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COLLEGE OF ART AND BUILT ENVIRONMENT

DEPARTMENT OF BUILDING TECHNOLOGY

SUPPLIER RELATIONSHIP MANAGEMENT OF THE ROAD

CONSTRUCTION INDUSTRY: A CASE STUDY OF GHANA HIGHWAYS

AUTHORITY

BY

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(BSC. BUILDING TECHNOLOGY)

**A THESIS SUBMITTED TO THE DEPARTMENT OF BUILDING
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PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD
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DECLARATION

I the undersigned declare that, the project research study presented is my own work. With the exception of specific quotations and ideas which were obtained from specific sources, this dissertation has not been presented anywhere for the award of a degree.

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DEDICATION

This dissertation is dedicated to God Almighty who has enabled me to get this far and also to my dear Wife and Children who supported me with their prayers and understanding. I also want to dedicate this dissertation to my bosses and colleagues at my work place for their assistance throughout my course of study despite my heavy schedule.

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I say God richly bless you all.

ABSTRACT

Supplier Relationship Management (SRM) plays a major role in construction procurement. It becomes more relevant when coordinating public procurement activities between Ghana Highway Authority (GHA) as the entity and Road Contractors as the suppliers in which, the engagement could be described as short-term in nature. The principal roles of SRM are covered by the generic Supply Chain Management methodology which offers general guidelines that can be used to analyze, reengineer, properly coordinate, and improve the road construction procurement for the entity (GHA). Resolving and controlling problems plaguing the relationship between the entity and suppliers within supply chain collaborations requires consolidating long-term relationships in improving performance. Improving performance is better realized if SRM methodology is employed through capacity training and development for both staffs and suppliers. Managing the relationship between these entities requires that lessons learnt are transferred between various entities. Due to its recurring character, the SRM methodology implies a continuous process improvement of which the scope can be changed over time, involving an increasing collaboration between GHA staffs and suppliers in smoothing the differences. Furthermore, Public Procurement Act is aimed at ensuring entities obtain value for money and ensure that scarce public funds are well spent and that important public projects are carried out in sustainable manner (PPA, Act 663, 2003). Such core objectives become very important when entity implements “SRM” in public procurement through adaptation of key variables such as ensuring effective communication and maintaining mutual trust and commitment between buyers-to-consultants, buyers-to-consultants and buyers-to-suppliers towards long term relations in public procurement decisions. The objective of the study was to determine the relevance of managing relationship and its challenges, effects and possible strategies in improving performance for the *Ghana Highway Authority* and the Ministry of Road and Highways in general. Sample size of eighty, (80) from the sample frame was used for which questionnaires as research instrument were used to collect data for analysis. The data were analyzed using one-sample t-test and descriptive statistics in which the mean values and p-values were determined and ranked accordingly. It was found from the study that trust and commitment, long term orientation and client engagement through capacity training and development as well as effective communication play major roles in developing and maintaining long term relationships between the Buyer/entity and the Suppliers/Contractors, despite short term nature of contract engagement between them. And that entity staff (GHA) should be project and customer focus in their Public Procurement decisions if value for money and principles of transparency as stated in the Public Procurement Act, Act 663, 2003 are to be realized.

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CHAPTER ONE

GENERAL INTRODUCTION

1.1 Introduction

Supply relationship management is mainly the interconnection of entities multifaceted activities which include processes for the provision of deliverables that meet entity needs and or requirements. In order to create a complex network in such services, it requires concerted effort of players to manage and improve the management of relevant information flows, services money and or materials which are in the form of resources enabling the supply chain system to operate without interference. Different researchers referred to supply relationship management as supply chain management, supply collaboration management (Dubois and Gadde 2002; Fawcett et al., 2007). The development supply relationship management does not only apply to general business management but more so applicable to engineering and for that matter more relevant to construction procurement management where the usual practice has been established for the buyer-supplier.

Therefore, what this means is that improving buyer-supplier relationship management in the constructional sector especially in the road construction sector procurement is relevant if an entity is to maintain long-term relationships. Even though there are challenges that affect such implementation process. There is enough motivation for an entity to ensure the effectiveness of managing buyer-supplier relationships in the road construction sector procurement as the merits are enormous. There are useful researches that established the facts that the best possible relationship types between buyers and suppliers, as well as supplier-consultant in the

sector that create value for money. The objective of the study is to find out the challenges as well as merit for, improving the relationship between Buyer-Suppliers in road construction sector procurement in order to increase the effectiveness of supplies. Particularly, the focus has been on assessing the relationship between Buyer-Supplier in creating values through improved inter-coordinating activities and networks among various sector players in procuring road projects for the nation.

The Ministry of Roads and Highway, as matter of policy, requires for inter-agencies and service providers' (GHA, DUR and DFR) to collaborate with suppliers to ensure that projects are effectively and efficiently delivered on time and on budget. Managing the relationship between the buyer-supplier to supplier-consultant (B2S, S2C) within road construction sector procurement offers value addition and or value for money to various entities as well as comparative advantage to public procurers while suppliers also maximize profit (Cohen et al., 2008).

1.2 Background of the study

The principal elements within procurement of road projects are between; the Buyer-to-Supplier, Buyer-to-Consultant, Supplier-to-Consultant (B2S, B2C, S2C) in which their performance directly affects the quality of the whole supply chain decision making. It is essential to establish an efficient mechanism to enhance it, accelerate its improvement and ensure the quality of services and/or projects delivery (Jiang and Bai, 2010). Through the evaluation and comparison of Buyer-Supplier, Buyer-Consultant, Supplier-Consultant (B2S, B2C, S2C) performance activities, entities can ensure and maintain the best service providers (suppliers and or consultants) and eliminate service providers and or consultants who fail to comply with performance

requirements (Jiang and Bai, 2010). Further, the focal points for public procurement according to the Act 663, is to promote value for money, competition among tenders, fairness and transparency among B2S, B2C and S2C. Such objectives call for effective and efficient collaboration and management of the relationship among individual players.

In addition, the current total costs of procuring projects coupled with project environmental and economic factors which affect road construction sector procurement calls for smooth relationship collaboration and management in creating harmony between industry players (Dubois and Gadde, 2002). One of the major contributions to this trend is the increased focus on core operations and outsourcing of support activities. According to Dubois and Gadde (2002) many companies' purchasing costs add up to 50 to 80 percent of the total cost of work done. Hence, managing buyer-supplier, supplier-consultant relationship has become a more significant duty to entities which managed the relationship. For instance, according to (Ganesan, 1994); suppliers are currently becoming very relevant to a larger extent due to their roles and relationships in the services they provide to the channel members in preventing an eventual breakout from the relationships. Therefore, it is important to carefully manage buyer-supplier relationships to potentially increase technical inputs and efficiency whiles creating competitive advantage for both. During the last decades, organizations have realized that this can be done through collaboration in a supply chain. This requires that entities establish interdependencies to exploit the potential benefits. Some of the goals and advantages for supply chain collaboration are revenue enhancements, cost reductions, flexibility to cope with high demand uncertainties, lower inventories, reduction of lead time, higher product

availability and higher customer satisfaction (Ganesan, 1994). These benefits are achieved when firms make adaptations to one another. Being able to benefit from supply chain collaboration requires commitment and dedication from all parties involved (Dubois and Gadde, 2002).

The study has been on Ghana Highway Authority which was established as a statutory body under the corporate decree 1974 (NRCD 298) and later repealed by GHA Act of 1997 (Act 540) to be responsible for the administration, control, development and maintenance of the nation trunks road totaling 13,367 km and other related facilities. The authority has the mission of providing a safe and reliable road network at optimal cost by taking advantage of modern technology in road building, maintenance and new income-generating methods to facilitate socio-economic development in the country, Ghana (GHA, 2015). Ghana Highway Authority (GHA) can improve performance through coordinated efforts of establishing long-term relationships between them and their sector players.

The industry has been arguably seen as a leader in term of outsourcing services providers in the area of road construction sector procurement where the entity engages various suppliers including foreign contractors in favour of local contractors and or consultants with less capacity development for the local contractors and consultants. The road construction industry is a site-specific project based activity which makes it quite distinctive compare to other procurement undertaken. The distinctive characteristic of the industry has been viewed from between channel members from two main perspectives. (Jiang and Bai, 2010) have pointed out that the creating of Supply Chain relationship or partnership in construction can take

place at the project level and at the firm or organizational level of operation. The authors further pointed out that the project level relationship is temporary in nature compare to the organizations' level where the relationship is permanent if the entities are to realize long term benefits. The project level requires innovation but which could be long-term beneficial through research and development as well as capacity training and development. Whiles through long-term programs, plans and strategies, the entities turns gain benefits channel relationship though the relationship may be permanent in nature, such relationships must be enduring and long-term through creative collaboration between entity and its' suppliers. Conversely, Buyer-Supplier, Buyer-Consultant, Supplier-Consultant (B2S, B2C, and S2C) relationship building could be capable of establishing long-term that improve performance for Ghana Highway Authority whiles creating level of competitive advantage for suppliers in competing with foreign partnership due to local content mechanisms.

1.3 Statement of the Problem

The Ministry of Road and Highways is responsible for policy direction for the procurement of road construction projects in the country. The implementing agencies such as Ghana Highway Authority are responsible for coordinating various consultants and suppliers. However, the sector has been challenged with issues of trust and commitment, loyalty, and how to maximize relations among individual players through an improved collaboration between various parties. Such occurrences will increase cost and risk whilst delaying schedule completion due to poor collaboration and trust between entity (GHA) and its suppliers despite some form of adhoc annual capacity training and development organized by GHA.

The challenge of agreeing and understanding procurement related activities that benefits both parties that is buyer-supplier, supplier-consultant and buyer-consultant as well as developing long-term relations between the policy makers (Ministry of Roads and Highways and its Agencies). For instance; implementing agency like Ghana Highway Authority (buyers on behalf of government), suppliers (contractors) and their consultant constantly are in tango within the value chain of road construction when there is lack of trust and commitment not forgetting insider trading between players. Supplier relationship management in terms of training and development, conflict resolution, mutual trust, long term commitment and coordination between the entities are currently lacking and this fails to add value. The phenomenon has called for the need to find out the challenges as well as benefits in managing supplier collaboration within the value chain of public road construction sector procurement a case of Ghana Highway Authority.

