

**FACTORS AFFECTING SUPPLY CHAIN COLLABORATION
IN GOVERNMENT MINISTRIES IN KENYA**

NATHAN MASINDANO SOITA

D61/70194/2009

SUPERVISOR

ONSERIO NYAMWANGE

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION, SCHOOL OF BUSINESS**

UNIVERSITY OF NAIROBI

2015

DECLARATION

This research project is my original work and has not been presented for a degree in any other university

Signed _____

Nathan Masindano Soita

Date _____

REG. NO. D61/70194/2009

This management research project has been submitted for examination with my approval as the university supervisor

Signed _____

Date _____

Onserio Nyamwange

Lecturer,

School of Business, University of Nairobi

DEDICATION

To my family members and all those who supported me in the completion of this project writing.

Thank you and God bless you abundantly.

ACKNOWLEDGEMENT

I would like to extend special thanks to all those who helped me in one way or another in making this project a reality.

Firstly I am indebted to my supervisor Onserio Nyamwange for his scholarly guidance throughout the conduct of this research project. His useful criticism and comments were very instrumental in the research implementation.

Further I am very grateful to all employees of the relevant Government Ministries for their valuable assistance in making available to me the required data.

I would like to appreciate the School of Business, University of Nairobi for providing me with the relevant study materials I needed during this research.

TABLE OF CONTENTS

DECLARATION.....	ii
DEDICATION.....	iii
ACKNOWLEDGEMENT.....	iv
LIST OF TABLES.....	vii
LIST OF ACRONYMS/ ABBREVIATIONS.....	viii
ABSTRACT.....	ix
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study.....	1
1.1.1 Supply Chain Collaboration.....	2
1.1.2 Government Ministries in Kenya.....	5
1.2 Research Problem.....	6
1.3 Research Objectives.....	8
1.4 Value of the Study.....	8
CHAPTER TWO: LITERATURE REVIEW.....	10
2.1 Introduction.....	10
2.2 Theoretical Framework for Supply Chain Collaboration.....	10
2.3 Factors affecting Supply Chain Collaboration.....	12
2.4 Factors Affecting Supply Chain Collaboration in the Public Sector.....	13
CHAPTER THREE: RESEARCH METHODOLOGY.....	16
3.1 Introduction.....	16
3.2 Research Design.....	16
3.3 Population.....	16
3.4 Data Collection.....	16
CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION...19	
4.1 Introduction.....	19
4.2 Response Rate.....	19
4.2.1 Gender of the Respondents.....	20
4.2.2 Age Category.....	20
4.2.3 Highest Formal Qualification.....	20
4.2.4 Length of Service with the Government Ministries.....	21
4.2.5 Departments of the Respondents.....	21
4.2.6 Designation of the Respondents.....	22
4.3 Supply Chain Collaborations.....	22
4.4 Factors Affecting Supply Chain Collaborations in the Government Ministries.....	24

4.5 Relationship between independent and dependent variables of the study.....	29
CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....	33
5.1 Introduction.....	33
5.2 Summary of Findings.....	33
5.3 Conclusions.....	34
5.4 Recommendations.....	34
5.5 Limitations of the Study.....	35
REFERENCES.....	37
APPENDICES.....	42
Appendix I: Research Questionnaire.....	42
Appendix II: List of Government Ministries, Kenya.....	48

LIST OF TABLES

Table 3.1: Summary of Research Methodology.....	18
Table 4.1: Extent to which there is Collaboration in Ministries and Stakeholders.....	23
Table 4.2: Participation of Various Stakeholders in Supply Chain Collaboration	24
Table 4.3: Aspects affecting Effectiveness of Supply Chain Collaboration.....	25
Table 4.4: Multiple Regression Analysis.....	29
Table 4.5: Model Summary	31
Table 4.6: ANOVA Test.....	31

LIST OF ACRONYMS/ ABBREVIATIONS

GDP	Gross Domestic Product
ICT	Information and Communications Technology
PPOA	Public Procurement Oversight Authority
PWC	Pricewaterhousecoopers
SC	Supply Chain
SCC	Supply Chain Collaboration
SCM	Supply Chain Management
SPSS	Statistical Package for Social Sciences
SRM	Supplier Relationship Management

ABSTRACT

This study sought to establish the factors affecting supply chain collaborations in the public sector in Kenya and how the government and its citizen stands to gain if the said factors were dealt with. The objectives of the study were to determine the level of supply chain collaboration in the government ministries in Kenya and to establish the factors affecting supply chain collaborations in the government ministries in Kenya. The research problem was studied through the use of a descriptive research design. Target population in this study was all the eighteen (18) government Ministries in Kenya. Since the population is relatively small, the researcher used census in all the ministries. The personnel involved in supply chain management in those institutions, finance managers and the administrators who plays a key role in policy making and resource allocation and utilization. The study utilized questionnaires administered by drop and pick later method. Data collected was purely quantitative and it was analyzed by descriptive analysis. Descriptive statistical tools such as Statistical Package for Social Sciences (SPSS) and MS Excel helped the researcher to describe the data and determine the extent used. This included frequency distributions, tables, figures, percentages, means and standard deviations. Further data coded was extracted using factor analysis method. The study found that there is collaboration between the Ministries and with various stakeholders in the supply chain. The study concludes that supply chain collaboration enhances supply chain management in the government ministries hence creating a competitive advantage through sharing information, making joint decision, inter-organizational relationship. The factors affecting supply chain collaboration in the Kenya Government Ministries include legal framework, quality of personnel, compliance with SCM Policies, information technology and stakeholders involvement. The study recommends that supply chain collaborative efforts should reach across the entire supply chain to help streamline essential processes such as product development and pricing, as well as reduce costs and improve responsiveness to customer demand. There is need for the supply chain actors to collaborate especially in the provision of transport and distribution. The study recommends that there is need for adoption of improved technology so as to ensure efficiency in information flow. The study recommends further research to address the how issue of supply chain collaborations in Kenya. The understanding of supply chain collaborations and supply chain performance in the government ministries can be extended to other public corporations in Kenya and the world to add value to the literature.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Supply Chain Management aims to link all the supply chain agents to jointly cooperate within the firm as a way to maximize productivity in the supply chain and deliver the most benefits to all related parties (Finch, 2006). Supply chain management plays a pivotal role in reduction of costs and increased efficiency in the supply chain function. Over the past decade, the traditional purchasing and logistics activities have emerged and shifted into broader strategic approach to materials and distributions management known as supply chain management. It is currently a major issue as organizations realize the substance of developing an integrated connection with their suppliers and final users.

Mentzer, DeWitt, Keebler, Min, Nix, Smith & Zacharia (2001) argue that effectiveness of the supply chain has become a critical business process as a result of: competitive pressures; the need to consider sustainability and risk; the need to achieve cost efficiency in order to be cost competitive; and the need to develop closer relationships with key suppliers who can provide the expertise necessary to develop innovative new products and successfully bring them to market. The main goal and important aspect of supply chain is leveraging the expertise, experience, skills and capabilities of the supply chain professionals who comprise this competitive network (Mentzer et al, 2001). The performance of a firm depends not only on how efficiently it cooperates with its direct partners, but also on how well these partners cooperate with their own business partners.

It has been shown that collaboration of operations in the supply chain can improve firm performance (Singh and Power, 2009). An additional benefit of cross functional, collaborative relationships with key suppliers is the ability to co-create value (Enz & Lambert, 2012). Collaboration is the cornerstone of effective supply chain management. More and more businesses are counting on their suppliers to lower costs, improve quality, and develop innovations faster than their competitors' suppliers can. To this end, many experts agree that American firms like their Japanese rivals, should build supplier networks that learn, improve, and prosper in sync with their parent companies.

1.1.1 Supply Chain Collaboration

A supply chain is a network of organizations performing various processes and activities to produce value in the form of products and services for the end customer. A supply chain is a system of organizations, people, activities, information, and resources involved in moving a product or service from supplier to customer. Supply chain activities transform natural resources, raw materials, and components into a finished product that is delivered to the end customer. Supply chains have expanded rapidly over the decades, with the aim to increase productivity, lower costs and fulfill demands in emerging markets. According to Li, Ragu-Nathan, Ragu-Nathan and Rao (2006) the dual purpose of SCM is to improve the performance of an individual organization as well as that of the entire supply chain.

Supply Chain collaboration is defined as the means by which companies or business entities within the supply chain work together towards mutual objectives through sharing of ideas, information, knowledge, risks and rewards (Cohen and Roussel, 2004). Further, supply chain collaboration has been defined as “two or more chain members working together to create a competitive advantage through sharing information, making joint decisions and sharing benefits which result from greater profitability of satisfying customer needs than acting alone (Togar and Sridharan, 2002). Buyer\supplier collaboration is departure from the anchor point of discreteness that underlies business transactions to a relational exchange as the roles of supplier and buyer are no longer narrowly defined in terms of simple transfer of ownership of products (Neil, 2004).

Supply chain (SC) collaboration is defined as “a win/win arrangement that is likely to provide improved business success for both parties” (McClellan, 2002). By focusing on relational exchange, collaboration entails the activities that are undertaken jointly rather than unilaterally (Heide 2003). The process covers the whole lifecycle of activities beginning with identifying a need, evaluating tenders, purchasing and ongoing contract management until the end of a goods or service contract, or end of the useful life of an asset. In these terms, supply chain collaborations simply means the close working relationship with suppliers of the goods, services and works on one hand, and working together with the ultimate users of the acquired goods, services or works on the other hand. Public bodies have always been big purchasers, involving huge budgets (Roodhooft and Abbeele 2006).

