INFLUENCE OF PROCUREMENT MANAGEMENT ON PERFORMANCE OF HEALTH POLICY PLUS PROJECT IN WESTERN KENYA

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A Research Project Report Submitted in Partial Fulfilment of the Requirements for the Award of the Degree of Master of Arts in Project Planning and Management of the University of Nairobi

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DECLARATION

This research project is my original work and has not been submitted to any other institution of higher learning for any award.

Signature: _____ Date: _____

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L50/5653/ 2017

This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this research project report to my husband James Karanja and my sons Lionel Karanja and Liam Karanja for their love and moral support during the entire study period. I also dedicate this study to my parents Mr. Joseph Mutai and Mrs. Janet Mutai who taught me the importance of education.

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ABBREVIATIONS AND ACRONYMS

ARVs	Antiretroviral
ART	Antiretroviral Therapy
DL	Distance learning
EOQ	Economic Order Quantity
ERP	Enterprise Resource Planning
FP / RH	Family planning and reproductive health
HIV	Human immunodeficiency virus
HP+	Health Policy Plus
IM	Inventory Management
JIT	Just in Time
KPIs	Key Performance Indicators
LPO	Local Purchase Order
ODeL	Open, Distance and e-Learning
ODL	Open and Distance Learning
PBB	Programme Based Budgeting
PhD	Doctor of Philosophy
PR	Purchase Requisition
QA	Quality Assurance
ROC	Re-Order Cycle
ROP	Re-Order Point
SCM	Supply chain management
SD	Standard Deviation
SMEs	Small Medium Enterprises

SPSS	Statistical software for social sciences
USAID	United States Agency for International Development
VMI	Vendor Managed Inventory

ABSTRACT

Procurement Management is an important and strategic function in every organization, since it forms a critical part of every project undertaken by the organization. The link between procurement management and project performance in particular, makes it important for organizations to adopt best practices in procurement to guarantee successful project completion. Therefore, this study sought to assess the influence of procurement management on project performance in Health Policy Plus in Western Kenya. Specifically, the study sought to determine the influence of procurement planning, vendor management, procurement monitoring and evaluation, e-procurement and inventory management on project performance. In Health Policy Plus, procurement has been faced with challenges spanning from counties complaining of frequent deferred procurement and supply of HIV related health commodities like ARVs and test kits; suppliers complaining of poor supplier management, delayed training of county health teams and poor monitoring and evaluation systems. The study adopted a descriptive research design. The target population of 106 consisted of top management and procurement staff at Health Policy Plus Project, County government supply chain officials and Health Facilities Managers. A sample of 84 out of 106 was established using the Nassiuma formula. Stratified and simple random sampling techniques were used in this study. Data was collected using a questionnaire and an interview guide. Data was classified and tabulated according to research objectives and analyzed using Statistical Package for Social Science version 25. The quantitative data was analyzed using descriptive statistics while content analysis was used for the qualitative data. Regression model was developed to show the relationship between variables. Data representation was done through tables. The study found that the acquisition is clearly planned in terms of time, scope, quality and quantity. Further, it was found that Health Policy Plus Project involves key suppliers on its entire project to ensure efficiency and effectiveness, quality compliance, effective product development and minimized costs due to innovation and economies of scale. The study also found that there is a functioning Enterprise Resource Planning System to facilitate electronic requisition and tenders are advertised through online system; deliveries are properly checked to ensure adherence to quality standards and as stated in the local purchase order, Health Policy Plus Project practices just in time inventory management and inventory is properly tracked to ensure its safe guarded against loss. The study concluded that procurement planning had the greatest influence on performance of Health Policy Plus Project in Western Kenya with a coefficient of 0.813 followed by inventory management with 0.789, then vendor management with 0.767, then e-procurement 0.701 while procurement monitoring and evaluation had the least influence with 0.598 on the performance of Health Policy Plus Project in Western Kenya. The findings are beneficial to the management of Health Policy Plus Project, Health Policy Plus Project stakeholders and academicians since it forms a basis for future reference The study recommends that Health Policy Plus project involves and conducts training of its relevant staff on developing quality procurement plans based on the approved work plan and budgets for effective procurement planning, fully integrate Vendor Managed Inventory to increase level of supplier relationship management and adopt effective Inventory control tools to determine inventory levels in order to guard against variability

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

In the modern society, procurement management plays a significant role in the achievement of project goals more than ever before and has become an essential component of every organization strategic plan. Technology has also created a chance for more efficient and effective procurement. Cost drivers are a significant element of every project and it is essential for project managers to recognize and critically review these cost drivers with a view to monitoring and managing them through appropriate strategies. Procurement strategies have been commonly introduced organizations as part of value creation strategies (Sullivan, Kashiwagi, & Chong, 2010).