1.4 Research Questions

- a) Which variables are the factors in managing buyer-supplier relationships?
- b) What are the challenges for managing buyer-supplier relationships?
- c) Which strategies are available for managing buyer-supplier relationships?

1.5 Aim of the study

This thesis seeks to determine the benefits of managing supplier relationship and also to determine the benefits of developing long-term relationship between channel members identified towards value prepositioning within public procurement system in Ghana.

1.6 Objectives of the study

The main objective of the study is to find out the relevance of managing relationship between buyer-supplier in road sector procurement and from which the following specific objectives have been outlined for the study.

1.6.1 Specific Objectives

- a) To determine the factors for managing buyer-supplier relationships
- b) To determine the challenges for managing buyer-supplier relationships
- c) To find out strategies for managing buyer-supplier relationships

1.7 Scope of the study

Theoretically, the scope of the study has been limited to Supplier Relationship Management in the procurement of Road Construction Works within public sector procurement. Evaluation and comparison of Buyer-Supplier, Buyer-Consultant, Supplier-Consultant (B2S, B2C, S2C) performance activities, that will inherently eliminate service providers and or consultants who fail to comply with performance requirements (Cohen et al., 2008). Conceptual model of building relationships between industry players in the procurement system consists of variables such as market orientation; procurement process coordination and performance, based on trust and commitment, communication and developing long-term relations (Dubois & Gadde, 2002; Cohen et al., 2008). This is to find out the influence of these variables on procurement coordination between Buyer-Supplier, Buyer-Consultant, Supplier-Consultant (B2S, B2C, S2C) especially in the road construction sector of public procurement.

Furthermore, the delimitation of the study has been public procurement in Ghana, with specific focus on Ghana Highway Authority as the for chosen for the study. This was due to consistent efforts to improve performance of staffs and consolidate performance between the Authority with its industry players within the construction sector and the public procurement in general. More so, financial constraints and time schedule for the final completion of this thesis have been the limitation of the study.

1.8 Significance of the study

This thesis seeks to determine the relevance of managing supplier relationship, a study of Ghana Highway Authority. However, the study will benefit other inter-agency operators and their suppliers as well as Consultants under the Ministry of Roads and Highways in improving performance.

The study will also help policy makers to formulate ways on how to improve sustainable procurement practices and policy formulation for the economy while adding value to general public procurement practices. Last but not the least, the study will also act as a basis for further research to other researchers in the field of public service delivery and procurement practices in Ghana.

1.9 Justification of the Study

The level of relationship between buyer and suppliers, particularly within the road construction sector procurement, permits for long-term relationship building. Besides, the move to build strong buyer –supplier relationship could create gains in improving their procurement activities. The Public Procurement Act, Act 663, section 3 (t) requires the development of the capacity of local business community to become competitive and efficient suppliers to the public sector. Furthermore,

according to Kortler & Armstrong (2008), building such relationship in a project environment referred to as marketing relationship where each entity aims at gaining value outcome through provision of certain distinctive characteristic practices in their procurement or project implementations.

There seems to be a lack of long-term relationship building between the players within construction sector procurement. The issues have to do with whether road construction sector procurers like GHA and the Ministry can build up and sustain long-term relationship with their suppliers in the implementation of public procurement projects and invariably create value for money. More so, the quest for crafting and sustaining effective partnering relationships among various entities thus; between suppliers (road contractors and consultants) and buyers on government behalf justify the need to find out the benefits and challenges thereof for both parties; hence the study.

1.10 Research Outline

This research is made up of five major chapters; chapter one comprised of the background of the study, problem statement, the objectives of the study, research questions/hypothesis, scope and limitations of the study and the significance of the study. Chapter two has been devoted to literature review with a look at conceptual to theoretical aspect of Supplier Relationship Management in public procurement. Furthermore, the research methodology has been tackled in chapter three, in which the data collection and presentation procedures were examined. However, Chapter four dealt with data analysis based on the responses from the respondents. The data captured were analyzed using descriptive statistics such as statistical mean, standard

deviation including one-sample t-test for data interpretations. Finally, summary of major findings, recommendations and conclusions were devoted to chapter five.

CHAPTER TWO

LITERATURE REVIEW

2.1 Overview

This chapter provides the review of literature on supplier relationship management within the public procurement. The chapter provides a brief definition of variables, conceptual and theoretical framework, buyer-supplier relations management; challenges and benefits and methodological issues from various authors of study have been discussed.

2.2 Definition of variables and concepts

Supply chain can be referred to as arrangement of business processes which involved the uplinks and downlinks and define the different processes and activities and resources to ensure continuous flows from the producer to the end-user within uninterrupted networks (Cooper et al., 1997). Supply chain concept, after its promotion in the Japanese auto industry initiative as part of the production system has gained substantial recognitions in all sectors including road construction sector of public procurement. The conceptual development of supply chain management in the automobile industry further expand the scientific research to industrial theory and management on the concept and described in the supply chain management literature (Cooper et al.,1997). Together with supply management collaboration (SMC) the original approaches, other concepts (e.g, the value chain, resources mobilization that ensure the process to operate effectively has been discussed on extended enterprise) affecting the development of the current conceptual understanding of (SMC). Supply management collaboration or relationship is a concept that originated and flourished in the processing industry (Fawcett et al., 2007). The first sign of SMC was detected

as part of the System Production of Toyota's JIT (Siguaw et al., 1998) system. This system aims at organizing the Toyota engine plant just to the right hand - small -size, at the right time. The objective was to drastically reduce inventory and better regulate the interaction of supply with the production line.

The supply collaboration management is logical continuation of the management development (Cooper et al., 1997). Although the concept is dominated by logistics management, the contemporary understanding does not only include only logistics management (Cooper et al., 1997). In fact SCM a combination of specific concepts such as: Total Quality management (TQM), Process Redesign Business (PRB), and Just in Time (JIT) were relevant theories that make the supply relationships practicable in many operational sectors of supply management. In addition, proposed a highly respected definition (Cooper et al., 1997) showed that the management of the concept involved business integration processes between stakeholders whose roles cannot be undermined if values are to be added between entity and the suppliers. In that sense the coordination, transparency and alignment of a string and configuration regardless of functional or organizational boundaries. What it means is that entity cannot develop better SCM without proper understanding of SRM which is the fulcrum on which supply chain management concept has been laid.

The concept is known in many jurisdictions and referred to as supplier relationship management others referred to it as vender relationship management. This study focuses on set of processes, and tools that improved supply relationship management in creating a long term relationship building among road construction sector procurers to maximize values, and minimized risk within the entire supplier

relationship management. Furthermore, (Kotler & Armstrong, 2008) referred to supplier relationship management as an overall process of building and maintaining profitable client's relationships by delivering superior value proposition and meet stakeholders expectation. The authors concluded that building such relationships entails entity offering the highest client-perceived value-client satisfaction. Client-perceived (the client's evaluation of the difference between all benefits and all costs of a market offering to those of competitors) while client satisfaction (the extent to which a product's (road project) perceived performance matches a buyer's expectations (Kotler & Armstrong, 2008). Whether SRM or VRM depending on acronym assigned determinants, such as getting clear assurance between supplier and the entity in improving better relationship between the entities through certain key variables such as trust, commitment, communication, stakeholders' engagement, capacity training and development towards value creations.

The focus is developing long-term relations that lead to an eventual partnership between the entities in improving services being rendered to public entity. Chartered Institute of Supply Chain Professional (CIPS, 2012) further opined that the objective of appreciating, approving, and whenever possible, identifying and maintaining long-term interactions between entities is hallmark of SRM, CIPS (2012).

2.3 Conceptual and theoretical framework

Conceptually, Buyer-Supplier Relationship Management is the dependent variable which has been examined within public procurement process and from which the independence variables: commitment, communication, satisfaction, long-term partnership, trust, loyalty, among other variables that promote and maintain without

discrimination among suppliers to the GHA. This is to prevent imposing of unnecessary constraints on achieving public procurement objective of creating value for money, openness, fairness, unprejudiced, and fair-minded in all processes of the public procurement process (PPA, 2003; Fawcett et al., 2007).

Conceptual framework

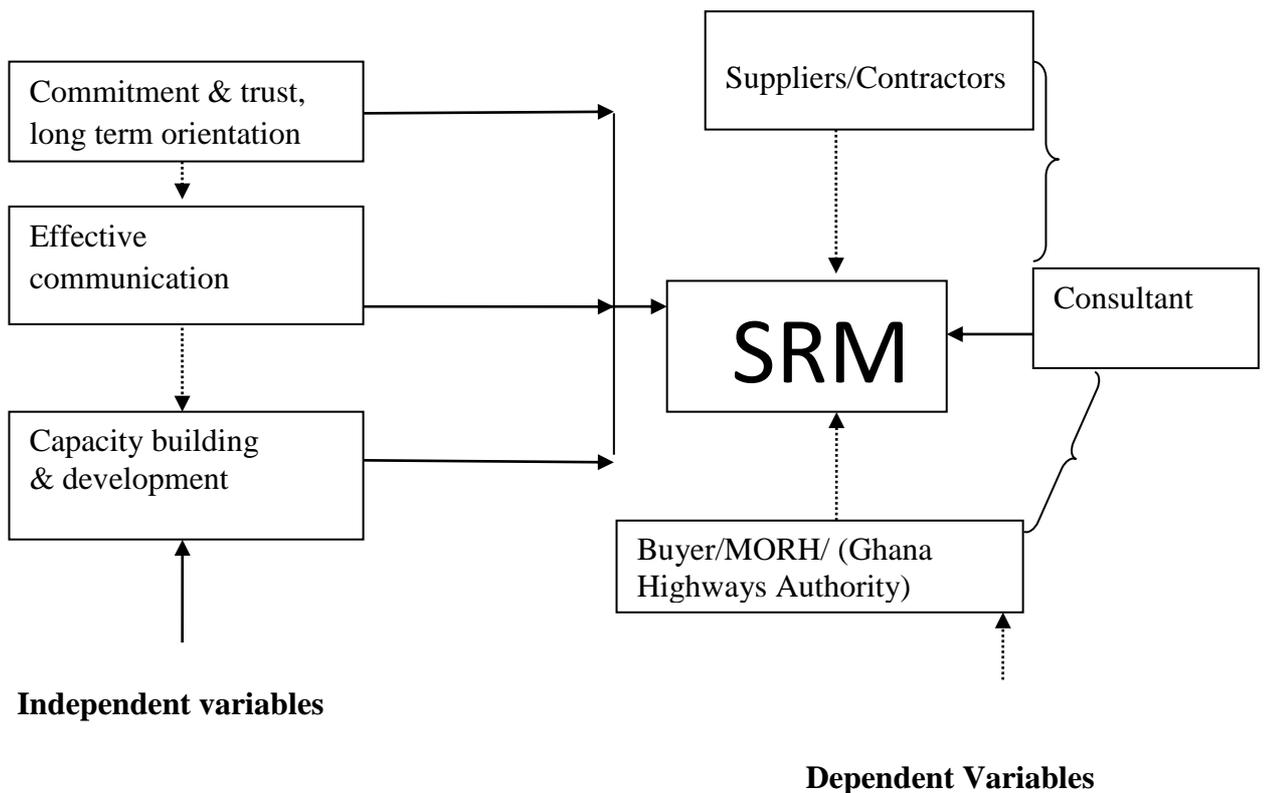


Figure: 2.1 Conceptual and theoretical frameworks based on the approach towards SRM

Source: (Author’s construct)

The figure 2.1, above on SRM provides relevant information for us to critically examine across the entire supply chain from the perspective of buyer-to-supplier rather than just as interwoven networks. The objective is to increase transparency

and alignment among players especially between supplier and buyer regardless of any functional differences and boundaries.

