



**SUPPLIER RELATIONSHIP MANAGEMENT AND PROCUREMENT**

**PERFORMANCE OF NATIONAL MEDICAL STORES, UGANDA**

**BY**

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**14/MBA/11/064**

**A DISSERTATION SUBMITTED TO THE SCHOOL OF MANAGEMENT SCIENCES  
IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS FOR THE AWARD OF THE  
MASTERS DEGREE IN BUSINESS ADMINISTRATION AT UGANDA MANAGEMENT  
INSTITUTE**

**NOVEMBER, 2017**

**DECLARATION**

I, *Charity Birungi*, hereby declare that, this is my original work and has never been presented to any other university or institutions for any academic award before. Where secondary sources of information used in this work, they have been acknowledged.

Date .....

Signed .....

**APPROVAL**

This study has been conducted under our supervision and the dissertation is now submitted for examination with our approval as the candidate’s supervisor.

**Signature.....**

**Dr Micheal Kiwanuka**

**Date: .....**

**Signature.....**

**Ms. Oluca Pross Nagitta**

**Date.....**

## **DEDICATION**

This dissertation is dedicated to my beloved husband Dr. Peter Mbidde Musiitwa who stood by me and provided me support and encouragement throughout the study. The work is also dedicated to my dear children for their high sense of patience and understanding during the period when I was absent from them during the course of this study even when they wanted my physical presence most

## **ACKNOWLEDGEMENT**

This study has been completed with the support and encouragement of numerous people without whom, it may have been much difficult. First and foremost and with thankful and heartfelt appreciation, I acknowledge the contribution of my supervisors, Dr Michael Kiwanuka and Ms. Pross Nagitta Oluka for their parental and academic guidance, commitment and readiness to help whenever I approached them. I salute them for the professional listening skills rendered to me towards the completion of this work. May the Almighty God bless them abundantly.

Relatedly, I would like to deeply thank all my lecturers at UMI. These have adequately guided and equipped me with both theoretical and practical skills. I would also like to acknowledge the contribution of my classmates of UMI from whom I enjoyed fruitful discussions on challenging topics.

In a special way, I wish to acknowledge with gratitude, the contributions and co-operation accorded to me by National Medical Stores. They did not only allow to carry out the study from the organization but also provided the study with the necessary information as respondents. Without their cooperation, this study may have been impossible to accomplish.

Any errors and omissions are entirely mine

**MAY GOD BLESS THEM**

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## LIST OF ACRONYMS

AHSPR	Annual Health Sector Performance Report
ASL	Approved Supplier List
BMAU	Budget Monitoring and Accountability Unit
CVI	Content Validity Index
CVI	Content validity index
FY	Financial Year
IFM	International Monetary Fund
GOU	Government of Uganda
KPI	Key Performance Indicator
NMS	National Medical Stores
MoH	Ministry of Health
OECD	Organization for Economic Cooperation and Development
PPDA	Public Procurement and Disposal of Public Assets Authority
PSM	Procurement Supply Management
SCM	Supply Chain Management
SPSS	Special package for social scientists
SRM	Supplier Relationship Management
UK	United Kingdom
WB	World Bank.

## **ABSTRACT**

This study assessed the contribution of supplier relationship management on public procurement performance of NMS Uganda. Specifically, the study established the relationship between supplier development; supplier appraisal; and supplier collaboration, and public procurement performance of National Medical Stores. The study was a cross-sectional survey design which used quantitative research approach and qualitative approaches. In collecting data, a questionnaire and an interview guide were used on a sample of 109 (NMS officials and administrators). Whereas quantitative data analysis was done using descriptive statistics and inferential statistics) content analysis was used to analyze qualitative data. Findings revealed a significant positive relationship between supplier development and supplier appraisal on public procurement performance of National Medical Stores. However, supplier collaboration was found to have a negative relationship with public procurement performance at National Medical Stores. The study recommended that national medical stores should improve on the supply disruptions while putting much effort on improving supplier collaboration that affect public procurement performance.

# **CHAPTER ONE: INTRODUCTION**

## **1.1 Introduction**

This researcher undertook an investigation while assessing how supplier relationship management was related to procurement performance of National Medical Stores (NMS), Uganda. Supplier relationship management (SRM) worked as a representation of independent variable (IV) and public procurement performance was used as the dependent variable (DV). This chapter covers the basis under which the study was rooted from global to local level of study history, theory, concept and contexts. The study further establishes a problem statement that rendered it undertaking as well as the study specific objectives as derived from the conceptual framework. The objectives guided the research in developing research questions and hypotheses. The conceptual framework is also consisted within this chapter, the study scope, study significances and justification. Lastly the chapter operationalized the study concepts.

## **1.2 Background of the Study**

### **1.2.1 Historical Background**

Since the 18<sup>th</sup> century, supplier relationship management in public organizations emerged as part of the public procurement reforms recommended by International Monetary Fund (Adjei, 2005). Throughout the 2000s, SRM has continued attracting and gaining in both the developed and developing nations (Cowell, 2009). The act of purchasing since history has been highly referred to as a clerical function-meaning that the interplay between the buying agents and the suppliers in the chain is usually done adversary (Burton, 2004). This kind of understanding has been changing through history and many people started shifting their understanding from what is called adversarial to seeing it as a collaborative function (Burt, Dobbler & Starling, 2003). In the United Kingdom for example, a lot of pressure started to emerge putting a number of companies to ensure

that they deduct on the prices of supply, inventory costs, stock management costs with a purpose of ensuring that the quality of supplies improve in terms of costs, time and value for money (Veludo, Macbeth & Purchase, 2006). As a way of solving this problem, procurement departments idealized that there is a need to undertake some lessons in managing supplies to ensure that the performance of procurement improved. They started by making sure supplier competence is improved through training, they went to motivation and lastly collaboration.

In the context of Africa today, companies in South Africa, Kenya, Rwanda and Tanzania for example, have already embraced the concept and practice of Supply chain Risk Management (SRM) with its related importance. Such countries are today implementing world class Supply chain management (SCM) intended to improve the performance of their service providers. Managing supplier relationships therefore, has become imperative for business growth and realizing efficiencies (Agaba & Shipman, 2007). The transitivity of a company's competitive advantage however, did not become simple but rather turned out to be complex relationship between supplier and the buyer (Blome & Schoenherr, 2011).

In Uganda's context, the issues of supplier relationship management was first depicted in forms of supplier collaborations which was featured into increased disobedience of time for delivery, not minding about the client, lack of some important materials in the supply chain, supplying of goods that were considered substandard, consistent denial of supplies, rejecting of products and increasing deferring of payments (Ntayi & Eyaa, 2010). That situation rendered the introduction of supplier relationship management in public enterprises during the improvement of procurement framework in 2003. Further, Muhwezi (2009) also showed that organizations in Uganda did not

always put much effort to ensure that their suppliers are motivated or collaborated with to ensure lasting relationships. These used to inconvenience a number of government departments especially in billing them inconveniencing costs and indulging in late supplies. Basheka (2008) thus indicated that the move to ensure that the performance of procurement improves created a way for supplier relationship management to ensure that problems to do with disobedience of time for delivery, not minding about the client, lack of some important materials in the supply chain, supplying of goods that were considered substandard, consistent denial of supplies, rejecting of products and increasing deferring of payments are solved.

Notwithstanding, NMS has not yet paid much attention to the supplier relationship management (Awuondo & Abdikadir, 2013). It is assumed that the procurement department of NMS was weakly positioned in the chain of drug delivery which means that the management of the organization have less attention to its work and this prolongs the work done and hence destroying the whole quality of supplies. Thus, due to the ongoing decentralization of health care system in Uganda, NMS management expects the organizations procurement function to increase its contribution in form of gaining revenue and acquire knowledge in future (Muhwezi, 2009). It is from such background that this study was conducted to assess whether the performance of procurement in NMS as any linkage with supplier relationship management.

### **1.2.2 Theoretical Background**

Transaction Cost Economics Theory was adopted to guide this study. This theory was advanced by Commons (1931) and formalized by Coase (1937). According to the theory, the major emphasis was put on the cost involved in provision of goods or services especially in the market. The proponents argue that the market value of a product or services determines the cost of supply.

As Mead and Gruneberg (2013) suggest, importance of supplier idea execution is another key procurement performance measure in supplier relationship management. Advanced procurement firms actively seek ideas from suppliers for revenue growth, cost savings among others. The ideas are tracked and their contribution to the firm's bottom line is measured. This helps to measure the department's ability to leverage intellect in the supply base. Another useful Key Performance Indicators (KPI) in operational performance is the procurement cycle time. This can be measured by the average time taken between requisition submission and placement of a purchase order. This can also be determined by the time taken from the start of sourcing process to the time of contract signing. The KPI is important in measuring the department's productivity (Sollish & Semanik, 2012). The aforementioned performance indicators are instrumental in establishing the connection between supplier appraisal and public procurement performance.

This idea intimates that in supply relationship management, supplier collaboration, supplier communication and supplier development can be among the most effective ways of improving the performance of service providers. In a nutshell, the transaction cost economics theory advocates alignment of supplier relationship management with real organizational activities if the goal of melioration of improving performance is to be realized.

### **1.2.3 Conceptual Background**

The key concepts of the study were supplier management and procurement performance. Supplier management meant the arrangement put forward to ensure that suppliers are brought together and a collegial relationship is put into play in form of motivating them, collaborating with them and developing them (Goran, 2005). SRM thus refers to a form of organization which defines what the organization needs to achieve, which suppliers can help to achieve this and how the organization is best going to work with the supplier and improve the performance (CIPS, 2009). In this study,



supplier relationship management was conceptualized as supplier appraisal, supplier collaboration and supplier development.

Procurement performance on the other hand, refers to a holistic procedure ensuring that value of procurement increase in any procurement organization (Weele, 2000). It can also mean the methods of ensuring that efficiency and effectiveness in an organization are quantified (Neely, 2005). Accordingly, in this study, performance was measured by quality, value for money, timeliness, and client satisfaction

#### **1.2.4 Contextual Background**

Over the years, Uganda has had a number of programmes and projects under the management of Ministry of Health (MoH). The Ministry delegated the drug supply function to National Medical Stores. This is mandated to ensure that pharmaceutical supplies are distributed continuously and sustainably. Since the inception of NMS, Government has been providing 30% of the funds budgeted for the purchase of medical supplies directly to NMS to perform its mandate. The remaining 70% being passed on directly to the local governments. Effective from Financial Year (FY) 2009-2010, the Government changed its policy and is now availing 100% funding for medical supplies directly through NMS. However, several reports have been seen still pointing at poor performance of procurement in NMS. It was therefore evident that the availability of medical supplies in all public health facilities depends entirely on the efficiency and effectiveness of SRM.