According to Cohen and Roussel (2004), collaboration in the supply chain can be defined in four different levels namely; Transactional, Cooperative, Coordinated and Synchronized. Transactional collaboration aims for the efficient and effective execution of transactions between partners with focus on improving the ease at which transactions are conducted. The main decision in a transactional relationship is the price. Cooperative collaboration involves information sharing on forecasts, inventory availability, purchase orders and delivery status between the partners. It involves a one-way communication in which data are sent from one partner to the other either manually or through electronic data interchange. In Coordinated collaboration, supply chain partners work more closely together and rely on each other's capabilities.

It involves a two-way flow of information between partners, a tightly synchronized planning and execution of processes and a long-term commitment. One such collaboration is the Vendor-managed inventory programs. The fourth level is the Synchronized collaboration. At this level, the collaborative relationship moves beyond supply chain operations to include other critical business processes such as investment in joint research and development projects, supplier development and intellectual property development. Partners in a synchronized collaboration relationship develops information jointly and focuses more on strategic vision of the future rather than on near-term planning.

Supply chain collaboration (SCC) provides benefits to the chain members. That is why SCC has become one of the most talked about topics in business area (Min, Roath, Daugherty, Genchev, Chen, Arndt & Richey, 2005). Especially in today's complex competition business environment, collaboration is the driving force behind effective supply chain management. Collaboration entails organizations working together to achieve mutual benefits. It looks beyond simple coordination by sharing information, participating in collaborative activities, managing exceptions, determining demand allocations, and monitoring performance goals (Chen & Paulraj, 2004; Daugherty et al., 2006; Simatupang & Sridharan, 2004). Potential collaboration partners in supply chain management can be classified in three groups namely; customers, materials suppliers and suppliers of services that support supply chain operations.

Collaboration is the cornerstone of effective supply chain management and as companies continue to narrow their strategic focus to a smaller number of core competencies, the skills and

talents of outside partners become more critical (Cohen and Roussel, 2004). Even though collaboration has obtained increasing popularity in the supply chain arena, its effectiveness has not been measured empirically at a national level. Several benefits of collaboration have been documented over the years for manufacturers, suppliers, and customers. These include impressive cost reductions, improved service, improved end-customer satisfaction, shorter lead times, improved information visibility, increased competitiveness, and a clearer division of responsibility among partners (Akintoye, Mcintosh & Fitzgerald, 2000; Matopoulos, Vlachopoulou, Manthou & Manos, 2007; Sandberg, 2007).

Barriers to successful implementation of collaboration in the SC have been identified as fear of failure, exposure to competition, concern about trust, increase of operational complexity, and technological incompatibilities (Barratt, 2004; Matopoulos et al., 2007, Sandberg, 2007; Van Weele, 2009). Mahmood, (2010) emphasized that public procurement represents 18.42% of the world GDP. In Kenya, public procurement accounts for 60% of total expenditure (Akech, 2005). Due to the huge amount of money involved in government procurement and the fact that some of the goods, services and works procured are very technical in nature and of high value, there is need for supply chain collaboration.

Effectiveness of SC collaboration is driven by information sharing, joint planning, goal congruence, personal interaction, and trust. Soosay, Hyland & Ferrer (2008) reported that the ability of managers to work with partners enables the firms to integrate and link their operations, which increases effectiveness and opportunities for innovation. Simatupang and Sridharan (2004) suggest that the requirements for effective collaboration are mutual objectives, integrated policies, joint decision making, information sharing, and sharing of benefits and losses.

Buyer/supplier commitment is the belief that trading partners are willing to devote energy to sustaining the relationship whereas according to Moorman, Zaltman and Deshpande (2002) buyer\supplier commitment is an enduring desire to maintain a valued relationship. Through commitment, partners dedicate resources to sustain and further the goals of the collaboration. Heide and John (2009) and Krause (2006) propose that the expectation of relationship is important for motivating collaboration in inter-organizational relationships. Simatupang and Sridharan (2005) noted that information sharing, joint decision making and incentive alignment

are factors that facilitate collaborative action through information exchange between the buyer and supplier.

Two constructs (operational effectiveness and overall effectiveness) are used to assess the effectiveness of SC collaboration. Operational effectiveness (also referred to as efficiency) of SC collaboration for this study has been defined to be how well the resources of the firm are utilized to reap benefits for all members of the SC. Elements of this measure include cost reduction, reduced inventory, reduced lead time, and streamlining of the SC processes. These components were similar to those reported by Min et al. (2005).

Overall effectiveness of SC collaboration has been defined as the extent to which the joint goals are measured with regards to improved service level, increased market share, better pricing, increased sales, new product development, and increased profits (Min et al., 2005). Supply chain collaboration in the public sector in Kenya is generally considered to as the collaborations in acquisition of goods, services and works by a procuring entity using public funds. Sharing and joint planning lead to goal congruence, which in turn influences operational and overall effectiveness of collaboration among SC partners in the public sector.

1.1.2 Government Ministries in Kenya

The government ministries derive their mandate from the Constitution of Kenya, which provides for proper budgetary and expenditure management of government financial resources. As a main function, the Ministries are charged with the responsibility of formulating financial and economic policies. According to Akech (2013) the ministries are responsible for developing and maintaining sound fiscal and monetary policies that facilitate socio-economic development in all the government sub sectors. The government Ministries coordinates government departments in the preparation of the annual national budget. The researcher is interested in the Central Government Ministries since they are the major government agencies through which supply chain collaboration can be investigated to reflect the national picture on the concept.

It is the responsibility of the Ministry to initiate and guide all departments to prepare their ministerial budgets. Kinoti, Arasa, Waititu and Guyo (2013) indicate that compliance with the formal elements of supply chain in the government ministries gives an indication of knowledge of the rules. Supply chain collaboration enhances effective communication between procurement

management staff in government ministries and this helps in implementation of ethical business practices. Public procuring entities should strive to collaborate across all public procurement functions in order to exploit opportunities that may arise for: better utilization of procurement skills and resources; greater purchasing leverage through aggregation of spend; and spread of best practice (Akech, 2013).

According to Mosoba (2012) PPOA has been a contributory factor to supply chain management in Kenya perpetually remaining vulnerable to all manner of irregularities with a spate of court cases and controversies continuing to plague procurement procedures for a number of public projects. The exercise of pre-qualification of suppliers should also be consolidated and performed by the PPOA or a designated agency for common items and services (Kinoti et al., 2013). Procuring entities would simply check updated lists with PPOA. The prequalification process should be continuous, with those already pre-qualified required to seek re-qualification annually.

This study seeks to establish the factors affecting supply chain collaboration in the Kenya Government Ministries.

1.2 Research Problem

All over the world there is increased reliance on suppliers for organization's ability to meet customer requirements and expectations, and even, in some cases, to comply with legal and regulatory requirements. Organizations are under increasing pressure to avoid supplier problems and to attract and retain the high performers, (Sherry, 2004 and Doolen, et al., 2006). Effective collaboration results into reduced inventory both to the material suppliers and customers, increased revenue, lower order management costs, higher gross margin, better forecast accuracy, better allocation of budgets, lower warehousing costs, lower material acquisition costs, fewer stock outs, lower freight costs, faster and more reliable delivery, lower capital costs, reduced depreciation and lower fixed costs (Li, 2007). In overall, effective collaboration leads to improved customer service and more efficient use of human resource (Roh, 2009). Even though the above benefits could be gained from an effective collaboration, that effective collaboration is quite elusive in the public sector in Kenya.

Awino (2009) conducted a study on empirical investigation of supply chain management best practices in large private manufacturing firms in Kenya. She noted that today, large companies are mainly focusing on becoming efficient and flexible in their manufacturing methods in order to handle uncertainty in the business environment. Chima (2007) conducted a study on supply-chain management issues in the Oil and Gas Industry and asserted that oil and gas industry is involved in a global supply-chain that includes domestic and international transportation, ordering and inventory visibility and control, materials handling, import/export facilitation and information technology. Kiema (2013) conducted a study on the effects of e-procurement on the firms operations: a case of selected firms in Nairobi, Kenya. The public sector has the responsibility to provide the citizens with goods and services in a more efficient, cost effective way considering the limited resources available through budgetary allocations. Thus whereas the government is strained in terms of resources, the citizens on the other hand expect quality goods and services and want to see value for money. This could more reliably be achieved through effective collaboration (Singh & Power, 2009).

Supply Chain Collaboration in the horticultural sector has gone a notch higher through the formation of public-private partnerships and collective action in high value fruit and vegetable supply chains (Narrod, Roy, Okello, Avendano, Karl & Amit, 2007). Jaffee & Masakure (2005) pointed out the collaborative strategies engaged by leading Kenyan and other developing countries suppliers and exporters in accessing European markets where the European retailers are using private standards for food safety and quality to enhance international competitiveness. According to that Study, some of the strategies engaged includes entering into contracts with Retailers in the European countries, investing heavily in improved production and procurement systems, upgraded pack house facilities and quality assurance in food safety management systems. Richard Lamming (2000) argued that a remarkable nature of Japan's supply chain relationships has been identified as a significant factor in its industrial success, especially in the automotive and electronics sectors. He pointed out that Japanese suppliers are developing new competitive technical and commercial capabilities enabling their Japanese industrial customers to concentrate on real-time, market driven configuration of products without needing to hold stocks in their supply chains and distribution channels. A perfect example of such success is how Toyota and Honda built great supplier relationships across Canada, the United States and Mexico (Liker & Choi, 2004). The two automakers struck successful partnerships by following six steps

namely; understanding how their suppliers work, turning supplier rivalry into opportunity, monitoring vendors closely, developing those vendors capabilities, sharing information intensively but selectively and finally helping those vendors continually improve their processes.