According to McCue & Johnson, (2010), the evolution of traditional ways of management of supply chain management has improved relationship management and must consider certain variables in promoting continuous process improvement within the SRM (Fawcett et al., 2007).

2.3.1 Theoretical framework

In the road construction procurement implementation which is characterized by complex networks of chains (Dubois and Gadde, 2002). There is therefore, the need to explore theoretical framework with a supply network perspective. Based on (Gadde & Håkansson, 2001) which indicated that analyzing the interdependences between entities within the sector is dyadic and involved more complex networks of relationships (Fynes et al., 2004)? The industrial network approach can contribute when analyzing the substance of relations. The ARA (Activities, Resources and Actors) model divides relationships into three layers; activity links, resource ties and actor bonds (Holmen et al., 2005), and provides insights into how to handle supplier relations. This gives a good foundation for analyzing relationships with close collaboration in the construction industry. One approach to close collaboration that has received a lot of attention both in the academia and in practice is partnering (Holmen et al., 2005). In the construction industry it has become one of the more successful approaches to closer collaboration between the parties (Khalfan et al., 1997).

However, in typical Ghanaian setting such framework can best be done if individual entities are willing and able to sustain and improve the relationships through trust, commitment, but improve communication to face the challenges and rift the benefits among individual players in the procurement of public projects especially among road contractors and with every entity that laid the platform for the implementation of the road construction industry procurement activities (Holmen et al., 2005).

Furthermore, the industrial network approach and the ARA model will complement the partnering literature in understanding how and when to engage in close collaboration in the road construction industry. One of the theoretical approaches stressed the advantages SMC as way close collaboration with suppliers and the free flow of information and materials between channel members (Persson, 2008). SCM found its origins in physical distribution and transport, but lately it has developed into services and constructions. Since the theory of SRM was introduced in the 80's, the interest for the concept has been growing. The need for SRM has increased as more companies decide to outsource a larger part of its activities. There is no agreed upon definition of SCM (Persson, 2008). With the research question in mind it is appropriate to use a definition that states that SRM involves management issues on an inter-organizational level.

2.4 Buyer-Supplier relations in the Road Sector Procurement

The contributions of building industry especially in the road sector procurement are phenomenal. By developing better but improve long term relation between procuring entity and suppliers cannot be over look (Persson, 2008). The industry is characterized by low levels of trust and commitment critical determinant that

improve supplies. It should be noted that in relations with the industrial context, what to expect, perhaps because the industry usually is on short-term projects basis, where buyers and sellers meet to resolve certain goals before, to possibly driven into the building relationship in order to prevent misunderstanding or potential disputes and possibly to maintain the relationships (Fawcett et al., 2007). The supplier or the buyer cannot operate in a vacuum. They depend on each other by virtue of supplies of resources and information to improve upon performance for the structures of project environment to work (Holmen et al., 2005). They match with each towards short-medium-long term results despite the fact that long-term collaboration and cooperation are rare. With regard to project-based road procurement interactions, trust and commitment and other behavioral elements are unusual. Most partners tend to depend on formal contacts for their management operations (Fawcett et al., 2007). However, the overall business marketing literature has indicated that the importance of long-term relationships buildings are enduring as both parties benefit in the long-term (Kotler & Armstrong, 2008). It has been argued that creating long term collaboration between buyers and suppliers within public procurement through effective communication based on trust and commitment create an avenue for long-term partnerships between entity and supplier themselves in a collaborative platforms where resources are willingly shared to improve supplies (Aulakh et al., 2009). Thus; based on the principles of relationship partnership the suppliers for instance can jointly bid and procure in road sector in order to leverage potential benefits (Barlow & Jashapara, 1998). Such initiative in this regard, creates an enhanced performance. However, to simply say that the industry is confident in developing and sustaining such relations between buyers and suppliers contradict the orientation undoubtedly

too simple eye, and in fact, there are studies which show that both strategies are beneficial (Morga & Hunt, 1994; Bechtel and Yayaram, 1997).

2.5 Factors that impact on Buyer-Supplier Relationships

There are two different modes of relationships found in the literature of supply chain management in construction procurement. For example, for purposes of this study, a distinction between a hostile type of relationship that exists and does not benefits each other and based on dependence structure were ignored. Relationships based on confidence and trust without any formal structures but purely on win-win approach for long-term cooperation are essential (Ng Thomas et al., 2002; Kingshott & Pecotich, 2007). What it means is that trust and dependency relation previously associated other management areas of study are relevant to procurement and construction (Baker et al., 1999). The outcomes under procurement construction are beneficial. The relative importance is to analyze the attributes that sustain such relations in improving performance. Trust is one of the key variables in the theory of social exchange, to develop basic normative force in business (Dwyer et al., 1987). In management theory and other literature, trust is described as important concept taken into account the understanding and the expectation of the parties in the relationships building where cooperation and planning in relational (Dwyer et al., 1987). A high degree of trust and commitment in supplier relationship building reduces risk and wrong perception but create high level of confidence in procurement activities whiles reducing cost considerably (Dwyer et al., 1987).

In the organization of the exchange management, supply relationship management especially between supplier and buyer is regarded as one of the key management

dependency where maintaining strong but long-term relationships become driving force for remaining in business (Van Bruggen et al., 2005). It is important to note that whenever both sides trust each other and perform their part of the contract agreement, the entity is able to protect confidential information, the growth of the relationship become long lasting and beneficial to both sides. To trust and develop confidence towards long term relationship is not easy. It has different sizes and contents that must be balanced and maintained (Ng Thomas et al., 2002; Kingshott & Pecotich, 2007).

Many studies in the literature have the confidence of the two main components of good will and credibility defined (Baker et al, 1999). The belief is that the supplier and buyer intensions and motives are made clear in building long-term supplier relationships. The pursuits of selfish ambitions in favour of profit motive are neglected. Here, credibility a critical determinant and that partner in the supply relationships keeps their words and promised in fulfilling their contractual agreement as required (Van Bruggen et al., 2005). The dependency shows the extent to which a party must establish the relationship with your partner, to achieve the desired objectives. According to the theory of dependency, (Pfeffer & Salanick, 1978) few organizations are self-sufficient inside the causes of addiction. The dependency may exist because the company needs to maintain that to survive especially in competitive procurement environment (Tellefsen et al., 2005). To maintain the relationship, one often open to business requests and subject to change by the partners while the dependent companies have vulnerabilities, are ready to continue operating within the guidelines for future relationships (Holmen et al., 2005). What is different from creating trust and commitment in the supply relationship building can contribute

significantly to development of guidance to real confidence is the interest of the partners in account of sharing the benefits thereof from the relationship (Ganesan, 1994). There are however extensive literature on quality relationship building. A comprehensive review of the literature shows that the different constructions were used based on the area of interest of the researcher.

In this study, critical variables in maintaining long-term relationship building between the Buyer and Supplier in the public procurement were look at. Hence, trust building in procurement supply, commitment, communication, long-term direction, continuous stakeholder involvement and capacity development and education as key components of the quality of relationships (Ganesan, 1994).

However the other research stream, sees trust as key variable of growing and maintaining long-term quality relationship, and considers it as forebear variable influencing other variables towards the creation of sustainable buyer-supplier relationships within road sector public procurement (Dubios & Gadde, 2002). Cogent implementation of these variables through strategic management support and capacity training and development are relevant in appreciating long-term impact on the assessment of buyer-supplier management within road sector procurement (Gadde et al., 2003).

Table: 2.1 Traditional Supply Chain and modern Supply Chain Management

Fundamentals	Traditional management	Supply chain management
Inventory management approach	Depend on independent effort and control	Joint collaborative teams reduction of inventories
Total cost approach	Cost minimization	Channel wide cost efficiency methodologies
Time horizon	Short term	Long term
Level of information sharing	Has limited transactional needs Limited to needs of current Transaction	Required planning and monitoring and control process for efficiency
The sum of coordination among multiple channel members	Single contract for the transaction between channel members	Possible different level of contracts between entity and channel members of supply
Joint Planning Platform	Based on transaction	Unending
Resemblances of cooperate ideologies	Not relevant	Compatibility at least for key Relationships
Extent of supplier Base	Possible to increase competition and less coordination	Increase coordination among channel members and innovation
Level of leadership initiative	Not needed	Needed for coordination focus
Risk sharing and rewards	Each depend on its' own of risk and rewards	Sharing of risk and rewards over long term
Rate of operations, information and supply levels	Warehouse orientation with principle of stock, safety stock interrupted by barriers to flows; with localized channels	Distribution center orientation Supply velocity, just in time delivery interconnecting flows, real time real response across channel members

Source: (Cooper and Pagh, 1997)

In addition to the evaluation, improvements in supply chain are the most important elements of the methodology of the Supplier Relationships Management. This can be derived from generic methodology by generalizing the common characteristics of different methods of Supply Relationship Management. In this sense, Deming cycle methodology is applicable. Supplier Relationship Management Development in

public purchasers (Cooper and Pagh, 1997) "*Plan-Do-Check-Act to evaluate redesign Control Improvement*" generic methodology consists of four major components: (1) review the supply chain, (2) the redesign of the supply chain, (3), supply chain management, and (4) continuous process improvement (Cooper and Lambert 1998).