#### **1.3 Statement of the Problem**

Supplier relationship management is expected to play a significant role in the reduction of costs and the optimization performance of public sector procurement (Han, Wilson & Dant, 1993). In the Ugandan context, t National Medical Stores is charged with the responsibility of procuring and supplying essential medicines and supplies to the public health sector in the country (NMS, 1993).

The management of NMS has partially achieved this by streamlining and making more effective the organizations sourcing processes. In addition, enormous investment in supplier development and collaboration with suppliers has also been made by NMS (Mugurura, 2013).

Despite all the above efforts, procurement performance of NMS in Uganda is still a distant reality (AHSPR, 2015/16). Reports show that a number of people using public health centers are suffering and dying or being killed by diseases which are preventable and this has been so because of drug stock-outs. In addition, annually, it is evidenced that the problem of drug stock-outs is reported in all parts of Uganda (BMAU, 2015; 2016).. This increasing stock outs on medical supplies in all levels of health facilities have been highly attributed to supplier relationship management. If this problem is not appropriately addressed, it may lead to increased poor health service delivery in Uganda. It was against this background that this study assessed the relationship between supplier relationship management and public procurement performance of NMS

#### **1.4 Study Purpose**

The study aimed at investigating the relationship between supplier relationship management and procurement performance of National Medical Stores, Uganda.

#### **1.5 Specific Objectives**

The study was guided by the following objectives;

- i)** To ascertain the relationship between supplier development and procurement performance of National Medical Stores
- ii)** To find out the relationship between supplier appraisal and procurement performance of National Medical Stores
- iii)** To examine the relationship between supplier collaboration and procurement performance of National Medical Stores

## 1.6 Research Questions

- i) What is the relationship between supplier development and procurement performance of National Medical Stores, Uganda?
- ii) What is the relationship between supplier appraisal and procurement performance of National Medical Stores, Uganda?
- iii) What is the relationship between supplier collaboration and procurement performance of National Medical Stores, Uganda?

## 1.7 Hypotheses for the Study

H<sub>1</sub>. There is a positive significant relationship between supplier development and procurement performance.

H<sub>2</sub>. There is a positive relationship between supplier appraisal and procurement performance.

H<sub>3</sub>. There is a positive relationship between supplier collaboration and procurement performance.

## 1.8 Conceptual Framework

### Independent Variable (IV)

#### Supplier Relationship Management

##### Supplier Development

- Supplier training
- Capital provision
- Advisory and technical support

##### Supplier Appraisal

- Suitability assessment

7

### Dependent Variable (DV)

#### Procurement Performance

- 
- Quality
- Timeliness
- Client satisfaction



**Figure 1: A conceptual framework showing relationship between supplier relationship management and procurement performance**

*Source: Adopted and Modified by Simatupang & Sridharan (2005).*

The study focused on supplier relationship management with emphasis on supplier appraisal, supplier development and supplier collaboration as the independent variable and procurement performance with emphasis on customer responsiveness, and compliance with public procurement laws and regulations as dependent variable. These variables were moderated by PPDA Act 2003. The relationship between supplier relationship management and public procurement performance is based on the fact that collaboration with the suppliers, information sharing and supplier development leads to effective procurement performance of National Medical Stores.

**1.8 Significance of the Study**

This study findings may provide information to policy makers and advocates that may be used as a basis for policy review or formulation creative ways of improving the supplier relationship management in public procurement management.

The study findings may also benefit NMS as it identified challenges currently facing the organization in respect with to supplier relationship.

The findings of the study may help other management of public procurement institutions to identify areas of weaknesses in supplier relationship management and act on them. It is expected also to add onto the knowledge bank of other scholars, whereby inspiring additional studies to be done in the same field for academic purposes..

### **1.9. Justification of the Study**

. The rationale behind the choice of this study was to empirically establish the impact of supplier appraisal, supplier development and supplier collaboration on public procurement performance with the National Medical Stores as case study. The study recognizes the need to research in order to understand the linkage between the aforementioned dimensions. Another justification for this study lies in geography. No study has been done on the same topic in NMS. The result of this study is hoped to contribute positively to the field of public procurement performance.

### **1.10. Scope of the Study**

#### **1.10.1 Geographical Scope**

The study was conducted in the National Medical Stores, Uganda located in Entebbe. This case study was chosen because it was accessible to the researcher and ties in very well with the operationalisation of the research problem under study.

#### **1.10.2 Time Scope**

The study covered the period between 2011-2016 because this is the period in which several projects were implemented and the performance of the ministries was questioned in Uganda (OAG report, 2010).

#### **1.10.3 Content Scope**

This research was limited to supplier relationship management and procurement performance of NMS. Supplier relationship management in this study was limited on supplier appraisal, supplier development and supplier collaboration, whilst, performance this was limited to quality, time, client satisfaction and value for money. The research went into the details of the relationship and also

attempt to establish whether they can lead to the effective performance of procurement of NMS.

### **1.12 Operational Definitions of Terms**

**Supplier appraisal:** this referred assessing of whether the supplier that is about to be selected is suitable and capable to make supplies competently before an award is given.

**Supplier development:** this referred to a collaborative process of ensuring that the suppliers that are about to be selected have the required skills and capacity to do the work.

**Supplier collaboration:** in this study, this referred to the pursuit of quality, efficiency and affordability without eroding suppliers' profit margins

**Quality:** This referred to the extent to which the work produced by civil servants meets the standards set by line managers.

**Timeliness:** This referred to the level of promptness in completing tasks.

**Value for money:** this referred to the level at which the service providers are able to provide services that are relative to the funds given to them

**Client satisfaction:** this referred to the extent to which customers of service providers are contented with supplies and deliveries made.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The study investigated the relationship between supplier relationship management and public procurement performance. This chapter presents the theoretical and related literature according to the study objectives. In particular, the chapter presents the theoretical review, the related review

and a summary of the literature review

## **2.2 Theoretical Review**

The theoretical framework for this study was derived from the transaction cost economics theory advanced by Commons (1931). Formalization of the theory of transaction cost economics is generally attributed to Coase (1937). Transaction cost economics theory majorly emphasizes that the cost involved in provision of goods or services especially in the market. The proponents argue that the market value of a product or services determines the cost of supply.

As Mead and Gruneberg (2013) suggest, importance of supplier idea execution is another key procurement performance measure in supplier relationship management. Advanced procurement firms actively seek ideas from suppliers for revenue growth, cost savings among others. The ideas are tracked and their contribution to the firm's bottom line is measured. This helps to measure the department's ability to leverage intellect in the supply base. Another useful Key Performance Indicators (KPI) in operational performance is the procurement cycle time. This can be measured by the average time taken between requisition submission and placement of a purchase order. This can also be determined by the time taken from the start of sourcing process to the time of contract signing. The KPI is important in measuring the department's productivity (Sollish & Semanik, 2012). The aforementioned performance indicators are instrumental in establishing the connection between supplier appraisal and public procurement performance.

This idea intimates that in supply relationship management, supplier collaboration, supplier communication and supplier development can be among the most effective ways of improving the performance of service providers. In a nutshell, the transaction cost economics theory advocates align

nment of supplier relationship management with real organizational activities if the goal of melioration of improving performance is to be realized.

## **2.3 Related Review**

### **2.3.1 Supplier Development and Public procurement Performance**

In understanding how supplier development and public performance of procurement are related, a number of studies and journals were reviewed. For instance, Nagurney (2010) indicates that supplier development must start with ensuring that suppliers are trained, provided with the required capital or equipments and fairly advised and technically supported, if an improvement in public procurement performance is to be reached on. Nagurney (2010) adds that in modern development, the competitiveness of any organization lies in ensuring that supplier development is done. Monczka, et al., (2008) argued that seminars and workshops need to be arranged by an organization at least every financial year and suppliers need to be called and given the required training especially in how the organization manages its inventory, stock management, supply chain performance and other related functions. These always inform the suppliers in doing more than what they will have done to have their performance improve. The improvement in the performance on the side of suppliers means an improvement on the side of buying organization since they are operating in a collegial relationship.

Krause et al., (2000) argue that supplier development calls for training suppliers in areas that are needing, and this can only be arrived at if a supplier performance appraisal is conducted. Such an appraisal will always provide the required weaker points which need to be addressed during training. If it is late delivery of supplies, the supplying firm is informed that even though it has the best quality of products, late deliveries will distort the relationship. Training should be done on



both sides, the buying and supplying side. Maula (2009) argues that supplying personnel are trained not that they do not understand what they are doing but to perfect their supplying capacity in the new organization.

Gordon (2008) in line with the arguments of Krause et al., (2000) agitates that training outcomes are important in benchmarking on to ensure that future areas where the buying organization wants the suppliers to improve are improved and development efforts are put in play to ensure that even the buying organization is compliant. Krause et al, (2007), further ascertained that training of suppliers may primarily improve the performance of public procurement but it becomes very important if it is done with capital provision. A number of suppliers are capable of providing the best quality of supplies and services, however, majority of the firms have no enough resources to deliver in time. Krause et al, (2007), gave an example of a supplier of good building raw-materials for a construction organization but with no enough trucks to keep delivering in time. They indicated that, a buying organization needs to intervene to make sure that this supplier is provided with capital to obtain such trucks and pay in future. The delays are always caused by lack of resources.

Archstone (2007) further added the issue of advisory and technical support. He indentified that many supplying and buying organizations need only some form of advice and technical support from either side to improve procurement performance. Theor (2009) extended this by arguing that most buying organizations tend to force impossible timelines on the side of suppliers and the suppliers tend to force to have such timelines meant and they end up supplying poor quality of materials. But if suppliers are collaborated and engaged, they would directly advise the buying

organization that there is a need to extend their procurement plans if they need quality supplies. On the other hand, Archstone (2007) argues that a number of supplying firms need only one technical advice to step up and make inventories in time and meet the buying organizations value for money criterion. Such organizations tend to operate on intuitions but when technically supported, their performance tends to improve. Sanchez-Rodriguez et al., (2005) concludes that there is a need to have a sophisticated way of doing things because the world has already entered a new global age that requires operating with technology. The combination of supplying and technology makes it automatic and timely. This study was done to establish whether suppliers in NMS are trained and if trained, what would be the cause of poor procurement performance.

### **2.3.2 Supplier appraisal and public procurement performance.**

Supplier appraisal is undertaken by the purchasing organization before a contract is placed with the supplier. According to Fogg (2006), supplier appraisal refers to an assessment done before a supplier is considered for an award of a contract and this consists assessing its potentials in capability to supply quality products, delivering in time, cost-efficiency and many other factors for efficiency and effectiveness in procurement supply. By this analysis, the objective of supplier appraisal is to become aware that the supplier about to be selected has all the requirements to undertake the organization or buyers' duties in a way that is efficient and effective (Ford, 2006).

