

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,
KUMASI, GHANA**

**Supplier Relationship Management Practices of Ministries, Department and
Agencies (MDA's) in Ghana (Supplier Perspective)**

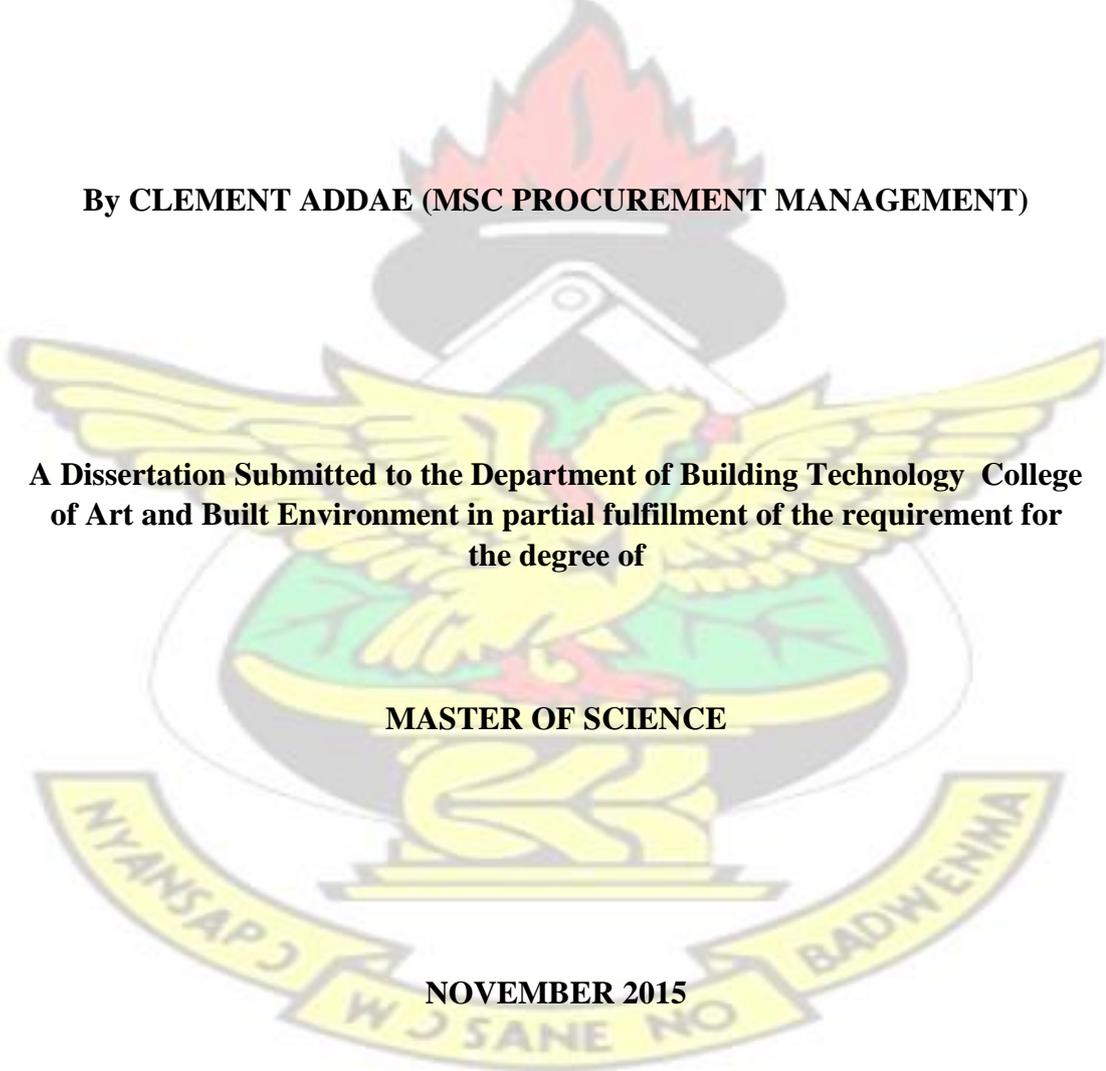
(A Case of Ghana Highway Authority)

By CLEMENT ADDAE (MSC PROCUREMENT MANAGEMENT)

**A Dissertation Submitted to the Department of Building Technology College
of Art and Built Environment in partial fulfillment of the requirement for
the degree of**

MASTER OF SCIENCE

NOVEMBER 2015



KNUST



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MINISTRIES, DEPARTMENT AND AGENCIES (MDA's) IN GHANA
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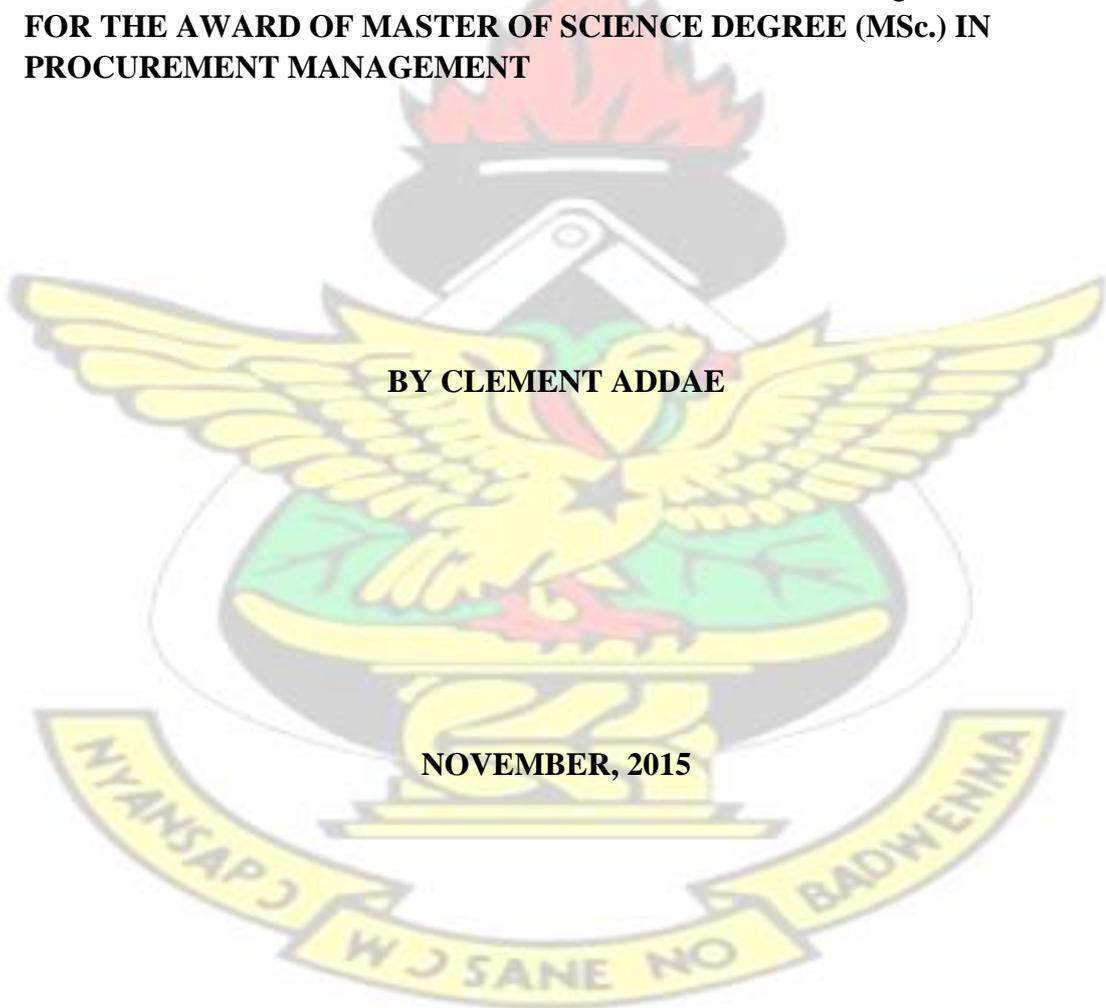
(A Case of Ghana Highway Authority)

KNUST

**A DISSERTATION SUBMITTED TO THE DEPARTMENT OF BUILDING
TECHNOLOGY IN PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE AWARD OF MASTER OF SCIENCE DEGREE (MSc.) IN
PROCUREMENT MANAGEMENT**

BY CLEMENT ADDAE

NOVEMBER, 2015



DECLARATION

I hereby declare that, this is the result of my original research and that no part of it has been presented for another degree in this University or elsewhere.

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DATE

SUPERVISOR'S DECLARATION

I hereby declare that, the preparation and presentation of the project was supervised in accordance with the guidelines on project, laid down by the Kwame Nkrumah University of Science and Technology (KNUST).

Certified by

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SIGNATURE

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DATE

ABSTRACT

There are different dependence structures within the supply chains of most business entities ranging from adversarial through transactional to long-term strategic partnership agreements. Supplier Relationship Management (SRM) is a form of strategic collaboration that creates synergy by achieving vertical and virtual integration between two supply chain actors. Ministries, Departments and Agencies (MDA's) in Ghana are required to take advantage of opportunities that are available in adopting Supplier Relationship Management Practices as a concept for business growth. The concept is about determination to communicate the needs and expectations to a supplier and, measure performance to invoke actions for compliance. Buyers try to develop suppliers by supporting them technically and financially by first rationalizing their supplier base, involve them early at product design stage and continuously measure their performance. Several developing countries have realized that a well-organised SRM system contributes to good governance. The study therefore seeks to investigate Supplier Relationship Management practices in the Ghana Highway Authority; a department under the Ministry of Roads and Highways in charge of the construction and maintenance of reliable trunk road network to support economic activities, minimize road accidents and save lives. The survey was carried out on eighty (80) respondents, made up of personnel from GHA, Private road contractors and consultants who are in charge of GHA projects. The study used primary and secondary data collection methods for the research. A three section questionnaire was designed and distributed to the respondents, after which unstructured interviews were conducted to classify doubts about answering to some question. The following specific objectives were expected to be achieved; To identify means of making SRM part of GHA's organizational goals and objectives, benefits to achieve and limiting factors against

successful SRM implementation. The study revealed that most people from the GHA did not understand the concept and a large number were not aware of Supplier Relationship Management. Some respondents were even not in support of the idea of investing in the suppliers business. The following recommendations were made among others: That Top management gives the concept that support required to provide influence and direction. Formal training needs to be provided and career development programmes be put in place which in the long term can help both parties. Suppliers are supposed to be contacted at the engineering phase of designing before starting preproduction. It further recommends that for a start a small portion of the company's business should be considered for SRM programmes. It is also recommended that those suppliers who produce superior performance that exceed targets must be rewarded.



