

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

**EXAMINING FACTORS THAT CONTRIBUTE TO SUCCESSFUL CONTRACT
MANAGEMENT PRACTICES IN PROJECT DELIVERY: A CASE STUDY OF
MINISTRY OF LOCAL GOVERNMENT AND RURAL DEVELOPMENT**

BY

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DECLARATION

I hereby declare that this submission is my own work towards the award of Masters of Science in Project Management and that, to the best of my knowledge it contains no material previously published by another person(s), not material which has been accepted for the award of any other degree of the university, except where due acknowledgement has been made in the text.

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ABSTRACT

Contract management is critical if value for money and quality can be attained for outsourced projects. Communication between a contracting and a providing partner is enriched through proactive contract management practices. The aim of the study was to examine some factors that contributes to effective contract management practices in project delivery in the public sector. The specific objectives of the study were to examine the effect of contract management factors such as human capital management, risk management styles, knowledge channels and relationship management on project delivery. The study adopted a descriptive research design which sought to establish factors associated with certain occurrences, outcomes and conditions. The target population was 100 and purposive sampling technique was used to arrive at a sample size of 83. Questionnaires were used to collect data which was analysed quantitatively. The findings highlighted four major factors that contribute to successful contract management practices in project delivery namely; human capital, risk management frame work, relationship management and knowledge channels. The findings of the study indicate human capital and relationship management as key influencers of project outcome. The richness of an entity's human resource plays a key role in the quality of project it delivers to its catchment area. Managing relationship between contracting party and providers offer a mutual grounds for cooperation and information sharing. Information sharing is critical for the survival of any project. Furthermore the study advocates for the establishment of proactive risk management factors to ensure waste and excessive spending is reduced to the barest minimum. Adopting such measure ensure proper evaluation of risk and uncertainties in every stage of the contracting period. Risk assessment at every stage of the project design and execution process is crucial to save funds and further ensure quality is guaranteed.

Keyword: Contract management, Human Capital, Relationship Management, Project Delivery

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LIST OF ACRONYMS AND ABBREVIATIONS

HC- Human Capital

KC-Knowledge Channels

MDA-Ministry Department and Agencies

MLGRD-Ministry of local Government and Rural Development

MOJ- Ministry of Justice

PD- Project Delivery

PhD-Doctor of Philosophy

RMF- Risk Management Framework

RM- Relationship Management

VIF- Variance Inflation Factor

MOJ- Ministry of Justice

DEDICATION

I dedicate this research document to my Mr P.K Afull and to all my loved ones for their enormous support throughout the study.

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Firstly, I thank God for giving me the grace to carry out the research. I also extend my sincere gratitude to Peter Amoah, and Dr. Ernest Kisi for their guidance, directions during the last strides of the study. I couldn't have completed the research without your assistance.

I thank my loved ones for all their support in my study.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Ensuring effective project delivery is critical in accounting for public funds and building public confidence in public officials. Project delivery is characterized by several complex activities that need to be conducted in a prudent and efficient manner to avoid waste through proper procurement procedures. Procurement has been defined briefly as the sourcing of good and projects from third party providers (World Bank, 1995). In most case organisations and nation sources for goods and projects from multiple suppliers and manufacturers and can take either local or international dimension. Adopting proper procurement measures ensure proper utilization of resources and understandably so. Commitment from public officers to ensure adequate mechanisms are initiated to streamline the acquisition of goods and projects resulted in the enactment of Public Procurement Act 2003 in Ghana. The purpose of the act is to serve as baseline framework for public procurement activities. Implementing this act is critical since majority of procurement activities happens in the public sector. In addition, the enactment of this law or framework is to curb surging corruption associated with awarding of contracts and projects. Consequently, it is supposed to ensure transparency and credible procurement process (Roodhooft and Abbede, 2006; Mahmood, 2010).

Apart from the sanity procurement reforms shine on the procurement landscape, it ensures fair and equitable distribution and utilization of resources. Following laid down procedures enable public project to be executed in a cost effective manner where value for money is considered as critical component. Value for money assessment is a key driver for project awarding in public project (Grimsey & Lewis, 2005; Loader, 2007).

Although these reforms have positively impacted on the performance of procurement in recent times, one key aspect that can lead to project failure is how contracts are managed. Contract management is critical if value for money and quality can be attained for outsourced projects. Contract management is considered as an integral aspect of the procurement lifecycle. It involves a series of activities planned to aid contract managers to adequately manage contracts through transition management, performance monitoring and further ensuring responsible parties commits to contractual agreements (Turner, 2004; Eckerd & Hill, 2012).

Contract management plans are designed to mitigate risk associated with projects by ensuring provider or contracting partner adheres to standards and regulations outlined in contracts. Adhering and commitment on the part of provider to contractual terms have a positive effect on project outcome. It ensures all parties are abiding by outlined processes (Munns & Bjeirmi, 1996; Ika, 2009; Turner & Muller, 2005).

Communication between contracting and providing partner is enriched through proactive contract management factors. Constant communication is critical if targets can be attained. The level of communication between these individual entities serves as a lock-in mechanism that aid in development of trust. Trust is essential for appropriate information are to be transferred between parties. Essentially these constant communication aids in risk mitigation in an uncertain environment. When risk is communicated earlier, the probability of it exacerbating is averted (Kerzner & Kerzner, 2017).

1.2 PROBLEM STATEMENT

The importance of contract management has influenced several studies in the field of project management. Most studies in this domain primarily focus on how contract management can aid in the mitigation of project related risk. This group of study highlights the role of contract management in mitigating uncertainties in the project management (Turner & Simister, 2001); the role of contract management in ensuring projects are organised and coordinated in a cooperative environment is examined in a study conducted by Turner & C Guilding C (2010). The impact of contract management on project performance is analysed in scholarly work authored by Banyenzaki, (2016). The success of project depends to a greater extent how contracts are management before-during and after the project. The survival or failure of project is tied to how effective contracts are managed (Munns & Bjeimi, 1996; Kerzner & Kerzner, 2017).

Although these studies provide insights into the role of contract management practices in project performance and its defining role in project risk mitigation, limited studies is conducted to ascertain how factors such as human capital, relationship management, risk management and knowledge channel affect the quality of project delivery. This limits researchers and scholars' insights into the role of contract management practices and its impact on project delivery. And this is the gap the study seeks to fill by empirically investigating some factors that contribute to successful contract management practices in project delivery.

1.3 RESEARCH QUESTIONS

The research questions for the study are as follows;

1. What are the contract management practices within Ministry of Local Government and Rural Development for project delivery?
2. What are the effects of contract management practices on project delivery within Ministry of Local Government and Rural Development?

1.4 AIMS AND OBJECTIVES

The aim of the study is to identify the factors that contribute to successful contract management practices in project delivery within Ministry of Local Government and Rural Development.

1.5 OBJECTIVES

To achieve the aim of the study, the following objectives were outlined.

1. To identify factors that contribute to successful contract management practices in project delivery.
2. To identify the effects of the factors of contract management practices on project delivery.

1.6 OVERVIEW OF METHODOLOGY

The study employed quantitative technique in its research design. Field survey was used to collect data and information from key informants in the chosen study institution. Data will be acquired using both closed ended questionnaire measure items. In addition, interview question will be utilized to acquire information. Target population and sample will be derived from employees of the Ministry of Local Government and Local Development.

Before conducting empirical analysis to derived meaningful insights from acquired data and information reliability and validity test will be performed. Other statistical analysis that will be performed includes descriptive statistics, correlation and regression analysis.