2.6 Benefits for Managing Buyer-Supplier Relationships

According to Siguaw et al., (1998) developing relationship between various parties within the industry leads to quality in terms of how individual players were being managed to provide value proposition. In line with its previous study and its characteristics of buyer-supplier relationship results in convenient and served as the main component for value for money creation within road sector procurement (which is a higher-order multidimensional construct) especially within public sector procurement. Reflecting on the key variables on the part of both the buyer and the supplier, an internal feeling in exchange for value for money are critical to promote the relations. Athannasopoulou (2009) has conducted comprehensive report and found that the primary dimension to build supply relationship is by commitment and the intended satisfaction to be gained from the relationship created. For example, (Angel & Perry, 1981; Anderson et al., 1992) has confirmed that commitment and satisfaction and satisfaction in term of value adding to supply are indicators that create quality relationships.

Given the role of communication in the supply relation management process, (Anderson et al., 1992) has indicated that communication play pivotal role in establishing long-term buildings. An extensive search of literature has shown that

these indicators were critical if supplier relationships are to be sustainable. Communication can be defined as formal and informal sharing of meaningful information in the form of messages to an intended party of concern and on timely bases Anderson et al., 1992). Whiles commitment is presumed to mean that partners believing ongoing relationships are untenable and trust each other to do their best to hold onto the said objectives until they no longer see the utmost effort to maintain such initiatives. Furthermore, Geyskens et al., (2000) referred to the long-term relations as an orientation and the perception of the interdependence of results that are attainable if parties are committed for intended results in the long run. The satisfaction of business relationship is evaluated on the bases of the suppliers' commitment to trust that brought the economic and social satisfaction. The separation of the social from the economic incentive to pursue profits from the supplier perspectives are to their objective of reaming in business whiles the GHA also aimed to create value for money in their public procurement undertaken. The evaluation of the social aspect of the relationship are psychological that might be professionally management to prevent the possible intended collusion in bidding process where favoritisms and bribery ensued. The economic satisfaction creates positive affective response for the channel members for greater long-term economic opportunities arising from the relationships.

McCue & Johnson (2010) have shown that the detection of other organizations strategic supplier aid: to optimize the allocation of resources in a broad base of suppliers; Build relationships and to manage expectations of suppliers; Providing strategic and operational groups with strategies consistent partnership as part of supplier bases, Providing strategic and operational group, with a vision of portfolio

based on long-term value; consolidate supplier efforts in relationship building. Such initiative improves the decisions undertaken and further consolidates the effort of suppliers leading to more strategic benefits. It relatively motivates suppliers to strive to value to their procurement decisions (Mohr & Spekman, 1994; McCue & Johnson, 2010).

2.7 Challenges of managing Buyer-Supplier Relationship

McCue & Johnson, (2010) has identified several challenges to buyer-supplier relation management. It is important to note that potential good supplier relationship management is an effective practice that allows an entity: on the basis of relative importance (supplier stratification) identify strategic suppliers; defining operational requirements and creation of governance structure for internal process interactions (Mohr & Spekman, 1994). Also, suppliers life cycle of operation the relationship management established formal processes for the involvement and clarification of responsibilities internally. As the management processes progresses the actual the power; and capacity building of suppliers to continually improve and add value are improved along McCue & Johnson, (2010). The authors noted, however, that an effective SRM requires clear understandings of the supplier (contractor) are of strategic value for the company and which are less important. Instead of just the player in the organization spending most of the resources, as the principal, additional factors to take into account the challenges, such as: risks, critical operational, technical integration, the total value, in the form long-term relationships with services organization, profitability, distribution, performance and loyalty (Kerry & Kenly, 2001; CIPS, 2012).

2.8 Strategies for the development of Relations Supplier-Buyer

2.8.1 Entity and Governance

Once the importance of individual suppliers is based on suppliers' stratification, the team structures of suppliers that collaborate to deliver value proposition become relevant determinant. The step for the entity is to structure various suppliers based on their level of qualifications and experience, which is needed to define and manage day to day activities of the members who supply to the entity (Mohr & Spekman, 1994; McCue & Johnson, 2010; CIPS, 2012). Once suppliers are well structured their coordination and management becomes easy for the entity in which roles and responsibilities are well defined in the procurement process for value addition. Such initiative create formalize structure of governance in place to make supply chain management repeatable, transparent, order management and consistent for the entity. An effective governance practices within the supply chain practices established: Date; Lists of participants; Agenda of the main supplier relationship review meetings; Models for reviews relations with suppliers; Drawings detailed of day to day management of suppliers though they are on contract for proper supervision as well as ensuring contract management, financial management and problem solving; that triggers and escalation paths for Suppliers problem resolution (Fawcett et al, 2007; McCue & Johnson, 2010).

2.8.2 Scale and Development of the Supplier

Entities holding on to suppliers' development reduces the introduction of new service design to meet organization goals and vision which optimize operation processes (McCue & Johnson, 2010). For the organization of purchase, this process is developing involved developing new service of operation that sustains the

relationship that can increase the client and or the value of the tax payers. Closely linked with capacity development are reliable long-term knowledge and skills updating to suppliers. An access to new ideas and opportunities for supplier performance gap and as scale for improvement priorities setting and investment for supply CIPS (2012).

The advantages to be gained in this process development are: create further opportunities for revenue generation; It allows the development of long-term collaborative efforts between the supplier and the buyer in this regard; and further opportunity for collective investment to improve supply. It offers the opportunity for suppliers of promotion to the next level; and provides insight into the business needs of customers' organization (Khalfan et al., 2007).

Organizations can create supplier development which needs to go through the creation of formal entity development programs that are in line with the objectives of improving performance in the road construction procurement for Ghana Highway Authority for instance. To do so, the first address: select service providers and for that suppliers based categories where development effort are addressed. Also, entity is determined by the specific development effort that is required to improve performance and takes appropriate development techniques design to address that in capacity training and development process (Khalfan et al., 2007).

For suppliers and procurement entities developing techniques as indicated by the Scottish Executive (1997); such as Joint investment in skills; Sharing of intellectual capital; Creating Shared Value identifying opportunities; Mapping of common

processes and improvement; Acquisition of capacity from suppliers; Collaborative multi-vendor; Multi-organization of cooperation; Joint training of staff; and systems and process integration (McCue & Johnson, 2010).

2.8.3 Service Level Agreement

The probability of supplier performance depends on the service level agreement (SLA) put in place to monitor performance of the supplier. Entities should constantly be on the move of improving performance of the suppliers and to support service providers from liability as well as the creation of incentive packages for performing within specification and at value (McCue & Johnson, 2010). Effective performance management within procurement system adds value to the organization CIPS (2012). Meeting the service level agreement not only maximized profit for the procuring entity but goes a long way to recognize the management and operational strategies for the suppliers for potential next contract. The first step is to recognize and understand the key drivers of the business value of the entity, as result of supplier performance and manage the tolerance level of disputes (Palmatier et al., 2007). The best is defining the scope of work and specification of supplies to ensure the supplier does understand and appreciate the performance target for the procurement to be made. Established target and tolerance level in procurement that create allowance for contingency reserve (Mohr & Spekman, 1994; McCue & Johnson, 2010).

In addition, it is important to formalize the impact of underperforming suppliers either relief them of contract and or terminate contract for competent supplier based on the service level agreement (McCue & Johnson, 2010). The resulting agreement report must be recorded and presented for official remarks for future improvement

effort for supply (Palmatier et al., 2007). This is typically accomplished by establishing power map that describes what supplier is responsible for and what concrete step being taken to address non-performance (McCue and Johnson, 2010). Even when SLAs are already in place, effective development and use of a power board that includes all parties concerned to understand how performance targets are to be met and managed (McCue & Johnson, 2010).

2.9 Conclusion

Development and maintenance of long-term supplier relationship management called for some drivers. They are relevant if the contracting authorities and the industry are to achieve value for money particularly in the area of road construction and improve the long-term relationships between providers of services in public procurement. Tellefsen et al., (2005) argue that, while supplier relationship management determined mainly by changes in the procurement environment due to policy, process, roles and responsibility differences, effective collaboration is based on effective communication, trust & commitment essential for successful supply relationship management.

After (McCue & Johnson, 2010) the basic requirements for the management of suppliers are successful in various parts of the sector are collected and it is the responsibility of the leaders of the industry for the strategic development and to train both buyers and suppliers by forming and capacity development for the implementation of the key tools when people are to improve performance (Palmatier et al., 2007). Thus; providing standardized tools and templates that allow the adoption of a system simplifies supply relationship management (McCue & Johnson,

2010). Additionally, activating the supplier of data management system that allows a single source of data that is available as common repository and unified relations with suppliers access to information are essentials for success. This allows a common understanding of state and report on current activity of supply whiles reducing risk of loss of data.

In addition, McCue & Johnson (2010) indicated that report on visibility; offers availability of all information concerning supplier allows employees to manage more proactively and supplier audit reports, access reports are necessary facilitating the execution and performance management of suppliers building long-term relationship with suppliers.

This researcher would like to add that the consolidation and improvement of supplier and buyer management reports; rating of suppliers, and the entity containment of challenges whiles putting policy and strategies in managing the relationships are ways to improve performance. To improve performance whiles maintaining long-term relationships in procurement supplies; communication, and share confidence, knowledge and skills acquisition through continuous capacity buildings for suppliers are paramount whiles entity maintaining regular evaluation of suppliers in order to help manage supplier performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

The chapter looks at the methodology of the study consisting of research design, sample size selection and technique, research instrument design, data collection procedure and framework of data analysis.