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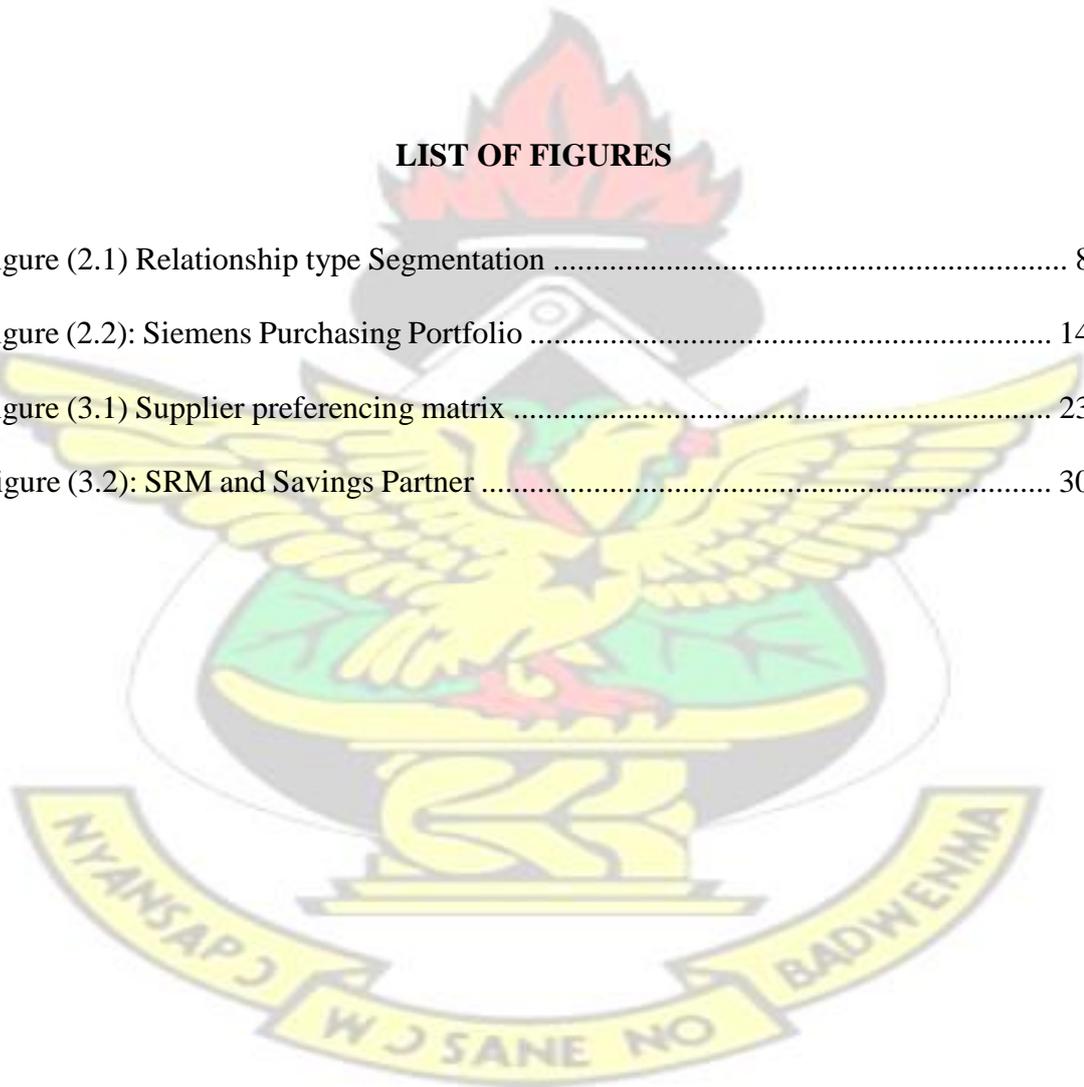
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ACKNOWLEDGEMENT

The completion of this work has been the resolute effort of well-wishers who deserved to be acknowledged. My prime and immense gratitude goes to the Almighty God, whose blessing gave me the strength, knowledge, wisdom and perseverance in coming out with this work.

I am very appreciative of the encouragement, patience and invaluable suggestions and guidance provided by my supervisor, Dr. T. Adjei-Kumi. My profound gratitude goes to Mr. Richard Kumi, Mrs. Leticia Nyarko Appiagyei and also the Management of Ghana Highway Authority, more importantly Mr. Benjamin Addae, and all the Construction and Consulting companies who provided great assistance to make this work successful. Colleague workers who showed interest in this work and freely received the questionnaire and provided me with appropriate data cannot be left out in my appreciation.

There is also the need for me to express my sincere gratitude to my dear wife Mrs. Margaret Addae, and my children, Louisa Afriyie Addae, Jeffrey Owusu Addae, Michelle Konadu Addae and Bernard Appiah Addae, for their encouragement and patience.

May Almighty God bless us all.

DEDICATION

I dedicate this work solely to my dear brother, Mr. Benjamin Addae, who apart from the Almighty God has been my great support since my degree through to this level. His dream is to see me through my PhD and for the nation to recognize his brother as one of the great scholars in Ghana. May the almighty God see to his dream through as I dedicate this piece of work to him.



CHAPTER ONE

INTRODUCTION

1.1 General

This chapter focuses on background information on supplier relationship management practices of Ministries, Departments and Agencies (MDA's) in Ghana (Supplier Perspectives), case study of Ghana Highway Authority. Objectives of the study as well as the statement of problem are clearly stated in this chapter. The chapter further describes the scope of the study, the methodology used, the justification and the organization of the study.

1.2 Background Information

Procurement in Public organizations have over the years been relegated to the background in Ghana for obvious reasons, many organizational heads have the perception that buying has been a traditional activity in our everyday life. The current trend of events in organizational set-ups in Ghana indicate that procurement activities need to be planned strategically by people who receive training to take care in public organisations.

Since procurement management is considered a means of acquiring goods in the most cost effective manner, it is important that professionals in the area try to ensure efficiency and economy in their day to day activities. It requires reforms and stringent adherence to procurement laws. Good procurement activities in public sector organizations in Ghana help to harmonize procurement processes to secure judicious use of public funds and allows competition and fairness in the bidding processes in the acquisition of goods and services.

Procurement activities of public organisations are varied and enormous, from implementation of procurement strategies, through assessment of market capability and supply related risk, tendering, receipt of goods and disposal of obsolete materials (Baily, 1994; Hines, 2004). The procurement function covers a wide range of activities which include, material specification, value analysis supply market research, negotiation, contract administration and transportation (Dobler et al. 1990). The involvement of suppliers in key procurement decisions are very important, buyers should therefore make sure inputs from suppliers are made part of their procurement decisions. The need to source for raw materials and finished parts externally due to core competencies has led to an increased emphasis on outsourcing arrangements (Venkatesan, 1992). This has increased suppliers' opportunity to specialize and improve upon their overall performance. According to the Supply Chain Management Institute (2008) Supplier relationship management is the process of planning and organizing company interactions with its suppliers. Weele (2000) suggests that, Companies must be ready to manage and develop its suppliers to assess the benefits in supplier relationship management. These business relationships have always earned partners cost saving opportunities. Supplier relationship strategies must be tailored to the overall business strategy (Treacy and Wiersema 1993). The essence of overall business strategies of public organizations is to reduce cost and make adequate bottom-line profits. It is therefore important that purchasing managers develop and execute sets of differentiated supplier strategies amongst which is SRM that help to reduce cost and make savings for public organizations.

Relationships between suppliers and buyers for years back were arm's length each party wanted to maximize its time and resources. Partners had competing priorities that strained their relationships. These relationships lacked mutual understanding, respect

and sincere wish for prosperity. Supplier relationship strategy was therefore developed to change the face of relationships that existed previously, now partners succeed through mutual arrangement to drive for lowest possible price and transparency in business dealings. Relationship can be developed and improved by partners seeing themselves as having similar goals and aspirations. Partners are supposed to comply with the procurement law and must be seen to be dealing in legitimate business. They are supposed to conduct themselves in a way which breeds honesty and respect. The buyer and the supplier must be free to dialogue in matters of mutual concern and adopt strategies that benefit both parties.

The need for transparency and efficiency in MDA procurement arrangements have come at such a time when the economy of the country has almost come to a standstill partly due to corruption in procurement arrangements. Several developing countries have realized that a well-organized SRM system contributes to good governance.

1.3 Statement of the Problem

The arms-length type of relationships that have existed for years between buyers and suppliers in the public sector with each party trying at every moment to guard his position in the business dealing without recourse to other stakeholders have affected business for decades. The buyer sought to negotiate for the lowest price with no regard for the suppliers' expenditure. The supplier on the other hand craves for the most advantage, price without recognizing that the success of one partner helps both partners to succeed. Suppliers have not considered embarking on activities that guarantee them future businesses from their partners as the cost of keeping a loyal customer has always been quite lower than attracting a new customer. Parties have not taken upon themselves to know activities of stakeholders in the supply chain. They have enjoyed being ignorant of the business dealings of their partners. Sometimes suppliers have no idea about the

final consumer of their raw materials. Buyers have also as part of their investment financing failed to make early payments to their suppliers which sometimes end up in legal battles. Strained relations have continuously marred business opportunities, materials have arrived very late, qualities of goods have been compromised and costs of production have always been high comparatively.

1.4 Research Questions

The statement of the problem will induce the formulation of the following sub questions:

- What basic principles of Supplier Relationship Management practices can Ghana Highway Authority embark upon to improve their overall company performance?
- How can a mutual participation base on planned co-operation between a supplier and a buyer result in cost reduction in public procurement?
- What factors limit the implementation of best supplier relationship management in Ghana Highway Authority?

1.5 Aim of Research

The aim of the research is to investigate how Supplier Relationship Management practices in the Ghana Highway Authority can help achieve effective project delivery.

1.6 Research Objectives

The following specific objectives are expected to be achieved:

- To identify basic principles of supplier relationship management that can help Ghana Highway Authority, achieve their set targets.

- To identify the benefits that could result from participation based on planned co-operation between the supplier and the buyer.
- To identify factors that limit successful implementation of supplier relationship management to achieve effective project delivery by Ghana Highway Authority.

1.7 Justification of the Study

This study is important because it will contribute to knowledge and development of literature in the subject area under investigation, and serve as a basis for further research for all those interested in the topic.

It will provide a framework for ensuring effective procurement practices in the Ghana Highway Authority and how effective project delivery through improved supplier - buyer relationship could be achieved. The study will help Ghana Highway Authority in working closely with their stakeholders in achieving competitive advantage. It would also influence national and corporate organisations to adopt commercial relationships that would enhance their procurement practices to achieve organizational goals.