1.7 SCOPE OF THE STUDY

The study is geographically restricted to the Ministry of Local Government in Accra, the nation's capital. It further limited to ascertain the capacity of public officers to follow due process in awarding contracts for project and goods procurement. Additionally, the factors that contributes to successful project delivery is examined.

1.8 ORGANIZATION OF THE STUDY

The study is classified into five (5) distinct chapters. **Chapter one** is dedicated to the introduction of the study. In this chapter, the background of study, research objectives and question is discussed. An overview of research methodology and scope of the study is presented.

Chapter two discussed relevant scholarly work in the field of contract management and project delivery. Current state of the body of knowledge on contract management and project delivery is examined to ascertain the missing link. Identifying the missing link enables researcher to situate its study in appropriate scholarly context.

Chapter three highlights the research methodology adopted for the study. Research design, method and data collection process is emphasis. Sources of data utilized for the study is detailed in this chapter.

Chapter four presents the result of empirical study. Initial demography of respondents and descriptive statistics is highlighted. Correlation and regression analysis is conducted and result presented in this section. Hypothesis is tested using t – statistical test.

And lastly **Chapter five** presents the discussion of research findings, recommendation and conclusion of the study. Further research direction is suggested to guide future research activities.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

This chapter presents relevant body of knowledge centred on the research topic. Contract management is a critical aspect of ensuring the right product or project is sourced and delivered. In the public sector this activity is essential due to its ability to affect public trust and affection for governments and public officers. In addition, adopting proper contract management mechanism does not only improve trust between citizens and authority, but further aids in cost reduction while ensuring efficient utilization of resources. The chapter touches on some contract management factors that affect project delivery, best factors in area of contract management as well as theories in this domain are examined. Project delivery channels and contract management factors that contribute to successful project delivery is examined in this section.

2.2 CONCEPTS OF CONTRACT MANAGEMENT

Awarding contracts for the acquisition of public products and projects is an essential component of activities that public officers observe in the discharge of their duties. The body of literature in the field of contract management indicates that when authorities follow due process in awarding contracts, it does not only save cost but also improve the quality of project offered.

Contract management involves coordinating of activities between diverse parties such as customers, vendors, partners/suppliers and employees. It involves series of negotiations to set out the terms and conditions delivering party should oblige. These details serve as the nucleus of contract formation. Aside setting out terms and condition, contracts contains the

procedure and execution of a particular project. It summarizes project activities from inception through execution to completion. Outlining these activities in a systematic mode ensure efficiency and optimal utilization of resources (Bhardwaj, 2011; Hotterbeekx, 2013).

Although there is no consensus on the definition of contract management, Grimsey & Lewis stated that contract management comprises processes undertaken to establish the integrity of contract and role responsible parties adheres to individual responsibilities. To ensure efficient project delivery each actor is expected to strict discharge its demarcated duties diligently. The operational objective of a project is achieved when all parties abide by strategic goals and needs of customer (Van Weele, 2014; Hotterbeekx, 2013).

Bhardwaj (2011), define contract management as the process that ensure responsible actors awarded a particular contract to oblige to guidelines and procedures agreed upon in order to deliver the objectives of the contracts. In his work he advocates for continuous relationship between parties to ensure trust building and effective information sharing. Fostering cooperation between actors is backbone of managing complex projects.

Oluka & Basheka (2014) advanced the definition of contract management include the role of leadership in ensuring contract objective are met. Aside possess capable workforce, skills and capital, for a project to success required constant interaction between diverse units and departments and sometimes-entire organizations. Ensuring each actor operates in an ethical manner requires the oversight of capable leadership mechanism. Leadership forms the centerpiece of inter – organizational project success and longevity.

Contract management in construction project management is referred to as project document that contains six categories such as finance management, house management, quality management, human resource management, procurement management and schedule

management. These dimensions augment the essence of instituting proper contract management framework. Consequently, these key elements have significant influence on the performance of such a project.

Managing these dimensions of project makes firms overcome challenges associated with contracting such as price fluctuations, incomplete contracting and fraud. Public procurement in emerging or developing economies are characterized by issues of corruption and fraud that restrict indigenes from deriving the needed benefit from these projects. Implementation of proper contract management protocols and process ensures these atrocities are overcome (Trevor et al., 2003).

The capacity of suppliers or project providers is monitor to address emerging problems or hurdles that might be discovered in the process of project execution. Project execution comprises of complex activities and actors. To attain success the capabilities and skills of diverse individuals needs to be monitored to ensure consistency throughout the entire project delivery process. Constant monitoring enables managers to identify gaps in knowledge and skills of suppliers or vendors (Lavy et al, 2012). And further aid in measuring the performance of vendors and providers.

2.3 THE PROCESS OF CONTRACT MANAGEMENT

According to Public Procurement Brief by SIGMA program 2011 (www.sigmaweb.org, accessed on 22 February, 2015) contract management activities can be broadly grouped into three areas: Delivery Management, Relationship Management and Contract Administration.

2.3.1 Delivery management

This ensures that whatever is ordered is then delivered to the required level of quality

and performance as stated in the contract. Delivery management may include checking the nature, quantity and quality of; Goods supplied – on delivery and also, when appropriate, at the time of manufacture; Works carried out – including conformity with designs and drawings, quality of workmanship and materials; Projects performed – including checking that required projects levels and timescales are met.

2.3.2 Relationship management

It seeks to keep the relationship between the economic operator and the contracting authority open and constructive, with the aim of resolving or easing tensions and identifying potential problems at an early stage, while also identifying opportunities for improvement. Relationships must be wholly professional throughout and must include a professional approach to managing issues and dispute resolution.

2.3.3 Contract administration

It covers the formal governance of the contract and any permitted changes to documentation during the life of the contract. This area of contract management ensures that the everyday aspects of making the contract run effectively and efficiently are taken care of (Hackett & Statham 2016).

2.4 CHALLENGES FACING CONTRACT MANAGEMENT

Contract management like most factors has its related problems and challenges that affect the success and closure of projects. Especially in emerging economies where public institutions and authorities are perceived to be corrupt and award contracts to cronies and family members to the detriment of deserving one. Most people hold that perception that gifts exchange hands before project contracts are awarded. Instead of awarding projects to deserving actors that possess the requisite skills and knowledge, contracts go to people who

have relationship with influential people in public institutions. This in most cases affects the quality of work or project provided (Kettl & Milward, 1996).

The inability of responsible parties to establish a systematic contract management procedure is at the core determinant for the failure of most contracts. When contracts lack clear communication and reporting channels, information and knowledge sharing is hindered. Having in place proper communication channels has the ability to improve the outcome of projects especially in the building and construction sector (Strangfeldova & Hronec, 2008).

In business environment where there are limited suppliers' competition coupled with lack of clear specification of product and projects influence the outcome of contracts negatively. Products and projects that is difficult to be specified or described in written contracts affects the delivery process since vendors or supplier do not have clear idea of what customer seeks (Milward & Snyder, 1996).

2.5 PROJECT DELIVERY

Evidently there has been a remarkable increase in the number of project providers in recent times. The rapid increase in this sector has provided the needed cushion to sustain most economies that have seen a decline in its manufacturing sector. Therefore, the significance of this sector cannot be underestimated. The dominance of projects is as a result of the value that customer derives from the patronage of these project right from purchase to after-sale activities. Due to the characteristics of project delivery and its involvement with targeted customers providers are able to communicate and share information with customers and vice versa. These interactive processes enhance the project delivery process and value creation for the customer (Normann, 2001; Verhoef et al, 2008; Porter, 1985; Allee, 2002; Ostrom et al, 2010; Osei and Owusu, 2015).