De Sousa (2006) thus indicated that in current days, it is actually mandated that a pre-contact supplier appraisal be done as a prerequisite for strategic procurement to make sure that value for money can be harnessed in an organization. This must be submitted to the management of an organization to make sure that the supplier that is about to take the contract has all the required

capacities to undertake the work more successfully. De Sousa (2006) further argues that the procurement or user department needs to be very honest when making such assessments because at the end of the day, if honesty is not adhered to, its consideration will be observed at the end of the tunnel after the contract is awarded and the supplier is not doing things in a proper manner. This will always cause question in how supplier appraisal is done. This study thus aimed at making sure that it investigates whether NMS undertakes supplier appraisals honestly and whether this has had an impact on procurement performance in the organization.

According to, Balakrishnan (2004), a more ambiguous trend has been the conscious assessment and validation of supplier networks and the development of collaborative or partnerships between buyers and suppliers. Storey, (2002) adds that, such schemes are of strategic significance than simply of tactical gains. Therefore success is derived from all members of the supply chain adding superior value to their product/services and delivering them more efficiently than competitors (Storey, 2006). Further, effectiveness in undertaking supplier appraisal becomes imperative in ensuring that the operational performance is boosted. In procurement, supplier appraisal is undertaken to achieve organizational goals as stated in the strategic plan. Procurement performance ensures that the overall strategic objectives of an organization are effectively and efficiently realized. Clearly, supplier appraisal boosts an organization's operational performance measured against the various performance measures, such as, quality, flexibility, speed, efficiency, and supplier relationship. Costello (2008) extends this by arguing that suppliers needs to be improved in the areas where they have been found to have weaknesses and this will always improve the effectiveness in performance of an organization and improving its competitive advantage.

With reference to Erridge, Fee and McIlroy (2001), in a procurement department where supplier appraisal take place, a number of operational performance measures are essential. Firstly, supplier defect rate is a key operational performance indicator used to measure the quality of purchases carried out by a procurement department. This can be achieved by dividing the number of defects by the total purchases, or defective shipments by total shipments. Firm competitiveness can also be measured by use of customer satisfaction indicator. Internal customers' rating on their satisfaction levels with the department's performance is essential in achieving this. If many firms use similar questions, benchmarking levels of satisfaction is achievable. Customer satisfaction helps in measuring the department's capacity to meet the needs and expectations of internal customers (Ray, 2011). The study had not considered the situations in NMS which rendered this study imperative to be considered.

### **2.3.3 Supplier Collaboration and procurement performance**

Togar & Sridharan (2002) argue that supplier collaboration essentially means ensuring that there is effective communication between the supplier and the buying organization. It also means that consistent motivation of suppliers when they do go or bad, they can either be positively sanctioned or negatively sanctioned. It may also mean the sharing of losses and gains between the supplier and the buying organization. Togar & Sridharan (2002) thus argue that the performance of public procurement in the current public service organizations across the globe relies heavily on supplier collaboration. They cited an example of a shoe factory in Singapore. This factory had its competitive advantage improve because it decided to share a percentage of its profits with suppliers away from the money they must get. This gave width to suppliers to ensure that they take their

supplies to only this shoe company. This gave it an edge in shoe making in the country.

Further, Mac Neil (2004) argues that supplier collaboration solves issues of inconvenience in time, quality and cost. This is because supplier collaboration puts in place a need to keep sharing information with suppliers on what is available and what was not available. He indicated that consistent sharing of information makes the supplying firm punctual and ever ready to fill the missing gaps in the organization. He indicated that, in organizations like supermarkets, new automated software has been integrated which continuously alerts the suppliers and the buyers what is missing and automatically filled. This has completely reduced on late supplies in premises and improved on customer satisfaction. Mac Neil (2004) argues that such arrangement can be a very good step that can be obtained by public service organizations especially those dealing in goods in keeping in contact with suppliers to avoid stock-outs. This is the basis as to why the researcher wanted to undertake this study in NMS to establish whether they have an automated way of sharing information with the suppliers and if they have, has it improved on the performance of its procurement.

Goffin et al, (1997) further ascertained that supplier collaboration extends to motivation. When the suppliers does what is beyond expectation, managers of a buying firm need to motivate the firm to ensure that they can consistently do the same because it is helping the buying organization to meet its service deliveries in time too. Lonsdale and Watson (2005) in addition indicated that, motivation can be both positive and negative. It can be both intrinsic and extrinsic. Positively, they mentioned things to do with extending contracts and ensuring that remunerations are revised upwards. Negatively, the buying firm can be cautioned, penalized in terms of money, taken back to

prequalification stages and so many others. Lonsdale and Watson (2005) argue that this awakens the performance of a supplying firm. For intrinsic supplier motivation, the supplying firm can be rewarded using non-financial means like recognizing its work and be provided with a certificate of good performance, be recommended to other organizations that need its services, it can also be given an award for best suppliers working with the organization annually. Extrinsically, the organization can be reduced on the cost of supplies in the organization, it can be provided with good remunerations and make prompt bids and fund transference.

According to Wells, (2006) supplier collaboration needs to include a motivational element, He states that there are often two key components of a motivation strategy which include; gain sharing which used in a number of industries and these enable the pursuit of quality, efficiency and affordability without eroding suppliers' profit margins and supplier award programs. This study wanted to establish how supplier motivation, communication and loss and gain sharing are done in NMS and whether these had improved on its performance in procurement activities.

#### **2.4 Summary of the Literature Review**

In summary, an expansive literature focus on supplier relationship management and the performance of public procurement. Understandably, given the nature of relationship, it is also clear from the literature reviewed that there are knowledge gaps in literature. Whereas most of the studies that form the basis of the literature reviewed were conducted in Europe, little research had been conducted in Sub-Saharan Africa, to collaborate most of the literature. Despite the existence of several studies on supplier relationship management especially in areas of supplier development, information sharing and supplier collaboration, these studies have neither been able to relate to performance of public procurement indicators and situation at NMS nor do they point out how supplier development, supplier appraisal and supplier collaboration relates to public

procurement performance. Although a lot of previous studies have been done on the relationship between supplier development, supplier appraisal and supplier collaboration and public procurement performance, most of them do not cover all factors employed by this study in operationalising supplier development, supplier appraisal and supplier collaboration and public procurement performance. Further, such studies fell short on explaining on what is happening in local government setting in developing countries like Uganda and NMS in particular.. In filling this knowledge gap, this study endeavored to assess whether supplier development, supplier appraisal and supplier collaboration can have a significant effect on public procurement performance while using NMS Uganda.

## **CHAPTER THREE: METHODOLOGY**

### **3.1 Introduction**

The study investigated the relationship between supplier relationship management and public procurement performance of NMS. This chapter explains methods which were adopted. It consisted of study design envisaged, study population, sample size and selection, sampling techniques and procedures. The chapter also addresses the various methods and procedures for collecting data and analyzing data that were used in accessing information regarding the influence of the supplier relationship management on the performance of Public procurement in NMS

### **3.1 Research design**

A case study research design was selected to enable an in-depth investigation of the study problem that adopted both quantitative and qualitative approaches (Amin, 2005). On one hand, qualitative techniques were used in capturing respondent's views and undertake an in depth analysis of supplier relationship management and public procurement performance in NMS (Mugenda & Mugenda, 2005). The quantitative techniques on the other hand, were used in examining how the two variables selected for this study are related.

### **3.2 Study population**

The study population consisted of 132 staff from National Medical Stores. The population of the study included all the people involved in work at National Medical Stores and included among others: 12 top management, 20 supervisory staffs, 80 Procurement unit and contracts committee staffs (NMS Human Resource Records, 2016). They were used in the study because in their course of work at National Medical Stores, they are aware, affected, effect and thus best suited to assess the problem of the study. The people who were selected to participate in the study included those whose experience with National Medical Stores operations is not less than at least 1 year.



### **.3 Sample size**

The sample size for the study was 109 determined basing on statistical tables of Krejcie, and Morgan, D.W. (1970) cited in Amin (2005). The sampling procedures are presented in table 1 below

**Table 1: showing total population, Sample size, sampling technique**

Population Category	Access Population	Sample size	Sampling Technique
Top management	12	10	Purposive sampling
Supervisory staff	20	19	Simple Random sampling
Procurement unit and contract committee members	100	80	Simple Random Sampling
Total	132	109	

*Source; primary data*

### **3.4 Sampling techniques and procedure**

The study used both random and non-random sampling approaches. In particular, simple random and purposive sampling techniques were used respectively. Simple random sampling was preferred in the selection of the supervisory staff and members of the procurement unit. This was intended to avoid bias by providing an equal and independent chance to all respondents to participate in the study.

On the other hand,, purposive sampling technique was used to select members of top management. The members of this population category were assumed to have varying levels of knowledge relevant to the study so the technique enable the researcher hand pick respondents on the basis of who she deemed to have more relevant information..

### **3.5 Data Collection Methods**

#### **3.5.1. Questionnaire Survey**

This method allowed the collection of quantified data from a large number of respondents. The

researcher prepared a set of questions pertaining to the field of enquiry (Quantitative). The designed questionnaire included mostly closed ended and although there were also some open ended questions. The Questionnaire was used because it was cheap to administer to the respondents that were scattered over a large area or organization within a short period of time. A questionnaire also allowed respondents to feel free to give information and respondents answer the questions at their own time sometimes without the influence of the researcher (Amin, 2005). The questionnaire was designed using the Likert scale format of Strong Agree to Strong Disagree.

### **3.5.2. Face to face interviews**

This technique was used to collect primary data from Top Management officials. Interview method basically relied on face-to-face interviews with the respondents in a bid to generate detailed and first-hand information. This involved the researcher personally interacting with the selected respondents with a set of pre-determined questions that they were required respond to on a one by one basis. This chose to use a semi-structured interview guide (Sekaran, 2004). Interviews allowed the researcher to probe and prompt the answers as they arose from the key informants for deeper study findings.

### **3.5.4 Documentary Review**

The document review was chosen to review a number of sources that existed for secondary data collection. In here, review was done on existing working documents, NMS work files, NMS data sheets and artifacts. These were reviewed with an aim of collecting data and information that would verify what had been reported through questionnaires and interviews. Further, public records which were obtained outside NMS were used in ascertaining the problem of poor procurement performance in NMS

### **3.6 Data collection instruments**

### **3.6.1 Interview Guide:**

In-depth interviews were conducted using the interview guide. The interview guide was unstructured and semi-structured. For either technique, the method enabled the researcher to collect accurate information from the officials who were selected to participate as key informants because, they had a wealth of experience and knowledge in procurement processes and practices. The instrument was used to ensure that reliable information is gathered because, it facilitates a deeper investigation into the topic under study. It helped the researcher to explain or clarify questions and find out the likeness. The interviews only applied to members of the only top management.