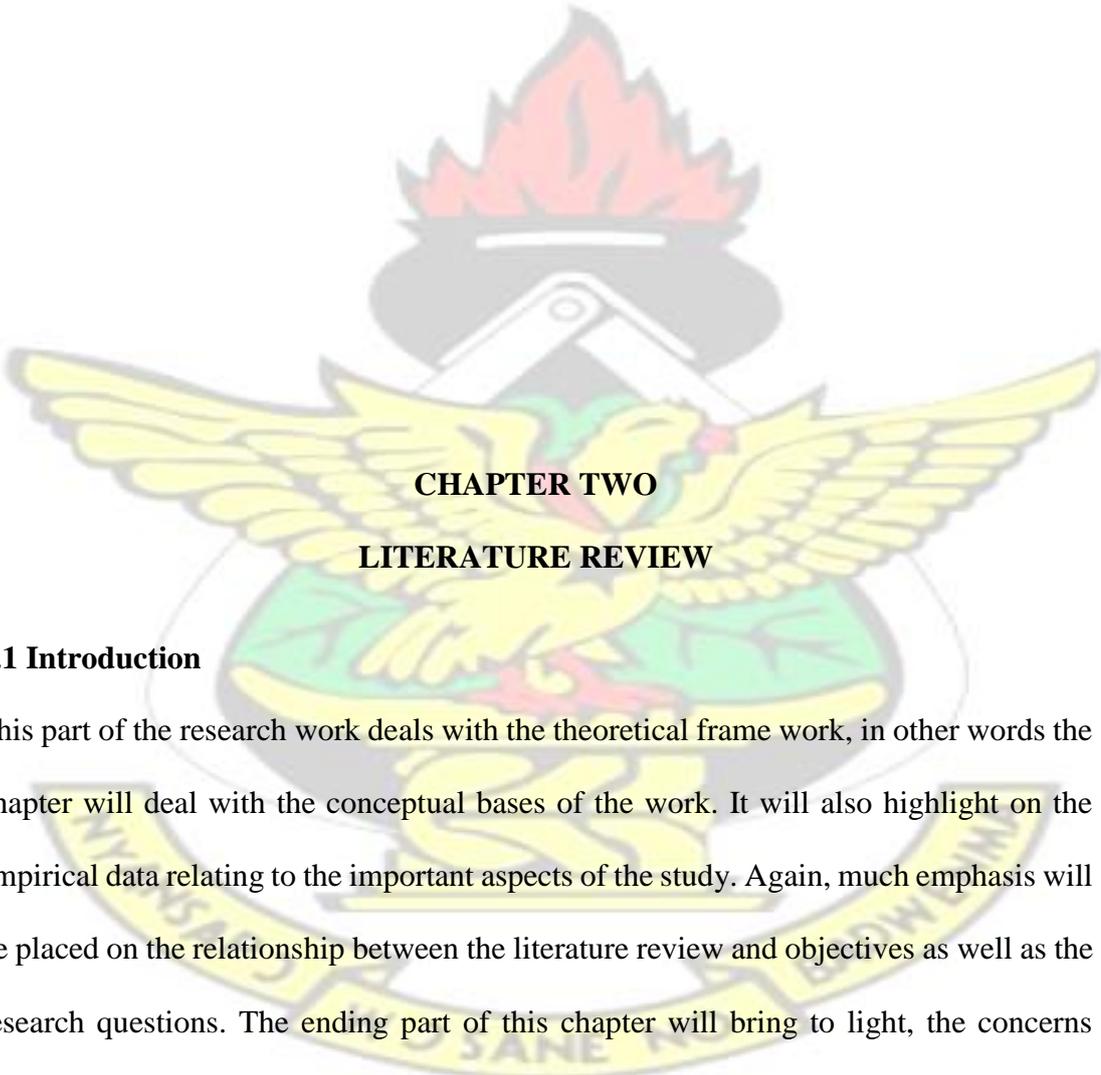
1.8 Limitations of the Study

Under the Public Procurement Act 663, Act 2003, all Ministries, Departments and Agencies (MDAs) and Metropolitans, Municipals, and District Assemblies (MMDAs) are to procure works, goods and services in compliance with the Act. Unfortunately, not all MDAs and MMDAs have fully implemented the provisions of the law.

Therefore, it is difficult getting information appropriate for the study.

Other study constraints are the following:

- Due to the limited time available for the study the focus was primarily on suppliers' firms operating in the Ghana Highway Authority.
- Limited financial resources and lack of available data and materials made it difficult for the researcher in undertaking such a study.
- The unwillingness of some management and procurement officials of the GHA to release information which could have enriched the study and also established a strong validity and reliability of the research data.

The logo of Kwame Ninsin University of Science and Technology (KNUST) is centered in the background. It features a yellow eagle with its wings spread, perched on a green shield. Above the eagle is a black mortar and pestle with a red flame above it. The entire emblem is set against a white background with the university's name in a circular banner at the bottom.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This part of the research work deals with the theoretical frame work, in other words the chapter will deal with the conceptual bases of the work. It will also highlight on the empirical data relating to the important aspects of the study. Again, much emphasis will be placed on the relationship between the literature review and objectives as well as the research questions. The ending part of this chapter will bring to light, the concerns mentioned under various sections of this chapter and conclude with the importance of this research work.

2.1.1 Types of Relationships

There are different relationship types in material activities which include transitional, transactional, nuisance and long-term relationship types. Akintoye et al. (2000) have also described a different adversarial relationship which exists in the construction business and long term relationship which normally exists among supply chain partners. According to Procurement Leaders Strategy Guide (2013), it is important that suppliers are managed and developed in such a way that may have the capacity to support buyers to deliver goods and services as required of them in their relationships.

Pala et al. (2012) have also hinted that, there are only a few studies that have looked into different types of business relationships that exist in supply networks and these include four categories namely transitional relationships, transactional relationships, collaboration and long-term strategic partnerships which are presented in the diagram below.

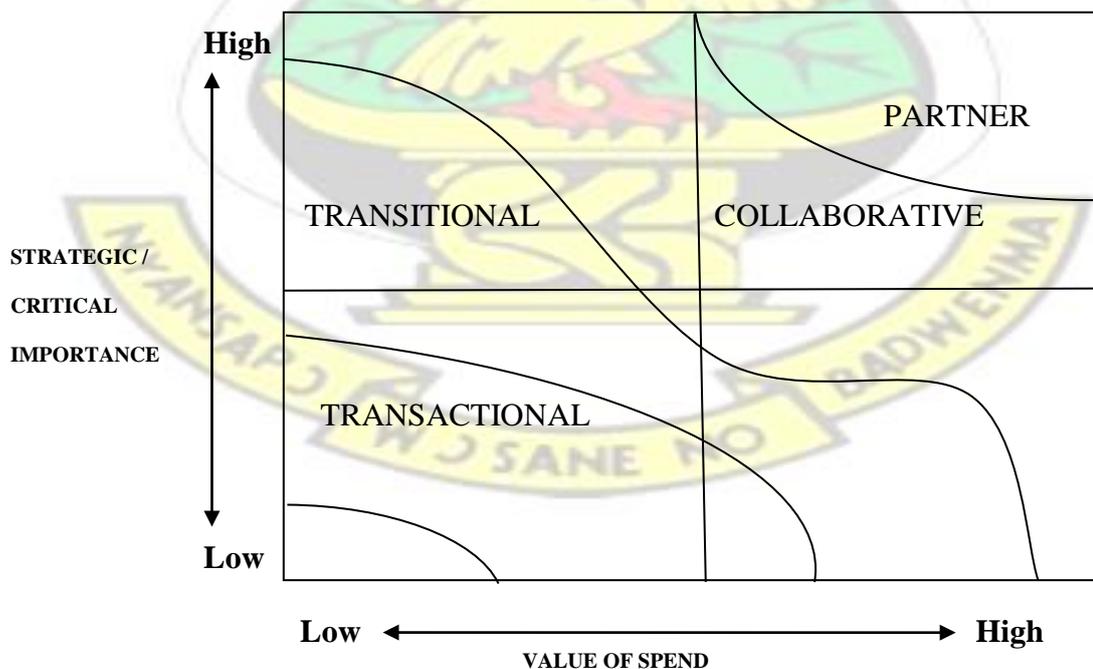


Figure (2.1) Relationship type Segmentation

Source: Procurement Leaders Strategy Guide (2013)

A number of supply networks relationships that are considered in this study are:

2.1.1.1 Adversarial Competition and Partnership Sourcing

“Adversarial competition” and “partnership sourcing” are two forms of purchasing strategies that organizations are interested in. Among these two, ‘partnership sourcing’ is considered to be more beneficial than the other since it creates a relationship based on trust between two sides (Macbeth and Ferguson, 1994). Parker and Hartley (1997) have also clearly necessitated the need of some specific conditions for partnership sourcing such as clear definition of mutual responsibilities, specification and measurable milestones for improved performance.

2.1.1.2 Transitional Relationship

Suppliers move in and out of business at any point in time without making a firm effort to stay in any relationship. Transitional Relationships are sometimes difficult to manage so it requires clearly defined objectives and goals of both parties.

2.1.1.3 Transactional Relationship

This type of relationship is common among partners in construction projects. Dubois and Gadde (2002) further described this kind of relationship as one-off relationship which allows partners to benefit from knowledge transfer. According to Belvins (n.d.), it lacks trust as it is normally on one-time transaction. No savings are made by partners and it takes little time and effort to reach agreement on such transactions. It does not

require any skill by partners in engaging in the transaction and also lacks adequate communication between buyers.

2.1.1.4 Collaborative Partnership

According to Gadde and Dubois (2010) collaborative partnership is a type of business relationship having the aim of creating synergy for supplier and buyer survival. The main characteristics of this kind of relationship is that, it is long term and it thrives on lively atmosphere and mutual understanding between partners. Brown et al. (1994) also suggested that, partnership sourcing is strongly associated with quality initiatives and that 'total quality management' is a definite requirement which suppliers are to take advantage of it and accept as one of the main drivers of partnership sourcing. According to Sadler (2003) partnership sourcing is an element of competitive strategy of an organisation and is developed and implemented with the intention to provide benefits. It was further suggested that, the aim of a successful partnership is to reduce stock time, shorten lead times, achieve greater flexibility, improve cash flow and lower administrative costs.

Burt et al. (2003), explains that there are varying levels of trust and companies work together to reduce cost and make savings. Further to this explanation it was mentioned that advance form of collaborative relationships are called strategic alliances. In supporting Burt et al., Blevins (n.d.) suggested that the type of product requirement would determine the relationship. He further stated that strategic products need to be procured through collaborative partnership arrangement and must-receive support from the entire organization.

2.1.1.5 Nuisance Relationship

Nuisance relationships are another form of arm's length relationships built with suppliers for simple sourcing business. Buyers keep these suppliers at arm's length until they are no longer needed and are simply dropped as the buyers' business grows. Suppliers' performance in the relationship is measured on the basis of price, time of delivery and quality of products (Procurement Leaders Strategy Guide, 2013).

2.1.1.6 Long Term Strategic Partnership

According to (Gadde & Dubois, 2010) strategic partnership is a relationship type that has long term benefits. Daves (2014) for instance, pointed out that long-term strategic partnership allows free-flow of feedback and ideas. Long term strategic relationships according to Fernandopulle (2015) require a high level commitment to sustain the relationship. In explaining further, she suggested strategic partnership produce a level of stability that leads to cooperation necessary to achieve desired results by both partners. According to Department of Trade and Industry U.K. (1991) strategic partnership is a new name of alliances of organisations where partners show commitment regardless of size, to a long term relationship with mutually agreed objectives.

2.1.2 Procurement Strategy

Procurement strategy is defined as a means by which longer-term ends are achieved through acquisition of materials and project delivery Baily et al. (1994) explained that wherever and whenever procurement strategies are less than adequate opportunities are lost whilst threats are neglected. Weele (2000) explains that, terms like procurement, purchasing, supply and logistics management can be used interchangeably and therefore procurement function should satisfy any material requirements for productive activities of organisation. Procurement function aimed at support activities may be very different

in character and some may have a 'project character' and may be unique and of high value (Weele, 2000).

Baily et al. (1994) have hinted that the development of a supply strategy involves company-wide considerations which differ from one company to the other which mostly depend on the nature of their operations. It was further argued that some purchasing organisations deliberately set up 'solus' suppliers; to forgo the so-called benefits of market competition for co-markership arrangement. Other organizations are aided to adopt an approach in keeping two or more sources in a market so as to stimulate competition while providing some insurance against failure of one or the other source. Further to Baily et al. assertion it was explained, the type of strategy employed is determined by the material in question and the supply market. Wheelen and Hunger (2008) has explained that traditionally multiple sourcing was considered superior because of competition because where one supplier is unable to deliver, another may be on standby to deliver materials. This assertion was argued by Deming (2000) that strategic sourcing which relies on only one supplier produce the best quality results since suppliers are managed to work together with the supplier to reduce cost and make savings.

Supply chain management principle is often a part of the rollout of strategic sourcing which involves management of strategic suppliers that are preferred to deliver buying organizations requirements (Cavinato, n.d.). He further suggested that, each SRM initiative is about determination to communicate the needs and expectations to a supplier and, measure performance to invoke actions for compliance. Ellram (1991) suggested that, strategic partnership with suppliers has been the strategy of organisations in response to the threat of undesired costs arising from the highly competitive business environment. However, Newman (1998) has said single sourcing

is considered as a dangerous strategy because it gave the supplier the occasion to take advantage of the buyer of numerous potential opportunities. Cox (1995) also defined strategic procurement as “the development of an external sourcing and supply strategy which link the total business plan of an organisation so as to maintain a sustainable position for the organisation in the total value chain.” Jonson (2010) has also suggested that strategic sourcing is the long term sustainable acquisition of good and service in an effective and more efficient manner. It has been explained that, making long term plans to ensure availability of materials are the wheels that run the supply chain management. Engel (2011) has further said, organisations should as a matter of fact consider total costs involved in a purchase rather than looking at the initial price. In strategic sourcing the life cycle cost of the material to procure must be considered paramount to enable decisive planning to take advantage of business opportunities. According to CIPS (2013), procurement objectives of any organization must be identified and linked to the overall business strategy to enable total organizational goals achieved to sustain company growth.