3.2 Research Design

Descriptive statistics was used to describe the main features of a collection of information and are applied to populations, and the properties of populations. The mean or standard deviation (parameters) represent the whole population, was adopted for this study. Descriptively, research design has been used basically to find out the existing situation of a particular occurrence of concern (Hair et'al, 2006). More so, descriptive statistic research is statistical methodology which deals with the relationship among variables (Schindler & Cooper; 2008). The underlying principle for descriptive survey may be seen as involving accurate data collection for the reason of determining the up to date nature of the area under discussion of this study (Tabachnick, & Fidell, 2007; Anderson et'al 2010). The descriptive study follows special procedures and makes possible interpretation of the data collected by the research questions as asked and answered descriptively. Researchers can therefore follow the same procedure and come up with the same results of the descriptive study minimizing the values of the personality or beliefs and inclination. Descriptive study also provides researchers with instruments that are easier to collect data for the study (Hair et'al, 2006).

Notwithstanding these strengths, descriptive survey has its own weaknesses. The main weakness of the descriptive survey is that, it is not sufficiently comprehensive to provide answers. Secondly, the descriptive survey cannot establish cause and effect relationships. Moreover, the researcher cannot deduce conclusively the cause of the phenomena or predict what the future phenomena will be. Furthermore, descriptive survey is costly when considered in terms of time and money when the target population is scattered. The choice of quantitative methodology can also be justified based on the fact that it is concise and sample is usually representative of a large population (Bowling, 2009).

3.3 Research Method

In order to collect and analyze data the study uses mixed research techniques which include action, to understand the research problem. The reason behind the adoption of a mixed research method is that although the study adopted the use of research questions which is typical with qualitative research, it also employed the use of statistical procedures in analyzing the data (Bowling, 2009).

According to (Cooper, & Schindler, 2008), qualitative research involves the interpretation and making sense out of what is seen and this makes it critical for understanding the social phenomena of the study. Qualitative research helps to define the importance of a study. When that study has very little information or when there is no variable known or when a relevant theory base is not adequate or missing, this means that qualitative research provides what needs to be studied in such circumstances (Tharenou & Cooper, 2007).

3.4 Population of the study

The population of the study was made up of two hundred (200) management staffs of Ghana Highways Authority from which sample size of eighty (80) was used for the study. Due to limited time for the submission of final work, the technical personnel made up of thirty-eight (38) Civil Engineers, twenty-two (22) Quantity Surveyors, thirteen (13) Geodetic Engineers, four (4) Valuers and three (3) Procurement Officers from Ghana Highways Authority were used. The eligibility criteria in this study were the respondents' involvement in the procurement activities in road constructions sector. The respondents have been carefully chosen ostensibly that they have the necessary characteristics in terms of knowledge and skills as well as experience in undertaking public procurement activities especially within road sector construction procurement in responding to the questionnaires.

3.5 Sample Size

Sample, a fraction of the whole of the population selected to participate in this research due to limited available. In this survey, sample size of eighty (80) out of the two hundred (200) of the total population was selected from the sample frame for the study. From the 10% margin of error i.e (0.1) and confidence level of 90%, the sample size was obtained using the formula: $n = \frac{N}{1+N(\sigma)^2}$. Where N=Total population (sample population), σ =margin of error (10%), n=sample size, Confidence level=90%. Therefore: $n=200/1+200(0.1)$, $n=80$ as the sample size for the study (Cooper & Schindler, 2008). However, after sending the questionnaires, ninety percent (90%) were returned completed and with valid responses as the actual representative of sixty (60) used for the analysis.

3.6 Sampling Technique

The sample technique adopted for this study was stratified sampling which is probability sampling techniques in which the defined target population is divided into groups, called strata, (technical personnel in charge of road construction sector procurement from GHA) from which samples were selected from each stratum (Hair et'al, 2006). The stratified random sampling is useful when the divisions of the target population are skewed or when extremes are present in the probability distribution of the target population. The goal is to minimize the variability within each stratum and maximize the differences between the strata. To ensure that the sample maintains require precision, representative samples were drawn from each of the smaller population groups from the study area (Ghana Highway Authority).

3.7 Instrumentation

The study considered a descriptive survey approach since it involves collecting primary data in order to answer questions concerning the existing status of the study. Descriptively, the design is directed towards determining the nature of a situation the incidence and interrelations among economic and sociological and psychological needs (Cooper & Schindler, 2008). It focuses on vital facts about the respondent's beliefs, opinions and attitudes and behavior, which provide an understanding of the phenomenon (Cooper & Schindler, 2008). After sending the questionnaires, ninety percent (90%) were returned completed and with valid responses.

3.8 Data Collection Procedures

The field survey approach was adopted for the data collection in which questionnaires were used to elicit information from the respondents' as a research

instrument. The questionnaires form part of primary sources of data used in this research.

Secondary sources of data were also used, and they were obtained from corporate annual reports, textbooks and the Internet materials. Questionnaires were the source of primary data used for this study which as self-designed and self-administered. That is, respondents filled out the questionnaires in their own privacy. Both closed- and open-ended types of questions were administered in collecting the raw data for easy selection or choice by the respondents due to limited time available for the final submission of this work.

3.9 Data Analysis

The data has been analyzed using quantitative and descriptive statistics (mean, standard deviations and standard error). The data collected was coded into the computer and edited to ensure consistency and checked for any omission, non-responses, validity and reliability of the responses using (SPSS version 17) for the statistical analysis. The responses were assigned weightings based on likert scale, interpreted as (strongly agreed-4, Agreed-3, disagree-2, strongly disagree-1). In order to determine the statistical mean, attribute including the associated standard deviation and standard error for the study were found (Tabachnick, & Fidell, 2007; Anderson et'al 2010). In consequence, null hypothesis was tested of either $H_1: \mu > \mu_0$ or $H_1: \mu < \mu_0$, but not both was used. Consequently: $H_0: \mu_{60} \text{ respondents} \leq 1$, $H_1: \mu_{60} \text{ respondents} > 1$ and Specify the p- value α level: $\alpha = .01$. Critical rating was indicated above which the attribute is considered to be important. The significance level was set at 90 percent in accordance with conventional levels (Anderson et'al 2010). With

cutoff point of 3.00, attribute deemed critical. Given the level of important, standard means, standard errors, standard deviation were determined and subsequently ranked

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Overview

This section focuses on the data gathered and analysis of information from respondents. The main reliability uniqueness was the respondents' professional backgrounds and experience in public procurement activities especially within road construction procurement including number of years working with Ghana Highway Authority. The findings have been summarized into three sections: Section A: Analysis of Biographical Data Section B: Knowledge of Supplier Relationship Management and Section C: Discussion of the findings to make reading easier for users of this research work.

4.2 Section A: Analysis of Biographical Data

Table: 4.1: Professionals within Ghana Highways Authority (GHA)

Respondents	Frequency	Percent
Procurement Officers	3	5.00
Engineer Civil	29	48.33
Quantity Surveyor	20	33.33
Geodetic Engineer	6	10.00
Valuer	2	3.33
Total	60	100.0

Source: Field Survey 2015

Table 4.1 described the respondents' level of profession in undertaking procurement activities within the three agencies (Ghana Highways Authority) under the Ministry of Road and Highways. From the above, five percent (5.00%) were Procurement

Officers, another forty-eight point thirty-three percent (48.33%) were Civil Engineers whiles Quantity Surveyors, representing thirty three point thirty three percent (33.33%). Also, ten percent (10.00%) were Geodetic Engineers and the remaining two percent (2.00%) of were Valuers. The management implications are the respondents were equally represented and their professional inputs on public procurement on road sector activities were considered in the analysis of this research. Each of the respondents has equal representative and responded to the same sample of questions for the study. The implication was to eliminate any form of bias from the study whiles respondents “credibility characteristics” were intact which are relevant in stimulating relationship among industrial players within public procurement.

Table: 4.2: Respondents level of Qualification/Professional Membership

Qualification/Professional Membership	Frequency	Percent
Higher National Diploma	12	20.0
Bachelors Degree (Including Professional Membership Association)	20	33.3
Postgraduate degree	28	46.7
Total	60	100.0

Source: Field Survey 2015

Analyzing table 4.2 above, twenty percent (20%) of the respondents were Higher National Diploma (HND) holders. Also, thirty-three point three percent (33.3%), were holding Bachelors degrees including professional membership association and the remaining forty six point seven percent (46.7%) were holding Master degree certificates with professional memberships such as GhIS, GhIE, PMP, MCIPS etc.

The implications are that each of the respondents were qualified and experienced as well as capable of providing professional inputs on issues of developing and maintaining supplier relationships in public procurement implementation while promoting the Public Procurement Act 663, 2003.

Furthermore, when asked how long the respondents have been working with contractors and consultants; the respondents have indicated eleven years and above while the remaining have indicated between one to ten years. Age was not considered as determinant compared to level of knowledge, skills and experiences of respondents as characteristics in undertaking road sector constructions procurement activities. This finding is critical, as it determined the level of experience of the respondents' coupled with the respondents' knowledge and skills with public procurement activities. The respondents' knowledge of Public Procurement Act, (Act 663, 2003) as well as appreciating challenges involved in road construction sector procurement in developing and maintaining relationships among players in the industry.

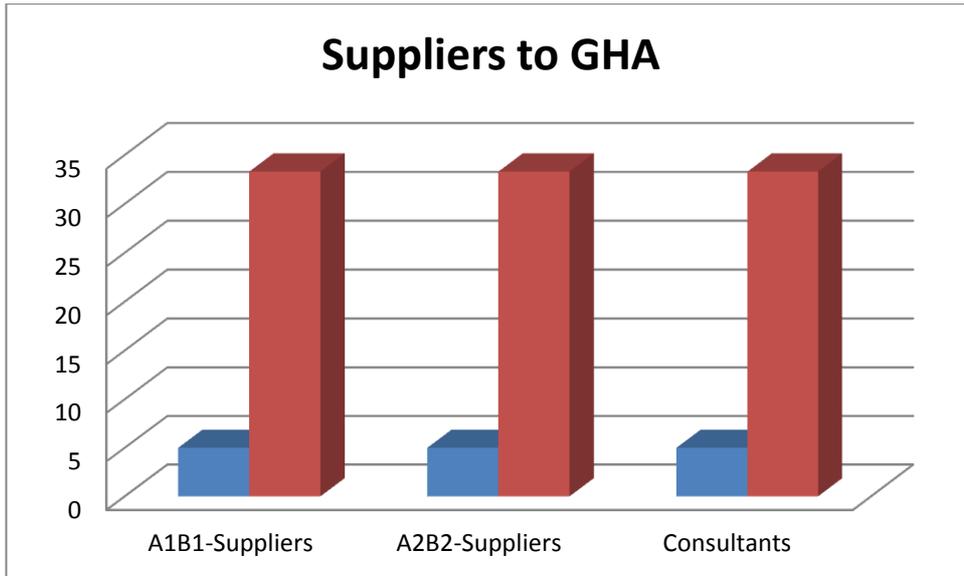


Figure 4.1: Suppliers to Ghana Highways Authority

Source: Field Survey 2015

Figure 4.1 above indicates various entities which undertake procurement activities with the three agencies (Ghana Highways Authority) under the Ministry of Road and Highways. The entities are equally represented in this study due to the need of equal flow of quantitative and qualitative information and data which are relevant to all in managing their relationships and performances. The Consultants and the A1B1 and A2B2 respondents were chosen based on Quality and Cost-Based Selection. The main considerations were given for the need for high quality works and efficiency of operation of procurement projects by both contractors and their consultant. With advent of entity interests on building capacity and encouragement on the uses of local content, in favour of foreign contractors or consultants, opportunities are been created in the selection and the building process of local suppliers. The objective is to ensure equal opportunity and transparencies whiles soliciting respondents' opinion in managing supplier relation and ensuring value for money.

