministries should be trained on safety measures, health and safety measures, employ effective goods storage and handling procedures, embrace effective risk control measures, select suppliers who deliver quality goods and services, employ effective material disposal procedures and put control systems that supports evaluation of quality of procured goods and services and employees welfare programs.

To ensure that regulatory framework helps in promoting the implementation of supply chain management ethical practices in government ministries in Kenya. Supply chain practitioners in the government ministries should be trained on how to comply with Public Procurement and Disposal Act, 2005 (PPDA), Public Procurement and Disposal Regulations, 2006 (GOK, 2006) and the Supplies Practitioners Management Act, 2007 (KISM,2009). The government should promote the level of procurement regulations awareness, enforce implementation of procurement regulations, monitor how government ministries implement procurement procedures, and apply internal control systems that lead to increased efficiency, transparency, and accountability in the execution of supply chain management ethical practices. Effective procurement policies should also be designed and implemented in all ministries.

5.5 Proposed Areas for Further Studies

This study was confined to the public sector (government ministries) and focused on 5major supply chain management ethical practices implementation issues notably; supplier relationship management, employees' competence, market pressure, health and safety measures and regulatory framework. This limited the study from exploring other factors that still could affect supply chain management ethical practices in government ministries. The study, therefore, proposes further studies to be carried out to help in establishing other factors that affect implementation of supply chain management ethical practices in government ministries that were not covered in this study. These factors could include corporate social responsibility, political interference and the level of procurement regulations enforcement. Further studies should also be carried out in

private sector organizations since they are also key players in government ministries supply chain management activities.

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APPENDICES
Appendix 1

Questionnaire

SECTION 1: **personal information**

(Instruction -Tick where appropriate)

1. Years of Work
   - ☐ Less than 5 years
   - ☐ 6-10 Years
   - ☐ 11-15years
   - ☐ 16 years and above
2. Age
   - ☐ 18-30 Yrs
   - ☐ 31-40 Yrs
   - ☐ 41-50Yrs
   - ☐ 51 and above
3. Highest Education Level
   - ☐ Secondary level
   - ☐ College level
   - ☐ University level
   - ☐ Masters
   - ☐ PHD
   - ☐ Professional Qualification

     (Specify…….
4. Department
   - ☐ Procurement department
   - ☐ Finance department
   - ☐ Administration Department

SECTION 2: **Supplier Relationship Management**

1. Please indicate the extent to which the following organization supplier relationship management issues are handled within the ministry. Please record your answer by ticking at the space provided, by the scale indicator. (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Supplier relationship management	**1**	**2**	**3**	**4**	**5**
a) Supplier / Buyer collaboration					
b) Communication with suppliers					
c) Supplier / Buyer development					
d) Supplier performance					
e) Quality of goods and services					
f) Supplier commitment					
g) Organization commitment in payment of suppliers					

2. Could you suggest how government ministries should employ effective supplier relationship strategies in order to encourage implementation of supply chain management ethics? (Explain).

……

……

……

SECTION 3: **Employees Competency**

1. Please indicate the level of the following employees' competency factors in the ministry. Please record your answer by ticking at the space provided, by the scale indicator. (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Employees' competency factors	**1**	**2**	**3**	**4**	**5**

a) Knowledge and skills on SCM functions					
b) Business ethic skills					
c) Employees qualifications					
d) Efficiency of procurement functions					
e) Employees job description					
f) Rate of employees training					
g) Employees training on professional ethics					

2. Could you suggest how public sector organizations should improve on employees' competency in order to support effective implementation of supply chain management ethics in government ministries in Kenya? (Explain).

……

……

SECTION 4: **MARKET PRESSURE**

1. Please indicate the extent to which the following market pressure issues affects the operation of the ministry in Kenya. Please record your answer by ticking at the space provided, by the scale indicator. (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Market Pressure	**1**	**2**	**3**	**4**	**5**
a) Leadership accountability					
b) Interest in company by target market					
c) Relationship with individual customers					
d) Information access					
e) Awareness of company and its values proposition					
f) Suppliers influence					

g) Competition among suppliers					
h) Public Community Sector Operations					
i) Political/Policy Conduct Sector					
j) Private Corporate Sector					
k) Nature of industry					
l) Demand and supply of goods and services					

2. Could you suggest how public sector organizations should manage market pressure challenges in order to support effective implementation of supply chain management ethics in government ministries in Kenya? (Explain).