Li et al. (2010) also said that, it requires companies to put in place policies that allow suppliers to be developed to strategically reduce total cost to the buyer. According to Murray (2008), socio-economic goals of public procurement are likely to be achieved through best practices but public organisations.

Humphreys et al. (2004) also talked on the importance of selecting suppliers and developing them into reliable partners to impact positively on financial position of companies. Carr and Pearson (1999, 2002) and Carr & Smeltezer (1999) collaborated

Humphreys et al. by saying that strategic purchasing has a positive impact on a firm's financial performance. Chen et al. (2004) also mentioned that Strategic purchasing breeds effective communication.

EdgeVerve (2014) has emphasized that, supply performance management strategy is for definite period depending upon the supplier, commodity procured, category of relationship with supplier and past performance. Pires and Sacomano (2008) has also suggested that company strategy is what prevails as far as relationships are concerned depending upon performance of partners.

Weele (2000) presents a classic article presented by Krajić (1983) in a matrix which tries to differentiate strategies towards supply markets which influence the balance of power between companies and their key suppliers. According to Krajić (1983), it is necessary that supply contracts and relationships are managed in such a way that the best is achieved, and to caution companies that depend too much on a supplier. It was further explained by Weele that several companies use portfolio analysis to manage their supply relationships. Siemens is reported to have used purchasing portfolio to achieve greater international co-ordination of the common components and suppliers. Figure (2.2) shows below different segments and the segment of routine products is 19% of the total amount of purchases which amount to 82% of the total amount of different products and 83% of all suppliers. Compared to the segment of strategic products, only 2% of the products and 9% of the suppliers are responsible for 38% of the purchasing costs. Siemens is recorded to have developed strategies for every segment in order to reduce the purchasing costs and drastically reduce the workload for the purchasing departments.

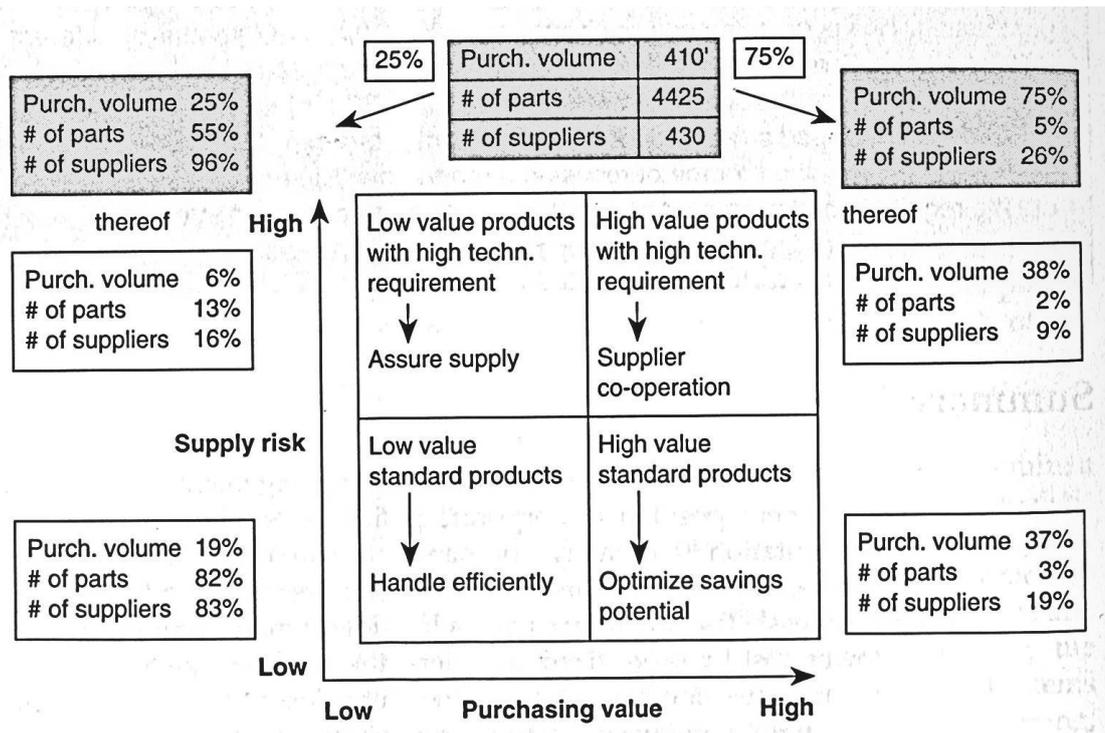


Figure (2.2): Siemens Purchasing Portfolio

Source: Kowalski (1993)

The research of Trim and Lee (2008) explained that, in order to be successful in supply relationship management, any organization desiring to benefit from partnership dealings should put in much resource in order to keep team members in shape for total commitment that produces rightful results. Innovative policies need to be adopted and applied to improve supply activities that benefit parties from either side of the partnership arrangement.

Douglas and Mattew (2012) also said that supplier relationship management process describes how suppliers are developed and managed to improve their performance in a business relationship. Further to this, it was explained that corporate strategy must first be reviewed as well as product specification and service agreements.

2.1.3 Supplier Relationship Management

Supplier relationship management is a long-term strategic partnership that embraces closer collaboration between the supplier and the buyer to achieve long term goals. According to Global Intelligence Network (2013), supplier relationship management is a collaborative partnership with the supplier which allows the buyer to manage the relationship for the required goods and services. Weele (2000) explains that purchasing management refers to all activities required to manage supplier relationships in the organization. He further declared that, the idea behind purchasing management is that if suppliers are not managed by their customers, customer relationships will be managed by the suppliers.

According to Eisenhardt (1998), the buyer must focus on how to improve supplier competencies to satisfy buyer expectation. Eisenhardt further suggested that valuable outcomes are desired from the relationship, so buying organizations must concentrate on how best those outcomes are realized in the relationship. Cavinato (n.d.) also suggested that SRM is about categorizing the supply markets of products and services and selecting suppliers from different categories to meet measurable performance. Again he emphasized that; SRM is about developing the selected suppliers to enable them perform what is expected of them.

Daves (2014) explained that a successful supplier relationship management program will often create a trusting partnership between a buyer and a supplier. Further to this Daves emphasized that hearty relationship creates a healthier bottom line despite underlying weaknesses in their procurement activities. Mattsson (1998) also mentioned there are different dependent relationships in the supply chain, through which material delivery, payment and information flow are accomplished.

2.1.4 Supplier Development

The management and development of Suppliers is the process of working with suppliers on one-to-one basis to improve their performance to deliver quality materials that go a long way to benefit the buying organization. CIPS has noted that supplier development appreciates regular feedback of the supplier's performance together with any customer complaints. A suggestion was also made by CIPS that supplier tailored to the specific needs of the buying organization. It was also pointed out that, supplier knowledge and technology can be leveraged through supplier development to reduce cost and lower risk. Kocabasoglu and Suresh (2006) mentions four essential dimensions of strategic sourcing which help organizations to maintain sustainable material levels. It is suggested that, there should be effective internal coordination between purchasing function and other department. Additionally, there should be effective information sharing among partners. Arumugam (2012) suggested that Companies that have left their supplier development programs at the background without fashioning it into their strategies are likely to lose opportunities that abound in material activities.

A study conducted by Rand Corporation on how Supplier Relationship Management has been practiced in the Air Force Material Command in USA, discussed how organizations can better pursue SRM and realize its goals by expanding the supply base to include all suppliers as incentive to improve and also develop an integrated supplier scorecard (Rand 2013). The report by Nelson et al. (2005) in the same studies revealed that investment in supplier development paid off in multiples of three and ten over a period of time. It also came out from their study that, it is important to institutionalize SRM by maintaining a sustained support from top management down the organizational structure and to clarify roles and responsibilities of individual team members while taking them through formal training to keep pace with best practices. Increased reliance

on suppliers for basic raw materials and capital products depend on how capable external suppliers are ready to meet buyer requirements. According to Mollahosseini and Barkhordar (2010); there has been the realization that suppliers are strategically made part of the buyers' business and it is therefore not surprising to see buying firms involving their suppliers at the design stage of their products so that specified quality and quantity are supplied to avoid legal battles. (HernandezEspallardo et al. 2010; Terpend et al. 2008) has mentioned that buying firms involve suppliers during the design stage of products to enable them understand the production processes to deliver required goods.

In view of the enormous benefits that buying and supplier organizations enjoy from agreements that in the long run help in the national development agenda governments have assisted business entities through ministries. According to Whitford and Zeitlin (2004), Mexican government sponsored supplier development programme to promote business in the country to strengthen competition amongst stakeholders with the aim of contributing to the country's economic development. In formulating supplier strategies, it is important to exchange experiences and also learn from "best-practices. Wheele (2000) has mentioned that, major firms like Shell Coca-Cola have continuously developed their suppliers. These companies are reported to have identified commodities that deserve to be sponsored through supplier development arrangement, (commodities to spend the most money). Krause and Handfield (1999) came out with supplier development model which describes four stages of developing suppliers in partnership relationships.

These stages are:

- **Identification and Rationalization of the supply base**

At this stage the supply base is rationalized to select suppliers who are capable of satisfying the needs of the buyer. Measures are taken to monitor suppliers' quality, cost and general performance to know those to maintain and which ones to phase out.

- **Problem-Solving Development**

The goal of this stage is to identify strengths and weakness of suppliers, weaker areas are taken care to build capacities to meet future requirements of the buyer.

- **Proactive Development**

The Buying organizations actively develop suppliers by improving communication between partners and providing technical and financial support.

- **Integrative Development**

Suppliers are integrated into the business of the supplier. Selected suppliers are made to participate in new product development and the buying organization make efforts to measure supplier performance to increase their chances for future business.

The model advises buying organizations to fully support the strategy. It is further suggested that supplier development teams must be established by selecting team members from different functional areas.

According to Weele, Philips Electronics for instance went through the process to develop and manage supplier relationships by selecting best-in-class suppliers and integrate them in the buyer business. Engineers are sometimes permanently located at the supplier's workshop on permanent basis to work on design or manufacturing problems of their production areas.

2.2 Best Practices of Supplier Relationship Management

According to RAND Corporation, while analyzing best practices of SRM for the Project Air Force, the following were mentioned to support means of achieving goals of supplier relationship management, management of business with each supplier, measurement of supplier performance and supplier motivation.

2.2.1 Management of Business with each supplier

According to Kotter and Cohen (2002), Contracts with individual suppliers are consolidated as the studies revealed that suppliers themselves prefer the consolidation so that the possibilities of future business are being contracted to them becomes high. When key suppliers have been selected on these bases, they are monitored and shaped for future business relationships which depend on continuous improvement on the suppliers' part. The supplier is expected to perform satisfactory always working hard to maintain the trust reposed in them. There is high expenditure of cooperation support and institution of joint initiatives that benefits both parties in the long run.

RAND Corporation's studies revealed that petty contracts with different suppliers did not support supplier relationship management activities of the buyer. Spending pattern of most large enterprises analyzed in the studies, showed that because contracts were signed with many suppliers, their leverages were reduced and made it more difficult to measure and manage supplier performance. The study recommended that corrective measures could be put in place by consolidating contracts and relationships with each supplier or supplier's business units and locations into one or very few contracts to help the process of supplier development. The study claimed suppliers typically prefer to do business with large-volume buyers. It was emphasized that, companies must monitor, shape capabilities and capacities of their "key" suppliers and develop new capabilities.

According to Morgan (2000), capabilities of key suppliers are monitored and assessed and when it meets expectations of buyer organizations, they are guaranteed future contracts. Such companies therefore try to develop new capabilities every now and then. They research into production of related products by under-taking value analysis programs. Buying organizations strives hard to maintain such suppliers, provide them with incentives and build trust for long-term relationship.