Supply chain management in the public sector in Kenya is regulated by a legal framework comprising of the New Constitution 2010, the Public Procurement and Disposal Act, 2005, the Public Procurement and Disposal Regulations of 2006 and subsequent attendant regulations issued from time to time. This legal framework in itself acts as a hindrance to effective collaboration since it does not give provisions for such collaborations. It has been reported that supply chain collaboration has proved difficult to implement; there has been an over-reliance on technology in trying to implement it; a failure to understand when and with whom to collaborate; and fundamentally a lack of trust among stakeholders in the public sector. It is for this reason that this study was needed. This study therefore sought to establish the factors hindering effective supply chain collaborations in the public sector in Kenya and how the government and its citizen stands to gain if the said factors are dealt with. The study therefore sought to answer the following research question: what are the factors affecting supply chain collaboration in the Kenya Government Ministries?

1.3 Research Objectives

The study was guided by the following research objectives:

- (i) To determine the level of supply chain collaboration in the government ministries in Kenya.
- (ii) To establish the factors affecting supply chain collaborations in the government ministries in Kenya.
- (iii) Find out the relationship between the identified factors and supply chain collaboration in the government ministries in Kenya.

1.4 Value of the Study

The study would be significant to policy makers in the public sector in the sense that challenges posed by some provisions of the legal framework in achieving effective supply chain collaboration could be repealed and replaced by those that enhances collaboration. The study would also be significant to policy makers in the government on the need to invest more in

Information Technology to be able to reap the benefits accruing from effective supply chain collaborations.

The study would be of particular significance to recruiting agencies in the public sector considering the fact that the quality of personnel involved in supply chain management contributes to the level of effectiveness in supply chain collaboration. It would help the management of the public sector institutions to comprehend the supply chain collaborations and factors affecting effective collaborations in the public sector in Kenya. This would assist them in assessing the value created by supply chain function in their system, revising resource allocation and justifying investments for the supply chain departments.

The study findings would be of importance to academic research, as it would contribute to both theoretical and practical knowledge on the supply chain collaborations and factors affecting effective collaborations in the public sector in Kenya. Scholars would find it important as it would increase the body of knowledge in this area. It would also assist the researchers in doing further studies on the same.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter focuses on the review of the literature to the purpose of the study ensuring relevance to the research problem. The review is to be undertaken to bring out the gaps and enhance knowledge of better and efficient ways of managing supplier collaborations. The specific areas covered here include theoretical framework for supply chain collaboration, factors affecting supply chain collaboration in the public sector, legal framework, political interference, compliance with supply chain management policy and regulation and information technology.

2.2 Theoretical Framework for Supply Chain Collaboration

This chapter focuses on three theories that supports supply chain collaboration. The theories reviewed include Stakeholders Theory, Resource dependency Theory and Resource-Based Theory.

2.2.1 Stakeholders Theory

According to Jones and Wicks (1999), the essential premises of stakeholders theory includes examination of the fact that the corporation has relationships with many constituent groups and that the theory is concerned with the nature of the relationships in terms of both processes and outcomes for the company and for the stakeholders. That the interests of all legitimate stakeholders have intrinsic value and no set of interests is assumed to dominate the others. Hood (2000) comments that everyone knows New Public Management is an international or even global phenomenon and that it represents an attempt to correct the shortcomings of traditional public organization in efficiency and service delivery to citizens. Murdock (2004) explored the potential for the application of Stakeholders theory to resolve some paradoxes and dilemmas of New Public Management where partnership and alliances are concerned and established that stakeholder analysis enables public managers and policy makers to make sense of the new landscape. The study concluded that knowing who your stakeholders are and consulting them appears to be an obvious priority for local managers in the public domain.

The Researcher found this theory relevant to the Research problem in the sense that a supply chain comprises of various stakeholders both from within and external including suppliers,

distributors, transporters and customers. To be able to identify the factors affecting the supply chain collaboration within the Government ministries, it was important to understand who the stakeholders are and their interests.

2.2.2 Resource dependence Theory

Resource dependence theory proposes that the need for environmental linkage is a direct function of the level of dependence facing an organization. Aldrich and Pfeffer (1976); Pfeffer and Salancik (1978) and Pfeffer (1987), proposes that a firm's survival is contingent on its ability to gain control over environmental resources. One determinant of a firm's performance is the development of linkages to the external environment such as with corporate boards. Boyd (1990) conducted a study on corporate linkages and organizational environment and established that a prominent feature of high performing firms is the use of fewer directors, but those who are most densely connected to the environment.

This theory was found crucial in this Study since Government resources are normally provided through a budgetary process and the said resources are limited as compared to the services the citizenry expect to receive. Thus if supply chain collaboration is enhanced within the government ministries and between the Ministries and suppliers of goods, works and services, then economies of scale and value for money could be achieved through the budgeted resources.

2.2.3 Resource-Based Theory

Strategic alliances have gained increasing popularity across all business sectors in recent years and emerged as an organizational design that enables firms to deal with the increasing complexity of building new sources of competitive advantage in order to compete in the global market. Prahalad and Doz (1987) states that the formation of strategic alliances between two organizations combines competition and cooperation to create a collaborative strategy. Nohria & Garcia-Point (1991) and Porter & Fuller (1986) states that through strategic alliances, a firm can gain access to desired strategic capabilities by linking to a partner with complementary resources or by pooling its internal resources with a partner possessing similar capabilities. In providing empirical evidence to illustrate the kind of resources shared in strategic alliance, Homin Chen, Tain - Jy Chen (2003) conducted a study and established that the commitment usually includes the contribution of human resources, capital, technological know-how and the willingness to

share the risk of technological failures. This suggests that the alliance is an investment rather than an exchange.

The relevance of this theory comes in handy as the Government Ministries explores ways of partnering with the private sector in provision of public services. A good example being Public-Private Partnerships in the road construction industry where the government enters into agreement with private contractors to construct the roads through concessioning and the contractor recovers their capital through toll charges from the road users over a period of time. By so doing the government is able to indirectly finance the essential projects through contractors who have the resource capacity that the government itself lacks.

2.3 Factors affecting Supply Chain Collaboration

Successful collaboration relies on the development of mutual trust between partners, as well as the willingness to share information that can benefit all the members of collaborative team. The goal is to treat all suppliers, outsourcing partners, customers, and service providers as an extension of your organization. Lejeune and Yakova (2005) concluded that interdependence was central to SC performance because it allowed firms to have competitive advantage over others. Research on collaboration in the software industry indicated that firms that collaborate need not share risks. However, firms that scored high on shared risk-taking tended to be more profitable than their competitors, but collaboration alone did not improve performance (Tucci et al., 2005).

Lee (2005) emphasized that simulation and empirical research methods miss critical communication patterns in an SC, and proposed the use of social network analysis to measure SC collaboration by studying the quality of relationships between members. Cassivi (2006) surveyed the telecommunications industry in which information visibility was identified as a significant element of collaboration in maintaining an efficient SC. Social factors such as interdependence, intensity, and trust have also been shown to be important. Sheu et al. (2006) demonstrated that a lack of social factors have a negative impact on partnership and implementation of technical factors (e.g., information sharing platforms and IT support). A study conducted by Vlachos and Bourlakis (2006) revealed contrasting views on collaboration between food SC members.

Retailers regarded factors of commitment, information sharing, category management, and physical distribution as critical for a successful relationship, whereas manufacturers regarded trust to be instrumental in relationship building. The volatile nature of the products has also been observed to impinge on the trust-building process and hinder the establishment of SC relationships in the food industry (Matopoulos et al., 2007). Sandberg (2007) established a clear relationship between the intensity of collaboration and positive effects experienced from the collaboration.

Soosay et al. (2008) reported that the ability of managers to work with partners enables the firms to integrate and link their operations, which increases effectiveness and opportunities for innovation. Barriers to successful implementation of collaboration in the SC have been identified as fear of failure, exposure to competition, concern about trust, increase of operational complexity, and technological incompatibilities (Sandberg, 2007; Van Weele, 2009). Absent of willingness to cooperate, a supply chain will not be able to attain lower costs and higher returns on investment. Further, irregular collaborative meetings among chain partners hinder managers' opportunities to share with one another concerns, weaknesses, and best practices. Other barriers to SCM fall under managerial complexity or misalignments in allying firms' processes, structures, and culture.

Under the umbrella of managerial complexity barriers include information system and technological incompatibility, inadequate measurement systems, and conflicting organizational structures and culture (Kinoti et al., 2013). Because many firms are comfortable using their systems for only their own tasks, it is not surprising to see inconsistent information and technology systems as a barrier. People are change averse and unwilling to share information for fear of exposing their weakness and secrets to others. If SCM is to be implemented across company borders, a revamp in attitude and thinking is necessary.

2.4 Factors Affecting Supply Chain Collaboration in the Public Sector

According to Dershin (2000), integrated supply chain processes are necessary preconditions for collaborative outcomes and, thus, they are a valued focus of research. Croxton et al. (2001) propose eight key supply chain processes including customer relationship management, supplier relationship management, manufacturing flow management, demand management, order

fulfillment, new product development and commercialization, and returns management. Hammer (2001) argued that streamlining cross-company processes is the next frontier for reducing costs, enhancing quality, and speeding operations. Collaborations in supply chain management in the public sector have not been very effective for various reasons as shown below:

Activities in the government sector are more regulated than in private sector e.g. the procurement Act 2005 and Regulation 2006 governing procurement in public sector in Kenya. Newman (2003) notes that while private sector procurement is more receptive to entrepreneurship and innovation; public procurement is based on legislation, policy and process. Public sector procurement serves a broader range of stakeholders, places greater emphasis on accountability and transparency, and allows little or no flexibility for negotiating with bidders. Only a good coordination between each component would bring the benefits to a maximum (Chima, 2007). Supply chain collaboration links both players with a joint decision-making process for demand planning and order fulfillment, collective performance metrics to evaluate individual performance and collective performance, and information sharing in a mutually beneficial way.