……

……

……

SECTION 5: **Health and Safety**

1. Please indicate the extent to which the following Health and safety issues are implemented in the ministry. Please record your answer by ticking at the space provided, by the scale indicator. (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Health and safety issues	**1**	**2**	**3**	**4**	**5**
a) Assessment of the environmental impact of organization activities					
b) Training on safety measures					
c) Health and safety policies					
d) Goods storage and handling procedures					
e) Risk control measures					

f) Identification of substandard goods					
g) Proper disposal procedures					
h) Health and safety measures					
i) Evaluation of quality of procured goods and services					
j) Employees welfare programs					
k) Emergency measures					
l) Monitoring of service delivery process					
m) Quality improvement activities					

2. Could you suggest how public sector organizations should employ health and safety measures in order to support effective implementation of supply chain management ethics in government ministries in Kenya? (Explain).

……

……

……

SECTION 6: **Regulatory Framework**

1. Please indicate the extent to which you agree with the following regulatory framework issues within the ministry. Please record your answer by ticking at the space provided, by the scale indicator. (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Regulatory framework factors	**1**	**2**	**3**	**4**	**5**
a) Procurement regulations awareness. The awareness of procurement regulation is high.					
b) Level of procurement regulations compliance.					

There is compliance of procurement regulations.					
c) Procurement procedures are followed to the letter.					
d) There is efficiency in procurement processes					
e) There is transparency and accountability					
f) No cases of loss of procurement funds					
g) Procurement policies are up to date					

2. Could you suggest how government ministries should improve on regulatory framework factors in order to support effective implementation of supply chain management ethics? (Explain).

……

SECTION 7: **Supply Chain Management Ethical Practices**

Please indicate the level to which you agree with the following statements relating to Supply Chain Management Ethical practices within the ministry. Please record your answer by ticking at the space provided, by the scale indicator. (1= not at all, 2 = small extent, 3 = moderate extent, 4 = large extent, 5 = very large extent)

Supply Chain Management Ethical practices issues	**1**	**2**	**3**	**4**	**5**
a) There is a relationship between Suppliers and supply relationships					
b) There is high Corporate integrity					
c) Presence of Corporate responsibility standards					
d) There is effective production and distribution practices.					
e) Strong Organization culture					
f) Presence of integrity capacity					
g) Procurement process is influence by market					

h) Presence of effective health and safety measures					
i) High level of regulations compliance					

Appendix II

APPENDIX II: introduction letter

To Whom It May Concern

Dear Sir/Madam,

RE: COLLLECTION OF DATA

I am a Doctor of Philosophy (PHD) candidate in the Department of Business Entrepreneurship and Procurement, School of Human Resource and Development, Jomo Kenyatta University of Agriculture and Technology (CBD Campus) Nairobi. As part of the requirement for the award of the degree, I am expected to undertake a research study on **"FACTORS INFLUENCING IMPLEMENTATION OF SUPPLY CHAIN MANAGEMENT ETHICAL PRACTICES IN GOVERNMENT MINISTRIES IN KENYA".** I'm therefore, seeking your assistance to fill the questionnaires attached. The attached questionnaire will take about twenty minutes to complete. Kindly answer all the questions. The research results will be used for academic purposes only and will be treated with utmost confidentiality. Only summary results will be made public. No one, except the institution will have access to these records.

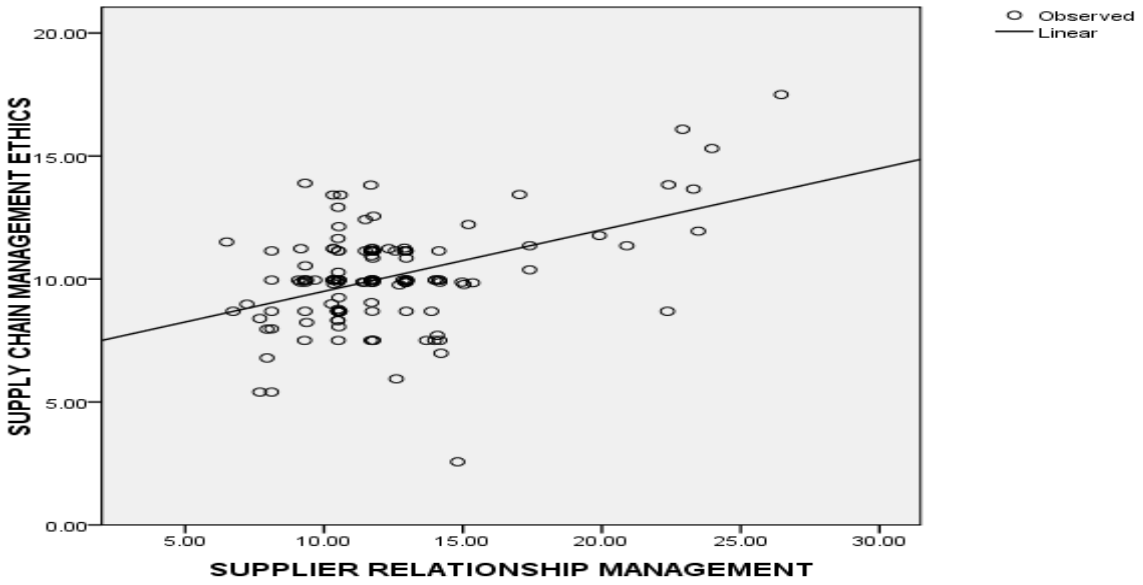
Should you require the summary, kindly indicate so at the end of the questionnaire. A self- addressed envelope is provided for your reply. Your co-operation will be appreciated.