4.3 Section B: Knowledge of Supplier Relationship Management

Table 4.3a: Challenges of implementing SRM within road sector procurement

One-sample statistic

Challenges to SRM	N	Mean	Std. Deviation	Std. Error Mean	Ranked
Lack of effective communication among industry players due to issues of trust and commitment	60	1.8667	.67565	.08723	1 st
Poor long term orientation towards client management and project focus	60	1.6167	.59065	.07625	4 th
Ineffective conflict resolution mechanisms deployments	60	1.5333	.74712	.09645	7 th
Lack of quick but frequent feedback between C2B, S2B, S2C	60	1.7167	.66617	.08600	2 nd
Frequent scope changes due to new technology	60	1.5332	.83294	.10753	5 th
Delay payment of work done & administrative bureaucracies	60	1.4167	.74314	.09594	6 th
Poor capacity building and development and implementation of lesson learned	60	1.6833	.74769	.09653	3 rd

Source: Field Survey 2015

Table 4.3a presents descriptive statistics of survey results concerning challenges in managing the relationships between various entities (A1B1, A2B2 contractors), Consultants for Ghana Highways Authority in road construction procurement. The variables (challenges in managing supplier relationship) were measured to determine the mean values which were range from 1.8667 to 1.4167 and standard deviation of means ranging from 0.67565 to 0.74314 with standard error of 0.08723 to 0.09594.

Furthermore, in order to test the significance of the estimated mean, a t-test was conducted at ten percent (0.01) level of significant and it has revealed that all the seven relevant variables (lack of effective communication among industry players due to issues of trust and commitment, long term orientation towards client management and project focus, ineffective conflict resolution mechanisms deployments, lack of quick but frequent feedback between C2B, S2B, S2C, frequent scope changes due to new technology, delayed payment of work done & administrative bureaucracies, and poor capacity building and development as well as implementation of lesson learned) were significant and pose threats or challenged in managing supplier relations within road construction sector procurement. It has been found from the study that the challenges identified above impact on the procurement activities of Ghana Highways Authority. Therefore, since the p-value does not exceed 0.05 as shown in (table 4.3a); the observed significance level or the attained level of significance lead to rejection of the decisions.

Table 4.3b: One sample test on Challenges to Supply Relationship Management

Test Value = 10					
	t	Df	Mean Difference	90% Confidence Interval of the Difference	
Challenges to SRM				Lower	Upper
Lack of effective communication among industry players due to issues of trust and commitment	35.922	59	0.13333	0.3079	0.9588
Long term orientation towards client management and project focus	46.993	59	0.58333	0.7359	0.4308
Ineffective conflict resolution mechanisms deployments	35.941	59	0.46667	0.6597	0.2737
Lack of quick but frequent feedback between C2B, S2B, S2C	38.177	59	0.28333	0.4554	0.1112
Frequent scope changes due to new technology	32.239	59	0.46667	0.6818	0.2515
Delay payment of work done & administrative bureaucracies	37.350	59	0.58333	0.7753	0.3914
Poor capacity training and development and implementation of lesson learned	34.360	59	0.31667	0.5098	0.1235

Source: Field Survey 2015

The t-test therefore established that there was agreement amongst the respondents that the inter-agencies poorly coordinate's activities between road sector procurers. Most A1B1 and A2B2 suppliers feel discriminated against by Ghana Highways Authority whiles there is lack of long term commitment & mutual trust among A1B1 to A2B3 contractors due to the quest to outweigh competitors leading to inability to

win bigger tenders through joint venture participation. The test also revealed that apart from consultant supervisory role of ensuring contractors perform their duties as liaison between entity and suppliers, most consultant poorly communicate their findings as most consultants are poorly selected through appropriate procurement processes likewise the suppliers (contractors). The findings further revealed that entity lack long term orientation in terms of client focus, value for money, conflict resolution and that capacity training programs for contractors and consultants towards continuous process improvement and development must be modeled towards supplier relationship management that create long term value within public procurement process.

Table 4.4: Factors to improve SRM within road sector procurement
Descriptive Statistics

	N	Mean	Std. Deviation	Variance	Ranked	
Factors that improve SRM	Statistic	Statistic	Std. Error	Statistic	Statistic	
Improve resources allocation across boundaries of supply	60	1.6000	.09567	.74105	.549	7 th
Ensure establishment relationship management with trust and long term commitment	60	1.6000	.10140	.78546	.617	5 th
Ensure strategic and operational definition with partnering effort	60	1.5167	.10221	.79173	.627	2 nd
Effective communication and Conflict resolution (win-win approach)	60	1.5000	.10496	.81303	.661	1 st
Creating value preposition for both entities (supplier-buyer) through capacity training and development	60	1.5000	.09655	.74788	.559	6 th
Ensure motivation of suppliers to strive for advancement through technology sharing	60	1.5667	.09318	.72174	.521	8 th
Implementing strategic sourcing opportunities and partnering	60	1.5667	.10187	.78905	.623	4 th
Supplier consolidation information sharing and collaboration through continuous process	60	1.6833	.10221	.79173	.627	2 nd

Source: Field Survey 2015

Table 4.4 above indicated significant variables relevant in the implementation of supplier relationships management within road sector procurement. Analyzing the

table 4.5 above, the mean values ranging from 1.5000 to 1.6833 and the standard deviations of the means ranging from 0.09318 to 0.10496; an indication there insignificant difference between the estimated mean and the variables identified improving road sector supply relationship management. With the cut off mean of 3.00, variable such as ensuring resource allocation across supply boundaries, effective communication and conflict resolution (win-win approach), provide supplier consolidation information sharing and collaboration through continuous process, implementing strategic sourcing opportunities and partnering, establishing and managing relationship expectations through trust and long term commitment, creating value preposition for both entities (supplier-buyer) through capacity training and development, and motivation of supplier for growth through technology sharing were ranked respectively and are considered critical as the variables in promoting sustainable relationships management among consultants, contractors and the entity providers within road sector procurement.

Table 4.5: Strategies in promoting SRM within road sector procurement

Descriptive Statistics

Strategies to Promote SRM	N	Mean	Std. Deviation	Variance	Ranked
Quick debriefing after tender evaluation to suppliers	60	1.7000	.76579	.586	6 th
Channel-wide cost efficiencies (Whole life cost) through capacity training and development	60	1.6667	.83700	.701	1 st
Joint reduction of contract inventories	60	1.9000	.70591	.498	8 th
Effective communication and Conflict Resolution (win-win approach)	60	1.6500	.79883	.638	4 th
Multiple contacts between contractors and subcontractors	60	1.7167	.71525	.512	7 th
Lead to strategic partnering to bid for bigger projects and capacity expansion between local suppliers	60	1.9500	.79030	.625	5 th
Interconnecting flows; JIT, quick response across supply chain	60	1.6167	.80447	.647	2 nd
Risk and rewards shared over the long term	60	1.6333	.80183	.643	3 rd

Source: Field Survey 2015

Table 4.5 above indicated significant variables relevant in the implementation of Supplier Relationships Management within road sector procurement. Analyzing the table 4.5 above, the mean values ranging from 1.6167 to 1.9500 and the standard deviations of the means ranging from 0.83700 to 0.79883; an indication that there was no significant difference between the estimated mean and the stated variable that promote implementation of Supplier Relationships Management within Road Sector Procurement among individuals entities. With the cut off mean of 2.00, variable such

as channel-wide cost efficiencies (Whole life cost) through capacity training and development, effective communication and Conflict Resolution (win-win approach), lead to strategic partnering to bid for bigger projects and capacity expansion between local suppliers quick debriefing after tender evaluation to suppliers, multiple contacts between contractors and subcontractors, and joint reduction of contract inventories were ranked accordingly. The variables identified were considered as strategic tools capable of developing and maintaining sustainable relationships management among consultants, contractors and the entity providers within road sector procurement if incorporated into capacity training and development for road sector procurers as modules.

4.4 Discussion of the results

The involvement of public procurement authority in relationship establishment whether in the short-to-medium and or long-term call for commitment to the relationship and trust as well as willingness of members to respect the agreements established the relationship if entities remain in supply. The commitment to the expectations for the relationship success is tied on the most committed partners strive to balance short-term linked to the achievement of long term objectives. The future supply relationship cannot be sustained without certain level of exchanges between partners. In procurement certain, if the supplier trusts the buyer there is commitment to duty and works done within schedule serving large sums of money for the state.

The study has revealed that the implementation supplier relationships among public procurers are relevant. The entities are however challenged with certain determinants such as “lack of effective communication among industry players due to issues of trust and commitment, long term orientation towards client management and project

focus, ineffective conflict resolution mechanisms deployments, lack of quick but frequent feedback between consultant-to-buyer, supplier-to-buyer, and supplier-to-consultant (C2B, S2B, S2C), as well as frequent scope changes due to new technology of designs, delayed payment of work done & administrative bureaucracies, and poor capacity training and development as well as implementation of lesson learned among others have been characterized some challenges that impedes smooth supplier relationship implementation in road sector procurement. These variables identified impact on the operation of Ghana Highways Authority in providing level playing fields for its suppliers as well as fulfilling the ministry objectives as policy formulators and the professional implementation of public procurement act objectives.