In explaining further, it was reported that Toyota Company in Japan assisted their suppliers Riken in 2007 when they needed assistance.

2.2.2 Measurement of Supplier Performance

AberdeenGroup (2002) suggested that typical supplier performance measurement program which fails to measure every bit of supplier activity exposes the program to large scale inefficiencies that will eat into bottom-line profits. In explaining further, it was mentioned that buying organizations that have performance measurement program were seen to improve upon their performance appreciably.

The group further revealed that performance measurements exposed hidden cost and reduces risk. According to Lambert and Pohlen (2001), in situations where supplier performance is not measured the objectives of the buying organization are not adequately achieved.

Gordon (2005) Pointed out that, supplier performance plays into supplier development programmes of the buyer since those selected as reliable suppliers are developed for future business opportunities. Gordon further intimates that performance measurement strengthens communication and further helps improve suppliers' performance. The following seven steps were emphasized by the group to comprise a process for developing and deploying supplier assessment:

- Alignment of supplier performance goals with organizational goals and objectives.
- Determination of an evaluation approach.
- Development of a method to collect information about suppliers.
- Designing and developing a robust assessment system.
- Deploying a supplier performance assessment system.
- Giving feedback to suppliers on their performance.
- Producing results from measuring supplier performance

Yongtao et al. (2012) research result indicated that quality of a relationship would sometimes determine the performance level of the supplier.

2.2.3 Supplier Motivation

Motivation according to Taylor (n.d.) is about engaging with the ordinary people within your supplier base to do whatever is important to keep business growth. Walton (n.d.) advised buyers to motivate partners as money and ownership alone are not enough. Buyers are admonished to think of new and more interesting ways to motivate partners. Explaining further, Walton went on to say that communication is important in every relationship.

According to Wawasa (n.d.), without the required capability, a supplier will not be able to deliver the needs of the buyer. However, supplier motivations inevitably incite the supplier to deliver what is needed to meet the supply targets. The research described four different quadrants namely development quadrant, core quadrant, nuisance quadrant and exploitable quadrant. In explaining further, it was made clear that even the most qualified suppliers may not be able to supply the buying firm their material requirements.

Wawasa, presented the Table below to explain how suppliers are attracted to the buyers' business in the following dimensions of value and attraction of the business to the supplier.

- i. The value of business to the supplier; and ii. The overall attractiveness of the business to the supplier.

The figure (3.1) below shows two different axes of attractiveness and relative value of business with attractiveness axis showing vertical movement of attraction from low level up to high level. On the value of business axis there is an indication of movement of relative business value horizontally from low to high.

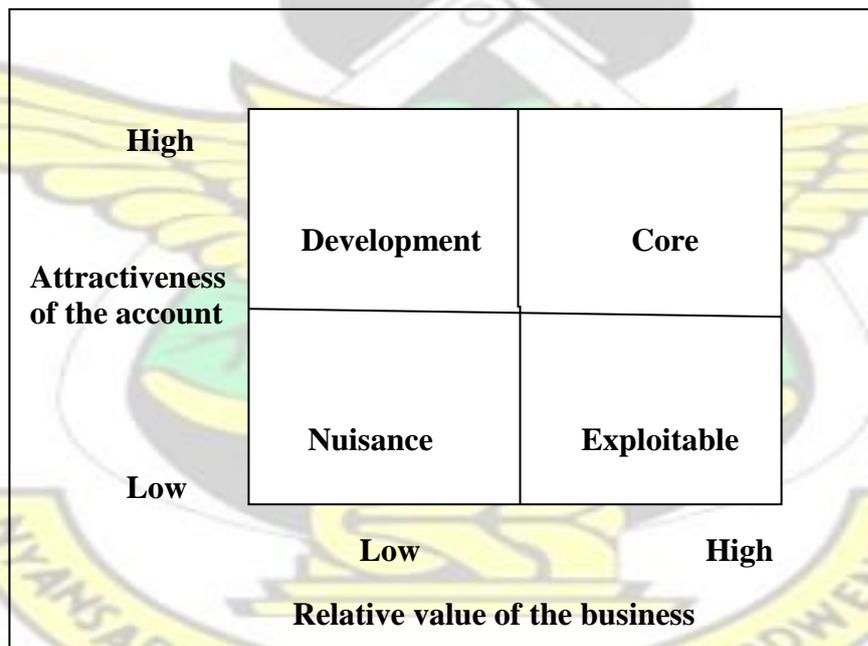


Figure (3.1) Supplier preferencing matrix

Source: Supplier Motivation (Procurement Management)

2.2.3.1 The value of business to the supplier:

Supplier annual report would indicate value of business as it reflects in the proportion of annual turnover accounted in by total procurement made. As indicate above

Suppliers give this information themselves or are sourced from other secondary data.

The higher the turnover, the higher the motivation.

2.2.3.2 The level of business attraction to the supplier:

The Supplier is attracted to the business upon several influential factors which include early payment by the buyer, ease of doing business, cultural affinities, compatibility as well as personal relationships and levels of trust.

The quadrant in which a supplier is located on the model will reflect different kinds of attitude towards the buying organisation including:

- a. **Nuisance quadrant:** Suppliers in this category has low attraction and low value of business. There is nothing to attract the supplier and motivation is considered marginal. Suppliers in this quadrant will rank the business relationship as lowest on their list of priorities. The buyer finds no attraction in developing new form cooperation.
- b. **Exploitation quadrant:** Here, suppliers consider as important the value of the business, but for other reasons may consider the business as not being attractive, since the business does not require enough time, efforts and resources, suppliers are likely to maintain the business but would not put in any effort and commitment. Buying organizations are sometimes exploited by raising price by supplier organizations
- c. **Development quadrant:** Suppliers have high attraction for this business but relative low value. Suppliers are attracted here by perceptions of future business potential. Consequently, they may be ready to invest time and effort in

developing a long-term relationship with the buying organization with the goal of increasing their sales over time.

- d. **Core business quadrant:** Suppliers located in this quadrant have high attractiveness and high value for business. Buying organizations are considered as part of its core business partners.

2.2.4 Early Involvement of Supplier in Product Design

According to Gentry (2008), there are several benefits associated with early supplier involvement like decreasing project costs, reduced project duration improving product or work.

Zsidisin and Smith (2005) suggested that, adopting early supplier involvement practices may offer additional benefits to organisations, including the management of supply risk in new product development and the upstream supply chain. According to Economist Intelligence Unit (2005) many leading companies are forming 'supply network' in order to look in the benefits of early supplier involvement. Johnsen (2009) mentioned that, information about early supplier involvement in crossfunctional teams at the early stage of product development has strong roots in the Japanese automotive industry. Leenders et al. (2002) also emphasize that, today early supplier involvement remains quite common in automotive and consumer electronic industries.

2.3 Classification of Relationships in the Construction Industry

The significance of relationships in the delivery of projects in the construction industry is important to be researched in appropriate depth in defining specific relationship types (Bemelmans et al., 2012). There has been a lot of research on contractor–client interface ignoring the downstream supply chain that accounts greater part of all project deliveries (Holti et al., 2000). Li et al. (2000) describes

“partnering” in the construction industry as being used interchangeably with alliance. It is suggested that partnerships between contractors and clients are various depending upon the duration of the contract. Black et al. (2000) explains that it has always been the mind of partners in the relationship to go for longer term arrangement rather than entering short term adversarial relationships that only help participants to work towards selfish objectives. According to Meng (2010), relationships must be at different layers of the partnership deals.

Ford (1980) intimates that, companies pursue relationship arrangement with others to obtain the benefits associated with reducing their costs or increase their revenues.

The institute of Civil Engineering and Surveyors suggests that different forms of partnership arrangements in the construction Industry depend on duration. These different forms of partnerships have been categorized into one off, long term and medium term project types.

Table 2.1 below, describes various forms of partnering arrangements in the industry. It identifies the different forms of partnering, relationship duration, basis of partner selection and the most appropriate conditions for application.

The table shows that contractors can enter into tendering or negotiate one off contract. Additionally, the table shows that there are strategic long term business relationships and competitive relationships at post award and pre-award stages of contracts. The Table basically shows short term and long term strategic partnership relationships among contracting parties.

Table2.1 Different forms of Partnering

Forms of partnering	Relationship duration	Basis of Partner selection	Condition for use
Project	One-off	Competition/negotiation	All projects. Best for high value

Strategic/Full	Long-term	Competition/negotiation	Where good business case, part of medium-long term strategy
Post-award	One-off	Competition	Public projects, including series of small projects
Pre-selection	One-off/long-term	Negotiation	Any project, Advanced selection of contractors
Coordination agreement	One-off/long-term	Competition/negotiation	Any project, Agreement overlaid on standard contract
Semi Project	One-off	Limited competition	All projects where scope of negotiation is limited

Source: Institution of Civil Engineering Surveyors, 1997{8}

Gunn (2002) explains that business relationships are generally tailored to mutual trust, openness and shared risks, and rewards amongst business partners. They work closely rather than competitively and adversarial. Government procurement manual collaborates by saying that Partnering is described as extending hand of friendship to suppliers. The basis for partnering in business is mutual respect and trust. Any form of suspicious must be worked at and eliminated from business relationship.

(Barlow & Jashapara, 1998) and (Bresnen & Marshall, 2002) identified two different relational patterns “adversarial relationship” and long term or collaborative relationships. In explaining further, it was made clear that adversarial relationships are common in the construction industry due to the short term nature of construction projects. According to Yilmaz et al. (2005) Commitment and trust are known to be ingredients of collaboration in business relationship. It was agreed by Walker and Hampson (2003) Long-term relationship between supply chains partners increase with time from competition in the initial stages to collaboration (Bower, 2003). As earlier explained alliance and long term strategy are sometimes used interchangeably. Thomson and Sanders (1998) share light on alliance contracting is as strategic

agreement by business partners to share risks and benefits. It is long-term strategies that increase opportunities for business partners in Construction Industry. Some projects are for long term periods. (Barlow and Jashpara, 1998) advised that such long term construction alliances must be differentiated from short term one-off project when benefits from alliances are difficult to be achieved.

Project alliances require participants to be selected on the bases of their capacity to do quality to do business. Addition to this, such suppliers must have commitment supplier price has not been a criterion for selection suppliers but good heart and long term availability and commitment in doing future business.

Respect for different culture is paramount since workers are coming from different cultural background. Employee relationships must be managed well to bring peaceful co-existent at project site.

Advantages realizable from partnering are enormous and are positioned to achieve further transformation in the field of work that would benefits both sides of the partnership.

Walker & Hampson (2003) gives distinction partnership from alliance by explaining that partners have separates goods and objectives. They maintain their independence as far as risk sharing and profits are concerned. Alliance has the aim of shared goals of parties. They share all risks and rewards or agree terms and conditions. They further explained that parties at the same time share losses and penalties together.

2.4 Challenges and Hindrance to Implementation of Supplier Relationship

Management

RAND Corporation, studying the implementation of supplier relationship strategy in the Material Section of the US Air Force noted that, the narrow scope of contracts posed a challenge since supplier relationship management has been described by the group to do well in consolidated contracts. Most contracts in Ghana are smaller in scope and contract values have always been a meager amount preventing successful implementation of this strategy. Companies have therefore not made any gain from supplier relationship as a strategy and the impact of it has not been felt. The group further mentioned that company staffs do not understand the strategy and companies have not been in the position to define clearly the objectives and goals of SRM and further hinted that there has not been a clear definition of the strategy.

Weele (2000) submits that competitive bidding amongst suppliers limits the benefits that are supposed to be achieved from the program; suppliers are selected based on evaluation of quotation submitted instead of concentrating on a supplier and develop him into a committed partner for future business.