Organizations, individuals and groups in the public sector, business firms are actively involved in all aspects of supply chain management. This make it possible for interests groups such as legislative bodies to pass or alter procurement statutes thus influencing appropriate procurement processes to suit vested and often personal interests. 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 and Callaghan, 2008). Corporate integrity failure embraces any enterprise-level scandal involving a violation of compliance, ethics, or corporate responsibility standards. Most public entities 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.

Compliance with regulations affecting drug licensing, accreditation and approvals can be costly for pharmaceutical companies wanting to market their products (Bessant, 2004). Some of them may try to bribe or influence the regulator to get their product registered or simply to speed up the approval process. The specialized competencies residing with suppliers may have a

substantial influence on the buying firm's innovativeness and ability to offer high-quality products (Dyer & Nobeoka, 2000). The performance demonstrated by the supplier on a day-to-day basis (e.g. delivery time, delivery reliability, product quality) is influential.

The current interest in SRM (supplier relationship management) among academics and business practices focuses more on basic transactional issues, particularly the sourcing and trading including supplier selection, quality/cost demands, and supplier capabilities/evaluation. Technology and knowledge communication are relatively neglected (Alshawi, 2001). Resource allocation clearly testifies to people throughout the organization, that the goal is important and that the senior manager is serious about it. Government officials and elected leaders have increasingly come to realize that public agencies must utilize ICT in order to enhance the procurement processes in the public sector. Faced with tight budgets and a retiring workforce, today's government agencies are operating in an environment defined by the need to 'do more with less'.

Public authorities are expected to provide excellent service to their constituents in an effective and transparent manner, all the while working under constant resource constraints by adopting ICT (Chin and Fairlie, 2004). In the literature review it was noted that most of the studies had been carried out on developed countries hence there was need to carry out similar research based on a developing country context. This study focuses on investigating the factors affecting supply chain collaboration in government ministries in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter involves the methods the researcher used to collect the data for the study. This included research design, target population, sampling design, data collection instruments, data collection procedure and data analysis procedure.

3.2 Research Design

This research problem was studied through the use of a descriptive research design to investigate the factors affecting supply chain collaboration in the Kenya Government Ministries. According to Cooper and Schindler (2003), a descriptive study is concerned with finding out the what, where and how of a phenomenon. This design assists to describe features, behavior, attitudes and principles of the study (Cooper & Schindler, 2006). Descriptive design was used in this study since the researcher intended to look at the problem at hand and thoroughly define it, clarify it, and obtain pertinent information that could be of use to policy makers in public supply chain management. This research design has the ability to accommodate large sample sizes; ability to distinguish small differences between diverse samples groups; ease of administering and recording questions and answers; increased capabilities of using advanced statistical analysis; and abilities of tapping into latent factors and relationships.

3.3 Population

Target population in this study was all the eighteen (18) government Ministries in Kenya. The Census sampling was therefore used.

3.4 Data Collection

The procedure for data collection involved questionnaires administered by dropping and picking later method to the supply chain management personnel, finance and administrators in identified Ministries. One set of questionnaire tailored for respondents was administered. The above method was used to collect primary data which was collected by the researcher and the research assistant in all the Ministries.

Since the population is relatively small, the researcher used census in all the ministries. Among the ministries, the researcher used snowball sampling in selecting the respondents from supply

chain, finance and administration departments. Researchers like Mugenda & Mugenda (2003) suggest that one may use a sample size of at least 10 percent, but for better and more representative results, a higher percentage is better. The data collection exercise took a span of two weeks period.

3.5 Data Analysis

Before processing the responses, the completed questionnaires were edited for completeness and consistency. The data was then coded to enable the responses to be grouped into various categories. Data collected was purely quantitative and it was analyzed by descriptive analysis. The descriptive statistical tools such as Statistical Package for Social Sciences (SPSS) and MS Excel helped the researcher to describe the data and determine the extent used. This included frequency distributions, tables, figures, percentages, means and standard deviations. Data analysis used Microsoft excel and SPSS to summarize responses for further analysis and facilitate comparison. To analyze the objectives on determining the level of supply chain collaboration in the government ministries in Kenya and establishing the factors affecting the effectiveness of supply chain collaborations in the government ministries in Kenya descriptive analysis.

Further, content analysis was used to analyze the information on supply chain collaborations and the factors hindering their effectiveness in the Kenyan government ministries. To test the relationships that presuppose a relationship between criterion and response variables, data coded was extracted using factor analysis method, a statistical approach that involves finding a way of condensing the information contained in a number of original variables into a smaller set of dimensions (factors) with a minimum loss of information. Factor analysis was carried out on the responses to the statements in order to extract factors perceived as important in supply chain collaboration in government ministries in Kenya.

Factor analysis was useful in reducing mass of information to an economical description. In this study, factor analysis was used to discover such concepts reflecting supply chain collaborations and the factors hindering their effectiveness in the Kenyan government ministries. Principal component with Kaiser Normalization was used. Varimax rotation method was employed and iteration transformations performed. The SPSS factor analysis was applied to analyze the

collected data in order to outline the major factors perceived to be contributing to supply chain collaboration in the Kenya Government Ministries. The delineation of these interrelated phenomena enabled generalizations to be made. The regression equation was as follows: $Y = a + b_i X_i$;

Table 3.1: Summary of the Research Methodology

Objective of the Study	Part of the Questionnaire	Data Analysis
1. To determine the level of supply chain collaboration in the government ministries in Kenya	Part B	Descriptive Analysis
2. To establish the factors affecting supply chain collaboration in the government ministries in Kenya	Part C	Factor Analysis
3. Find out the relationship between the identified factors and supply chain collaboration in the government ministries in Kenya.	Part C	Inferential Analysis

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. The study findings are presented on the factors affecting supply chain collaboration in the Kenya Government Ministries. The data was gathered from the questionnaire which was designed in line with the objectives of the study. The analysis of data was done using statistical package for social sciences (SPSS). The research instrument was designed in line with the objectives of the study. To enhance quality of data obtained, structured and unstructured types of questions were included. The data obtained was fed into SPSS version 21.0 and used to compute the proxies used to measure the factors affecting supply chain collaboration in the Kenya Government Ministries. The chapter is organized under sub-sections guided by the research questions and analyzed in both descriptive and inferential analyses.

4.2 Response Rate

Response rate is the extent to which the final data set includes all sample members and is calculated from the number of people with whom interviews were completed divided by total number of people in the entire sample. This includes those who declined to participate and the unavailable. From the target population staff currently serving in the offices of the government ministries in Nairobi this study sampled 54 respondents from the target population in collecting data with regard to factors affecting supply chain collaboration in the Kenya Government Ministries.

According to the results, 45 out of the 54 respondents from the Kenya Government Ministries filled in and returned the questionnaire. The response rate achieved for the questionnaire was 83.3%. This response rate was quite commendable and was made a reality by the fact that the researcher administered the questionnaires by himself to the Kenya Government Ministries. This was valid and reliable representation of the targeted population hence adequate for the study analysis. The response rate demonstrates a willingness of the respondents to participate in the study.

4.2.1 Gender of the Respondents

In this study the respondents sampled were expected to comprise both male and female staff working in the Kenya Government Ministries in Nairobi. As such, the study required the respondents to indicate their gender by ticking on the spaces provided in the questionnaire.

Accordingly, 62% of the respondents were male while 38% of them were female. The findings show that the Kenya Government Ministries have both male and female staff; however the majority of them are males. The findings imply that the views expressed in these findings are gender sensitive and can be taken as representative of the opinions of both genders as regards to factors affecting supply chain collaboration in the Kenya Government Ministries.

4.2.2 Age Category

This study sought to investigate the composition of the respondents in terms of age brackets. This aimed at understanding how the respondents were distributed across the various age brackets and consequently their opinions on the topic of study. The study required the respondents to indicate their age category by ticking on the spaces provided in the questionnaire.

Majority 38% of the respondents indicated that their ages fell between 41 and 50 years, 28.0% of the respondents recapped that they were aged above 50 years, 21 % of them indicated that they were aged between 31 and 40 years, while 13.0% of the respondents were between 21 to 30 years of age. From the results, the respondents were well distributed in terms of age and that they are active in technological advancements and productivity and hence can contribute constructively in this study on the factors affecting supply chain collaboration in the Kenya Government Ministries.

4.2.3 Highest Formal Qualification

The Government Ministries in Kenya employ staff in different work stations hence different academic qualifications. The target population comprised of people in different responsibilities and qualification requirements hence different academic qualifications. The study thus sought to establish the highest academic qualifications attained by the respondents. This difference might contribute to differences in the responses given by the respondents.

The outcome show that majority of the respondents had at least an undergraduate degree and hence understood the information sought by this study, that is, 40.5% of the respondents had acquired a graduate degree level of education, 50.0% of the respondents indicated that they had acquired a post graduate level of education, while 9.5% of the respondents indicated that they had acquired college diploma levels of education. These outcomes mean that majority of the respondents had at least a graduate degree and hence understood the information sought by this study. These findings further imply that all the respondents were academically qualified and also familiar with their duties and could dispense them effectively in terms of professional work ability and performance.