### **3.6.2 Questionnaire:**

This tool allowed the collection of quantified data from a large number of respondents. The researcher prepared a set of questions pertaining to the field of enquiry. The designed questionnaire included mostly closed ended and although there were also some open ended questions. The Questionnaire was used because it was cheap to administer to the respondents that were scattered over a large area or organization within a short period of time. A questionnaire also allowed respondents to feel free to give information and respondents answer the questions at their own time sometimes without the influence of the researcher (Amin, 2005). The questionnaire was designed using the Likert scale format of Strong Agree to Strong Disagree.

### **3.6.3 Document Review Guide:**

The document review checklist was chosen to review a number of sources that existed for secondary data collection. In here, review was done on existing working documents; NMS work files, NMS data sheets and artifacts. These were reviewed with an aim of collecting data and information that would verify what had been reported through questionnaires and interviews.

Further, public records which were obtained outside NMS were used in ascertaining the problem of poor procurement performance in NMS.

### 3.7 Quality control

#### 3.7.1 Validity

The researcher ensured that the tools that were used in the study possessed the required validity. Here, expert judgment was sought to make sure that the items in the questionnaire are rated in such a way that they have a content validity index of above 0.7 which is recommended by Amin (2005) as enough to guarantee the validity of the instrument. Table 2 below has details;

**Table .2 Content Validity Indices for the Questionnaire**

Variable	Description	No. of Items	Content validity index
Independent	Supplier development	9	.796
	Supplier appraisal	8	.876
	Supplier collaboration	8	.808
Dependent	Public Procurement performance	7	.829

*Source: Primary data, 2017*

#### 3.7.2 Reliability

This measures the degree at which the tool can consistently measure the different scenarios but providing the same results over time (Gay, 1996). In this case, the researcher undertook this by undertaking pretesting of the instruments twice using National Drugs Authority as an organization synonymous with NMS. It was established after pilot testing that, all items in the questionnaire had a Cronbach Alpha

**Table 3 Reliability indices for the respective sections of the questionnaire**

Variable	Description	No. of Items	Cronbach alpha

Independent	Supplier development	9	.831
	Supplier appraisal	8	.865
	Supplier collaboration	8	.853
Dependent	Public Procurement performance	7	.904

*Source: Primary data*

### **3.8 Data collection procedure**

Using an introduction letter from UMI, the researcher obtained approval from National Medical Stores authorities to conduct the research. The researcher then piloted the questionnaire on a sample of ten respondents and the interview guide on two respondents. The researcher then used the comments from these respondents to improve the questionnaire and interview guide. The researcher then made contact with the various authorities to whom the letter was addressed and together with the authorities made appointments as to when the study would be carried out to enable proper planning. On the agreed dates, the researcher went to the organization (National Medical Stores) to meet the respondents and collect the data. The researcher ensured that during the data collection questions are discussed in the presence of the respondents so that she well understood; and where necessary made adjustments to reduce the chances of non-compliance and non-reliability of the tool. The data collection was carried out for a period of one week. In the event of any incompleteness of the data collecting exercise, the researcher rescheduled the appointments on consultation with the respondents. After data collection, data analysis was done and the dissertation report was made, which marked the final activity of the research process.

### **3.9 Data Analysis**

The study analyzed qualitative and quantitative data.

### **3.9.1 Qualitative data analysis**

The qualitative data collected from interviews and documentary reviews was analyzed by content analysis. The initial step involved sorting the content into themes, which depends on the content. Data collected was organized into a common data pool. It was transcribed, synchronized and grouped into themes. During analysis, themes were generated from the responses and categories. A coding scheme was adopted to create themes. It was these major themes that formed the basis of extrapolating out the emergent issues related to the research question subject matter. Patterns of linkages and clues from the themes related to the research questions were observed and data interpretation was done in respect to the research objectives. Checking was done to minimize errors of double selection and other forms of repetition.

### **3.9.2 Quantitative Analysis**

Quantitative data was analysed through descriptive and inferential means. Descriptive means included use of frequencies, percentages, means and standard deviations. This kind of data was presented using frequency tables, pictograms and graphs or pie charts. Inferential means included; using both correlation and regression analysis means. In this case, a Pearson correlation and linear regression were used. Pearson Correlation was used in answering the study research hypotheses and Regression Analysis was used in establishing the extent to which the two variables under investigation are related (Oso and Onen, 2008).

### **3.10 Measurements of variables**

The study variables that are both independent and dependent variables were measured using the five point Likert type scale and this was Supplier relationship management and public procurement performance. This scale was used because it was assumed for important in establishing numerical strength of study variables and understanding the perception of respondents.

### **3.11 Ethical considerations**

The researcher employed confidentiality in the course of data collection for the information to be given. Here the researcher was anxious not to explode what key informants and employees said. The researcher also employed cooperation, whereby she was able to continuously operate with respondents to establish a concrete rapport and this induced respondents to tell what they would not have said. Participation was made voluntary to allow open expression in the research to exhaust facts related to the study area. The researcher employed non-probability sampling techniques to ensure that sampling bias is minimized by ensuring that randomization is achieved. Lastly, non-responses were voluntarily mobilized to respond without being forced.

## CHAPTER FOUR:

### PRESENTATION, ANALYSIS AND INTERPRETATION OF RESULTS

#### 4.1 Introduction

The study investigated the relationship between supplier relationship management and public procurement performance of NMS. This chapter presents, analyses and interprets the study findings. The findings are presented using study objectives established. Specifically, the chapter in turn presents the response rate, biodata, and study findings

#### 4.2 Response rate

The response rate of the study was calculated using a formula:

$\text{Response rate} = \frac{\text{targeted response rate}}{\text{Response rate}} \times 100\%$ . The response rate findings are indicated in Table below.

**Table 4: showing the response rate**

<b>Tool</b>	<b>Target response</b>	<b>Actual response</b>	<b>Response rate</b>
<b>Questionnaire</b>	80	69	86.2%
<b>Interview</b>	29	21	72.4%
<b>Total</b>	109	90	82.6%

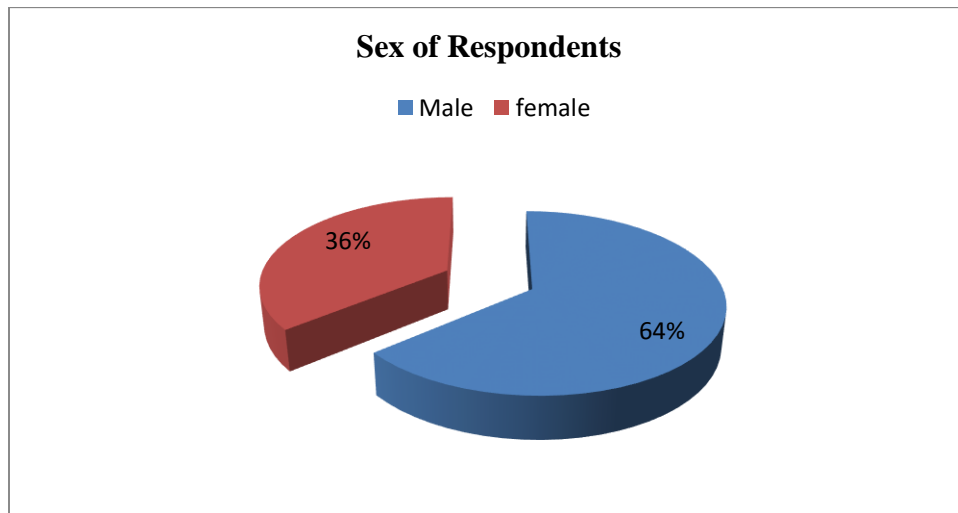
*Source: Primary data, 2017*

80 questionnaires were administered, however, 69 managed to be accessed which made a rate of response at 86.2%. On the side of interviews, 29 respondents had been targeted, 21 managed to be accessed meaning that 72.4% was the response rate. On overall, 82.6% managed to reply. This response rate of 82.6% deemed good because it was over and above the 70% recommended by Mugenda and Mugenda (2003).



### 4.3 Background of the Respondents

#### 4.3.1 Gender of the respondents

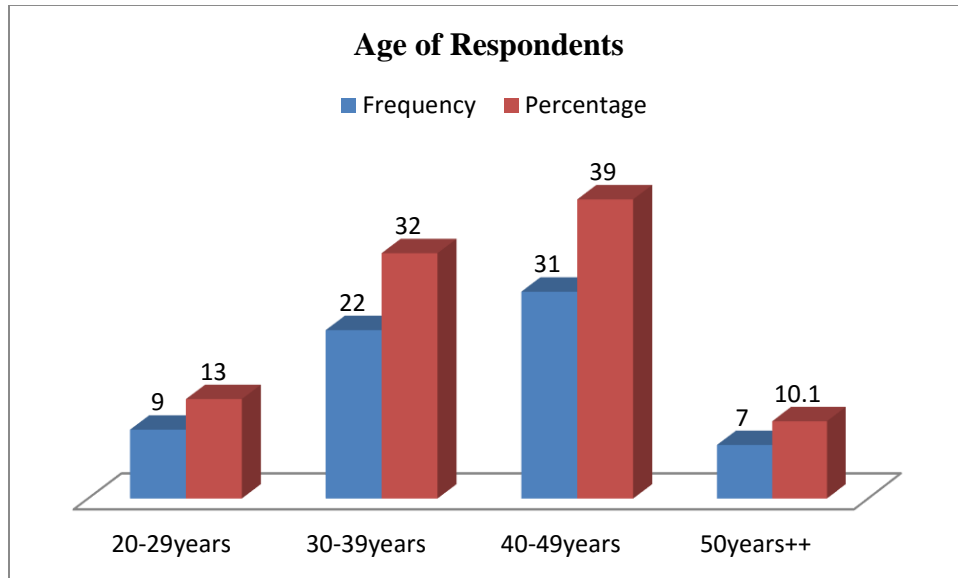


*Source: Primary data, 2017*

#### **Figure 2: Gender of the respondents**

From figure 2, it is indicated that the majority of respondents in the study were males constituting 64%. Females on the other hand, were constituted 36% of the respondents. The implication of this finding was that no matter the disparity in percentage of males and females who attended the study, at least views of both males and females were captured which is too vital in making a critical analysis in the performance of public procurement. This made the study findings representative and, therefore, enabled generalizations