Yours sincerely,

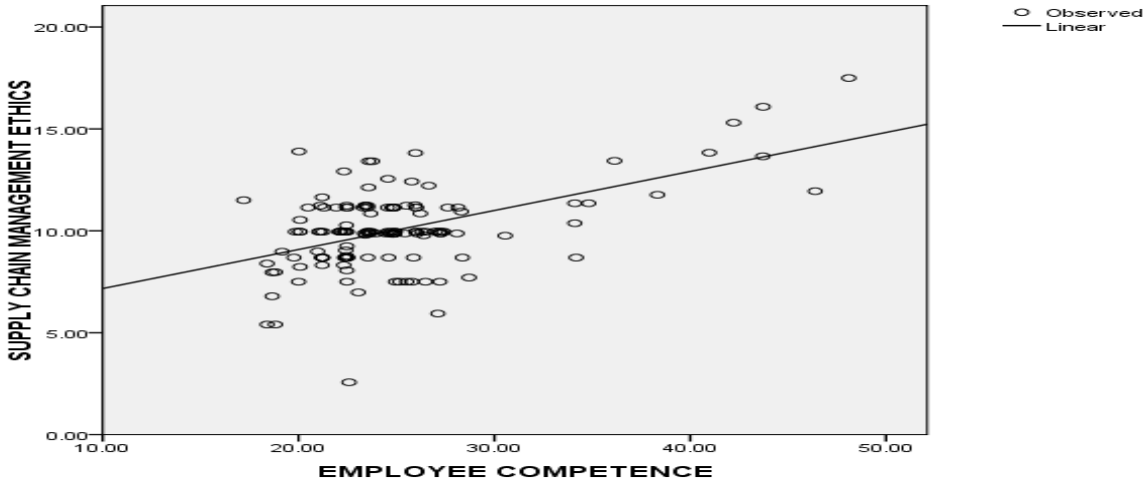
JUSTUS B. KINOTI

Appendix III

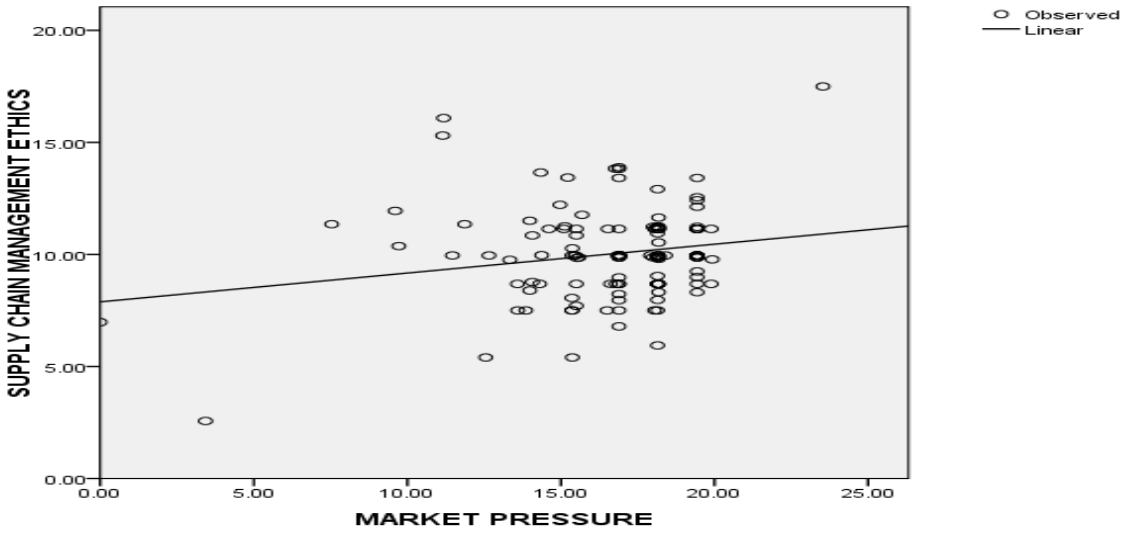
Scatter Plots



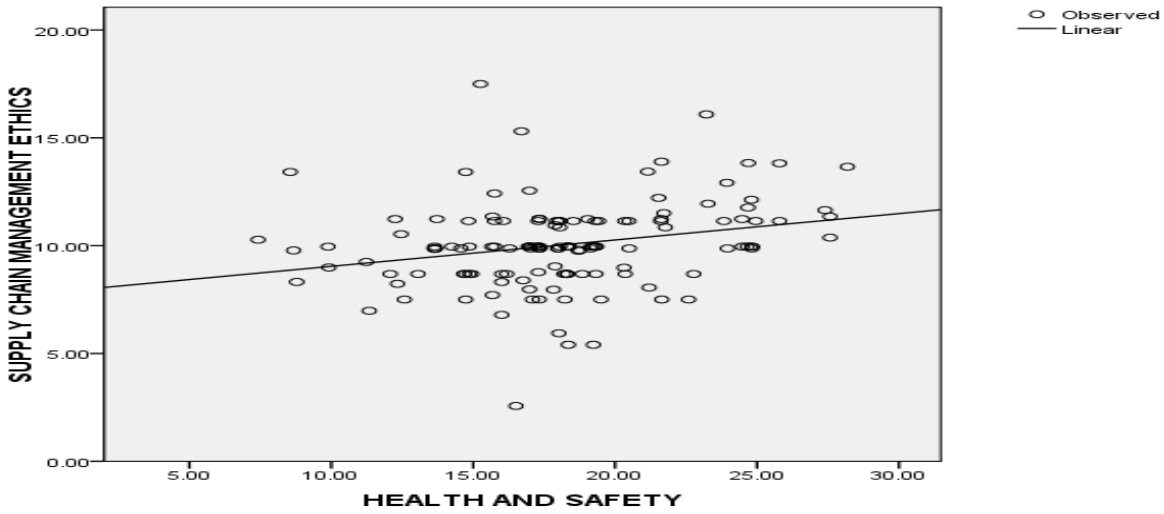