4.2.4 Length of Service with the Government Ministries

The length of continuous service/working in an organization determines the extent to which one is aware of the issues sought by the study. The study therefore sought to establish the length of time that the respondents had been working in Government Ministries in Kenya.

From the study, 38% of the respondents unanimously indicated that they had worked with the Government Ministries for a period of 5 - 10 years, 34% of them had been working in the Government Ministries for 1-5 years, 15% of them had been working in the Government Ministries for less than one year whereas 13% of them had worked in the Government Ministries for a period of more than 10 years. This implies that most of the staff participating in this study had been operating for an ample time thus they were conversant with the information that the study sought pertaining to the factors affecting supply chain collaboration in the Kenya Government Ministries.

4.2.5 Departments of the Respondents

Supply chain management affects various aspects of supply chain collaboration of organizations across various departments. It was therefore important to ensure that questionnaires were distributed and returned from various departments within the supply chain in the government ministries in Kenya. This was to ensure that all the areas affecting supply chain collaboration are captured in the study.

From the results, 54% of the respondents were working in the supply chain departments, 18% of them were working in the procurement departments, 9% worked in finance departments, and

12% worked in the ICT department, while 7% worked in other departments which included human resource and administration. This implies that all departments that were targeted by the study were involved and that the findings are not biased hence representative of the various departments' views on factors affecting supply chain collaboration in the Kenya Government Ministries.

4.2.6 Designation of the Respondents

The study targeted to collect data from the staff comprising of supply chain management personnel, finance and administrators in the government ministries. Accordingly, the study included heads of departments, assistant heads of departments and supervisors as well as other general staff. The study therefore required the respondents to indicate their designation by ticking on the spaces provided in the questionnaire. This was relevant to assess the distribution of the respondents across the management levels.

According to the results obtained, 41.0% of the respondents indicated that they were serving as supply chain heads, departmental assistant heads, unit heads and supervisors in the government ministries, 25.63% of them were heads in the finance departments, 23.1% of them indicated that they were heads in the ICT departments and 10.3% of the respondents comprised of heads of procurement departments. These findings show that the respondents that participated in the study were mainly those involved in the formulation and implementation of the decisions concerned with the supply chain collaboration in the Kenya Government Ministries.

4.3 Supply Chain Collaborations

Supply chain management includes coordination and collaboration with channel partners such as suppliers, intermediaries, third-party service providers and customers. This study was concerned with establishing the extent to which there is collaboration between the Ministries and with various stakeholders in the supply chain.

4.3.1 Extent of collaboration

The study required the respondents to indicate the extent of collaboration between their Ministry and various stakeholders in the supply chain using a scale of five parameters where the lowest

was 'to no extent' while the highest was 'to a very great extent'. The results are as indicated in table 4.1.

Table 4.1: Extent to which there is Collaboration in Ministries and Stakeholders

Extents	Frequency	Percent
To a very great extent	2	4.9
To a great extent	13	29.4
To a moderate extent	26	56.9
To a little extent	4	8.8
Total	45	100.0

Source: Research Data (2015)

As shown in Table 4.1, 56.9% of the respondents indicated that there is collaboration between the Ministries and with various stakeholders in the supply chain to a moderate extent, 29.4% of the respondents indicated that there is collaboration between the Ministries and with various stakeholders in the supply chain to a great extent, 8.8% of them indicated to a little extent, while 4.9% of the respondents indicated that there is collaboration between the Ministries and with various stakeholders in the supply chain to a very great extent.

4.3.2 Participation of Stakeholders in Supply Chain Collaboration

The effectiveness of SC collaboration is viewed as the extent to which the joint goals are measured with regards to improved service level, increased market share, better pricing, increased sales, new product development, and increased profits. In this regard the study sought to establish the extent to which various stakeholders in the supply chain participate in the collaborative endeavours approached by the government Ministries in Kenya. The respondents were therefore required to indicate to what extent the various stakeholders in the supply chain participate in the collaborative endeavours approached by their Ministry using a scale of 1 to 5 where 1= no extent, 2= little extent, 3= moderate, 4= large extent and 5 is to a very large extent.. The results are as shown in table 4.2.

Table 4.2: Participation of Various Stakeholders in Supply Chain Collaboration

Stakeholders in the supply chain	Mean	Std. Dev
Suppliers	3.4808	1.50151
Customers	3.2115	1.14338
Outsourcing partners	3.3077	1.19703
Subcontracting partners	3.4615	1.47478

Source: Research Data (2015)

The responses obtained in this section were rated on a scale of 1 to 5, as such the minimum mean score expected would be 1.000 and the maximum score of 5.000. The results depicted in Table 4.2 show that there was a moderate level of collaboration among the ministries and various stakeholders. The highest collaboration was between subcontracting partners with a mean score of 3.4615, followed by that of suppliers (mean score = 3.4808), then outsourcing partners shown by a mean of 3.3077 and finally customers at a mean of 3.2115.

4.4 Factors Affecting Supply Chain Collaborations in the Government Ministries

To establish the factors affecting supply chain collaborations in the government ministries in Kenya, the respondents were required to indicate their level of agreement with various statements provided regarding supply chain collaboration in the government ministries in Kenya. The results were generated using the rotational Varimax methods to explore the variables contained in each component for further analysis. The 41 items were subjected to factor analysis with varimax rotation. By using factor analysis, a factor loading for each item and its corresponding construct was determined. In order to verify that the items tapped into their stipulated constructs, a principal components analysis with a VARIMAX rotation was executed. Table 4.3 shows the results.

Table 4.3: Aspects affecting Effectiveness of Supply Chain Collaboration

Aspects affecting effectiveness of supply chain collaboration	Factor loadings	Underlying factor	Mean	Std. Dev
Competitive pressures affects supply chain collaboration	0.722	Legal framework	3.304	1.190
The need to achieve cost efficiency in order to be cost competitive affects supply chain collaboration	0.702		3.770	1.184
The Ministry creates sales forecast in close collaboration with key suppliers /distributors to reduce stock outs/ waste	0.668		3.549	1.177
The Ministry regularly visits/ face to face communication with our partners to facilitate collaborative relationship	0.673		3.250	0.676
The Ministry has close collaboration with suppliers to perform logistics synchronization	0.629		3.521	1.414
The Ministry practices collective learning with suppliers/ manufacturers to facilitate joint operation improvement	0.529		4.150	1.276
Framework contracting limits opportunities for negotiation	0.714		2.528	1.108
Abuse of public procurement systems erodes supplier confidence	0.661		2.917	0.841
Contracts are not awarded free of any political interests	0.734		2.722	0.741
Most government ministries lacks management capacities to administer supply chain partnerships	0.556		3.472	1.558
The existing procurement laws are insufficient to enable reliable supply chain partnerships	0.644		2.917	0.967
The government legal framework aims at promoting fair, open, transparent and competitive procurement processes	0.768		2.528	1.464
The government has developed procedural frameworks that supports long-term commitment and supplier relationships	0.563		3.694	0.710
The Ministry sets targets and harmonized business processes with suppliers/manufactures for smooth operations	0.570		3.292	1.611
The Ministry collaborates with its	0.563		3.542	1.515

customers in product design on exceptional items					
The Ministry collaborates with its manufacturers/ vendors and customers in order generation to prevent stock-outs/ waste	0.567		3.333	1.492	
There is lack of supply chain collaboration leadership teams in place	0.654	Quality of Personnel	3.4643	0.9138	
Supply chain collaboration is key to operational effectiveness in our company	0.713		3.6251	1.0026	
The Ministry's trading partners share business knowledge to enhance operation improvement	0.549		3.9699	1.3081	
Effective supply chain collaborations produce more efficient and economical acquisitions resulting in the delivery of cost-efficient and timely contracts for products or services.	0.671		3.6875	1.3524	
The Public expects quality and seamless services from the government ministries	0.7113		3.3611	1.1748	
Lack of transparency and accountability are considered as major threats to supply chain collaborations	0.644		3.6388	0.7616	
Supply chain management processes in the Ministry are bad	0.693		3.8929	0.7787	
Supply chain collaboration practices leads to organizational effectiveness	0.529		Compliance with SCM Policies	4.4962	0.7030
The supply chain collaboration in the ministries is effective	0.707			3.1429	1.1025
Supply chain collaborations produce more efficient and economical acquisitions resulting in the delivery of cost-efficient and timely contracts for products or services.	0.5704			3.0833	1.1307
Prequalification enhances supply chain relationships	0.5203	3.5555		0.7725	
Supply chain collaboration is probably necessary where large and complex contracts are undertaken	0.6244	3.9722		1.1080	
Supply chain collaboration practices results to increased productivity	0.552	3.3750		1.2041	
The need to consider sustainability and risk affects effectiveness of supply chain collaboration	0.537	2.7978		1.7721	

Supply chain collaboration practices have led to improved product/ service quality	0.637		3.9549	1.1339
Collaborations increase complexity in supply chain management	0.68		3.7679	0.8088
There is lack of computerized supply chain management system	0.665	Information Technology	3.7978	1.5013
The Ministry's trading partners exchange information that helps in joint business planning to align goals	0.495		2.6250	1.1227
Most suppliers lacks ICT skills to participate in public e-procurement	0.5324		3.3888	0.9032
Supply chain complexity hinders visibility of supply chain collaboration in the sector	0.551		3.5833	0.7755
The Ministry's trading partners keep each informed about events or changes that may affect the other partners	0.761		4.1579	0.9280
The need to develop closer relationships with key suppliers affects effectiveness of supply chain collaboration	0.687	Stakeholders Involvement	3.6250	1.0026
The Ministry develops front end agreement on operations with key partners to streamline business operations	0.714		3.1870	1.2991
Information on tendering is widely shared between the Ministry and potential suppliers	0.716		3.3888	0.9032
Late/delayed payments discourage suppliers from entering into long-term commitments with government Ministries	0.755		3.0833	1.1307
There is high level of collaboration with stakeholders in the supply chain in this ministry	0.750		3.3036	1.1106

Source: Research data (2015)

The above table helps the researcher to estimate the communalities for each variance. This is the proportion of variance that each item has in common with other factors. Factors with Eigen values (total variance) greater than 0.5 were extracted and coefficients below 0.49 were deleted from the matrix because they were considered to be of no importance. The factor loadings are the correlation coefficients between the variables and factors. Typically, loadings of 0.5 or greater

are considered very significant (Hair et al., 1987). The VARIMAX rotation was used because it centers on simplifying the columns of the factor matrix. With the VARIMAX rotational approach, there tends to be some high loadings (i.e. closer to 1) and some loadings near 0 in each column of the matrix. The logic is that interpretation is easiest when the variable-factor correlations are either closer to 1, thus indicating a clear association between the variable and the factor, or 0 indicating a clear lack of association.