#### 4.3.2 Age of the Respondents

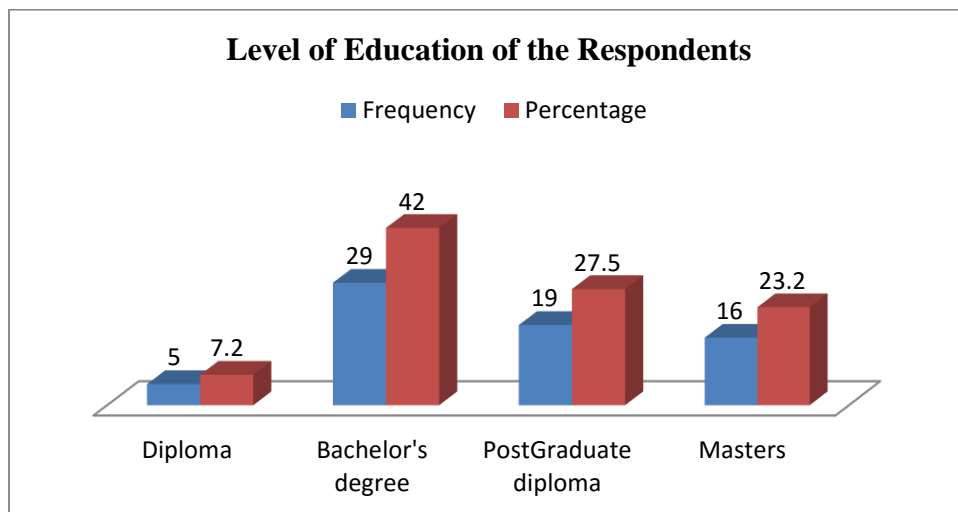


*Source: Primary data, 2017*

**Figure 3: age of the respondents**

The study findings indicated those between 40-49years had 39%. Those who were in the category of 30-39 constituted 33%, those who were above 50years took 11.6% and the category of 20-29years was represented by 10.5%. The implication from this finding is since the majority of respondents were at least 30 years and above they were expected to have enough experience of what is exactly happening as far as the study was concerned.

#### 4.3.3 Level of Education of the Respondents

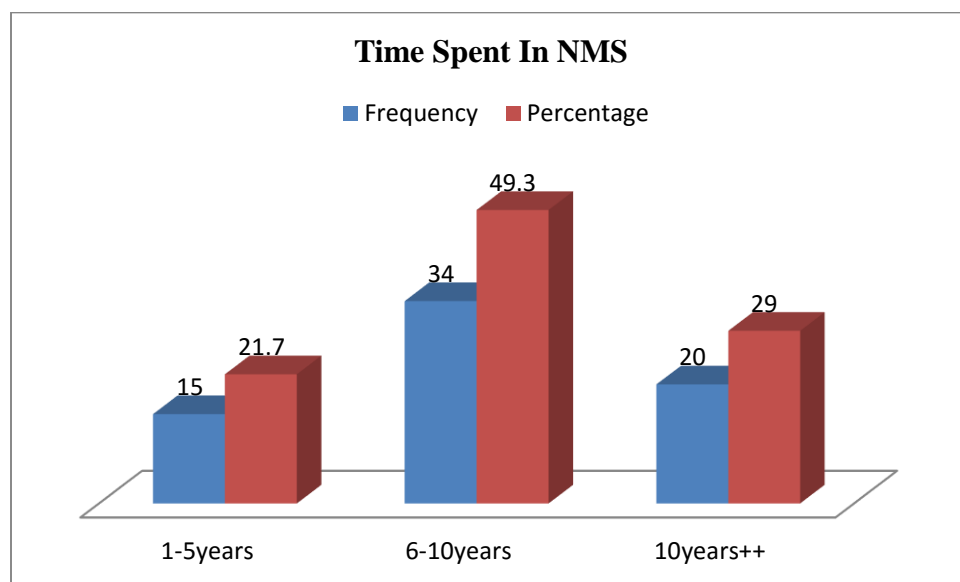


*Source: Primary data, 2017*

#### **Figure 4: Level of education of the respondents**

The study findings showed that the majority of respondents had studied up to a bachelor's degree of education (42%). Post-graduate diploma was represented by 27.5%; 23.2% of the respondents had attained a master's level of education. The least category of diploma holders were 15.1%. These were presumed to the required knowledge to interpret questions and offer right answers.

#### **4.3.4 Time spent working in NMS**



*Source: Primary data, 2017*

#### **Figure 5: Showing the Time spent in service**

Figure 5 above indicates that most of the respondents had been at NMS for 6-10years and these amounted to 49.3%. 29% had been at NMS for 10years and above and the least percentage of 21.7% of the respondents had been at NMS for 1-5years. On the other hand, among the interviewees, it was reported that most of them 79% had dealt with most of the suppliers and clients for the last 15years and above and 21% had dealt with most of the clients for the last 10-15years. This thus implies that as per the number of years most respondents had dealt with most of the clients at NMS. Such people were assumed to have enough experience to inform the study.

#### 4.4. Empirical findings

The findings were obtained on the relationship between supplier development and procurement performance of National Medical Stores; relationship between supplier appraisal and procurement performance of National Medical Stores and relationship between supplier collaboration and procurement performance of National Medical Stores.

#### Research Question ONE

##### 4.4.1 Supplier Development and Procurement Performance in NMS

To establish the relationship between supplier development on public procurement performance of NMS, a Likert scale was used to measure the perceptions of respondents on different statements and Table 5 has more details below:

**Table 5: Descriptive Statistics on Supplier Development and Procurement Performance**

Items	1	2	3	4	5	Mean
NMS organizes training of public health service providers every year	13%	7.8%	13%	38%	27.6%	3.51
The pricing policy is jointly agreed on with our public health service providers	11.8%	13%	5.2%	47.3%	22.3%	3.54
Supplier evaluation is periodically undertaken to ensure good quality of the goods and services	7.8%	14.4%	9.2%	28.9%	36.8%	3.78
In most aspects of the relationship, the responsibility for getting things done is shared	15.7%	10.5%	0%	51.3%	22.3%	3.88
There is high turn up for public health service providers in NMS workshops	5.2%	21%	3.9%	35.5%	26.3%	3.97
Periodic supplier audits are undertaken to correct compliance errors in public health facilities	14.4%	6.5%	11.8%	34.2%	30.2%	4.00
We openly advise public health service providers on the best technology to use in handling drugs	3.9%	3.9%	7.8%	52.6%	31.5%	4.12
NMS makes its supply plans for the next seasons together with its public health service providers in Uganda	2.6%	2.6%	6.5%	53.9%	34.2%	4.14
The technical abilities of the public health staffs in handling drugs are evaluated supplying to them	3.9%	5.2%	0%	40.7%	50%	4.18

*Source: Primary data, 2017*

Responses in Table 5 revealed that supplier development was available and continually observed by procurement staffs in NMS. This position was confirmed by the following items that had means above 3.5 included; The technical abilities of the public health staffs in handling drugs are evaluated supplying to them (4.18); NMS makes its supply plans for the next seasons together with its public health service providers in Uganda (4.14); We openly advise public health service providers on the best technology to use in handling drugs (4.12); Periodic supplier audits are undertaken to correct compliance errors in public health facilities (4.00); There is high turn up for public health service providers in NMS workshops (3.97); In most aspects of the relationship, the responsibility for getting things done is shared (3.88); Supplier evaluation is periodically undertaken to ensure good quality of the goods and services (3.78); The pricing policy is jointly agreed on with our public health service providers (3.54) and NMS organizes training of public health service providers every year (3.51). All these mean that supplier development is at the forefront in NMS which presupposes high public procurement performance.

The above responses can be interpreted to mean that suppliers working with NMS are well trained in what they expect from them and how best they can deliver supplies. They are provided with the required resources to deliver supplies in time as well as being advised both technically and mechanically. These are assumed very key in enhancing the performance of procurement in an organization.

The responses obtained from the procurement officials in the questionnaire were closely similar with what key informants reported in interviews conducted. For instance, on 6 key informants visited, 100% admitted that supplier development was being ensured by the organization. Among

the supplier development indicators they mentioned included; periodic supplier audits, technical abilities of suppliers ensured, pricing policy, workshops conducted and training. One of the executive had this to say,

*“We work in an environment that is too demanding but we have always ensured that our clients are brought together and train them on what and how our relationship must be coordinated over time...this has really improved on the quality of services we provide at NMS...”*

Relatedly, another key informant said:

*“It has now become a routine that our suppliers have to be trained on what you expect from them after being selected...we don’t mean they don’t know what to do...they of course know but NMS has different targets away from what other organizations they might have been working with wanted...so training and continually advising them becomes very key in stimulating their performance and our performance at NMS...”*

The above statements implied that supplier development was being practiced at NMS and this has a primary role of stimulating the performance of procurement in an organization. This practice in NMS was supported by the documents reviewed at NMS. For instance, according to NMS Supplier Training Manual (2015), it indicates that all suppliers at NMS are briefed every after annual year on the objectives and new targets of the organizations. Secondly, according to NMS strategic plan (2013/2018), this prioritizes supplier development because they think it is key in ensuring that services are delivered in time at NMS. Basing on the primary findings obtained from respondents, it is crystal clear that supplier development was prevalent in NMS because most of the responses

were agreed on and continually supported by the key informants, however, it was not supported by documents reviewed

**4.4.1.1 Correlation results for supplier development and public procurement performance in NMS**

To test if there was a relationship between supplier development and public procurement performance in NMS, a spearman rho correlation was ran and Table 6 has more details.

**Table 6: Correlation results**

			Supplier development	Public procurement performance
Spearman's rho	Supplier development	Correlation Coefficient	1.000	.453**
		Sig. (1-tailed)	.	.005
		N	69	69
	Public procurement performance	Correlation Coefficient	.453**	1.000
		Sig. (1-tailed)	.005	.
		N	69	69

Source: Primary data, 2017

It was established that supplier development positively affected the performance of public procurement in NMS ( $\rho = .453$ ). It was also further established that there was a significant relationship between the two variables and this means that the hypothesis was accepted ( $p = .005 < .005$ ). This means that the lower the supplier development, the public procurement performance at NMS.

**4.4.1.2 Regression results for supplier development and public procurement performance in NMS**

A linear regression was ran in determining the extent to which supplier development influences public procurement performance as showed in Table 13.