RAND Corporation talks about commodity councils which regulate activities of supplier firms. In collaborating with the group, Weele recounts that supplier cartel in most European countries make it difficult to make some silent agreements on pricing behavior. It becomes difficult under such conditions to allow supplier-buyer agreement on the underlying terms and conditions of their relationships. He commented on lack of experienced staff and ambitious purchasing plans. Specific purchasing policies are not developed on how to deal with suppliers. Resource constraints have also been mentioned by RAND Corporation as having a toll order on the successful implementation SRM. Instead of suppliers integrating with buyers to enjoy the benefits

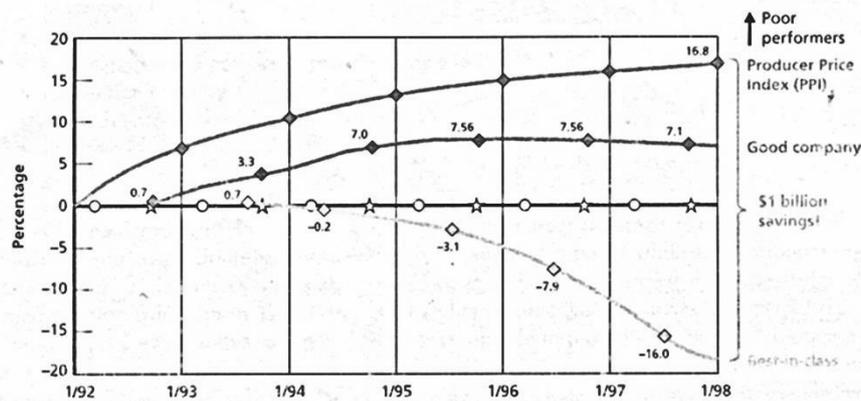
of partnerships, they prefer to spend time and resources managing short term marketing activities without looking into the future and the benefits that it brings.

2.5 Benefits of Supplier Relationship Management

Supplier relationship management practices assist both suppliers and buyers to enjoy cost reduction resulting from superior performance. Suppliers give added-on services and buying firms are available to give assistance to sustain the relationship. It has been explained that long-term agreements encourage suppliers to invest in research and development (RD) in order to propose technologically current cost effective and high-quality solutions to the buying firm's needs. For instance, it is suggested that, the Ford Motor Company is a leading advocate of supplier partnerships and that its supplier partners invest in better tools and equipment, better methods and far more training than in pertained in previous short-term adversarial relationships. Dobler and Burt (1996) suggest that because of profitability and efficiently drive in wellstructured relationships some companies are turning to supplier relationship management as controlled by systematic approach to sourcing of goods. There are several benefits associated with supplier relationship management and they all culminate in a healthier bottom line. Certain costs in business dealings among partners are eliminated while implementing supplier relationship program (Daves, 2014).

The figure (3.2) below shows a graphical presentation based on actual costs and longterm savings from SRM by (Nelson et al. 2001), which shows reduction of cost resulting in price reduction within a period six years from 1992 to 1998.

SRM Can Lead to Large Long-Term Savings



SOURCE: Nelson, Moody, and Stegner, 2001. Used with permission.
RAND TR64-2.1

Figure (3.2): SRM and Savings Partner

Source: RAND Corporation

By cooperating in mutually beneficial relationship with key suppliers, a company can strive for cost savings in the long term. Daves concluded that good working relationships with suppliers will not only deliver cost savings, but will reduce availability problems, delays, quality improvement and better service to the consumer. According to Gentry (2008), there are several benefits associated with early supplier involvement, such as reduction in project costs, project duration and improvement in project delivery time. CIPS (2013) explained that, implementation of supplier relationship strategy mutually benefits partners in the relationship because the adoption of it, improves the performance of both the buying and the supplying organizations. Monczka et al. (1998) reported that, a survey of leading companies that they made revealed that improvement in delivery performance stepped up adequately due to supplier development and management initiatives.

Carone (2004) has also reported that new product development time for Alcatel operations that was studied for a period of six months revealed a reduction of development time to weeks in millions of dollars when suppliers were involved in product design. Weele (2000) has also reported that Philips was one of the first

companies in Europe which focused on partnership arrangement and introduced the term ‘co-makership’. Weele further explained that the main objective of supplier relationship is cost reduction and savings. On the part of quality, he explained that buyer-supplier agreement on quality requirements help suppliers to deliver goods that are free from defects. Weele continue to describe SRM as being beneficial as it allows transfer of knowledge which help to reduce cost and quickens delivery of quality products which in the long run help parties to the partnership.

CHAPTER THREE METHODOLOGY AND ORGANISATIONAL PROFILE OF GHANA

HIGHWAY AUTHORITY (GHA)

3.1 Introduction

This chapter deals with methods that were employed in the conduct of the research. The Research design, the target population, sample size, instruments employed in gathering the data are described in this chapter. It also includes the data collection procedure. The research was conducted on supplier relationship management by the Ministries, Districts and Agencies (MDA’s) with particular reference to Ghana Highway Authority (GHA) in Ashanti Region. In order to collect accurate data on the topic, questionnaires and interviews were prepared and given out to procurement personnel and construction workers to seek their views on Supplier Relationship Management (SRM) practices in their organisations.

3.2 Research Design

This study seeks to investigate Supplier Relationship Management Practices (Supplier Perspective) of Ghana Highway Authority, Ashanti Region and how the results can help

the organisation achieve effective project delivery. The following specific objectives are expected to be achieved:

- To identify basic principles of supplier relationship management that can help Ghana Highway Authority, achieve their set targets.
- To identify the benefits that could result from participation based on planned co-operation between the supplier and the buyer.
- To identify factors that limit successful implementation of supplier relationship management in Ghana Highway Authority.

To be able to do this, the study used a cross-sectional design approach in which data was collected from a research questionnaire and structured interviews conceived on the basis of a typical Supplier Relationship Management.

3.3 Population

Population refers to the set of individuals or events having common visible characteristics, which the researcher is interested in (Agyedu et al. 1999). The population for this study was staff of Ghana Highway Authority, Contractors and Consultants working with GHA in Ashanti Region. The region was chosen as a result of its proximity. Required information would be available for the research.

3.4 Sample and Sampling

The study targeted staff of GHA, Road Contractors and Consultants. Staff of GHA included Management Personnel, Engineers, Quantity Surveyors, Supervisors and Foremen. Using Kish formula, a sample size of eighty (80) was obtained and twenty-nine (29) personnel were selected randomly from Ghana Highway staff, thirty-five (35) personnel from Contractors and sixteen (16) respondent from consultants all in Ashanti Region. All the Eighty (80) respondents were selected from Ashanti Region,

Ghana, as already explained due to proximity and time constraint.

The formula for computing the sample size is as follows: n

= $N / 1 + [N/(e)^2]$ Where:

n = Sample size N = Population

size e – Desired level of precision

(0.05) Total error = 0.1 at a

confidence level of 95% $n = N / 1 +$

$N/ (e)^2 = 100 / [1 +100 (0.05)^2]$ n=

80

Sample size = 80

3.5 Research Instruments

A three-section questionnaire was designed and copies sent to each respondent organization. Three different sets of questionnaires were sent out, one to top management, one to procurement staff and another to middle level managers or supervisors from all the selected firms. An unstructured interview was conducted among top management and other employees of the firms to clarify doubts about answers to some questions in the structured questionnaire which also to solicited relevant information for the study.

3.6 Data Collection Procedures

The questionnaires were administered and collected from respondents by the researcher himself. Table 3.1 below, shows a list of respondents from various construction companies who have contracts with Ghana Highway Authority in Ashanti Region, by categories.

Table 3.1 Samples and Percentage Rates

Firms	Number	Percentage (%)
GHA Staffs	29	36.25
Contractors	35	43.75
Consultant	16	20.00
Total	80	100

Source: Field Data, 2015

3.6.1 Data Collection

Both primary and secondary data were used for the research.

3.6.2 Primary Data

The primary data of information were obtained by the use of the questionnaire. Due to the complex nature of the questionnaire and the kind of answers that were required, the respondents were personally interviewed.

3.6.3 Secondary Source

The secondary sources of information were, literature reviews from the internet, textbooks, journals, reports, and thesis that have been published on Supplier Relationship Management.

3.6.4 Data Analysis

The researcher gave out eighty (80) questionnaires to individuals, twenty-nine (29) to Ghana Highway Authority staffs, thirty-five (35) to contractors and sixteen (16) to consultants in Ashanti region. The researcher distributed the questionnaires to cover stakeholders of construction industry.

The results of the research were drawn from the main findings from the three sections of the questionnaire. A combination of descriptive accounts as well as summary statistic in terms of percentages and ranking were used to examine the findings. Actual

performance of the respondent organizations project was assessed using the following four measure of project success (to the supplier) as a benchmark:

- It meets customer’s perceived quality requirements;
- Resources of money, time, material and people are sufficient to do the job;
- Communication channels between team leaders and team members are in place and are adequate; and
- Control mechanisms are in place and used.

Both close-ended and open-ended answers were obtained from the questionnaire.

Three ranking tables were also added. The procedure for analysis is as given below.

3.6.5 Analysis of Open-Ended Data

In the case of this research, respondents failed to give comments.

3.6.6 Analysis of Close-Ended Data

Due to the simple and straight-forward nature of such questions, the answers obtained were easily converted into percentages and presented by the use of appropriate Tables.

3.6.7 Analysis of Ranking Table

Responses were assigned weights. A table was appropriately used to present the information obtained. Appropriate comments were then included. Weights were assigned to responses from respondents as follows:

Table 3.2: Weighting and Perceptions

Weights	Perceptions		
	1	Strongly Disagreed (SD)	Not Very Often (NVO)
2	Disagreed (D)	Not Often (NO)	Not Important (NI)
3	Neutral (N)	Not Sure (NS)	Not Sure (NS)
4	Agreed (A)	Often (O)	Important (I)

5	Strongly Agreed (SA)	Very Often (VO)	Very Important (VI)
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Source: Field Data, 2015

Response were therefore analyzed by the following equations:

Equation (1) $W=1SD+2D+3N+4A+5SA$

Equation (2) $W=1NVO+2NO+3NS+4O+5VO$

Equation (3) $W=1NVI+2NI+3NS+4I+5VI$

$\% = W_n / \text{Total } W \times 100$

W_n / W_{max} ,

Where

SD is the number of times the method is ticked strongly disagree

D is the number of times the method is ticked disagree

N is the number of times the method is ticked neutral

A is the number of times the method is ticked agree

SA is the number of times the method is ticked strongly agree

NVO is the number of times the method is ticked not very often

NO is the number of times the method is ticked not often

NS is the number of times the method is ticked not sure

O is the number of times the method is ticked often

VO is the number of times the method is ticked very often

NVI is the number of times the method is ticked not very important

NI is the number of times the method is ticked not important

NS is the number of times the method is ticked not sure

I is the number of times the method is ticked important

VI is the number of times the method is ticked very important

W is the weighted score for the method

W_n is the respective weight of the method being considered

W_{max} is the highest weight obtained

r is the relative importance

R is the Ranking

3.7 Organizational Profile of GHA

GHA was established under NRC Decree 298 in December 1974. But was suspended by Act 540 of December 1997 to reflect changes which had occurred in the road subsector since 1982.

The key function of GHA is the Administration, Development and Maintenance of trunk roads and related facilities in Ghana. Related responsibilities include road line markings, safety facilities such as speed calming devices and installation of town gates.

The current length of trunk roads under the GHA totals 15,360km excluding 2,065km of District capital town roads outside Metropolitan and Municipal Areas. Out of the 15,360km trunk roads, 7,042km (46%) are paved, and 5,458.0km (36%) are gravel surfaced while 2,372.3 (15%) is under construction (Ghana Highway Authority, Road Condition Survey 2013).

3.7.1 Mission Statement

The mission statement of the Ghana Highway Authority is to provide and maintain a safe and reliable trunk road network at optimal cost to support socio-economic development in Ghana.