To ensure customer gain access to the requisite benefits of a particular project, providers needs to pay critical attention to the entire project delivery journey. Project delivery is defined as the set of principles, standards, policies, strategies and policies and in some cases constraints that can be utilized in the design and deployment of particular project. These set of procedures are designed to ensure value for customer and further improve customer experience (Grandey, 2003).

According to Quinn et al.,(2001), “there are series of project activities like setting of project plan, allocation, distribution, recycling, decomposition, repair, recovery of resources involved in the process of product servitization”. All these project activities in most cases take place in the project industries. The scholar further emphasized that, after-sale product; project supply chain plays the major roles before the goods get to the final consumer. The activities of the project industries are seen in largest areas in high-skilled jobs such as architecture, engineering, law and more recently, medical diagnostic projects (U.S International Trade Commission, 2011, Recent trends in U.S Trade, 2011).

Furthermore, globalization and advancement in technology have affected the functional activities of both manufacturing and project firms in past decades. Especially in the hospitality industry there is an on-going battle for firms’ that offers superior projects of value to its clients. For instance, in the aviation industry airline project quality in recent times has become an essential ingredient to gain customer loyalty, gain repetitive buyers and satisfy customer. Firms are of the view that when clients appreciate the quality of project offered there is a great probably it might translate into brand loyalty. Users align with projects that provide maximum utility and value. The pressure form users for an improved value have push firms to formulate policies aid at gaining a view into the customer perception before product or project deployment starts. The ability to anticipate client perceive value have a

significant impact on the brand image of firm (Liou et al, 2015; Chen & Hu, 2013; Wang et al, 2013).

Cases have shown that, project industries cannot only create value to the economy, but also support current industrial sectors to realize better value more effectively and efficiently. Project industries do, indeed, reflect higher levels of intellectual capital in recent years, but did not do so a decade ago. The growth of interest in the knowledge economy in recent years has, in part, been driven by the increasing dominance of projects in many large economies. Furthermore, current research suggests that the application of traditional supply chain network in the project context is not sufficient to realize a robust system. In addition, current studies are limited on the management aspect of the complex project network (Miah et al., 2013; Ellram et al., 2004; Arlbjorn et al., 2011). An implicit assumption exists that projects will require more skills and knowledge from employees (Erickson & Rothberg, 2015). Many projects have been thought to require more expertise and know-how from providers which the project industries are endowed with, especially modern projects driven by information technology and associated data.

Studies in the public sector indicates that in the acquisition of public goods and projects public agents pays critical attention to the project journey in order to provide valuable products to citizenry. Public management of contract initiates measures to ensure proper awarding of project contract and management to attain established objectives. Citizen demand public officer uses resource judiciously and equitably to provide quality projects to inhabitants (Levin & Tadelis, 2010; Brown & Potoski, 2002).

2.5.1 Effects of contracts managements on Project delivery

The delivery of quality projects is hurdled by series of difficulties on the part of both procuring party and providing actor. A gap in human resource skills and knowledge on part

of provider affects the outcome of project delivery. A study conducted by Schneider et al (2006) revealed that the lack of skill on part of project provider affects the quality of projects provided.

Communication is proved to be an important tool in the conveyance of information from one party to another in a reasonable manner. To ensure the complex activities involves in contract management runs smoothly proper coordination between actors is critical. Contracting and providing parties should establish clear-cut mode for information and knowledge sharing. A breakdown in this information and knowledge sharing practice gives birth to breakdown in network communication. Failure of communication in a complex system results in chaos and increase in cost due to wastage of scare resources (Dean, 2004; Papazoglou et al, 2004).

Studies in the field of Information and technological communication project delivery have revealed that the privacy and security of customers is most hindrance to delivery valuable projects. Recent increase in the number of cyber-attacks have drawn customer's attention to adopting measures to protect their personal information. Data security and client privacy is on the top of every firms list. Considering the mechanism involved in securing to identify and profile of customer hinders the delivery of valuable projects (Subashimi & Kavitha, 2011).

2.6 THEORETICAL LITERATURE REVIEW

To elaborate on the impact of contract management on public project delivery, the following theoretical perspectives are interrogated. In this study the principal – agency theory, transaction cost theory and Pareto Analytic view is discussed.

2.6.1 Principal – Agency Theory

The principal – agency theory over the years has been successfully applied to diverse research studies in the field of management studies especially in area of construction

management. The core of principal – agency theory is to foster relationship between principal (acquisition party) and an agent (project provider). These studies have indicated that procuring officers plays key role in ensuring both parties adhering to contractual agreements (Jager, 2008).

Some scholars have argued that the underlying principle of principal – agency theory is based on a clear understandings of the needs of the principal and the ability of supplier to provide projects and products that satisfied this needs. To ensure agents compliance principals must monitor the activities of its agents to ascertain their strengths and weakness during contract execution process (Ketchen & Hult, 2006; Oluka & Basheka, 2014).

Relationship between project owners and contractors needs to be formulated in a systematic process to smoothen information transmission without diluting its content. Diluted messages affect the quality of outcome among other factors. The principal – agency theory has been used to examine contractual relationship between companies as principal and providers as agent (Chiappori & Salanie, 2008; Ceric, 2008). The advances and success of principal – agent theory in dealing with contract requirement and responsibilities makes it a suitable lens to examine the effect of contract management on project delivery especially in public sector.

2.6.2 Transaction Cost Theory

One of the most popular theories in the field of economies and organisational theory in past decades is the transactional cost theory. Transaction cost theory focus on the transactions that occurs between different parties. Transaction cost involves the managing and monitoring of personnel and procuring input to ascertain if they match capital requirement of a firm. In some instance the cost associated with supplier selection, contract management, performance measurement and dispute resolution is calculated as a cost component of transaction (Williamson, 1981; Ghoshal & Moran, 1996).

Transaction cost includes expenses incurred during the design and deployment of projects either in-house or externally. Certain types of goods and projects have higher contracting transaction costs, and thus require higher levels of Contract Management capacity. Whereas contracting is less problematic for private goods, non-excludability and jointness of use give rise to market failures, and consequently they are more difficult to contract in competitive markets. Because markets are likely to under provide public goods, assessing the feasibility of contract arrangements is more difficult (Geysken et al., 2006).

2.6.3 Pareto Analysis

Pareto analysis is an approach developed by Vilfredo Pareto an Italian statistician. In his seminal work he discovered most of national wealth is controlled by 20 percent and accounts for 80 percent of expenditure. Therefore, to attain optimal resource utilization, it is prudent for manager to sort through available solutions to identify suitable ones. Pareto analysis provides a systematic and creative way to select appropriate solution in an effective manner that ensures equity. One essential component of this approach is its ability to simulate thinking and aid in thought organisation (Lysons & Farrington, 2006).

The choice of Pareto analysis is due to its potential to promote effective contract management. Through Pareto analysis organisations are able to analysis which options provide optimal result at minimal contract management cost. And this is critical due to the limited nature of resources (BG Group, 2014). However, it can be limited by its exclusion of possibly important problems which may be small initially, but which grow with time. It should be combined with other analytical tools failure mode and effect analysis.

2.7 EMPIRICAL LITERATURE REVIEW

A survey through academic literature reveals a number of studies conducted in the field of contract management and project delivery. Contract management has been studied in project management and organisational studies. A study conducted to explore the determinants and constraints of contract management in the public sector in Uganda. During their study a total of 120 individuals were sampled. The findings of their study revealed that contract management is related to contract performance (Oluka & Basheka, 2014).