Moreover, using the theory of social exchange, (Geyskens & Steenkamp, 2000) argues that outcome of the mistrust of the above breed mistrust and marked as such variables would also be used to reduce exposure to the relationship.

In the quest to meet increasing deficit infrastructural provisions especially in the road sector of public procurement for the country, developing long term suppliers' relationships in road procurement project delivery between Ghana Highways Authority under the Ministry of Road and Highways on government behalf become essential if long term consolidations between entities are to be maintained and developed.

From the study, it is clear that the majority of respondents understand supply relationship management mainly from the supplier perspective although in reality the

concept covers the entire cycle of procurement, supply and consumption back to production line of supply to resources mobilization in procurement undertaken.

Furthermore, this research has agreed with Dubois and Gadde (2002) who argued that suppliers are becoming gradually more significant as they account for as major player in the value chain in road sector procurement interconnected to the buying entity's services" (Dubois & Gadde 2002). Li et al., 2000; London & Kenley, 2001 further accessed that the goals and advantages for supply chain collaboration are revenue enhancements, cost reductions, flexibility to cope with high demand uncertainties lower inventories, and reduction of lead time, higher product availability and higher customer satisfaction (Palmatier et al., 2007). Fawcett et al., 2007; McCue, & Johnson, 2010) argued that supplier relationship optimized resource allocation across broad supplier base, promote effective communication between entities and consultants as well as encourage conflict resolution (by adopting win-win approach). Holmen et al. (2005) further provided that developing supplier relation lead to strategic and operational groupings with consistent partnering among suppliers whiles consolidating information sharing and collaboration among entities. The findings against the background of the literature reviews of Fawcett et al., 2007; McCue & Johnson, 2010) has affirmed the validity and reliability to support the position that the supplier relationships management are appropriate and significance value on continuous process improvement, implementing strategic sourcing opportunities and partnering, establish and manage relationship expectations through trust and long term commitment, creating value proposition for both entities within public procurement process implementation. From the study, buyers may intend that suppliers have faith whenever they are providing their professional duty with them,

helping them getting the bid / tender always limited stress. Although it may be possible, formal written agreement that include how relationships are to be manage and maintain throughout the period of supply are to be informed within the contract document of supply to prevent bridge in the procurement transactional process. However, despite the fact that businesses can confidently add that their suppliers can offer you more than just valuable information at a certain point in time in improving relationship within the supply chain it may not be reliable to share. The rate of propensity of suppliers to share information may be minimal due to competitive nature among suppliers themselves for the buyers' contract which is available. The eventual risk is that risk particular vendor may be incapable of meeting supply hence, change in tendering process of different supplier who might create problem for the relationship. Too much reliance on certain suppliers, the company formal agreement with the relevant written contract could put in jeopardy. These mixed results suggest that the concept of trust and commitment to individual may be complicated and raised the questions of low level of confidence between channel members of supply and which influence supply relationship management in creating its value preposition in public procurement process.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Overview

Chapter five presents the summary of this research finding, review of the research objectives, conclusions and the necessary recommendations of the study on supplier relationships management within road construction sector procurement.

5.2 Review of the Objectives

5.2.1 Review of Objective one (1): To determine the factors for managing buyer-supplier relationships.

The preliminary research questionnaires and literature review have revealed that these relevant factors (optimize resource distribution across broad supplier base, effective communication and conflict resolution (win-win approach), provide strategic and operational definitions with consistent partnering among various supplier groups, supplier consolidation information sharing and collaboration through continuous process, implementing strategic sourcing opportunities and partnering, establish and manage relationship expectations through trust and long term commitment, creating value proposition for both entities (buyer-supplier) through capacity building and development, and encouraging suppliers growth through technology sharing). This is capable of consolidating supplier-to-consultant, consultant-to-buyer, and buyer-to-supplier relationships management for short-to-medium-to-long term within public procurement process. Furthermore, (Anderson & Weitz, 1992; Fawcett et al., 2007) have done comprehensive review in the literature and examined relationship management.

To conclude, large proportion of studies consider *trust, commitment, communication, long term orientation, continue stakeholder engagement and capacity development & training* as the main components of quality relationship. The findings have revealed that consideration of such factors promote long term relationships between among entities and consolidate performance within procurement service delivery. However, trust and commitment as an element of quality relationship within short term operation and the nature of contractual engagement, are relevant in improving quality supplier relationship management within public procurement.

5.2.2: Review of Objective two (2)

To determine the challenges for managing buyer-supplier relationships

In the construction industry for instance, business relationships are driven by short-term nature in procurement projects implementation. Buyers and Sellers interact in order to achieve specific goals. However, the implementation processes are challenged by lack of effective communication among industry players due to issues of trust and commitment, long term orientation towards client management and project focus, ineffective conflict resolution mechanisms deployments, lack of quick but frequent feedback between C2B, S2B, S2C, frequent scope changes due to new technology, delayed payment for work done & administrative bureaucracies, and poor capacity building and development as well as implementation of lesson learned) are common in such demand driven sector and which pose threats or challenge in management of various entity relations within road construction sector procurement. It has been found from the study that the inter-agency operators who are responsible in the management of A1B1 and A2B2 suppliers and Consultants faced such challenges in managing the suppliers despite the capacity building and development

available to quarterly manage contractors to consolidate performance in public procurement delivery within road construction sector procurement.

McCue & Johnson, (2010) has however further indicated that effective and efficient supply relationship management requires clear understanding with contractors who transact businesses with public entity and requires most strategic mechanisms and professionalism. Furthermore, rather viewing the challenges of public procurers in managing suppliers which involved entity spending quite amount of state resources most importantly in training and development for suppliers, additional challenges such as risk sharing, operational criticality in emergency construction with limited procurement method to apply, technical integrating performance loyalty, possibility of being subjected to bribery scandals due to political interference in public procurement among others are inimical.

5.2.3: Review of Objective three (3)

To find out the strategies for managing buyer- supplier relations.

The study has revealed that contrary to the challenges encountered in managing supplier relations the benefits obtained are numerous. The finding has agreed with (Kotler & Armstrong, 2008) who also indicated that buyer-supplier relations lead to focus on developing long-term relations that lead to an eventual partnership between the entities in improving service delivery which are rendered to the public. McCue, & Johnson, (2010) who gave insight into customer organization's business needs indicated that strategies such as developing channel-wide cost efficiencies (Whole life cost) through capacity building and development, interconnecting flows; Just-In-Time service delivery, quick response across supply chain and risk sharing for long-

term growth, effective communication and conflict resolution through (win-win approach) are developed as some of the strategies when entity developed supplier relationships management. McCue, & Johnson, (2010) further indicated that strategic partnering among bidders is relevant if they are to bid for bigger projects among local suppliers. Fawcett et al., 2007; Dubois and Gadde (2002) called for quick debriefing after tender evaluation to suppliers; multiple contacts between contractors and subcontractors, as well as joint reduction of contract inventories were strategic as the variables in capable of developing and maintaining sustainable relationships management among consultants, contractors and the entity providers. Such findings were supported by McCue & Johnson, (2010) who further stated that as a strategy for entity to improve supplier relationship there must be supplier relationship data management. There must be regular holding of supplier reviews meetings to improve communication, trust, knowledge and skills sharing among entities as ways of mitigating lack of trust and commitment through capacity training development for the suppliers as well as for consultant to be on the same page in public procurement.

5.3 Summary of major findings

From the study, one sample t-test the null hypothesis is rejected based on the following factors which are relevant in managing buyer-supplier relationships:

- Ensure adequate resource allocation across broad supplier base where each suppliers are categorized for capacity development through quarterly training program to improve supply in road procurement
- Effective communication and conflict resolution (win-win approach)
- Encourage strategic and operational groups partnering where they compete with foreign contractors

- Supplier consolidation through information sharing and technology application within road procurement process
- Collaboration through research& development for continuous process improvement
- Implementing strategic sourcing opportunities and partnering,
- Establishing and managing relationship expectations through trust and long term commitment,
- Creating value proposition for both entities (supplier-buyer) through capacity training and development
- Motivating suppliers to strive for advancement across supplier tiers through technology sharing
- trust, commitment, long term orientation, continue stakeholder engagement and capacity development & training as the main components of quality relationship
- making local content policy more flexible local suppliers to compete favorably

This meant that the null hypothesis that relevant factors in managing buyer-supplier relationships do not exert positive effect on procurement delivery was rejected. In other words the test revealed that all the variables are significant in managing suppliers' relationships since each had a p-value not exceeding 0.05.

It was further identified from the study that challenges which pose threat on the management of supplier relationship are:

- Lack of effective communication among industry players especially between (Supplier-to-Buyers, Consultant-to-Buyers, Supplier-to-Consultants) due to issues of trust and commitment,
- Long term orientation towards client engagement and project focus
- Ineffective conflict resolution mechanisms adaptation due to agitations among contractors and infighting among bidders as well as interference
- Lack of quick but frequent feedback between (C2B, S2B, S2C), i.e (Consultant-to-Buyers, Supplier-to-Buyers, Supplier-to-Consultants)
- Frequent scope changes due to new technology of road project designs,
- Delay payment of work done & administrative bureaucracies, as well as
- Poor implementation of lesson learned) were common challenges in management of supplier relationship within road sector procurement.

Finally, from the study it has been found that strategies such as developing and maintaining channel-wide cost efficiencies (Whole life cost) through capacity training and development, interconnecting flows; Just-In-Time service delivery, quick response across supply chain, effective communication and conflict resolution through (win-win approach) are relevant in maintaining and sustaining long term relations among entities within road sector procurement.

5.4 Conclusion

Although the development of the relationship was identified with suppliers to be obvious, joint operation, capacity building and development, commitment and trust building that will be reserved for the adoption of this regulation are relevant. Also, with the limited cooperation between services providers are impact negatively on

public procurement implementation. Buyer-Supplier relationships are best maintained and sustained for future through such level of commitment. Added to the above, ensuring level of cooperation, particularly in the procurement process for construction materials and other resources. This result shows the relevance of supply chain management in the proposed building materials and other service collaboration are relevant. Thus, there is a need for more research to be done in this sector, focusing on the process of sourcing materials for supply in long-term relationship building in the public contracting environment.