Past empirical review points out that procurement approaches are essential to the achievement of project goals, while at the same time adopting best values for general organizational results (Mwikali & Kavale, 2012). Masiko (2013) stated that strategic procurement procedures were a main determinant of organizational performance in the present competitive environments. Wanyonyi and Muturi (2015) stated that the bad procurement approach adopted led to poor project results. This demonstrates that intense competition in the market calls for innovative strategies to be adopted in order to promote purchase procedures within organizations (Brownell, 2005).

Globally, Dimitri, Dini and Piga (2006) argue that there is a strong trend towards effective procurement management in Europe, the United States and Southern America. However, it is highly important to evaluate the prevailing purchasing process because of organizations bureaucracy and rigidity. Ricarda (2016) surveyed the influence of procurement practices in the electronics sector in Geneva. His purpose to examine the repercussion of procurement practices on the global supply chain of electronics found out that it is important to enhance procurement management to have a smooth and efficient supply chain not only globally but regionally and locally. In Africa, Caritas, Julius and Zenon (2016) researched the impact of procurement practices on performance of Rwandan governmental construction project and found out that good procurement management strengthens the performance of the construction of Bugesera District office.

In Kenya, Gakinya (2013) performed an inventory management and supply chain survey, stating that inventory management, standardized purchases and bulk orders are the present trend in

centralizing purchases within state organizations. In another research of sugar manufacturing companies; Lwiki, (2013) shows that, in line with the implementation of inventory management procedures, companies have moved to centralizing their buying processes by adopting e-procurement, standardizing their purchases and adhering to procurement laws. Makabira and Waiganjo (2014) researched the significance of procurement management on the achievement of corporate firms in Kenya. The findings were that Kenya National Police employed procurement practices in its operations and that the organization has benefited from employing procurement controls. Karanja and Kiarie (2015) conducted research on Guaranty Trust Bank to indicate the impact of procurement practices on organizational performance in private scope. The study also noted that procurement planning was a major contributor to organizational performance.

Health Policy Plus (HP+) is a donor funded project awarded to Palladium (formerly Futures Group. HP+ has a mandate to strengthen and advance health policy priorities in HIV, family planning and reproductive health (FP/RH), and maternal health. It aims to improve the enabling environment for equitable and sustainable health services, supplies, and delivery systems through policy development and implementation, with an emphasis on voluntary, rights-based health programs, and by strengthening in-country partners' capacity to navigate complex environments for effective policy design, implementation, and financing aligned to their priorities. HP+ play a bigger role in increasing access to HIV related health commodities like ARVs and test kits; supports development of PBB curriculum and manual for county budgeting, printing and supply to focus counties; HP+ aims to train county staff on PBB to enhance their capacity on planning and budgeting, facilitate training of trainers, who be used to cascade training at sub-county level.

Due to the nature and complexity of the project, it is important to research on how the project is influenced by its procurement management function (Health Policy plus, 2019). HP+ operates in 12 counties in Kenya but the research focused on 4 counties in Western Kenya. This is because the 4 are the majority within the same region namely Busia, Kakamega, Bungoma and Vihiga.

1.2 Statement of the Problem

Procurement is deemed to be part of principles of management that focus on effective achievement of project goals. In practice, when the procurement process is well planned and implemented, it can act as an economic instrument for guaranteeing effective project performance (Keith et al., 2016). Many institutions are challenged by dynamic procurement revolution and this gives them

difficulty on the smooth running of their projects (Wambui, 2013). Procurement management is fragile and predisposed to regular discontinuities (Jeppesen, 2010). Jibrin, Ejura and Augustine (2014) noted that the major problem in the current procurement industry is not on the limited regulation models but because of noncompliance and pitiable execution process. Regardless of the effort by institutions to improve performance of the procurement function, procurement management remains the key challenge (Hussein & Shale, 2014). This problem has precipitated to a decline in project performance in majority of organizations (Schiele, Horn & Vos, 2011).

Previous literature has paid little attention to procurement management and project performance. Globally, Caritas, Julius and Zenon (2016) researched the impact of procurement practices on Performance of Rwandan governmental construction project. They indicated that procurement planning had a positive performance in the construction firms. Aleman and Guererro (2016) researched on procurement practices and SMEs in global Supply chains in Switzerland. The research showed that there was still a gap in the literature on Systematic evidence from monitoring and evaluation of pro-SME procurement Practices and their impacts on both economic and social upgrading of the intended SMEs. Locally, Karanja and Kiarie (2015) conducted research on Guaranty Trust Bank to indicate the impact of procurement practices on organizational performance in private scope. The study also noted that procurement planning was a major contributor to organizational performance.

Even though various studies have been conducted on procurement, Most of the research focused on procurement practices and none of these studies focused on Procurement management and project performance especially in Health Policy Plus (HP+) project. Therefore, this study filled this gap in literature addressing the questions as to what extent does procurement management influence project performance in Health Policy Plus (HP+) project in Western Kenya.

The study also established challenges facing the procurement processes in HP+ since most of counties have frequently complained of differed procurement and supply of Health commodities which adversely affect availability of essential medical supplies in health facilities and delay in training of county teams. Suppliers have also complained of poor supplier management hence this research endeavored to establish and provide practical recommendations.