3.7.2 Vision

The GHA's has a vision: to provide safe and reliable trunk road network across Ghana that to link neighboring countries to minimize road accidents and save lives.

3.7.3 Objectives of GHA

To accelerate the realization of the above mission, the following are the objectives of the GHA among others:

- **Improving Road Condition:** To ensure the provision, expansion, and maintenance of trunk road transport infrastructure by increasing the proportion of the trunk road network and roads in district capitals and put them in good condition.
- **Reducing Accident Facilities:** To work with the National Road Safety Commission and other stakeholders to reduce accident fatalities on the trunk road network.
- **Reducing Travel Time:** To ensure the provision of affordable, safe and accessible transport system by dualisation of heavily trafficked trunk road sections.
- **Environmental and Social Mitigation Measures:** To mitigate the impact of the road development and maintenance program on the environment and people.
- **Improving Quality of Systems Delivery:** To assist the Ministry of Roads and Highways and other Ministries, Departments and Agencies (MDAs) to develop and strengthen the appropriate legal, institutional and regulatory framework and regulate all modes of transport to ensure an efficient transport system that will promote quality delivery of services.
- **Administration & Human Resources:** To recruit, train and adequately motivate staff and provide the needed logistics to undertake the required services.

3.7.4 GHA Key Activities

GHA's main projects revolve around road development, routine maintenance, periodic maintenance, bridge development and maintenance as well as road safety works.

CHAPTER FOUR

DATA PRESENTATION, DISCUSSION AND ANALYSIS

4.1 Introduction

The chapter gives details of the findings of the empirical study. Analysis of the findings is made from data gathered in relation to theoretical framework.

4.2 Sample and Response Rate

Workers from the Regional office of the GHA, Ashanti Region alongside workers from construction companies and consultancies were chosen for the study. The Eighty (80) workers selected as respondents mentioned above give response analysis as per Table 4.1 below.

Table 4.1 Sample Response Rate

Firms	Sample Size	No. Returned	Response Rate (%)
GHA Staffs	29	29	36.25
Contractors	35	35	43.75
Consultants	16	16	20
Total	80	80	100

Source: Field Data, 2015

4.3 Respondents' Characteristics

Respondents' characteristics of the study include age, gender and length of association with company.

4.3.1 Gender of Respondent

The percentage distribution of the gender response is shown below in a Table 4.2. The figure indicates that 20% of the respondents were females and 80% males.

The number of management personnel that responded was 10 which represented 12.5% of total sample size.

Table 4.2: Gender Respondents

Item	Gender	Frequency	Percentage
1	Female	16	20
2	Male	64	80
Total	Total	80	100

Source: Field Data, 2015

4.3.2 Age of Respondents

Table 4.3 below indicates that 10% of respondents used were between the ages 21 to 30 years; 16% of the respondents were between the ages of 31 and 40. Ages between 41 to 50 years were represented by 46% which was the highest population respondents. From the Table below, the ages between 51 and 60 were 14% and finally the ages above 60 years was 4% which shows that the respondents are more experienced in supply relationship management field which this study could rely on.

Table 4.3 Age Response

Item	Experience	Frequency	Percentage
1	21-30	8	10
2	31-40	13	16
3	41-50	37	46
4	51-60	19	14
5	Above 60	3	4
Total		80	100

Source: Field Data, 2015

Table 4.4 below represents the educational level of the respondents. Majority of the respondents are degree holders and had 49% followed by MSc holders which formed 24% of the respondents. 21% had obtained HND and 6% respondents also had obtained

other qualifications. The information provided below indicated that the respondents were well educated and the information given would be much reliable.

Table 4.4 Educational Background

Item	Education	Frequency	Percentage
1	PHD	0	0
2	MSc	19	24
3	BSc	39	49
4	HND	17	21
5	Other	5	6
Total		80	100

Source: Field Data, 2015

The eighty (80) questionnaires were distributed to eighty (80) respondents in the Ashanti Region, twenty-nine (29) to Ghana Highway Authority Ashanti Region staffs, thirty-five (35) to contractors and remaining sixteen (16) to consultants working with Ghana Highway Authority in Ashanti Region. All eighty (80) questionnaires were returned. The analysis was done by dividing the data into three categories namely;

- Basic principles of supplier relationship management that can help Ghana Highway Authority to achieve their set targets;
- The benefits that could result from participation based on planned cooperation between the supplier and the buyer; and
- The factors that limit successful implementation of supplier relationship management achieving effective project delivery by Ghana Highway Authority.

4.4 Data Analysis

4.4.1 Perception of respondent on basic principles of supplier relationship management

This section sought information about principles of supplier relationship management, necessary to achieve their set targets.

Tables 4.5, 4.6 and 4.7 below show the response rate obtained from the questionnaires sent to Construction and service companies. Respondents were asked to indicate peculiar Supplier Relationship Management practices adopted by their firms.

Respondents were asked to choose from the following Likert Scale, where appropriate: The scale rated perception of respondents according to whether they were in agreement or not to questions asked.

(SD)-represented strong disagreement; (D)-represented disagreement; (N)- represented neutral; (A)-represented simple agreement; and (SA)- represented strong agreement. Other responses were rated in the following category; (NVO) - Represented not very often; (NO)-represented not often; (NS)-represented not sure; (O) - represented often; and (VO) - represented very often; (NVI) - represented not very important; (NI) - not important; (NS) - not sure; (I) - represented important; and (VI) - represented very important; where necessary.

Table 4.5: Basic Principles of Supplier Relationship Management that can help to achieve effective project delivery

Principles	1	2	3	4	5				
	SD	D	N	A	SA	W	R	r	%
Is it necessary to have laid down basic principles of (SRM)?	5	8	7	26	34	316	3	0.95	11.72
Is it necessary for both suppliers and buyers to respect laid down principles?	3	7	8	39	23	312	5	0.93	11.57
Is it necessary to rely on few contractors?	2	36	19	13	10	233	9	0.70	8.64
Should contractors be part of material requirement planning (MRP)?	4	3	40	18	15	277	7	0.83	10.27
Does good leadership affect expected project outcome?	0	9	12	38	21	311	6	0.93	11.54
Is supplier development necessary?	1	3	11	38	27	327	2	0.98	12.13
Do suppliers relate well with the buyers?	3	8	9	33	27	313	4	0.94	11.61
Have cordial relationships helped in the progress of work?	5	7	36	14	18	273	8	0.82	10.13
Has risk assessment reduced the chance of risk occurring?	1	10	6	20	43	334	1	1.00	12.39
TOTAL						2,696			100

Source: Field Data, 2015

Response from respondents on questionnaires on necessity to have laid down basic principles of supplier relationship management for strongly agreed was 43% of the

respondents who strongly agreed to have basic principles. A question to the effect that all parties should respect laid down principles was agreed by 49% of the respondents and 29% of the respondents strongly agreed that there should be laid down principles. Only 4% of the respondents strongly disagreed with the idea of having laid down principles.

The idea of adopting few suppliers for supply development did not receive positive response from respondent as only 13% out of the total respondents of 100% agreed that few suppliers be relied upon whilst 45% disagreed with the suggestion. Most of them failed to appreciate the fact that supplier relationship management practices are possible with few suppliers, thinking that when contractors are not delivering quality with the chance to fire them is better where they are many.

The idea to involve contractors in material requirement planning was totally rejected by respondents. 50% of the respondents were neutral. It was observed that most of the respondents did not understand the concept of material requirement planning (MRP). 5% of the respondents even said they strongly disagreed. The question with regards to leadership affecting project outcomes was accepted as necessary by respondents, since 48% of the respondents went for agreed and 26% went for strong agreement making approximately 74% of the respondents that indicated that leadership was important to impact on project outcomes. None of the eighty (80) respondents strongly disagreed meaning they understood the essence of leadership as far as project outcomes are concerned. A good leader leads his people but does not drive them and has always achieved successes in all endeavors.

Findings of the study on cordial relationship between the suppliers and the buyers was positive as 41% of the respondents agreed with the suggestion whilst only 4%

respondents disagreed with the idea. In addition, 34% strongly agreed with the suggestion on cordial relationship between the suppliers and buyers. On risk assessment reducing the chance of risk occurring, 54% of the respondents strongly agreed that it is a necessary factor. Risk assessment in contracts have always been necessary due to the complex nature of projects so all respondents were positive with their response that they strongly agreed with idea of making provision for future risk.

4.4.2 Benefits that could result from participation based on planned co-operation between the supplier and the buyer.

This section sought information about benefits that could result from participation based on planned co-operation between the supplier and the buyer.

Table 4.6: Benefits that could result from participation based on planned cooperation between the supplier and the buyer.

Benefits	1	2	3	4	5				
	NVO	NO	NS	O	VO	W	R	r	%
Have supply chain challenges delayed Projects?	0	4	14	49	13	311	4	0.86	12.51
Have regular reports on project benefitted both parties?	3	4	55	7	11	259	6	0.71	10.42
Is it important to guarantee contractors at Banks?	1	61	7	9	2	190	8	0.52	7.64
Do regular meetings impact project delivery?	1	3	5	14	57	363	1	1.00	14.60
Have poor workmanships terminated contract terminated?	1	3	4	66	6	313	3	0.86	12.59
Have terminated contracts ended end up in legal battles?	4	2	54	13	7	257	7	0.71	10.34
Do you agree that early payments are beneficial to parties?	0	8	3	12	57	358	2	0.99	14.40

Do early collaboration lead to early payments?	2	4	8	55	11	309	5	0.85	12.43
Is mobilization of materials at the start necessary?	63	2	5	6	4	126	9	0.49	5.07
TOTAL						2,486			100

Source: Field Data, 2015

Total of 60% of the respondents went in for ‘‘often’’ and 16% went in for very often for the fact that supply challenges have often delayed project outcomes. They therefore suggested that the necessity for project packages to include mobilization funds should be talked about, because the fund helps contractors to mobilize materials down before projects start. However, they cautioned that contractors must be monitored since funds are sometimes diverted for unnecessary ventures. A total of 15% of the respondents for ‘‘often’’ and 71% of the respondent ‘‘very often’’ went in for the fact that early payments are beneficial to all parties involved in a contract, whereas 69% of the respondents went in for ‘‘often’’ for the fact that early collaboration lead to early payment. These responds confirmed that the regular collaboration for contract payment is beneficial for the progress of the project. Only 14% of the respondents expressed their support to the issue of regular support. On the issue of Bank guarantees, it was heavily rejected as 76% of the respondents noted that it is not important for buyers to guarantee suppliers at the Banks. Their argument was that people of good financial standing must be awarded with contracts.

The highest number of sixty-six (66) forming 83% of the respondents emphasized that; contracts are often terminated as a result of poor workmanship. It is the researcher’s believe that suppliers have not been supported by clients as expressed with regards to Bank guarantee. Further 68% of respondents said they are not sure contract terminations end up in serious legal battles. My investigation revealed that clients have often failed

their part of contracts but there have been no such battles from the suppliers so when the parties also delay there are trade-offs normally. 69% of the respondents also confirmed early collaboration of partners often lead to early payments and it is a beneficial factor to suppliers and buyers as well.

4.4.3 Factors limiting successful implementation of Supply Relationship

Management (SRM) to achieve effective project delivery.

This section sought information about factors limiting successful implementation of Supply Relationship Management (SRM) to achieve effective project delivery.

Table 4.7: Factors limiting successful implementation of Supply Relationship Management (SRM) to achieve effective project delivery.