In addition to these results, although it has been found that the benefits derived from coordination between buyer-supplier relationships, in public procurement, the procurement system, the degree of importance perceived in road procurement as constructional sector varied. This due to the fact that the engagement processes between buyer-supplier is not long in nature as it is project based. The fact that most activities are carried out based on better performance to improve supply and the degree of importance of each action and the coordination mechanism in construction procurement can be assumed influences the outcome. Therefore, it is extremely important for the management to understand that buyer-supplier coordination within procurement processes are links with business performance. In this study, it was shown that it is the acceptance of cooperative efforts lacking such joint decision-making, compared supplier to relationship development and procurement.

Furthermore, the results are in line with longitudinal analysis the conducted by (Fawcett et al., 2007; McCue & Johnson, 2010) show that this dependence- related interactions can lead to long-term relationships by providing the opportunity for

fostering interpersonal relationship which are applicable to both buyer-supplier relation within road sector public procurement. Through this mechanism, initial long-term relations can be established through certain key variables if professionalism can be ensured and addressed in coordinated manner without prejudice and favoritisms which breed corruption within public procurement system.

The study has pointed to the need for supplier development especially the local suppliers. That through long-term development and investment in developing their capacity to compete favorably with foreign contractors. The findings further conclude that human specific assets; such as involvement in capacity training and relevant up-to-date technology suppliers sharing by suppliers as well as skills sets are integrated into the road sector procurement which are beneficial to the buyer and the suppliers.

The subsequent realization of this significant point create long-term and collaboration between buyers and suppliers which are players in the industry in fusing in lesson learn into their new project development for accepted long-term value prepositioning in the public procurement process.

The realizations are possible if there is regular pattern of continuous interaction and the sharing of sensitive information, knowledge and skills that can improve performance through consistent buyer-supplier collaboration that mitigate potential problems which confront both for the development and responsiveness.

Ghana Highways Authority in particular is capable of improving on their supplier relationship performance through trust and commitment by ensuring that mechanisms are put in place by creating level playing fields for all qualified suppliers. Suppliers within road sector also need to reflect on the outcomes of trust and develop proper strategy in their relationships with the client (Ghana Highway Authority). Continuous process improvement programs should be organized by Ghana Highways Authority to sustain the relationships of supply in road sector procurement.

5.5 Recommendations

It is increasingly becoming clear that buyer-supplier relationships building are important in the public procurement project implementation efforts. And also, while the private are the engine for infrastructure provision within road construction sector procurement, developing long-term relationship between them and Ghana Highway Authority cannot be put aside. It is in the light of this that the researcher will like to make the following recommendations to management and other interagency operators within road sector procurement to be incorporated into their management decision making process upon request: that entity ensures professional management of the supplier relationships to potentially increase values that create competitive advantages in public procurement where potential local suppliers who lack capacity can jointly bid for supplies. This can be done through collaboration in a supply chain which requires that organizations establish interdependencies to exploit the potential benefits. The goals and advantages for implementing sustainable supply chain collaboration are revenue enhancements; cost reductions, flexibility to cope with high demand uncertainties as noted by (Baker & Siguaw, 1999). There is possibility

of lower inventories, and reduction of lead time, higher product availability and higher customer satisfaction (Dwyer et al., 1987; Holmen et al., 2005). These benefits are achievable when entities adopt the principles that underlined in the public procurement notwithstanding the key variables such as trust and commitment, open communication, capacity training and continuous development effort among others as identified in this study and applied to the later. Furthermore, being able to benefit from supply chain collaboration requires commitment and dedication from all parties involved. In the light of foregoing conclusion and recommendations the study however provide the following recommendations which are worthy of note to be incorporated into management decisions making upon request.

5.5.1 That GHA should ensure effective communication between Consultant-to-Buyers, Supplier-to-Buyers, and Supplier-to-Consultants by encouraging supplier collaboration platform through uses of information communication technology by creating common portal system for suppliers and consultants towards quick but an informed data integration of their procurement projects and advice.

5.5.2 That trust and commitment, towards long term orientation and client engagement are developed and maintained among entities and that entities are project and customer focused. Client-perceived (the client's assessment of the difference between all benefits and all costs of entity procurement offering relative to those of competitors) whiles client satisfaction (the extent to which road procurement project) apparent performance matches a buyer's expectations (Kotler & Armstrong, 2008; McCue & Johnson, 2010). These can be achieved if there are clear understanding between buyer and the seller

through long-term collaboration and management of the need required with fairness, and transparency within public procurement process.

- 5.5.3 That there should be an effective conflict resolution mechanisms through win-win approach in managing suppliers within the relationships by preventing frequent agitations among contractors and infighting among bidders as result of interference from politicians and lack of quick but frequent feedback between (B2S, S2C S2B,), i.e (Buyers-to-Supplier, Supplier-to-Consultants, Consultant-to-Supplier).
- 5.5.4 Finally, frequent scope changes due to new technology of road project designs, are resolved through continue process development programs (capacity building and development for staffs as well as suppliers whiles making consultant serves as facilitators). Such platform prevents delayed payment of work done as necessary information are delivery & smooth administrative are encouraged whiles discouraging bureaucracies and implementation of lesson learned within the procurement. Sustainability in the supplier relationships management are assured when consultants, contractors and the entity providers are committed and trust each other in terms of resources and time in maintaining long term relationships. Such findings was supported by (McCue & Johnson, 2010) who earlier indicated that as strategy for entity to improve supplier relationship there must be supplier relationship data management, appreciation of the potential benefits and challenges by both parties concern.
- 5.5.6 Ensure holding regular supplier reviews meetings to improve communication, trust, knowledge and skills sharing among entities.

The implementations of such initiatives will consolidate Act 663, and of meeting the functions which was promulgated in section (3) subsections (t & u) for the Authority and or entity in building supplier relationship for the local suppliers to be competitive and efficient.

5.6 Scope for further Research

This study provides the understanding of supplier relationship management in the context of public procurement within the road sector construction procurement. To measure and consolidate long-term relationships and performance, exploring the relationship between consultant-to-supplier and consultant-to-buyers, supplier-to-consultants are worthy to investigate in constructional procurement.

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APPENDIX

APPENDIX A:

Questionnaire

Instructions: Tick \surd and or provide answers as appropriate.

SECTION A: Biographical Data

1. Which of the following road sector do you work for?

Department of Urban Roads []

Ghana Highways Authority []

Department of Feeder Roads []

2. Your Profession within road sector procurement

Procurement officer []

Engineer []

Quantity Surveyor []

Geodetic Engineer []

Valuer []

3. Highest educational and professional level

Higher National Diploma []

Bachelors Degree (including honors) []

Postgraduate (MA/MSc/MPhil/PhD) []

Other (please specify).....

4. How long have you been working with road sector procurement?

1 to 5 years []

6 to 10 years []

11 years and above []

SECTION B- Promoting Supplier Relations within Road Sector Procurement

5. How often do you involve your suppliers/consultants in their procurement project implementation?

Quarterly []

Monthly []

Annually []

Not certain []

5. There are no relationship between your entity and suppliers/consultants

Agree []

Strongly agree []

Disagree []

Strongly disagree []

6. Entity does not develop capacity training for its suppliers/consultants?

Agree []

Strongly agree []

Disagree []

Strongly disagree []

7. Consultant/Suppliers often complain about poor collaboration about your entity?

Agree []

Strongly agree []

Disagree []

Strongly disagree []

8. In which form do consultants/suppliers often complain?

- Client relationships management []
- Delay payment of work done []
- Frequent scope changes due to new technology []
- Administrative bureaucracies []
- Others.....

9. Entities should often organized capacity training and development for its contractors/consultants

- Agree []
- Strongly agree []
- Disagree []
- Strongly disagree []

10. Capacity training and development should not based on Supplier Relationship Management

- Agree []
- Strongly agree []
- Disagree []
- Strongly disagree []

11. Supplier Relationship Management (SRM) in road sector procurement means.....

- Strategic partnering & Quick conflict resolution []
- Developing trust and effective communication between clients []
- Managing client perceived value and satisfaction []
- Long term commitment & orientation between entities []

12. Which of the following challenges mostly affect Supplier Relations implementation?

- Commitment & trust []
- Effective communication []
- Long term orientation []
- Quick conflict resolution []
- Capacity development []

13. Entity collates the following variables in developing sustainable supplier relation

- Personal contact & timely payment []
- Clear specifications & equitable treatment []
- Training & open communication []
- Feedback & mutual consideration []
- Confidentiality & integrity []

14. From your perspective SRM can lead to:

- Cost reduction and constructional time saving []
- Quality improvement and adequate resource utilization []
- Mutual trust and long term commitment []
- Effective and efficient coordination among players []
- Improve supplier conflict resolution and management support []

Q15	Indicate which strategic indicator (s) you think is or are relevant in promoting SRM within road sector procurement	Please tick [√]			
		SA-3	DA-1	SDA-2	AG-4
a.	Optimize resource allocation across broad supplier base				
b.	Establish and manage relationship expectations through trust and long term commitment				
c.	Provide strategic and operational groups with consistent partnering				
d.	Effective communication & Conflict Resolution (win-win approach)				
e.	Creating value preposition for both entities (supplier-buyer) through capacity training & development				
f.	Motivate suppliers to strive for advancement across supplier tiers through technology sharing				
g.	Implementing strategic sourcing opportunities & partnering				
h.	supplier consolidation information sharing and collaboration through continuous process improvement				

NB: SA-strongly agree, DA-disagree, SDA-strongly disagree, A-Agree

Q16.	Which of the following benefits do you think promote SRM in procuring of road projects?	Please tick [√]			
		SA-3	DA-1	SDA-2	AG-4
a.	Quick debriefing after tender evaluation to suppliers				
b.	Channel-wide cost efficiencies (whole life cost) through capacity training and development				
c.	Joint reduction of contract inventories				
d.	Effective communication & Conflict Resolution (win-win approach)				
e.	Multiple contacts between contractors and subcontractors				
f.	Lead to strategic partnering to bid for bigger projects and capacity expansion between local suppliers				
g.	Interconnecting flows; JIT, quick response across supply chain,				
i.	Risks and rewards shared over the long term.				

NB: SA-strongly agree, DA-disagree, SDA-strongly disagree