In the above table, the researcher used Kaiser Normalization Criterion, which allows for the extraction of components that have an Eigen value greater than 1. The principal component analysis was used and five factors were extracted. The initial component matrix was rotated using Varimax (Variance Maximization) with Kaiser Normalization. The above results allowed the researcher to identify what variables fall under each of the 5 major extracted factors including legal framework, quality of personnel, compliance with SCM Policies, information technology and stakeholders involvement. Each of the variables was looked at and placed to one of the five factors depending on the percentage of variability; it explained the total variability of each factor. A variable is said to belong to a factor to which it explains more variation than any other factor. From the above table, the individual variables constituting the 5 factors extracted are summarized.

The first variable identified was legal framework measured by 16 items with means lying between 2.528 and 4.1504. The average of these mean scores 3.746 was indicating that legal framework affects the supply chain collaboration in the government ministries to a great extent. The second factor identified was quality of personnel which had 7 items with a mean ranging between 3.4643 and 3.9699. This also indicates that quality of personnel had a great effect on the supply chain collaboration in the government ministries. The third variable identified was compliance with SCM policies which was measured by 6 items showing the effectiveness of SC collaboration in the ministries. Their mean scores were ranging from 2.7978 to 4.4962 which indicate that SCM policies affect the supply chain collaboration in the government ministries to a great extent. The fourth variable was information technology which had 4 items on computerized supply chain management system, exchange of information, ICT skills and supply chain complexity. Their mean scores were ranging between 2.625 and 3.7978 whose average was 3.349 implying that information technology affects the supply chain collaboration in the

government ministries to a great extent. The fifth variable identified was stakeholders' involvement which was measured by 6 items with mean scores lying between 3.0833 and 4.1579 indicating that stakeholders involvement has a great influence on supply chain collaboration in the government ministries.

4.5 Relationship between independent and dependent variables of the study

To establish the relationship between the independent variables and the dependent variable of the study, the study conducted inferential analysis. The study sought to complement the descriptive analysis by carrying out a multiple regression analysis. A multivariate regression model was applied to determine the relative importance of each of the five variables with respect to the factors affecting supply chain collaboration in government ministries in Kenya. The researcher applied the SPSS to code, enter and compute the measurements of the multiple regressions for the study.

Table 4.4: Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.713	1.068		0.799	0.033
	Legal framework	0.246	0.203	0.135	0.619	0.036
	Quality of personnel	0.259	0.193	0.08	0.358	0.014
	Compliance with SCM Policies	0.298	0.250	0.242	0.891	0.023
	Information technology	0.375	0.160	0.346	1.284	0.044
	Stakeholders involvement	0.453	0.088	0.167	1.379	0.004

Dependent Variable: Supply chain collaborations in the government ministries.

The researcher conducted a multiple regression analysis so as to determine the factors affecting the supply chain collaborations in the government ministries investigated in this study.

The regression equation ($R_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$) was:

$$R_t = 0.713 + 0.246X_1 + 0.259X_2 + 0.298X_3 + 0.375X_4 + 0.453X_5 + \epsilon$$

Whereby Y = Supply chain collaborations in the government ministries
 X_1 = Legal framework
 X_2 = Quality of personnel
 X_3 = Compliance with SCM Policies
 X_4 = Information technology
 X_5 = Stakeholders involvement

According to the regression equation established, taking all factors (legal framework, quality of personnel, compliance with SCM Policies, Information technology and stakeholders involvement) constant at zero, the supply chain collaborations in the government ministries will be 0.713. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in Legal framework operations will lead to a 0.246 increase in supply chain collaborations in the government ministries. A unit increase in quality of personnel operations will lead to a 0.359 increase in supply chain collaborations in the government ministries; a unit increase in compliance with SCM Policies operations will lead to a 0.268 increase in supply chain collaborations in the government ministries, a unit increase in Information technology operations will lead to a 0.168 increase in supply chain collaborations in the government ministries, while a unit increase in stakeholders involvement operations will lead to a 0.453 increase in supply chain collaborations in the government ministries.

These results infer that stakeholders' involvement contributes more to supply chain collaborations in the government ministries, followed by information technology, then compliance with SCM Policies, and then quality of personnel while legal framework contributes the least to supply chain collaborations in the government ministries. At 5% level of significance and 95% level of confidence, legal framework had a 0.036 level of significance, quality of personnel had a 0.014 level of significance, compliance with SCM Policies had a 0.023 level of significance and information technology had a 0.044 level of significance, while stakeholders involvement had a 0.0041 level of significance hence the most significant factor for supply chain collaborations in the government ministries. The model Summary for the regression is shown in table 4.5.

Table 4.5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.832	.692	.600	.0378

a. Predictors: (Constant), legal framework, quality of personnel, compliance with SCM Policies, information technology and stakeholders involvement

The coefficient of determination is a measure of how well a statistical model is likely to predict future outcomes. The coefficient of determination, r^2 is the square of the sample correlation coefficient between outcomes and predicted values. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (supply chain collaborations in the government ministries) that is explained by all the five independent variables (legal framework, quality of personnel, compliance with SCM Policies, information technology and stakeholders involvement).

The five independent variables that were studied, explain 69.2% of the supply chain collaborations in the government ministries as represented by the R^2 . This therefore means the five independent variables contribute about 69.2% to the supply chain collaborations in the government ministries while other factors not studied in this research contributes 30.8% of the supply chain collaborations in the government ministries.

Table 1.6: ANOVA Test

	Sum of squares	Df	Mean Square	F	Sig or P-value
Regression	46.294	44	11.574	11.815	000(a)
Residual	97.953	44	980		
Total	144.248	1			

Predictors: (Constant), legal framework, quality of personnel, compliance with SCM policies, information technology and stakeholders involvement

ANOVA findings as explained by the P-value of 0.000 which is less than 0.05 (significance level of 5%) confirms the existence of correlation between the independent and dependent variables. The model shows the model fitness i.e. how well the variables fit the regression model. The sum of squares gives the model fit and hence the variables fit the regression model. From the results, the F ratio of 11.815 and the significance of 0.000 shows that there was not much difference in

means between dependent and independent variables. Since F calculated is greater than the F critical (value = 11.815), this shows that the overall model was significant.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This is the final chapter in this study which gives the summary of the findings, the conclusions and recommendations of the study based on the objective of the study. It comes after identifying the background, problem at hand and the objectives in chapter one, literature review was done in chapter two, chapter three set out the methodology that the study used to collect data and chapter four analyzed the data obtained from the study on the factors affecting supply chain collaboration in the Kenya Government Ministries. The chapter finally presents the recommendations and suggestions for further studies.

5.2 Summary of Findings

The study sought to establish the factors affecting supply chain collaboration in the Kenya Government Ministries. The study found that there is collaboration between the Ministries and with various stakeholders in the supply chain to a moderate extent. From the study, the effectiveness of SC collaboration is viewed as the extent to which the joint goals are measured with regards to improved service level, increased market share, better pricing, increased sales, new product development, and increased profits. There was a moderate level of collaboration among the ministries and various stakeholders with the highest being subcontracting partners, followed by that of suppliers, then outsourcing partners and finally customers.

The study also found that there are 5 major extracted factors affecting supply chain collaboration in the Kenya Government Ministries which include legal framework, quality of personnel, compliance with SCM Policies, information technology and stakeholders involvement. Accordingly, stakeholders' involvement contributes more to supply chain collaborations in the government ministries, followed by information technology, then compliance with SCM Policies, and then quality of personnel while legal framework contributes the least to supply chain collaborations in the government ministries.

5.3 Conclusions

From the findings the study concludes that SCM requires the integration of inter-organizational and intra-organizational relationships, which help the coordination of the different types of flows that run along the entire SC. Collaboration in the public sector supply chain comes in a wide range of forms, but in general have a common goal: to create a transparent, visible demand pattern that paces the entire supply chain. According to the results, there is a significant level of collaboration among the ministries and various stakeholders with the highest being subcontracting partners, followed by that of suppliers, then outsourcing partners and finally customers.

The study concludes that supply chain collaboration enhances supply chain management in the government ministries hence creating a competitive advantage through sharing information, making joint decision, inter-organizational relationship. This study also concludes that the level of supply chain collaboration has an important interaction effect on the relation between external resources and buying firm performance, where collaborative forms of buyer-supplier exchange facilitate greater access to external resources. From the results, managing flows in a network like a SC is a major challenge due to the complexity of the network, the proliferation of products that flow through this network, and the presence of multiple decision makers who each own and operate a piece of this network and optimize a private object function. The findings are pointer to the responsiveness, flexibility, commitment and the belief of the trading partners are willing to devote energy to sustaining the relationship.