**Table 7: Model summary**

<i>Regression Statistics</i>		
Multiple R	.453	
R Square	.205	
Adjusted R Square	.199	
Standard Error	3.936	

*Source: Primary data, 2017*

Table 13 shows that supplier development contributed to 20.5% on public procurement performance basing on R Square (0.205). In conclusion therefore, it can be reached that supplier development has had a positive influence on public procurement performance in National Medical Stores. This implies that public procurement performance in National Medical Stores highly depends on supplier development.

## **Research Question TWO**

### **4.4.2 Supplier appraisal and public procurement performance in NMS**

To establish the relationship between supplier appraisal on public procurement performance of NMS, a likert scale was used to measure the perceptions of respondents on different statements and Table 9 has more details below:

#### **Table 9: Descriptive Statistics on the findings on practicing of supplier appraisal in NMS**



<b>Items</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Mean</b>
Supplier quality assurance is well monitored at NMS	3.9%	11.8%	26.3%	31.5%	27.6%	3.49
NMS assesses supplier's capability in controlling prices of supplies before contracts are given	1.3%	21%	35.5%	21%	21%	3.50
NMS assesses supplier's capability in controlling quantity of supplies before contracts are given	0%	0%	7.8%	69.7%	22.3%	3.55
NMS assesses supplier's capability in controlling quality of supplies before contracts are given	0%	0%	0%	63.1%	36.8%	3.60
The performance of suppliers are frequently assessed in NMS	23.6%	36.8%	30.2%	6.5%	3.9%	3.63
NMS assesses supplier's capability in controlling delivery of supplies before contracts are given	10.5%	19.7%	30.2%	22.3%	14.4%	3.76
The top management in NMS is involved in evaluating the eligible contractors by comparing the shortlisted ones	21%	13%	6.5%	38%	21%	3.77
NMS assesses the suitability of suppliers before contracts are given	11.8%	25%	0%	48.6%	15.7%	4.06

*Source: Primary data, 2017*

Responses in Table 9 revealed that supplier appraisal was being done and very much emphasized in NMS. Among the items that confirms this statistical claim include; NMS assesses the suitability of suppliers before contracts are given (4.06); The top management in NMS is involved in evaluating the eligible contractors by comparing the shortlisted ones (3.77); NMS assesses supplier's capability in controlling delivery of supplies before contracts are given (3.76); The performance of suppliers are frequently assessed in NMS (3.63); NMS assesses supplier's capability in controlling quality of supplies before contracts are given (3.60); NMS assesses supplier's capability in controlling quantity of supplies before contracts are given (3.55); NMS

assesses supplier's capability in controlling quantity of supplies before contracts are given (3.50); Supplier quality assurance is well monitored at NMS (3.49).

The above findings can be interpreted to mean that NMS invests enough time in assessing the suitability of respondents, their capability and past records in performance before they give contracts to them. This is assumed to be more important in improving the performance of procurement.

Interviews with key informants shed more light on supplier appraisal in NMS and these were supportive of the findings obtained using questionnaire. Key informants revealed that suppliers are highly appraised in NMS. They opined that for purposes of improving the performance of procurement and delivering drugs in the best way possible, it is important that best teams are selected and must possess a good-track record. They were probed on how this is established. They indicated that the top management in NMS is involved in evaluating the eligible contractors by comparing the shortlisted ones because they have capacity of looking into the track records submitted with a deeper eye. One of the key informants was quoted saying:

*...one of the hardest thing to know to determine the capacity of suppliers because they have a lot of documents they always submit and they need time to be reviewed ad we always want to take every supplier on merit and performance records...therefore, we vest enough time to assess the suitability of these suppliers we are using and I think in the recent years since we became an autonomous organizations, we have consistent suppliers who we appraise very well and our service performance in Uganda has been making a good progress....*

He added,

*We do take time to evaluate the performance of all our suppliers from both local to international level and we keep cancelling contracts of some suppliers have failed to consistently meet our expectations...and this is why we keep getting new suppliers on board and keep maintaining others because of their good performance and...I purely think that this has been the cause of our good performance of procurement as NMS....*

The above statements can be interpreted to mean that there is a confirmation among the key informants that supplier appraisal was being done in NMS especially when it comes to suitability assessment and performance evaluation of suppliers. This position seemed in line with what the documents obtained indicated. For instance, according to NMS supplier evaluation report (2016), it indicates that all suppliers managed to meet the expectations of NMS in 2016 compared to those suppliers of 2015 where three suppliers failed to meet the expectations of the organization and their contracts were suspended. The NMS performance report (2015) also confirms that compared to the competence of suppliers, the performance of NMS had to go higher and most of the goals were achieved by the organization in procurement. Basing on the primary findings obtained from respondents, it is crystal clear that supplier development was prevalent in NMS because most of the responses were agreed on and continually supported by the key informants, however, it was not supported by documents reviewed.

#### **4.4.2.1 Correlation results for supplier appraisal and public procurement performance at NMS**

To test if there was a relationship between supplier appraisal and public procurement performance in NMS, a spearman rho correlation was ran and Table 10 has more details.

**Table 10: Correlation results**

			Supplier appraisal	Public procurement performance
Spearman's rho	Supplier appraisal	Correlation Coefficient	1.000	.532**
		Sig. (1-tailed)	.	.013
		N	69	69
	Public procurement performance	Correlation Coefficient	.532**	1.000
		Sig. (1-tailed)	.013	.
		N	69	69

*Source: Primary data, 2017*

It was established that supplier appraisal positively affected the performance of public procurement in NMS ( $\rho = .532$ ). It was also further established that there was a significant relationship between the two variables and this means that the hypothesis was accepted ( $p = .013 < .000$ ). This means that the lower the supplier development, the public procurement performance at NMS.

#### **4.4.2.2 Regression results for supplier appraisal and public procurement performance**

A linear regression was run in determining the extent to which supplier appraisal influences public procurement performance as showed in Table 11.

**Table 11: Model summary**

<i>Regression Statistics</i>		
Multiple R	.532	
R Square	.283	
Adjusted R Square	.281	
Standard Error	1.33	
Observations	69	

*Source: Primary data, 2017*

Table 13 shows that supplier collaboration contributed to 28.3% on public procurement performance basing on R Square (0.283). In conclusion therefore, it can be reached that supplier appraisal has had a positive influence on public procurement performance in National Medical Stores. This implies that public procurement performance in National Medical Stores highly depends on supplier collaboration.

### Research Question THREE

#### 4.4.3 Supplier Collaboration and Public Procurement Performance

To establish the relationship between supplier collaborations on public procurement performance of NMS, a Likert scale was used to measure the perceptions of respondents on different statements and Table 12 has more details below:

**Table 12: Descriptive Statistics on practicing of supplier collaboration in NMS**

Items	1	2	3	4	5	Mean
Benefits of this relationship are shared frequently with public health service providers	9%	36%	33%	16.5%	4.5%	2.71
National Medical Stores has joint investments with suppliers	3%	28.5%	31.5%	30%	6%	3.08
Losses are shared with public health service providers in case they arise	1.5%	22.5%	27%	24%	24%	3.42
Our suppliers in National Medical Stores always keep their promises	4.5%	6%	24%	34.5%	30%	3.43
National Medical Stores makes joint agreements about supply changes with our suppliers	1.5%	15%	42%	18%	22.5%	3.43
Our suppliers in National Medical Stores are very competent	0%	10.5%	25.5%	36%	27%	3.89
Our suppliers are reliable in their collaborative arrangements with National Medical Stores	3%	3%	22.5%	40.5%	30%	3.92
National Medical Stores has confidence in suppliers it collaborates with	3%	4.5%	13.5%	43.5%	34.5%	4.03

*Source: Primary data, 2017*

Responses in Table 12 revealed that supplier collaboration in NMS was not convincing. Among the items that confirms this statistical claim included; National Medical Stores makes joint

agreements about supply changes with our suppliers (3.43); Our suppliers in National Medical Stores always keep their promises (3.43); Losses are shared with public health service providers in case they arise (3.42); When an expected situations arise, public health service providers always act in a manner that is favorable to us (3.08); National Medical Stores has joint investments with suppliers (3.03); Benefits of this relationship are shared frequently with public health service providers (2.71).

The above items can be interpreted to mean that in NMS, there are few chances of sharing losses and gains between suppliers and contractors, which is very important or a very important element in motivating the suppliers. Secondly, the issue of poor communication is reflected especially when it comes to disagreements and a number of respondents doubting the keeping of promises on either party.

On the other hand, however, some of the responses that were in support of existence of supplier collaboration in NMS included; National Medical Stores has confidence in suppliers it collaborates with (4.03); Our suppliers are reliable in their collaborative arrangements with National Medical Stores (3.92); Our suppliers in National Medical Stores are very competent (3.89). These implied that suppliers are motivated especially when it comes to stimulating the confidence of suppliers and reliability elements that are promoted. These are essential in supplier collaboration and assumed to have a direct influence on the performance of procurement on the side of NMS.

Interviews with the key informants shed more light on supplier collaboration in NMS were supportive of the findings obtained using questionnaire. Key informants revealed that

collaboration with suppliers and clients has not been adequately achieved. They opined that promises are not well respected, losses are not evenly shared and there were issues of unreliability.

To emphasize this position, one key informant D said:

*....most of the people we deal with aim at making a lot of profits and do not aim to make long term relationship with NMS and this has affected our work....I have been realizing overtime that few suppliers and public health staffs here keep promises .....*

Similarly, key informant B had this to say:

*We have endeavored to collaborate with all our suppliers and even clients but it appears that few respects such arrangement, they tend to look at us as a government entity which doesn't aim at making money, they find no importance of making consistent relationship with us.*

The quotation suggests that supplier collaboration is not properly done in the procurement units of NMS and this was clearly ascertain by a number of observation results got at NMS. For instance, it was observed that NMS has no enough certificates of work completion, scrap books and monitoring contracts. All these are essential in supplier collaboration.

Generally, findings show that supplier collaboration to procurement staffs was not satisfactory. From the conceptual framework, the explanation was that if this happens to be the case, public procurement performance would be high.

#### **4.4.3.1 Correlation results for supplier collaboration and public procurement performance**

To test if there was a relationship between supplier collaboration and public procurement performance in NMS, a spearman rho correlation was ran and Table 12 has more details.

**Table 12: Correlation results**

			Supplier collaboration	Public procurement performance
Spearman's rho	Supplier collaboration	Correlation Coefficient	1.000	-.433**
		Sig. (1-tailed)	.	.283
		N	69	69
	Public procurement performance	Correlation Coefficient	-.433**	1.000
		Sig. (1-tailed)	.283	.
		N	69	69

*Source: Primary data, 2017*

It was established that supplier collaboration negatively affected the performance of public procurement in NMS ( $\rho = -.433$ ). It was also further established that there was no significant relationship between the two variables and this means that the hypothesis was rejected ( $p = .283 > .005$ ). This means that the lower the supplier collaboration, the public procurement performance at NMS.