Scatter plot for Significance of Supplier Relationship Management



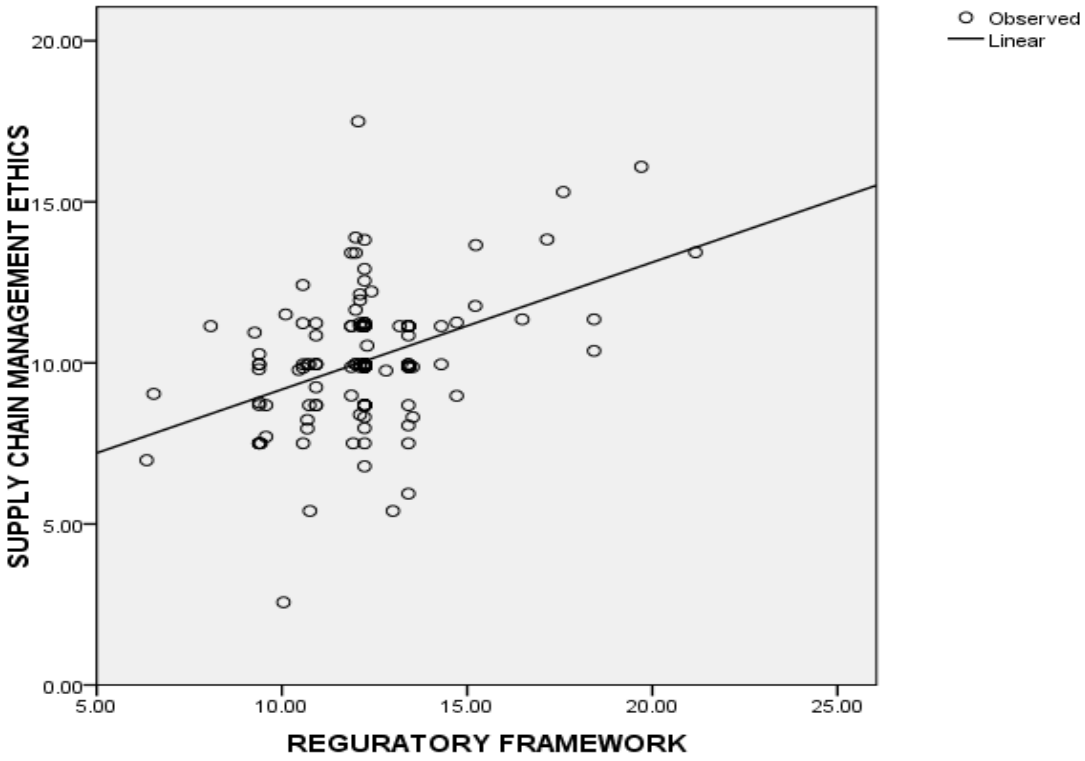
Scatter plot for Significance of Employees Competence