Breedon (2012) found out that for project to attain success in its delivery, key performance indicators and data requirement should be constantly monitored to reflect benefits of contracts to be delivered. In his study the author focused on contract management review on the ministry of justice. Findings from their exploratory study indicates that when principal (thus contracting party) do not provide adequate information on specific product they want it led to gap in outcome performance since supplier are left to interpret requirement for themselves. Uncertainties arise when incomplete information is given to suppliers and this affects the key performance indicators of the contract under execution. To address these uncertainties, the study recommended that MOJ should design KPIs and requirement framework that reflects the outcome details of contract.

One essential aspect of contract management is the management of contractual relationship. Relational contracting needs to be fluid and flexible to encourage cooperation among members. This cooperative approach fertilizes the grounds for trust building and mutual understanding. Through this approach principal and agent are able to communicate and share value and norms of both parties. It helps enrich communication process and further promotes joint problem solving between actor. When principal and agent find themselves on level

playing field regarding information sharing and others it has probability to affect the performance of such party (Sumpikova & Rousek, 2009; Sclar, 2001).

Mturi (2013) assessment of procurement contract management in public institutions in Tanzania reveals that contract variation and skills of key contract management staff has implications on project delivery performance. In his study data is collected from key informant within the Kinondoni Municipal Council to test its state hypotheses. Findings revealed that contract management staff has inadequate skills and training to enable them discharge their duties in an efficient manner couple with late deliveries and lack of sense of professionalism. And this has a negative impact on the performance of such contract. To address this situation, the researcher recommended the adoption and institutionalization of continuous training to instil professionalism in individuals.

Contracting out to external parties is a prevailing activity in the business environment. Outsourcing of products and projects in recent times has been preferred choice by most organisations when it comes to project acquisition and delivery. The body of work in this area suggests that proper outsourcing will improve cost – effectiveness, delivery quality and expense control. Using Slovak data, Merickova & Nemec, (2013), investigated the factors that led to successful contracting in Slovakia. Using a quantitative approach, the study found out that there is no relationship between competitive selection and performance of contract. And this was attributed to the fact that there is non-existence of competitive supplier selection process in Slovakia.

2.8 FACTORS AFFECTING CONTRACT MANAGEMENT IN PROJECT DELIVERY

2.8.1 Human Capital

The backbone of organisational innovation and creativity evolves from the quality of human resource at such an entity's disposal. Human resource is the beacon of success of every organisation. The probability of firm with enrich human resource to improve upon its productivity is higher and vice versa. Although human resource plays a critical role in the productivity in all enterprises, the management of this crucial resource has been a daunting task for most firms.

One of the critical aspects of attaining contraction target is rooted on the commitment and capabilities of its human resource. Organizing coordination and cooperation activities between diverse individuals involved in specific project is a complex task that requires the commitment and compromises of every actor. It takes proper collaboration between these individuals to attain product objective in terms of delivery schedule and risk mitigation. In business - business sourcing or procurement is essential participants to share a relational bond as a means to improve trust and communication. In this study the researcher argues that proper management of human resource are able to utilize the capital it offers to improve the quality and value of projects awarded.

To examine the effect human capital on project quality outcome the study adopted scales developed by Roth (2012) that seeks to emphasis on the significance of human capital utilization in business – business transactions. Using this scale enables one to examine the skills, capabilities and how application of these knowledge affects project outcome.

2.8.2 Risk Management Framework

Risk inherently is associated with every business activity and understandably so. Therefore, managers have the upmost responsible to formulate prudent measure to curb the surge in emerging risks. Risk management in recent times has evolved to become an integral aspect of firm strategy and mission (Kerzner & Kerzner, 2017; Akintoye & Macleod, 1997; Ward & Chapman, 2003).

To mitigate the adverse effect of risk on business operations several measures and strategies have been executed by diverse organisations. These measures are to manage uncertainties within the entire supply chain network. The complex nature of project delivery requires each actor to play an essential part to improve itself in risk aversion and mitigating strategy implementation matrix (Bannerman, 2008).

Some of the measures implemented include creation of specialized risk management unit and department filled with individuals that have enough knowledge, skills and expertise in the design and executing of risk management policies. Looking at it from a principal – agency perspective requires the effort of both parties to mitigated these uncertainties. It takes the initiative of both the contracting party and provider to assessment and provides solutions to potential risks (Akintoye et al., 2008; Ambulkar et al., 2015).

Communication is critical to risk management and complex systems needs to improve on its information and knowledge sharing if it wants to curb uncertainties within its supply and value chain. Information and knowledge exchange enable parties to identify potential threats before it occurs. Through this joint effort participants are able to develop collective risk mitigation matrix and assessment tools. In measuring the role of risk management framework in project execution, scales developed by (Ambulkar et al., 2015).

2.8.3 Knowledge Channels

The knowledge base is described as one of the most important resource of firm. The social capital of firm mostly rests the richness of the enterprise knowledge about diverse aspects of its business operations. Despite knowledge base of an enterprise is accredited to be a fundamental component of firm success most firms have not been able to utilize its knowledge capabilities optimally (Cheng et al., 2008).

The mode in which knowledge and information is disseminated has the potential to either convey or distort its contents. Managers that seeks to achieve an improved outcome in their products should implement network communication channel that ensure knowledge and innovation diffuses effectively (Rogers 1995)

Adopting proper knowledge sharing channels would enhance the competence of diverse units and departments. The technical skills and capacity of employees is enriching through deliberate exchanges of information. Project outcome can only be successful if collaborating parties are prepared for the task ahead. Working as a single team with several moving parts is one of the main mode to ensure smooth and timely transmission of information to individuals. Implementing these approaches enable eliminate communication barriers and constraints. This fluid nature enables actor to easily adapt to evolving changes in project requirements on a timely basis (Sharratt & Usoro, 2003)

2.8.4 Relationship Management

Relationship management is defined as the ability of firms to manage interactions and relationship with its customers, suppliers and other actor within its value chain. These relationships can take virtual or physical mode respectively (Oliveira & Roth, 2012).

Managing the interactions between contracting partner and a project provider requires intentional implementation of strategies that foster cordial relationship. These strategies is geared at improving relational experience whiles improving on actor embeddedness to specific groups (Halgin & Borgatti, 2012; Burt, 2000).

Ties shared by actors in complex network delivery high quality product because of mutual understanding. This is attributed to role of relationship in building partnership between a firm and its customer. The customer can be individuals or a corporation in similar or adjacent business sector (Meng, 2012; Chen & Popovich, 2003).

One central component of relationship management is the ability for firm to move beyond transactional phase of encounter with customer to adopt a holistic approach to include customer in product specification and design process. Through this process firms are able to reduce wastage and further provide valuable products that its customers need (Dai & Wells, 2004; Payne & Frow, 2005).