Likely Limiting Factors	1	2	3	4	5				
	NVI	NI	NS	I	VI	W	R	r	%
Should MDA's have Supplier Relationship Management (SRM) teams?	1	3	50	16	10	271	8	0.79	9.55
Is regular funding of suppliers important for?	3	4	1	21	51	353	2	1.03	12.43
Is well defined vision and goals necessary?	7	5	3	8	57	343	1	1.00	12.08
Should contract terms be well written and interpreted?	7	3	6	51	13	300	3	0.87	10.57
Are quality personnel recruited for SRM positions?	3	3	13	12	49	341	4	0.99	12.01
Are contracts large enough to support SRM?	0	7	4	63	6	308	6	0.90	10.85
Are projects impeded for non-supervision?	1	58	10	5	6	197	9	0.57	6.94
Is supplier categorisation for SRM?	0	5	11	48	16	315	5	0.92	11.10
Do supplier associations assist SRM business?	3	4	51	12	10	262	7	0.76	9.23
Do you have suppliers for SRM business in your department?	56	8	9	5	2	149	10	0.43	5.25

TOTAL						2,839			100
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Source: Field Data, 2015

The Table above shows some suggestions to help resolve supplier relationship management problems as perceived by firms. Respondents total of 63% suggested that, it is very important for MDA's to have Supplier Relationship Management (SRM) teams. This is followed by suggestion on regular support and funding by buyers which, respondents considered it very important with a score of 64%. Respondents also considered it very important to have well defined vision and goals of the project with a score of 71%.

Respondents numbered 61% also considered it very important to have high-quality personnel with adequate skills recruited for their SRM positions. Also, 79% respondents accepted the fact that it is important for contracts to be large enough to support SRM activities.

It also surfaced that, if supervisors are not regular at site, works are impeded and the response to categorising suppliers for Supplier Relationship Management business was also positive. Respondents agreed that it is not very important to have suppliers reserved purposely for SRM business in their departments.

4.5 Conclusion

Perceptions of respondents indicate that they are not very much aware of the concept of Supplier Relationship Management. Some personnel from Finance department were not in support of the idea that investment should be made in the suppliers' business to reduce cost and increase performance. One difficult aspect which was mentioned was that most of the few supplier firms often sub-contract their activities to smaller firms to meet early completion time, most especially main contractors who take up Ghana

Highway Authority contracts. It therefore becomes difficult to forge collaborative partnership that is sustainable for supplier development.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Findings of this study indicate that, the entire Supplier Relationship Management (SRM) should be improved through specified relevant programmes to subsequently maintain a positive relationship between suppliers and buyers.

5.2 Summary of Findings

5.2.1 Benefit from Supplier Relationship Management (SRM)

This survey has yielded some useful information, which is expected to help improve SRM programmes in various firms. In order to achieve the best technical and economically feasible solutions, organisations should involve suppliers in major design decisions. It is worth noting that supplier's role now has moved from just supplying products to the role of a systems supplier, designing and delivering technologically advanced systems. These may lead to situation where the supplier becomes gradually integrated in the customer's business process.

Nelson et al.(2005) claim that investments in supplier development and management yields huge profits resulting from improved quality and timeous delivery. Through supplier development, buying enterprises production requirements are well understood by SRM teams and undertake risk assessment protocols, early enough for sustainable

development. The buyer tries to practice open-door policies through feedback and information sharing to develop the supplier, and this has always helped in the area of Material Requirement Planning (MRP) for sustainable production activities.

Some benefits which can be achieved through supplier relationships management comprise a high level of guarantee for material suppliers at a comparatively low cost. SRM programme help to reduce cost, increase efficiency, prices remain unchanged for longer period of time and supplies continuously hint buyers of changes in the market conditions.

5.2.2 Institutionalizing Supplier Relationship Management (SRM)

In order to reduce cost and make savings for each party to prosper, the specific goals of the SRM programmes that may be institutionalized in various organizations may include the following:

- To improve top management commitment and team work
- To ensure effective collaboration among buyers and suppliers
- To ensure effective supplier development
- To undertake supplier performance measurement, and
- To ensure effective Communication among all parties to contracts.

To achieve the SRM performance improvement plan it is important to deepen cooperation with an organization's internal and external stakeholders.

SRM needs to be institutionalized to make it integral part of overall company strategies.

Top management should make policies required to provide support, influence and direct activities that create awareness of SRM in the organisation. Management commitment should be paramount to give guidance, clarify roles and responsibilities of the SRM

teams. Formal training needs to be provided for team members including career development programmes to help achieve real goals for mutual benefits, among partners of a relationship.

5.3 Summary of Recommendations

This section aims at addressing issues gathered in the study with recommendations to improve Supplier Relationship Management Practices by the MDA's with particular reference to Ghana Highway Authority to adopt the best practices.

- **Early Supplier Involvement**

With products having many new and much higher technical requirements the suppliers should be involved at a very early stage, since contribution of the supplier in the development and design work is necessary. It is therefore important that suppliers are contacted in the engineering phase, for technical advice. Suppliers have a capacity to bring on board ideas to ensure efficiency in the progress of a project.

It is recommended that suppliers of routine products are involved in all designs and development works; they are supposed to submit their proposals based on detailed designs and specifications provided by the client.

- **Communication**

Constant communication between supplier and buyer on quality and cost improvements can lead to product and process innovations. It is also advisable to have laid down basic principles which must be respected by internal customers if the program would have the required support in an organisation. It is recommended that, mechanisms are put in place to allow information to flow vertically and horizontally to avoid misunderstanding among team members.

- **Team Work**

Regular meetings must be held and notices of such meetings are to be distributed to all members. Teamwork generates friendship among workmates and even during outside working hours. It also increases competition by improving motivation and commitment, quality and innovation.

- **Motivation**

Suppliers must be supported with funding to mobilize whatever materials they may need to enable them deliver as expected of them. Early payments for work done are another source of motivation, since late payments demotivate suppliers.

- **Few Suppliers**

Well written set goals and objectives are important for all the parties to understand and to keep them going. It is also worth noting that, a well-defined number of suppliers are selected for the program. The volume of business with a supplier must be large enough to earn him selection to be developed for SRM programmes.

- **Commodity Councils**

It is recommended that suppliers who are members of commodity councils are not selected for SRM programmes because those suppliers are not allowed to have a separate negotiation teams. The council may have one contracting officer to negotiate on behalf of all members so it is difficult for any individual council members to enter into long term relationship with any buying organisation.

- **Supplier Development**

It is recommended that suppliers are supported to expand their capacity and develop new opportunities. Suppliers must have sufficient capacities to engage in longer

term contracts and there should be transparency and mutual commitment to share gains and losses.

- **Measure & Shape Supplier Performance**

Supplier Performance is measured on results of supplier effectiveness and supplier efficiency. Supplier effectiveness is ability of the supplier to perform well to meet previously established standards.

It is recommended that a supplier performance measurement system must be put in place. Suppliers who produce superior performance, that exceed performance targets must be rewarded. Suppliers who perform to meet desired performance must be given additional business.

- **Buyer-Supplier Conferencing**

It is recommended that Buyer organizations meet suppliers to demonstrate commitment and dialogue on how best partnership arrangements are nurtured to deliver successful outcomes. Thorny issues relating to contracts are supposed to be explained by the buyer so that supplier delivers exact materials ordered by the buyer.

- **Integration of Supplier Relationship Management Recommendation**

The GHA must embark on Supplier Relationship Management programme that will transform suppliers to have the interest of the buyer at heart. Suppliers must be made to think positively and constructively to help both parties to share benefits that come out of their relationship.

5. 4 Conclusion

Broadly speaking one can argue that arms-length type of relationship that have existed for years in material administration in various organizations have so far inhibited a lot of opportunities in Ghana. However, adversarial relationship is gradually giving way to collaborative partnership type. Organizations are currently managing that relationship by institutionalizing it to become part of the overall company strategy. Suppliers are currently developed through motivation and financial support to meet their delivery targets.

Many organizations have not understood the ideals of supplier relationship management but with the enormous benefits that are being wreaked by organizations practicing the programme. Ministries, Department and Agencies (MDA's) in Ghana may take advantage and support it to work in their organizations.

There are financial challenges that affect organizations ability to make greater progress in a sustainable relationship between the buyer and the supplier. Other challenges are having clear and understandable policies for SRM, devoting resources for the programme and capabilities of staffs assigned to the initiative. Suppliers have most of the time been smaller firms, whose scope of contract are limited and do not support SRM programmes.

5.5 Area for Further Studies

On the bases of the findings discussed, this study recommends a further examination into the Supplier Relationship Management Practices of Ministries, Departments and Agencies (MDA's) in Ghana (Supplier Perspectives).

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APPENDIX

QUESTIONNAIRE

**SUPPLIER RELATIONSHIP MANAGEMENT PRACTICES OF
MINISTRIES, DEPARTMENT AND AGENCIES (MDA's) IN GHANA
(SUPPLIER PERSPECTIVE)**

(A CASE OF GHANA HIGHWAY AUTHORITY)

The main objective of this study is to examine the effectiveness of project delivery through improved supplier relationship management practices of Ministries, Department and Agencies (MDA's), in Ghana (Supplier Perspectives) and its impact on productivity in support of socio-economic goals of the country. This study is being undertaken by an MSc. Procurement Management student of Kwame Nkrumah University of Science and Technology, Kumasi. The information you provide will be treated in strict confidence and anonymity and will be used for academic purposes only.

Please tick (✓) the number that best describes your opinion.

General Information

1. Age:.....
Sex: Male () Female ()
2. Position:.....
3. Name of Department:.....
4. No of years of experience:.....
5. Highest Level of Education:.....
6. Date:.....

(1) BASIC PRINCIPLES OF SUPPLIER RELATIONSHIP MANAGEMENT THAT CAN HELP TO ACHIEVE EFFECTIVE PROJECT DELIVERY

SCALE:

1= Strongly Disagree; 2=Disagree; 3=Neutral; 4=Agree; & 5=Strongly Agree

NO	PRINCIPLES	1	2	3	4	5
1	Is it necessary to have laid down basic principles of (SRM)?					
2	Is it necessary for both suppliers and buyers to respect laid down principles?					
3	Is it necessary to rely on few contractors?					
4	Should contractors be part of material requirement planning (MRP)?					
5	Does good leadership affect expected project outcome?					
6	Is supplier development necessary?					
7	Do suppliers relate well with the buyers?					
8	Have cordial relationships helped in the progress of work?					
9	Has risk assessment reduced the chance of risk occurring?					
10	Any other, Please state.....					

(2) BENEFITS PARTICIPATION BASED ON PLANNED COOPERATION BETWEEN THE SUPPLIER AND THE BUYER.

SCALE:

1= Not very often; 2=Not often; 3=Not sure; 4=Often; & 5=Very often

NO	BENEFITS	1	2	3	4	5

1	Have supply chain challenges with delayed Projects?					
2	Have regular reports on project benefitted both parties?					
3	Is it important to guarantee contractors at Banks?					
4	Do regular meetings impact project delivery?					
5	Have poor workmanships terminated contract terminated?					
6	Have terminated contracts ended end up in legal battles?					
7	Do you agree that early payments are beneficial to parties?					
8	Do early collaboration lead to early payments?					
9	Is mobilization of materials at the start necessary?					
10	Any other, Please state.....					

(3) FACTORS LIMITING SUCCESSFUL IMPLEMENTATION OF SUPPLY RELATIONSHIP MANAGEMENT (SRM) TO ACHIEVE EFFECTIVE PROJECT DELIVERY SCALE:

1= Not very important; 2= Not important; 3=Not Sure; 4=Important; & 5=Very Important;

NO	LIKELY LIMITING FACTORS	1	2	3	4	5
1	Should MDA's have Supplier Relationship Management (SRM) teams?					
2	Is regular funding of suppliers important for?					
3	Is well defined vision and goals necessary?					
4	Should contract terms be well written and interpreted?					
5	Are quality personnel recruited for SRM positions?					
6	Are contracts large enough to support SRM?					
7	Are projects impeded for nonsupervision?					
8	Is supplier categorisation for SRM?					
9	Do supplier associations assist SRM business?					
10	Do you have suppliers for SRM business in your department?					
11	Any other, Please state & Recommend.....					