#### 4.4.3.2 Regression results for supplier collaboration and public procurement performance

A linear regression was ran in determining the extent to which supplier collaboration influences public procurement performance as showed in Table 13.

**Table 13: Model summary**

<i>Regression Statistics</i>	
R	.433
R Square	.187
Adjusted R Square	.184
Standard Error	3.618

*Source: Primary data, 2017*

Table 13 shows that supplier collaboration contributed to 18.7% on public procurement performance basing on R Square (0.187). In conclusion therefore, it can be reached that supplier



management has had a positive influence on public procurement performance in National Medical Stores. This implies that public procurement performance in National Medical Stores highly depends on supplier management.

#### 4.4 Overall Prediction Model

This was done to ascertain the level at which SRM predict public procurement performance.

**Table 14: Prediction Model for Factor Components**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.106	.682		1.623	.114
	Supplier development	.306	.054	.440	5.693	.000
	Supplier appraisal	.572	.255	.559	2.638	.010
	Supplier collaboration	.169	.086	.315	3.263	.002
<b>Dependent Variable: Public Procurement Performance</b>						
R=.823 <sup>a</sup>						
R Square=.799						
Adjusted R Square=.733						
Sig=0.000						

*Source: primary data, 2017*

Table 14 shows that supplier development, supplier appraisal and supplier collaboration predict 73.3% of public procurement performance of NMS. The most significant predictors of public procurement performance of NMS were supplier appraisal (Beta= .559), supplier development (Beta=.440) and supplier collaboration (Beta= .315). The results revealed that most determining factor was supplier appraisal. Therefore, much emphasis needs to be vested in improving supplier development appraisal and supplier collaboration, if public procurement of NMS is to be achieved further.



## **CHAPTER FIVE:**

### **SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

The study establishes the study summaries, discussions done each and every objectives, conclusions and lessons learnt as well as the recommendations and areas observed for further study.

#### **5.2 Summary of findings**

##### **5.2.1 Supplier development and public procurement performance in government agencies**

The study findings revealed that there was a positive significant relationship between supplier development and procurement performance of National Medical Stores in Uganda. In particular, the positive effect implied that a change in supplier development contributed to a moderate change in public procurement performance whereby improvement in supplier development caused improvement in public procurement performance and vice versa.

##### **5.2.2 Supplier Appraisal and public procurement performance in government agencies**

The findings established that supplier appraisal had a positive significant relationship with procurement performance of National Medical Stores in Uganda. The positive relationship meant that supplier appraisal had a positive contribution on public procurement performance whereby improvement in supplier appraisal caused an increase in public procurement performance in government agencies and vice versa.

##### **5.2.3 Supplier collaboration and public procurement performance in government agencies**

The findings revealed a negative significant relationship between supplier appraisal and procurement performance of National Medical Stores in Uganda. This means that supplier collaboration had a negative contribution to public procurement performance at NMS whereby

improvement in supplier collaboration can lead to improvement in public procurement performance.

### **5.3 Discussion of findings**

#### **5.3.1 Supplier development and public procurement performance in government agencies**

The findings indicated that there was a significant relationship between supplier development and public procurement performance of government agencies in Uganda. The finding is in line with Nagurney (2010) who indicated that supplier development must start with ensuring that suppliers are trained, provided with the required capital or equipments and fairly advised and technically supported, if an improvement in public procurement performance is to be reached on. Nagurney (2010) adds that in modern development, the competitiveness of any organization lies in ensuring that supplier development is done. Monczka, et al., (2008) argued that seminars and workshops need to be arranged by an organization at least every financial year and suppliers need to be called and given the required training especially in how the organization manages its inventory, stock management, supply chain performance and other related functions. These always inform the suppliers in doing more than what they will have done to have their performance improve. The improvement in the performance on the side of suppliers means an improvement on the side of buying organization since they are operating in a collegial relationship.

Krause et al., (2000) argue that supplier development calls for training suppliers in areas that are needed, and this can only be arrived at if a supplier performance appraisal is conducted. Such an appraisal will always provide the required weaker points which need to be addressed during training. If it is late delivery of supplies, the supplying firm is informed that even though it has the best quality of products, late deliveries will distort the relationship. Training should be done on

both sides, the buying and supplying side. Maula (2009) argues that supplying personnel are trained not that they do not understand what they are doing but to perfect their supplying capacity in the new organization.

Gordon (2008) in line with the arguments of Krause et al., (2000) agitates that training outcomes are important in benchmarking on to ensure that future areas where the buying organization wants the suppliers to improve are improved and development efforts are put in play to ensure that even the buying organization is compliant. Krause et al, (2007), further ascertained that training of suppliers may primarily improve the performance of public procurement but it becomes very important if it is done with capital provision. A number of suppliers are capable of providing the best quality of supplies and services, however, majority of the firms have no enough resources to deliver in time. Krause et al, (2007), gave an example of a supplier of good building raw-materials for a construction organization but with no enough trucks to keep delivering in time. They indicated that, a buying organization needs to intervene to make sure that this supplier is provided with capital to obtain such trucks and pay in future. The delays are always caused by lack of resources.

Archstone (2007) further added the issue of advisory and technical support. He indentified that many supplying and buying organizations need only some form of advice and technical support from either side to improve procurement performance. Theor (2009) extended this by arguing that most buying organizations tend to force impossible timelines on the side of suppliers and the suppliers tend to force to have such timelines meant and they end up supplying poor quality of materials. But if suppliers are collaborated and engaged, they would directly advise the buying

organization that there is a need to extend their procurement plans if they need quality supplies. On the other hand, Archstone (2007) argues that a number of supplying firms need only one technical advice to step up and make inventories in time and meet the buying organizations value for money criterion. Such organizations tend to operate on intuitions but when technically supported, their performance tends to improve. Sanchez-Rodriguez et al., (2005) concludes that there is a need to have a sophisticated way of doing things because the world has already entered a new global age that requires operating with technology. The combination of supplying and technology makes it automatic and timely.

### **5.3.2 Supplier Appraisal and public procurement performance in government agencies**

The findings indicated a significant positive relationship between supplier appraisal and public procurement performance of government agencies in Uganda. Findings of this research support other studies, which also established that better supplier appraisal contribute to high public procurement performance while inadequate supplier appraisal contribute to low public procurement performance. De Sousa (2006) thus indicated that in current days, it is actually mandated that a pre-contact supplier appraisal be done as a prerequisite for strategic procurement to make sure that value for money can be harnessed in an organization. This must be submitted to the management of an organization to make sure that the supplier that is about to take the contract has all the required capacities to undertake the work more successfully. De Sousa (2006) further argues that the procurement or user department needs to be very honest when making such assessments because at the end of the day, if honesty is not adhered too, its consideration will be observed at the end of the tunnel after the contract is awarded and the supplier is not doing things in a proper manner.

According to, Balakrishan (2004), a more ambiguous trend has been the conscious assessment and validation of supplier networks and the development of collaborative or partnerships between buyers and suppliers. Storey, (2002) adds that, such schemes are of strategic significance than simply of tactical gains. Therefore success is derived from all members of the supply chain adding superior value to their product/services and delivering them more efficiently than competitors (Storey, 2006). Further, effectiveness in undertaking supplier appraisal becomes imperative in ensuring that the operational performance is boosted. In procurement, supplier appraisal is undertaken to achieve organizational goals as stated in the strategic plan. Procurement performance ensures that the overall strategic objectives of an organization are effectively and efficiently realized. Clearly, supplier appraisal boosts an organization's operational performance measured against the various performance measures, such as, quality, flexibility, speed, efficiency, and supplier relationship. Costello (2008) extends this by arguing that suppliers needs to be improved in the areas where they have been found to have weaknesses and this will always improve the effectiveness in performance of an organization and improving its competitive advantage.

With reference to Erridge, Fee and McIlroy (2001), in a procurement department where supplier appraisal take place, a number of operational performance measures are essential. Firstly, supplier defect rate is a key operational performance indicator used to measure the quality of purchases carried out by a procurement department. This can be achieved by dividing the number of defects by the total purchases, or defective shipments by total shipments. Firm competitiveness can also be measured by use of customer satisfaction indicator. Internal customers' rating on their satisfaction levels with the department's performance is essential in achieving this. If many firms

use similar questions, benchmarking levels of satisfaction is achievable. Customer satisfaction helps in measuring the department's capacity to meet the needs and expectations of internal customers (Ray, 2011).

### **5.3.3 Supplier collaboration and public procurement performance in government agencies**

The findings indicated that supplier collaboration has negative but a significant relationship with public procurement performance of government agencies. Supplier collaboration was conceptualized to mean supplier appraisal, supplier motivation and loss and gain sharing. Findings of this research support other studies, which also established that better supplier collaboration contribute to high public procurement performance while poor supplier collaboration contribute to poor public procurement performance. Andaleeb (1996) established that supplier collaboration contributes to public procurement performance. However, Togar & sridharan (2002) argue that supplier collaboration essentially means ensuring that there is effective communication between the supplier and the buying organization. It also means that consistent motivation of suppliers when they do go or bad, they can either be positively sanctioned or negatively sanctioned. It may also mean the sharing of losses and gains between the supplier and the buying organization. Togar & sridharan (2002) thus argue that the performance of public procurement in the current public service organizations across the globe relies heavily on supplier collaboration. They cited an example of a shoe factory in Singapore. This factory had its competitive advantage improve because it decided to share a percentage of its profits with suppliers away from the money they must get. This gave width to suppliers to ensure that they take their supplies to only this shoe company. This gave it an edge in shoe making in the country.

Further, Mac Neil (2004) argues that supplier collaboration solves issues of inconvenience in time,



quality and cost. This is because supplier collaboration puts in place a need to keep sharing information with suppliers on what is available and what was not available. He indicated that consistent sharing of information makes the supplying firm punctual and ever ready to fill the missing gaps in the organization. He indicated that, in organizations like supermarkets, new automated software has been integrated which continuously alerts the suppliers and the buyers what is missing and automatically filled. This has completely reduced on late supplies in premises and improved on customer satisfaction. Mac Neil (2004) argues that such arrangement can be a very good step that can be obtained by public service organizations especially those dealing in goods in keeping in contact with suppliers to avoid stock-outs.