The study further concludes that the effectiveness of supply chain collaboration relies upon the level to which it integrates internal and external operations, and the level to which the efforts are aligned to the supply chain settings in terms of the geographical dispersion, the demand pattern, and the product characteristics. According to the findings, the factors affecting supply chain collaboration in the Kenya Government Ministries include legal framework, quality of personnel, compliance with SCM Policies, information technology and stakeholders involvement.

5.4 Recommendations

From the findings and conclusions, supply chain collaboration is undoubtedly a worthwhile target, jointly creating the common pace of information sharing, replenishment, and supply

synchronization in the system reduces both excess inventory and is essential to avoid the costly bullwhip effect that is still prevalent in so many organisations in both public and private sectors. The study recommends that supply chain collaborative efforts should reach across the entire supply chain to help streamline essential processes such as product development and pricing, as well as reduce costs and improve responsiveness to customer demand. This would be a cutting edge since organizations that utilize sustainable supply chain management as a strategic tool in business management are likely to have a competitive edge over others.

The study recommends that there is need for the supply chain actors to collaborate especially in the provision of transport and distribution. Executives should develop supply chain partnerships/collaborations in an attempt to reduce costs, improve service and to gain competitive advantage. The best supply chains have stakeholders' relationships that are based on value and consistent delivery of this value. A collaborative supply chain environment that encompasses all members of the value chain – from the organization to its most distant trading partners and suppliers – requires continuous and careful monitoring and evaluation.

The study further recommends that a new level of visibility into the work order status is also essential to ensure seamless visibility across all supply chain processes in the government ministries. The study recommends that there is need for adoption of improved technology so as to ensure efficiency in information flow. For a supply chain to achieve its maximum level of effectiveness and efficiency, material flows, money flows and information flow throughout the entire chain must be managed in an integrated and holistic manner, driven by the overall service and cost objectives. When automating these processes, the relevant stakeholders must support the information-sharing, collaboration, and monitoring activities that are needed to effectively manage the relationship with other stakeholders in the supply chain.

5.5 Limitations of the Study

The focus of this study lay on investigating the factors affecting supply chain collaborations in the government ministries in Kenya. The geographical context of the study was the ministerial head offices in Nairobi. The study could cover more organizations across the country especially the County governments and public corporations so as to provide a more broad based analysis. As such, this study was therefore limited by its inability to generalize the findings as

representative of the public sector institutions in the country as different organizations in the public sector differ in their managerial approach and differ in their settings altogether.

The respondents approached were likely to be reluctant in giving information fearing that the information sought would be used to intimidate them or print a negative image about them or the ministries. Time limitation and the sample of respondents were also important issues that were done in limited scope. Perhaps, using some other methods of data collection would have yielded different and more pronounced results. The researcher also encountered problems in eliciting information from the respondents as the information required is subject to areas of feelings, emotions, attitudes and perceptions, which could not be accurately quantified and/or verified objectively. This led to lack of response due to the veil of confidentiality surrounding the government ministries.

5.6 Suggestions for Further Research

Given the above shortcomings therefore, the study recommends that future studies should consider expanding the scope by including County governments all over the country and public corporations. Future studies should also consider expanding the topic to address the how issue of supply chain collaborations in Kenya. In order to advance this research, future studies should address several different perspectives. The understanding of supply chain collaborations and supply chain performance in the government ministries can be extended to other public corporations in the world and add value to the literature. In addition, private companies might provide further insights on the impact of supply chain collaboration operational issues on supply chain performance. An additional future area for research is to study supply chain collaborations and its impact on supply chain performance as perceived by operational, middle and senior management in public and private organizations or other organizations by sector.

REFERENCES

- Akintoye, A., McIntosh, G. and Fitzgerald, E. (2000). A survey of Supply Chain Collaboration and Management in the UK Construction industry. *European Journal of Purchasing and Supply Management*, 6, 159-168.
- Buvik, A. and Halskau, O., (2001). Relationship duration and buyer influence in just-in-time relationships. *European Journal of Purchasing & Supply Management* 6(7), 111-119.
- Cassivi, L. (2006). Collaboration planning in a supply chain. *Supply Chain Management: An International Journal* 11(3), 249-258.
- Chen, I.J. and Paulraj, A. (2004). Towards a theory of supply chain management: The Constructs and Measurements. *Journal of Operations Management*, 22(2), 119-150.
- Chima (2007). Supply chain management issues in the Oil and Gas industry. *Journal of Business & Economics Research Vol.5, No.6, 2007.*
- Cox, A. (2001). Understanding buyer and supplier power: a framework for procurement and supply competence. *The Journal of Supply Chain Management* 37(2), 8-15.
- Damien, P. (2005). Supply chain management integration and implementation: a literature review, *Supply Chain Management: An International Journal*, Vol. 10 Iss: 4 pp. 252 – 263.
- Daugherty, P.J., Richey, R.G., Roath, A.S., Min, S., Chen, H., Arndt, A.D., and Genchev, S.E. (2006). Is Collaboration paying off for firms? *Business Horizons*, 49, 61-70.
- De Jong, G. and Nooteboom, B., (2000). *The causal structure of long-term supply relationships - an empirical test of a generalized transaction cost theory*. Kluwer Academic Publishers, Boston.
- Finch, P. (2004). Supply chain risk management, *Supply Chain Management: An International Journal*, Vol. 9 Iss: 2, pp.183 – 196.
- Fredrick Jacobson (2007). *The Impact of Supply Chain Management on Government Institutions*

- Gadde, L.E. and Snehota, I., (2000). Making the most of supplier relationships. *Industrial Marketing Management* 29(4), 305-316.
- Haakansson, H. and Ford, D. (2002), “How companies interact in business networks?”. *Journal of Business Research*, Vol. 55, pp. 133-9.
- Handfield, R.B. and Bechtel, C., (2002). The role of trust and relationship structure in improving supply chain responsiveness. *Industrial Marketing Management* 31(4), 367-382.
- Heide, J.B. (2003). Plural governance in industrial Purchasing: *Journal of Marketing*, 67(4), 18-29.
- Intarher M. and Johanna B.W. (2009). *Managing and controlling Public Sector Supply Chains*
- Jefrey K. Liker and Thomas Y. Choi. *Building Deep Supplier Relationships*
- Johnsen, R.E. and Ford, D. (2001). Asymmetrical and symmetrical customer-supplier relationships: contrasts, evolution and strategy. The 17th Annual IMP Conference, Oslo, Norway, 1-20, <http://web.bi.no/imp2001> .
- Kenya Shippers Council (2012) *A Kenya Shippers Council Policy Paper of 2012*. Supply chain security during election period
- Kim, K., (2001). On the effects of customer conditions on distributor commitment and supplier commitment in industrial channels of distribution. *Journal of Business Research* 52(2), 87-99.
- Kinoti, J. B., Arasa, R., Waititu, G. A. & Guyo, W. (2013). Influence of the procurement regulatory framework on the implementation of Supply Chain Management ethics in Government Ministries in Kenya. *International Journal of Social Sciences and Entrepreneurship* , 1 (5), 185-193.
- Lamber, D.M., and Enz, M.G. (2012). Managing and measuring value co-creation in business-to-business relationships: *Journal of Marketing Management*, 2012.

- Lamming, R. (2000). *Beyond partnership: Strategies for innovation and lean supply*. New York: Prentice-Hall: 1993.
- Lee, P.D (2005). Measuring Supply Chain integration: A social network approach. *Supply Chain Forum: An International Journal*, 6(2), 58-67.
- Matopoulos, A., Vlachopoulou, M., Manthou, V. and Manos, B. (2007). A Conceptual framework for Supply Chain Collaboration: Empirical evidence from the agri-food industry. *Supply Chain Management: An International Journal* 12(3), 177-186.
- McClellan, M. (2002). *Collaborative manufacturing : Using realtime plant floor information to advance Supply Chain performance*. Delray Beach, FL: St Lucie Press.
- Mentzer, J.T., Dewitt, W., Keebler, J.S., Min, S., Nix, N.W., Smith, C.D. and Zacharia, Z.G. (2001). Defining Supply Chain Management. *Journal of Business Logistics*, 22(2), 1-25.
- Min, S., Roath, A.S., Daugherty, P.J., Genchev, S.E., Chen, H., Arndt, A.D. and Richey, R.GI. (2005). Supply Chain Collaborations: What's happening? *The International Journal of Logistics Management*, 16(2), 237-256.
- Mugenda O.M & Mugenda, A.G. (1999). *Research methods: quantitative and qualitative approaches*. Nairobi: ACTS Press.
- Mugenda, O.M., & Mugenda, A.G. (2003). *Research Methods; Quantitative & Qualitative Approaches*, Nairobi: Acts Press.
- Narrood, C.A., Roy, D., Okello, J., Avendano, R., Belem, D., and Rich, K.M.. (2007). The role of public-private partnerships and collective action in ensuring smallholder participation in high value fruit and vegetable supply chains. *CAPRI Working Paper No. 70, October, 2007*.
- Oanda, C.A. (2013). Lessons from procurement of the failed BVR devices. *News Article*
- Okech, A. (2009). Building a Grassroots Based Movement: GROOTS Kenya in Development. *Society for International Development*, 52(2), 224-229