In addition to firm gaining opportunity to co – create and improve its innovation capability through customer integration, it aids in conflict management between firms and external partners. In project delivery there is potentiality of conflicts, these occurrence needs to be attended to swiftly to minimize its effect on project outcome. Building relationship ensure actors have a stake in decision making process making it less liking for such a group to be characterize with numerous conflicts (Oliveria & Roth, 2012)

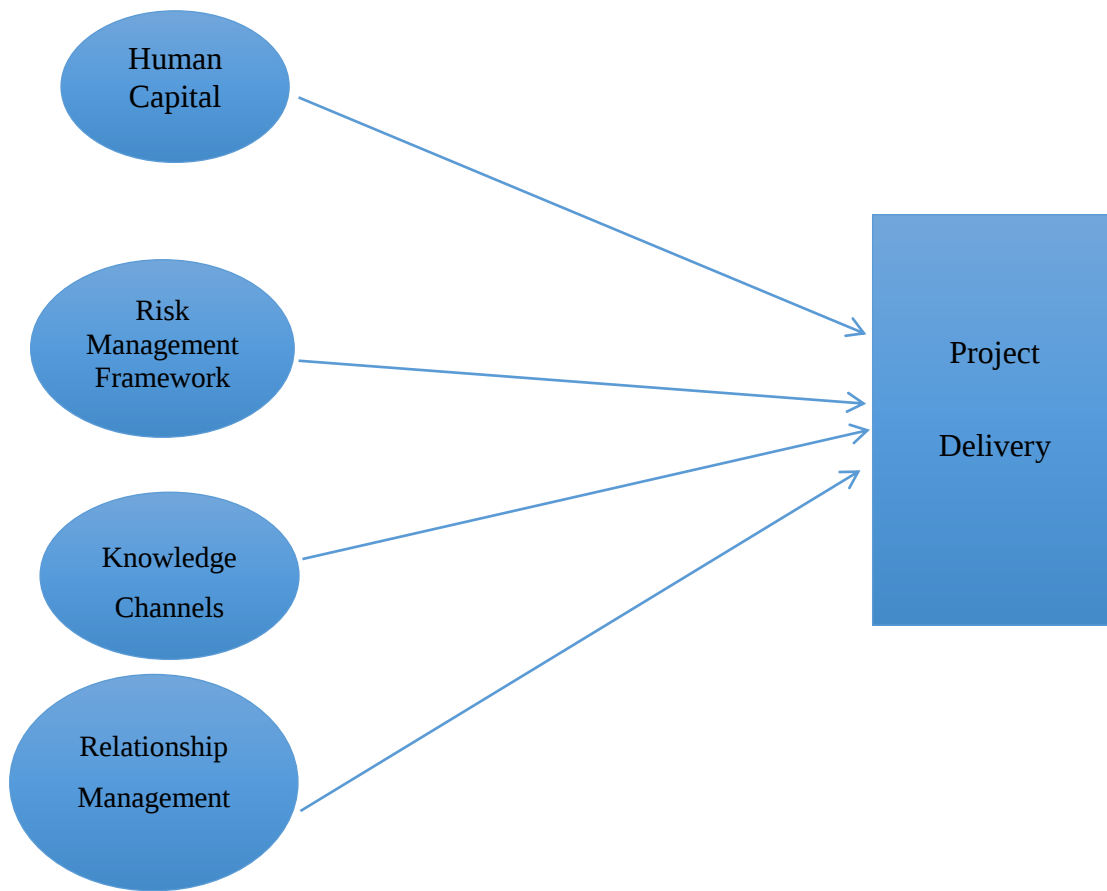


Figure 2.1: Conceptual Framework

Source: Authors Construct

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

The chapter 3 of the study presents the research methodology adopted to investigate the research objectives and questions of the study. Data collection and method of analyses is highlighted in this section. The sampling approach and size is discussed in this chapter. This chapter is arranged as follows; research philosophy, research design and method, population and sampling technique, sample size and data collection procedure. Lastly how data would be analysed in sequence chapter is highlighted.

3.2 ABOUT THE ORGANIZATION

Ministry of Local Government and Rural Development (MLGRD) is one of the largest public sector organizations in Ghana entrusted for planning and implementation of local level rural urban and small scale water resources infrastructure development programs. MLGRD works closely with the local stakeholders to ensure people's participation and bottom-up planning in all stages of project implementation cycle.

The broad objectives of MLGRD's development activities are to improve the socio- economic condition of the country through supply of infrastructures at local level and capacity building of the stakeholders. MLGRD promotes labor-based technology to create employment opportunity at local level and uses local materials in construction and maintenance to optimize the project implementation cost with preserving the desired quality. MLGRD works in a wide range of diversified programs like construction of roads, bridges/ culverts and markets to social mobilization, empowerment and environmental protection. The role and responsibilities of the Ministry of Rural Development and Local Government are mainly to, Convey the policy perspectives and guidelines of Central Government, Monitor the finances and

expenditure, Render expert advice, Issue guidelines on administrative and statutory regulations, Supervise the execution of projects and programmes, Coordinate the activities of Municipal Corporations in order to ensure the efficient and effective delivery of projects in a timely manner and also balanced growth development., act as an adjudicator in cases of disputes between Municipal Corporations

3.3 RESEARCH APPROACH

Researcher's perspective of the real world in most cases cannot be distinguished from its interpretation of scholarly work and findings. This notion of researcher influences the selection of particular research design over another. Scholars over past decades have identified several research paradigms such as positivism, realism among others (Yin, 2001).

A positivism paradigm is adopted as the lens under which the researcher will examine the impact of contract management on project delivery. Adopting this approach enable the researcher to interpret result of study without diluting it with one's own biases and misconceptions.

3.4 RESEARCH STRATEGY

Research design is defined as the overall plan or framework that serves as a guide for particular study. It guides the researcher in the selection of method and appropriate tools for data collection and interpretations. Most scholars have described research design as a blueprint to guide the direction of intended research activity. It elaborates on the manner in which the researcher seeks to conduct such a study (Mouton and Babbie 2001).

The study adopts an exploratory approach to ascertain the relationship between contract management and project delivery. The motive for selecting this approach it would the

researcher to gain in depth understanding about the role of competing factor associated with contract management in project delivery (Babbie & Mouton, 2001; Fox, 2007).

Adhering to research design, the study adopted an empirical approach to unearth the relationship between contract management and project delivery. Adopting these techniques enables research to systematically ascertain the extent each contract management construct influences the outcome of project delivery.

3.5 POPULATION

Employees of the Ministry of Local Government are identified as population group. Population of a study is defined as an aggregate of the number of units or individuals a researcher wants to study. Population in some case can be partial or include entire communities and countries. The size of population sometimes makes it difficult for researcher to include every member of population in specific study. To address this hurdle appropriate techniques are design to aid in the selection of relevant actors that can be studied.

3.6 SAMPLE SIZE

A sample can be described as a subset of a population or a selected representative of a larger population. The choice of sample and approach to data collection is critical if the study can arrive at a meaningful conclusion. Sample needs to select in a manner in which is representative enough of the overriding population since is not feasible to study entire population size (Kadam & Bhalerao, 2010). The sample size of the study was 83.

3.7 SAMPLING TECHNIQUE

In this study the researcher adopts a purposive sampling approach. Purposive sampling techniques is when a researcher selects respondents or information using a deliberate approach to exclude actors that are deem to possess less information on subject at hand. Purpose sampling is used to identify and collect data from key informant in the offices of Ministry of local Government.

3.8 DATA COLLECTION

Saunders et al (2007), stated that primary data are the information collected precisely for a project research being carry out. Obtaining this level of data is a tiresome and laborious activity. According to them secondary data is the already existing data that have been used for other purpose

The source of information acquired for a particular study is critical if meaningful insights can be gained. Credible source of information gives credence to the credibility of research findings and implications. To ensure data quality and credibility data should be collected from key informants using appropriate survey tools. The tool utilized in the collection of data for this study is the questionnaire. Closed-ended questions was adopted to ease respondents in answering the questions and also helped save their precious time.

The questionnaire is designed in a simple and unambiguous manner to ensure smooth collection of respondent opinions and view about the impact of contract management on project delivery. Is worth noting that questionnaire is design with strict confidentiality in mind, respondent do not have to disclose their identity in responding to outlined questions. Identify respondents included head of department of procurement unit, contract management staff and others.