Goffin et al, (1997) further ascertained that supplier collaboration extends to motivation. When the suppliers does what is beyond expectation, managers of a buying firm need to motivate the firm to ensure that they can consistently do the same because it is helping the buying organization to meet its service deliveries in time too. Lonsdale and Watson (2005) in addition indicated that, motivation can be both positive and negative. It can be both intrinsic and extrinsic. Positively, they mentioned things to do with extending contracts and ensuring that remunerations are revised upwards. Negatively, the buying firm can be cautioned, penalized in terms of money, taken back to prequalification stages and so many others. Lonsdale and Watson (2005) argue that this awakens the performance of a supplying firm. For intrinsic supplier motivation, the supplying firm can be rewarded using non-financial means like recognizing its work and be provided with a certificate of good performance, be recommended to other organizations that need its services, it can also be given an award for best suppliers working with the organization annually. Extrinsically, the organization can be reduced on the cost of supplies in the organization, it can be provided with

good remunerations and make prompt bids and fund transference. According to Wells, (2006) supplier collaboration needs to include a motivational element, He states that there are often two key components of a motivation strategy which include; gain sharing which used in a number of industries and these enable the pursuit of quality, efficiency and affordability without eroding suppliers' profit margins and supplier award programs.

## **5.4. Conclusions**

### **5.4.1 Supplier development and public procurement performance in government agencies**

It was established that undertaking supplier development in NMS has had a positive influence on public procurement performance. This means it is important to ensure that suppliers are developed through supplier training, capital provision and provision of advisory and technical support. The study concluded therefore that Supplier development had a positive significant relationship with the public procurement performance in government agencies in Uganda..

### **5.4.2 Supplier Appraisal and public procurement performance in government agencies**

On second objective, it was found out that undertaking supplier appraisal in NMS has had a positive influence on public procurement performance. This means that it is important to ensure that suppliers are appraised through suitability assessment, capability assessment and performance evaluation. It was thus reached that assessing the suitability of suppliers, assessing supplier's capability and evaluating performance of suppliers can always lead to improvement in public procurement performance in government agencies not only NMS. The study thus concluded that there was a positive significant relationship between suppliers appraisal and procurement performance in government agencies in Uganda

### **5.4.3 Supplier collaboration and public procurement performance in government agencies**

It was established that undertaking supplier collaboration in NMS has had a no influence on public procurement performance. The study thus concluded that there was a negative relationship between supplier collaboration and procurement performance in government agencies in Uganda. This means it is important to ensure that NMS invests much effort in ensuring that there is effective communication between them and the suppliers at all levels, motivation strategies need to be put in place to stimulate the performance of suppliers and sharing of losses and gains needs to become formal to enable suppliers do work without delay and fear of loss.

## **5.5 Recommendations**

### **5.5.1 Supplier development and public procurement performance in government agencies**

- Management of government agencies in particular should introduce a policy of “supplier development”. It should focus on supplier training and enrolment in seminars and workshops provide them with capital benefits to undertake their work.

### **5.5.2 Supplier Appraisal and public procurement performance in government agencies**

- The management of government agencies need to invest much in evaluating the performance of suppliers consistently as they assess their suitability and capability before they are given contracts.
- The selection process should entail assessing of their past performance and evaluation should go after work is done so that they can be replaced or advised where they are not doing well.

### **5.5.3 Supplier Collaboration and public procurement performance in government agencies**

- Management of government agencies should endeavor to see that they always keep their promises while ensuring that losses resulting from the relationship with public health service providers are shared. When unexpected situations arise, public health service providers always act in a manner that is favorable to all clients.

### **5.6 Limitations of the study**

The study was successful, though some limitations were encountered.

Some potential respondents who were considered to hold key policy information could not be reached for interview despite several reschedules. While some respondents considered it a waste of time as they had participated in such research previously, with no financial rewards. Time was lost as the researcher offered explanations that the study was purely for academic purposes. Some respondents failed to return the questionnaires issued to them, which was a limitation on the researcher's progress as timelines, had to be revised and in some cases extra costs were incurred in availing extra questionnaires.

### **5.7 Contribution of the Study to Existing Body of Knowledge**

While existing literature showed how supplier relationship management affected public procurement performance, none of the scholars gave evidence in the context of government agencies. Thus, the findings of this study provides this information about the effect of supplier development, information sharing and supplier collaboration affected on public private performance in government agencies, which can be referred to by other scholars.

### **5.8 Areas for Further Research**

- The study was limited on supplier relationship management and public procurement. There is therefore a need for further study to ensure that many more variables are used more than SRM like financial management, public private partnership and many more.

- Supplier relationship management and public performance of procurement were restricted on three dimensions each. Theoretically, these variables can have many more dimensions and indicators. It is thus important for another study to be undertaken to study these variables using more other dimensions and indicators for a comprehensive understanding of the study.
- This study focused on NMS only. This makes the study limited to NMS and not in other government department. It is from this basis that the researcher recommended another study to be undertaken to measure whether what is found out in NMS can be generalized elsewhere.

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**APPENDIX I:  
QUESTIONNAIRE FOR PROCUREMENT UNIT STAFFS**

***Introduction***

Dear Respondent,

The researcher is a student of Master in Business Administration (MBA) at Uganda Management Institute (UMI), Kampala, Uganda. She is undertaking a research to generate data and information on “*Supplier Relationship Management and Public Procurement Performance of National Medical Stores, Uganda.*” You have been selected to participate in this study because the contribution you make to your organization is central to the kind of information required. The information you provide is solely for academic purposes and will be treated with utmost confidentiality. Kindly spare some of your valuable time to answer these questions by giving your views where necessary or ticking one of the alternatives given. Indeed your name may not be required. Thank you for your time and cooperation.

**SECTION A: BACKGROUND DATA**

*Please circle the numbers representing the most appropriate responses for you in respect of the following items:*

1. Your gender a) Male b) Female
2. What is your age group?  
a) 20-29,      b) 30-39,      c) 40-49,      d) 50 and above
3. What is your highest level of education?  
a) Post Grad Diploma,      b) Bachelor’s degree,      c) Masters’ degree      d) Doctorate  
e) Others (specify) -----
4. Time spent in procurement service in National Medical Stores?  
.....

**SECTION B: SUPPLIER RELATIONSHIP MANAGEMENT**

**Supplier development**

In this section please tick in the box that corresponds to your opinion/view according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No	Statement	1	2	3	4	5
1	National Medical Stores organizes training of its suppliers					

No	Statement	1	2	3	4	5
	every year					
2	There is high turn up for suppliers in NMS workshops					
3	National Medical Stores pricing policy is jointly agreed on with its suppliers					
4	NMS undertakes supplier evaluation periodically to ensure good quality of the goods and services					
5	In most aspects of the relationship, the responsibility for getting things done is shared					
6	NMS makes its supply plans for the next seasons together with its suppliers in Uganda					
7	We openly advise our suppliers on the best technology to use in handling drugs					
8	The technical abilities of the public health staffs in handling drugs are evaluated supplying to them					
9	Periodic supplier audits are undertaken to correct compliance errors in public health facilities					

### Supplier Appraisal

In this section please tick in the box that corresponds to your opinion/view according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	NMS assesses the suitability of suppliers before contracts are given					
2	NMS assesses supplier's capability in controlling quality of supplies before contracts are given					
3	NMS assesses supplier's capability in controlling prices of supplies before contracts are given					



No.	Statement	1	2	3	4	5
4	NMS assesses supplier's capability in controlling delivery of supplies before contracts are given					
5	NMS assesses supplier's capability in controlling quantity of supplies before contracts are given					
6	The top management in NMS is involved in evaluating the eligible contractors by comparing the shortlisted ones					
7	The performance of suppliers are frequently assessed in NMS					
8	Supplier quality assurance is well monitored at NMS					

### Supplier collaboration

In this section please tick in the box that corresponds to your opinion/view according to a scale of 1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	<i>Benefits of this relationship are shared frequently with public health service providers</i>					
2	Our suppliers are reliable in their collaborative arrangements with National Medical Stores					
3	Losses are shared with public health service providers in case they arise					
4	National Medical Stores has joint investments with suppliers					
5	National Medical Stores makes joint agreements about supply changes with our suppliers					
6	National Medical Stores has confidence in suppliers it collaborates with					

No.	Statement	1	2	3	4	5
7	Our suppliers in National Medical Stores always keep their promises					
8	Our suppliers in National Medical Stores are very competent					

**SECTIONC: PUBLIC PROCUREMENT PERFORMANCE**

In this section please tick in the box that corresponds to your opinion/view according to a scale of  
1 = Strongly Disagree, 2 = Disagree, 3 = Not Sure, 4 = Agree, 5 = Strongly Agree

No.	Statement	1	2	3	4	5
1	The quality of supplies has increased in drugs in the supply chain					
2	Complaints regarding absence of health supplies have been reduced					
3	Non prevalence of drugs in health centers has reduced					
4	All district public health centers are well stocked					
5	Delays in distribution of drugs in health centers has completely reduced					
6	National Medical Stores has had no drugs getting expired in its stores					
7	All kind of drugs required by patients in health centers are availed in time					

**THANK YOU FOR YOUR PARTICIPATION!**

**APPENDIX II:**

**INTERVIEW SCHEDULE FOR TOP MANAGEMENT OFFICIALS**

1. Position in National Medical Stores.....

2. Department /Section.....

a) Does National Medical Stores carry out supplier development? *Please tick the appropriate option.*

a)  Yes                      b)  No

If so, in what ways?(Probe for supplier training, capital provisions and advisory and technical support)

.....

Has supplier development improved on public procurement performance?

.....

.....

2a) a) Does NMS appraise its suppliers? *Please tick the appropriate option.*

a)  Yes                      b)  No

If so, in what ways?(Suitability assessment, Capability assessment and performance evaluation)

.....

Has supplier appraisal improved on public procurement performance?

.....

.....

3a) Does NMS carry out supplier collaboration? *Please tick the appropriate option.*

a)  Yes                      b)  No

If so, in what ways?(Probe for supplier communication, supplier motivation and loss and gain sharing)

.....

.....

Has supplier collaboration improved on public procurement performance?

.....

.....

THANK YOU SO MUCH

**APPENDIX III:  
DOCUMENTARY REVIEW CHECKLIST**

No.	Documents	Yes	No
1.	Supplier development and Public procurement performance procurement plans are in place Bids evaluation report portfolios photographs artwork schedules		
2.	Information sharing and public procurement performance letters to the paper schedules workshops reports		
3.	Supplier collaboration and public procurement performance scrapbooks PDU, user and other dept monitor contracts Certificates of completion are issue of before payments are affected.		

**APPENDIX IV:**

**TABLE FOR DETERMINING SAMPLE SIZE FROM A GIVEN POPULATION**

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

*Source: Krejcie & Morgan (1970, as cited by Amin, 2005)*

Note.—*N* is population size.

*S* is sample size.