- Rajendra, K.S. (2011). Understanding Supply chain: A literature review. : *International Journal of Engineering Science and Technology (IJEST)*, Vol. 3 No. 3
- Sandberg, E. (2007). Logistics Collaboration in Supply Chains: Practice vs. theory. *The International Journal of Logistics Management*, 18(2), 274-293.
- Sheu, C., Yen, H.R., and Chae, B. (2006). Determinants of supplier-retailer collaboration: Evidence from an International Study. *International Journal of Operations & Productions Management*, 26(1), 24-49.
- Shoshanah Cohen & Joseph Roussel. *The Five Disciplines for Top Performance*.
- Simatupang, T.M. and Sridharan, R. (2004b), "Benchmarking supply chain collaboration: an empirical study", *Benchmarking: An International Journal*, Vol. 11 No. 5, pp. 485-503.
- Singh, P.J. and Power, D. (2009). The nature and effectiveness of collaboration between firms, their customers and suppliers: A Supply chain perspective. *An International Journal*, 14(3), 189-200.
- Skjoett-Larsen, T., Thernøe, C. and Andresen, C. (2003), "Supply chain collaboration: theoretical perspectives and empirical evidence", *International Journal of Physical Distribution & Logistics Management*, Vol. 33 No. 6, pp. 531-49.
- Soosay, C.A., Hyland, P.W. and Ferrer, M. (2008). Supply Chain collaboration: Capacities for continuous innovation. *Supply Chain Management: An International Journal*, 13(2), 160-169.
- State House- Kenya (2013) President Uhuru Kenyatta unveils the structure of his Government.". State House (Kenya). 18 April 2013. Retrieved 20 February 2015.
- Sweeney, E. (2005). Managing the Supply Chain: The Role of Information and Communications Technology (ICT) as a Key Enabler of the Process. *Business Ireland, Summer Issue*, p.105-109.

The Public Procurement and Disposal Act, 2005

The Public Procurement and Disposal Regulations, 2006

Togar, M.S., Alan C., and Wright, R.S. (2005). Applying the theory of constraints to supply chain collaboration, *Supply Chain Management: An International Journal*, Vol. 9 Iss: 1 pp. 57 – 70.

Tucci, C., Kaufman, A., Wood, C.H. and Theyel, G. (2005). Collaboration and teaming in the software Supply Chain: *Supply Chain Forum: An International Journal*, 6(2),16-27.

Vollman T., William L.B., David C.W., and Robert, J.F. (2004). *Manufacturing Planning and Control Systems for Supply Chain Management*. McGraw-Hill Education – Europe

APPENDICES

Appendix I: Research Questionnaire

This research is in partial fulfillment of requirements for a degree in Masters of Business Administration from the University of Nairobi and I will be most grateful if you could kindly complete this questionnaire. This questionnaire consists of three parts; kindly answer all the questions by ticking in the appropriate box or filling in the spaces provided. Kindly answer the following questions by ticking in the appropriate box or filling the spaces provided. The information given here will only be used for purposes of this study and will be treated with utmost confidentiality. Your cooperation will be highly appreciated.

PART A: GENERAL INFORMATION

1. What is your gender?

Male Female

2. Indicate your age category:

Below 20 years 41-50 years
21-30 years Above 51 years
31-40 years

3. What is your highest level of education?

Post Graduate Diploma
Graduate Certificate
Any other (specify).....

4. Years of service/working period in the Ministry/public sector department

Less than 1 year 6-10 years
1-5 years Over 10 years

5. Indicate your Department

Supply chain Procurement
Finance ICT
Other (Specify.....)

6. Please indicate your designation

Procurement manager/head Finance manager/head

ICT manager/head

[]

Other (Specify.....) []

PART B: SUPPLY CHAIN COLLABORATIONS

7. Would you agree that supply chain collaboration exists between various departments within this Ministry and between the Ministry and other stakeholders?

a) Yes []

b) No []

If yes, what benefits has the Ministry gained from such collaborations

.....
.....

If no, state the challenges the ministry undergoes as a result

.....
.....
.....

8. With regard to this Ministry, to what extent do you have collaboration with various stakeholders in the supply chain?

To a very great extent	To a great extent	To a moderate extent	To a little extent	To no extent

9. To what extent do the following stakeholders in the supply chain participate in the collaborative endeavours approached by this Ministry? Use a scale of 1 to 5 where 1= no extent, 2= little extent, 3= moderate, 4= large extent and 5 is to a very large extent

Stakeholders in the supply chain	1	2	3	4	5
Suppliers					
Customers					
Outsourcing partners					
Subcontracting partners					
Others (specify.....)					

10. Outline the various areas where there is supply chain collaboration in the Ministry.

.....

-
-
11. Please give the extent of your agreement with the following statements about supply chain collaboration in your Ministry. (Use the following legend to score your response 1- Not at all 2- Small extent 3- Moderate extent 4- Great extent 5- Very great extent)

Aspects on supply chain collaboration	1	2	3	4	5
The Ministry has devised ways of sharing information with its stakeholders in the supply chain					
The tendering/bidding process is fair, transparent and competitive for all candidates					
The Ministry allows tenderers to participate in development of specifications and designs for its requirements					
The Ministry assists its suppliers in achieving their full potential through training, financing etc					
The Ministry uses framework contracts where prices and quantities are preset for less complex contracts					
Suppliers have been trained on the use of IFMIS to acquire skills necessary to enable them participate in public procurement processes through e-procurement					
The Ministry undertakes monitoring and evaluation of its suppliers					
The Ministry carries out market surveys to guide its procurement processes					

PART C: FACTORS AFFECTING SUPPLY CHAIN COLLABORATIONS

12. Kindly rate your level of agreement with the following statements that regard supply chain collaboration in this Ministry. Use the following Likert scale: Strongly Agree=5, Agree=4, Neither Agree nor Disagree=3, Disagree=2, Strongly disagree=1

Aspects affecting supply chain collaboration	1	2	3	4	5
There is high level of collaboration with stakeholders in the supply chain in this ministry					
The supply chain collaboration in this Ministry is effective					
Competitive pressures affects supply chain collaboration					
The need to consider sustainability and risk affects supply chain collaboration					

The need to achieve cost efficiency in order to be cost competitive affects supply chain collaboration					
The need to develop closer relationships with key suppliers affects supply chain collaboration					
The Ministry develops front end agreement on operations with key partners to streamline business operations					
The Ministry's trading partners exchange information that helps in joint business planning to align goals					
The Ministry creates sales forecast in close collaboration with key suppliers /distributors to reduce stock outs/ waste					
The Ministry regularly visits/ face to face communication with our partners to facilitate collaborative relationship					
The Ministry has close collaboration with suppliers to perform logistics synchronization					
The Ministry practices collective learning with suppliers/ manufacturers to facilitate joint operation improvement					
The Ministry sets targets and harmonized business processes with suppliers/manufactures for smooth operations					
The Ministry collaborates with its customers in product design on exceptional items					
The Ministry collaborates with its manufacturers/ vendors and customers in order generation to prevent stock-outs/ waste					
The Ministry's trading partners share business knowledge to enhance operation improvement					
The Ministry's trading partners keep each informed about events or changes that may affect the other partners					
Supply chain collaboration practices leads to organizational effectiveness					
Supply chain collaboration practices have led to improved product/ service quality					
Supply chain collaboration practices results to increased productivity					
Supply chain collaboration is key to operational effectiveness in our Ministry					
Supply chain collaborations produce more efficient and economical acquisitions resulting in the delivery of cost-efficient and timely contracts for products or services.					
Supply chain management processes in the Ministry are bad					

There is lack of supply chain collaboration leadership teams in place					
Collaborations increase complexity in supply chain management					
There is lack of computerized supply chain management system					
Supply chain complexity hinders visibility of supply chain collaboration in the sector					
Prequalification enhances supply chain relationships					
Lack of transparency and accountability are considered as major threats to supply chain collaborations					
The government has developed procedural frameworks that supports long-term commitment and supplier relationships					
The government legal framework aims at promoting fair, open, transparent and competitive procurement processes					
Supply chain collaboration is probably necessary where large and complex contracts are undertaken					
Late/delayed payments discourage suppliers from entering into long-term commitments with government Ministries					
The existing procurement laws are insufficient to enable reliable supply chain partnerships					
Most government ministries lacks management capacities to administer supply chain partnerships					
Contracts are not awarded free of any political interests					
Most suppliers lacks ICT skills to participate in public e-procurement					
Information on tendering is widely shared between the Ministry and potential suppliers					
Framework contracting limits opportunities for negotiation					
Abuse of public procurement systems erodes supplier confidence					
The Public expects quality and seamless services from the government ministries					

13. What other information would you like to share about supply chain collaboration in the government ministries in Kenya?

.....
.....

14. In your opinion, what do you think should be done to enhance supply chain collaboration in public sector firms in Kenya?

.....
.....
.....

THANK YOU!!!

Appendix II: List of Government Ministries, Kenya

1. Cabinet Affairs Office in the Presidency
2. Ministry of Interior and Coordination of National Government
3. Ministry of Devolution and Planning
4. Ministry of Foreign Affairs
5. Ministry of Defence
6. Ministry of Education, Science and Technology
7. The National Treasury
8. Ministry of Health
9. Ministry of Transport and Infrastructure
10. Ministry of Environment, Water and Natural Resources
11. Ministry of Labour, Social Security and Services
12. Ministry of Lands, Housing and Urban Development
13. Ministry of Sports, Culture and the Arts
14. Ministry of Energy and Petroleum
15. Ministry of Agriculture, Livestock and Fisheries
16. Ministry of Industrialization and Enterprise Development
17. Ministry of East African Affairs, Commerce and Tourism
18. Ministry of Mining

Source: Source: <http://www.presidency.go.ke/index.php/ministries>: Accessed 12th April, 2015, 0913hrs