Official of the ministry is contacted during the design stage to sort for their permission in order to allow its employees provide answers to questionnaire items. During this period the significant of the study is emphasized to potential respondents and therefore the need to provide accurate and relevant responses. The questionnaire measures items on a 7-point likert scale. A total of 100 questionnaires were sent out and attained a response rate of 83 per cent representing 83 answered questionnaires.

3.9 DATA ANALYSIS

Montgomery (1991) defines data analysis as a methodical Investigation of information collected in a systematized form in order to comprehend the developing trend in any situation. Creswell (2005) restated that data analysis as a process that encompasses drawing conclusions and inferences from findings.

Data that is acquired from the survey is inputted into Microsoft Excel version 2013 and later transferred into SPSS version 22. Initial reliability and validity test are conducted to ascertain the credibility of data before further empirical analysis is conducted. When the reliability and validity of data is ascertained, descriptive statistics is conducted to examine the mean, standard deviation, minimum and maximum data point.

In addition to descriptive statistics, correlation and regression test is conducted to highlight the relationship between contract management constructs and project performance. The hypothesis is tested using t-statistics test.

3.9.1 Reliability

The reliability and validity of survey data needs to be examined to check for internal consistency and other issues associated with survey data. Measuring the reliability provides

researcher with the standing to move ahead with further analysis and further ensues the quality of data (Saunders et al, 2007).

To determine the reliability of the data acquired, reliability test is conducted using the Cronbach alpha value as the unit of measurement. The outcome of the reliability test was ranges from 0.548 to 0.87. The outcome suggests that the data acquired was reliable with an alpha value greater than 0.5.

Table 3.1: Reliability Test

	Composite Relation	Alpha
Human Capital	0.657	0.543
Risk Management factors	0.548	0.623
Knowledge Channels	0.636	0.598
Relationship Management	0.810	0.848
Project Delivery	0.718	0.784

Source: STATA 13

3.9.2 Discriminant Validity

To examine the validity of the data, the discriminant validity approach developed by Fornell & Larcker (1981) is adopted. This number of tests have positive implication on the outcome of the study.

Table 3.2: Discriminant Validity

	1	2	3	4	5
Human Capital	0.778				
Knowledge channels	0.171	0.758			
Project Delivery	0.521	0.197	0.907		
Relationship Management	0.245	0.090	0.377	0.835	
Risk Management	0.140	0.303	0.236	0.363	0.877

Source: STATA 13

Campbell and Fiske (1959) introduced the concept of discriminant validity. Although there is no standard value for discriminant validity, a result less than .85 tells us that discriminant validity likely exists between the two scales. A result greater than .85, however, expresses that the two constructs intersection more and they are probably quantifying the similar thing. Therefore, we cannot claim discriminant validity between them.

3.9.3 Variance Inflation Factor

The variance Inflation Factor Analysis (VIF) is conducted to measure the extent of error in the dataset. Variance inflation factor is considered a critical issue if the VIF value obtained for a particular variable is greater than 10. In the case of this study, the value obtained for VIF was less than 10 for all measured variables.

Table 3.3: VIF result

	VIF
HC1	1.438
HC2	1.687
HC3	1.572
RM1	0.783
RM2	1.490
RM3	1.490
KC1	1.527
KC2	0.948
KC3	1.025
RLM1	1.273
RLM2	1.724
RLM3	1.211
RLM4	1.210
PD1	1.432
PD2	1.432

Source: STATA 13

The outcome indicates that multi- collinearity is not a significant issue regarding the data used for the purpose of this study. Result from these tests provides the grounds to conduct further analysis. Table 4.1 shows the VIF value obtained by all variables.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 INTRODUCTION

In this section of the study, the result attained from performing statistical analysis is presented. The reliability and validity of the data employ for the study is measured. In addition, the descriptive statistics coupled with Pearson correlation analysis is reported. Furthermore, the outcome of linear regression model is discussed.

4.2 THE INFORMATION OF THE RESPONDENTS

The information of the respondents is described by role in the Ministry, Department and Agencies (MDA), experience and highest level of formal education. The questionnaire asked a number of background questions, including education, experience, and respondents role when comes to contract management process at a case organization.

4.3 BIO DATA

Table 4.1: Age of Respondents

Category (Years)	Frequency	Percentage
21-30	19	23%
31-40	38	46%
41-50	24	29%
> 50	2	16%
Total	83	100%

Source: Field Survey, 2018.

Table 4.1 shows the age of the respondents. An examination of the age shows that the age range from 31 to 40 years were 46% and 21 to 30 years being represented by 23%. However,

29% and 16% of the respondents were represented by 41 to 50 years and above 50 years respectively. This is a suggestion that MLGRD has relatively young and active staffs with few personnel who are older and will be retiring soon.

Table 4.2: Level of Education Respondents

Category (Years)	Frequency	Percentage
PhD	-	0%
Master's Degree	18	27%
Bachelor's Degree	53	64%
Others	12	14%
Total	83	100%

Source: Field Survey, 2018

Table 4.2 above indicates that out of the total number of respondents sampled for the study, 64% of the respondents hold bachelor's degree while 27% have attained master's degree in various areas of educational studies. No respondents have attained a doctorate degree. Moreover 14% of the respondent hold various forms of certificates in different areas of educational studies. This may indicate that majority of the respondents have attained good level of education.

Table 4.3: Number of years worked with Public Service

Category (Years)	Frequency	Percentage
1-5	10	12%
5-10	21	25%
11-15	28	34%
16-20	10	12%
21-25	14	17%
Total	83	100%

Source: Field Survey, 2018.

As indicated above, the table 4.3 is about the number of years employees have spent working with MLGRD and the result shows that 34% of the respondents have been with the organization between 11 to 25 years. However, just a few of the respondents presenting 17% have been with MLGRD for more than 20 years. For an employee to be in MLGRD and involve in contract management for 11 years and more, is an indication that such employees should possess vast experience in contract management.

4.4 DESCRIPTIVE ANALYSIS

Table 4.4: Descriptive statistics

	MEAN	S.D
HC1	4.952	1.097
HC2	5.205	0.954
HC3	5.614	1.221
RM1	5.530	0.936
RM2	5.627	0.901
RM3	5.742	0.916
KC1	5.072	0.961
KC2	5.855	1.190
KC3	4.855	0.693
RLM1	4.964	1.054
RLM2	5.807	1.246
RLM3	5.530	0.972
RLM4	5.500	1.092
PD1	5.482	1.045
PD2	5.846	1.206

Source: STATA 13

4.5 FACTOR ANALYSIS

To examine which observed variables has the ability to measure specific unobserved variables, exploratory factor analysis is conducted. Exploratory factor analysis is a data reduction strategy which is utilized to identify the most significant indicators. Initial Kaiser – Meyer – Olkin measure of sample adequacy and Bartlett’s test of Sphericity is conducted.

Bartlett test of Sphericity (Approx: Chi – Square 205.755, df, 703, sig .000) and KMO (value of 0.786), these results support the rationale for performing factor analysis on dataset. Variables with factor loading greater than 0.5 are considered to be appropriate for further analysis (Hair et al, 2014).

The result obtained for factor analysis indicates majority of the unobserved variables have the ability to predict the outcome of its unobserved variables. However variables such as KC3, RLM1, RLM2 and RLM3 had factor loading of 0.133, 0.349, 0.433 and 0.482 respectively. These factors loading are below the accepted threshold of 0.5 and above. The table 4.4 shows the outcome of exploratory factor analysis.