Scatter plot for Significance of Market Pressure



Scatter plot for Significance of Health and Safety



Significance of Regulatory Framework

APPENDIX IV

COEFFICIENT TABLES

Supplier Relationship Management Coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7.003	.547		12.804	.000
supplier relationship management	.250	.043	.442	5.770	.000
Dependent Variable: supply chain management ethics					

Employees Competence Coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.256	.683		7.693	.000
employee competence	.191	.027	.522	7.157	.000
Dependent Variable: supply chain management ethics					

Market Pressure Coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(constant)	7.885	.937		8.416	.000
market pressure	.129	.055	.195	2.333	.021
Dependent Variable: supply chain management ethics					

Health and Safety Coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	7.818	.732		10.681	.000
HEALTH AND SAFETY	.122	.039	.257	3.108	.002
Dependent Variable: supply chain management ethics					

Regulatory Framework Coefficients

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	5.230	.915		5.716	.000
regulatory framework	.395	.074	.414	5.328	.000
Dependent Variable: supply chain management ethics					

APPENDIX V

LIST OF GOVERNMENT MINISTRIES

1. Ministry of Public Health
2. Ministry of Medical Service
3. Ministry Agriculture
4. Ministry of Gender
5. Ministry of Roads
6. Ministry of Works
7. Ministry of Youth
8. Ministry of Finance
9. Ministry of Planning
10. Ministry of Tourism
11. Ministry of Immigration
12. Ministry of Special Programmes
13. Ministry of Labour
14. Ministry of Trade
15. Ministry of Home Affairs
16. Ministry of Lands
17. Ministry of Local Government
18. Ministry of Wildlife
19. Ministry of Information
20. Ministry of Energy
21. Ministry of Environment

Appedix vi Measurements of Variables

Variable	Indicator	Measure	Scale	Instrument
Supplier Relationship Management	a) Supplier / Buyer collaboration b) Communication with suppliers c) Supplier / Buyer development d) Supplier performance e) Quality of goods and services f) Supplier commitment a) Organization commitment in payment of suppliers	Likert/ Ordinal	5 Point Likert Scale	Questionnaires
Employees Competency	a) Knowledge and skills on SCM functions b) Business ethic skills c) Employees qualifications d) Efficiency of procurement functions e) Employees job description f) Rate of employees training g) Employees training on professional ethics	Likert/ Ordinal	5 Point Likert Scale	Questionnaires
Market pressure	a) Leadership accountability b) Interest in company by target market c) Relationship with individual customers d) Information access e) Awareness of company and its values proposition f) Suppliers influence g) Competition among suppliers h) Public community sector operations i) Political/policy conduct sector	Likert/ Ordinal	5 Point Likert Scale	Questionnaire

	j) Private corporate sector k) Nature of industry l) Demand and supply of goods and services			
Health and Safety	a) Assessment of the environmental impact of organization activities b) Training on safety measures c) Health and safety policies d) Goods storage and handling procedures e) Risk control measures f) Identification of substandard goods g) Proper disposal procedures h) Health and safety measures i) Evaluation of quality of procured goods and services j) Employees welfare programme k) Emergency measures l) Monitoring of service delivery process m) Quality improvement activities	Likert/ Ordinal	5 Point Likert Scale	Questionnaire
Regulatory Framework	a) Procurement regulations awareness. The awareness of procurement regulation is high. b) Level of procurement regulations compliances. there is compliance of procurement regulation c) Procurement procedures are followed to the letter d) There is efficiency in procurement processes e) There is transparency and accountability f) No cases of loss of procurement funds g) Procurement policies are up-to- date	Likert/ Ordinal	5 Point LikertScale	Questionnaire