Table 4.5: Exploratory Factor Analysis

	No of items	Loadings
Human Capital		
HC1	3	0.817
HC2		0.740
HC3		0.772
Risk Management Factors		
	2	
RM1		0.833
RM2		0.930
Human Capital Management		
	2	
KC1		0.643
KC2		0.857
Relationship Management		
	2	
RLM3		0.759
RLM4		0.904
Project Delivery		
	2	
PD1		0.922
PD2		0.893

Source: STATA 13

The outcome of reliability test indicated the variables are reliable for further analysis and do not exhibit signs of multi-collinearity as a result of high inter – item correlation. All the variables examined had alpha value greater than 0.5 therefore making them acceptable without the need for re – specification. The outcome of discriminant validity satisfies the threshold suggest by Henseler et al (2015) and Sarstedt & Mooi (2014).

4.6 CORRELATION TEST

The table 4.6 shows the result for the Pearson correlation conducted. Correlation analysis is conducted to ascertain the statistical relationship between latent variables under study.

Correlation test is conducted to examine the casual relationship between the factors of contract management, that is, human capital, risk management, relationship management, knowledge channels and Project delivery.

The result indicates human capital, knowledge channels of an organisation, relationship management and risk management factors to some extent have a relationship with the quality of project delivery. The table 4.5 presents the result of correlation test conducted.

Table 4.6: Correlation Analysis

	1	2	3	4
Human Capital				
Knowledge Channels	0.171			
Project Delivery	0.521**	0.197		
Relationship Management	0.245*	0.090	0.377*	
Risk Management	0.140	0.303**	0.236	0.363

*P < .10, * p < .05., ** p < .01., ***p < .001

Source: STATA 13

4.7 THE EFFECT OF CONTRACT MANAGEMENT FACTORS ON PROJECT DELIVERY

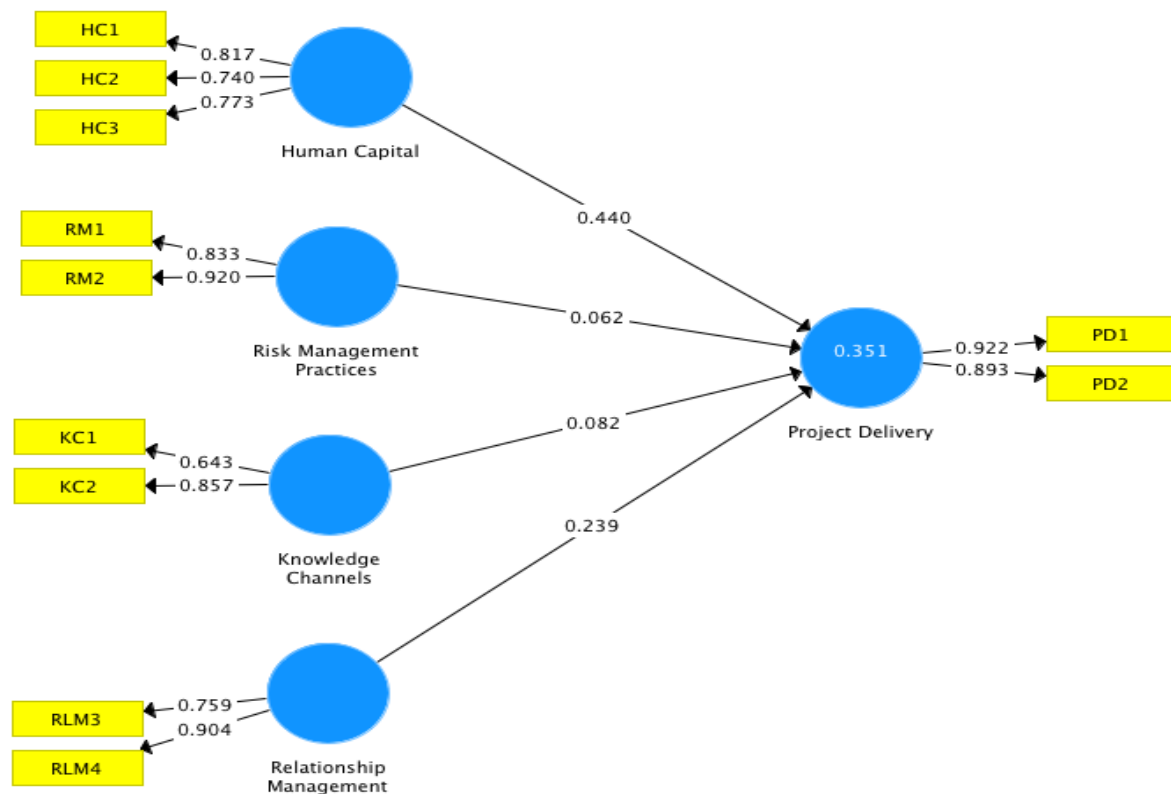
The effect of contract management factors on project delivery is evaluated using a structural equation modelling approach. The structural equation modelling approach enables the research to examine the structural relationship between the latent variables and dependent variables (Hair et al.,

2009). Adopting this multiple linear regression approach enables the study to unearth the causal relations between the constructs. And further highlight most significant construct when it comes to achieving project objectives. The constructs understand includes human capital, knowledge channels, and relationship management and risk management factors. Each latent variable is measured with a set of observed variables. The dependent variable for the study is project delivery and is measured with 2 indicators. The table 4.4 presents the descriptive statistics of the variables utilized for the study.

4.7.1 Regression Test

In order to examine the effect of contract management factors on project delivery, multiple linear regressions is conducted. The R^2 value of 0.351 and adjusted R^2 of 0.317 is obtained, indicating the construct can explain 35. 1 per cent of project delivery outcome. Although the value is not high enough it shows these variables have fair influence on the quality and value of project delivered by public agency.

Figure 4.1: Partial Lease Square



Source: STATA 13

However, human capital of the organisation had the most significant relationship with the dependent variables. The quality of human resource an organisation possess has high probability to affect its decision making process. Firms with high human capital turn out to be more competitive in their endeavours comparatively. With the right skill set authorities are able to negotiate diligently to attain a win-win situation in a cost effective manner.

The health of relationship between supplier and contracting party is critical to the success of every project. Maintaining cordial relationship with providers and supplier aids in trust building. Aside providing fertile ground for trust and mutual cooperation, information and knowledge sharing is conducted in a timely and accurate manner divulge of ambiguities. The figure 4.1 shows the outcome of multiple linear regression.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

The chapter presents summarizes the insights gained from of the study. Recommendations are provided in this chapter to enable practitioners make informed decision. Finally the conclusion and further research direction is suggested.

5.2 SUMMARY OF FINDINGS

Public official and authorities have a responsibility to ensure that every project undertaken serves the best interest of its citizenry. To ensure this mandate is achieved deliberate policies and measures have been implemented to check abuse of power/authority and also provide framework that should be adhered to in the event of awarding contracts. Emerging countries in recent times have joined the race to sanitize the use of public funds. Measure employed to curb the abuse of public funds included the enactment of public procurement Act as a policy framework to guide the activities of procurement and contract awarding.

The findings of the study indicate that public institutions take into consideration diverse contract management factors from initial stage through to final stage. Among the various activities conducted in these stages, proper identification of project requirement happens to be critical to the survival and success of projects. Negotiation prior to selection of supplier or provider is key influencers in current contract management practices. These findings conform to the findings from studies such as Manso & Nikas (2015) and Sharma (2016). These sets of studies highlights the significances of proper negotiation and identifying critical requirement of project is crucial to attaining project objective.

Monitoring and evaluation project against established key performance indicators enables proper revision of project at each stage of delivery process. The study found out monitoring and evaluation at the core of project delivery. This approach is adopted to ensure high standards and quality is adhered to. The essence of monitoring and evaluation has been emphasis in studies such as Sammons et al.(2015 and An et al (2017).

The skills and capabilities of individuals in an organisation is its greatest asset. This human resource provides firms with the need potential to achieve it business and corporate strategy. The contribution of human capital towards organizational performance cannot be underrated. The findings indicate that human capital had positive impact on project delivery. A firm with capable people it is able to design and implement successful product at cost effective way. As indicated by Carpenter & Sanders (2001) and Crook et al (2011) human capital of any organisation is critical to the performance for both technical and operational efficiency.

Inherently risk is an inevitable aspect of every project. The ability to mitigate this risk has greater propensity to affect the quality and value of projects. Identifying risk enables providers and contracting party save cost and time in the design and execution stage of project. The effect of risk management on project quality is acknowledged by studies such as Hillson (2017) and Carvalho & Rabichini (2015).

However, the study makes such intriguing revelations, relationship between diverse stakeholders seem not to influence the outcome of project significantly. Rationale for this occurrence can be attributed to low inter – agency or firm collaboration between various stakeholders in the procurement ecosystem. This findings contradicts studies conducted by Zou et al (2014), Too & Weaver (2014) and Bourne (2016) that suggest that proper risk management factors has significant impact on project delivery.

5.3 CONCLUSION

The central theme of the study is to investigate current contract management practices within MLGRD. In addition it examined the effects of contract management factors such as human capital management, risk management factors, knowledge channels and relationship management on project delivery. Project delivery is measured in terms of project quality and value.

From the study, it can be concluded that there exist various factors of contract management practices in MLGRD. The contract management factors highlighted by the study included human capital management, risk management factors, knowledge channels and relationship management. Out of the several factors of contract management practices highlighted, human capital and relationship management were identified as key influencers of project outcome.

Finally, the study concludes that managing relationship between contracting party and providers provide mutual grounds for cooperation and information sharing. Information sharing is critical to survive of any project. The richness of an entity's human resource plays a key role in the quality of project it delivers to its catchment area.

5.4 RECOMMENDATIONS

The findings of the study indicate human capital of a firm and relationship management have the most influence on the outcome of project. Indicating agencies that have access to superior human capital coupled with proper relationship management skills stands the chance to offer competitive and valuable projects. Insofar as human capital and relationship management have an impact on project outcome, risk management factors and knowledge channels had less influence. To ensure public entities offer citizen value for money project the following recommendations are propose:

- Institutions should make continuous training and development a core component of their business development and growth strategy. Firms with knowledgeable individual stand a better chance to outwit competition in this turbulent business and political environment. Gaining access to superior knowledge makes an entity formidable force in its sector. In addition it's provide talents in organisation with relevant industrial knowledge to discharge is activities diligently. Enriching the skills and capabilities of individuals on the aggregate contributes towards organisation performance and the success rate of its projects.
- It is crucial to implement deliberate measures that foster constant interaction between diverse stakeholders within the procurement ecosystem. Through these interaction information and knowledge is shared in a prudent and efficient manner. The issue of trust is resolved through formation of social ties and alliances. Each actor feels invested in the success of such project or alliance therefore would contribute positively towards achieving collective objective. In addition through constant interaction social capital is developed. Actors can utilized available social capital to enhance its internal innovation and creativity.
- The study advocates for the establishment of proactive risk management factors to ensure waste and excessive spending is reduced to bare minimum. Adopting such measure ensure proper evaluation of risk and uncertainties in every stage of the contracting period. Risk assessment at every stage of the project design and execution process is crucial to save funds and further ensure quality is guaranteed.

5.5 FUTURE RESEARCH

Even though, the study makes some significant contribution, there are some shortcomings that hinder generalization of study findings. The sample size is relatively small compare to number of local government practitioners and their distinct location some operates. Future studies needs to adopt larger sample size to reflect the view of individuals in different catchment areas. In addition a longitudinal approach should be adopted in future studies to ascertain how these factor change over time.

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APPENDICES

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,

KUMASI

COLLEGE OF ARTS AND BUILT ENVIRONMENT

FACULTY OF BUILT ENVIRONMENT

DEPARTMENT OF CONSTRUCTION TECHNOLOGY AND MANAGEMENT

(Master of Science in Project Management)

SURVEY QUESTIONNAIRE

This questionnaire is aimed at soliciting information on 'Examining factors that contribute to successful project delivery'. I will be very grateful to you if you could give us part of your valuable time in responding to this survey. Kindly be informed that this research is purely academic. Therefore, all information given will be treated with uttermost confidentiality.

Research Topic:

Examining Factors that Contribute to Successful Project Delivery: Case Study of Ministry of Local Government and Rural Development.

By:

JANE ADJABENG

Tel: 0243537057

Email: jadjabeng8@gmail.com

Please, kindly respond to the question by ticking in the appropriate box for each item.

SECTION A: DEMOGRAPHY OF RESPONDENTS

1. Gender

a) Male ☐

b) Female ☐

2. What is your age?

a) 15– 19 ☐

b) 20 – 29 ☐

c) 30 – 39 ☐

d) 40 – 49 ☐

3. Educational level?

a) PhD ☐

b) Master's Degree ☐

c) Bachelor's Degree ☐

d) Others ☐

4. Job Position?

a) Senior Management Level ☐

b) Mid- Management Level ☐

c) Line Management Level ☐

5. Work Experience (in years)

a) < 5 ☐

b) 6 – 10 ☐

c) 11 – 15 ☐

d) 16 – 20 ☐

SECTION B. CONTRACT MANAGEMENT FACTORS HAVE ON PROJECT DELIVERY

The following questions are rated on a 7 – Likert scale, where 1 = extremely disagree and 7 = extremely agree.

1. Which of the following contract management factors have significant influence on project delivery?

1) Human Capital

	Rare						Often	
1) We have created a stable workforce so that our employees can build better skills	1	2	3	4	5	6	7	
2) We promote comprehensive quality education and training of our employees	1	2	3	4	5	6	7	
3) We have an education plan where more than 5 percent of an employee's time is devoted to training.	1	2	3	4	5	6	7	

2) Risk Management Mechanism

	Rare						Often	
1) We have a department to manage supply chain risks and disruptions	1	2	3	4	5	6	7	
2) We have KPI and metrics to monitor supply chain risk	1	2	3	4	5	6	7	
3) We have information systems in place to manage supply chain risks and disruptions	1	2	3	4	5	6	7	

3) Knowledge Channels

	Rare					Often	
1) Managers regularly visit supply chain partners to enable two-way sharing of expertise	1	2	3	4	5	6	7
2) Use teams that cross company boundaries	1	2	3	4	5	6	7
3) Employees share expertise with partners via informal gatherings	1	2	3	4	5	6	7

4) Relationship Management

	Rare					Often	
1) We believe that the right relationship with our customers means more than the price we charge them	1	2	3	4	5	6	7
2) Solving problems with customers is considered a joint responsibility no matter who is at fault	1	2	3	4	5	6	7
3) We are concerned with our customers' profitability, as well as our own	1	2	3	4	5	6	7

5) Project Delivery

	Rare					Often	
1) We implement measures to minimize waste in project delivery process.	1	2	3	4	5	6	7
2) Our project meets established quality and value standards.	1	2	3	4	5	6	7

THANK YOU