1.3 Purpose of the Study

The purpose of this study was to investigate the influence of Procurement Management on performance of Health Policy Plus (HP+) Project in Western Kenya.

1.4 Objectives of the Study

The study was guided by the following objectives;

i. To determine the influence of procurement planning on performance of Health Policy Plus (HP+) Project in Western Kenya.
ii. To examine the influence of vendor management on performance of Health Policy Plus (HP+) Project in Western Kenya.
iii. To evaluate the influence of e-procurement on performance of Health Policy Plus (HP+) Project in Western Kenya.
iv. To examine influence of procurement monitoring and evaluation on performance of Health Policy Plus (HP+) Project in Western Kenya.
v. To evaluate influence of inventory management on performance of Health Policy Plus (HP+) Project in Western Kenya.

1.5 Research Questions

This research study sought to answer the following questions;

i. How does procurement planning influence performance of Health Policy Plus (HP+) Project in Western Kenya?
ii. How does vendor management influence performance of Health Policy Plus (HP+) Project in Western Kenya?
iii. How does e-procurement influence performance of Health Policy Plus (HP+) Project in Western Kenya?
iv. How does procurement monitoring and evaluation influence performance of Health Policy Plus (HP+) Project in Western Kenya?
v. How does inventory management influence performance of Health Policy Plus (HP+) Project in Western Kenya?

1.6 Hypothesis of the Study

The study tested the following hypothesis;

i. **H_0**: There is a no significant relationship between procurement planning and performance of Health Policy Plus (HP+) Project

   H_1: There is a significant relationship between procurement planning and performance of Health Policy Plus (HP+) Project

ii. **H_0**: There is a no significant relationship between vendor management and performance of Health Policy Plus (HP+) Project

   H_1: There is a significant relationship between vendor management and performance of Health Policy Plus (HP+) Project

iii. **H_0**: There is a no significant relationship between e-procurement and performance of Health Policy Plus (HP+) Project

   H_1: There is a significant relationship between e-procurement and performance of Health Policy Plus (HP+) Project

iv. **H_0**: There is a no significant relationship between procurement monitoring and evaluation and performance of Health Policy Plus (HP+) Project

   H_1: There is a significant relationship between procurement monitoring and evaluation and performance of Health Policy Plus (HP+) Project

v. **H_0**: There is a no significant relationship between inventory management and performance of Health Policy Plus (HP+) Project

   H_1: There is a significant relationship between inventory management and performance of Health Policy Plus (HP+) Project

1.7 Significance of the Study

This study highlighted the influence of procurement management on project performance in Health Policy Plus (HP+) Project in Western Kenya. The findings therefore may be beneficial to the management of Health Policy Plus (HP+) since it informs them on the best practices in procurement management and their influence on project performance.

The findings of the study would also be of interest to stakeholders in the health sector including governmental organizations in coming up with best procurement management practices that can

improve project performance. Both the national and county governments would use the findings of this study in enhancing procurement management and project performance.

The findings would be helpful to policy makers since it would provide a framework for significant and measurable improvements in equity, access, monitoring and affordability of quality health services and supplies. The findings would also encourage the national and county governments to create a policy environment for public stewardship, accountability, and transparency. The findings would be helpful in generating technical and monitoring reports and case studies that would inform HP+ achievement.

Lastly, to academicians and researchers; the results of this study would help them appreciate the influence of procurement management on project performance. This research would also add value to the existing body of knowledge on procurement management and project performance. This would aid in providing platform for further academic research as well as future reference for literature review.

1.8 Limitations of the Study

Limitations are potential weaknesses or problems with the study identified by the researcher. During the research, some respondents were not willing to participate in the study due to fears of victimization or exposure of personal information. They were however informed that their information was kept confidential, and that their names were not recorded to maintain privacy. Communication obstacles like stereotypes affected the research. The researcher guided the participants to answer questions closely without prejudice.

1.9 Delimitations of the Study

The study was conducted on the influence of procurement management on project performance of the Health Policy Plus (HP+) Project in Western Kenya. The study focused on procurement management practices such as procurement planning, vendor management, e-procurement, procurement monitoring & evaluation, inventory management and how they influence project performance in Health Policy Plus (HP+). The study focused on assessing the perceptions of HP+ employees and was limited to Western Kenya counties which include Vihiga, Busia, Kakamega and Bungoma. The Counties were studied to ascertain the influence of procurement management in performance of Health Policy Plus project. The respondents included top management and

procurement staff at Health Policy Plus (HP+) Project, County government procurement officials and Health Facilities Managers.

1.10 Basic assumptions of the Study

The research was based on the assumption that the research would get access to prospective potential respondents in Health Policy Plus (HP+), focus County government officials and facility managers and the respondents would share the required information without cohesion.

1.11 Definition of Significant Terms Used in the Study

E-procurement; Requisition, tendering, selection and management of vendors via a web based system

Inventory Management; refers to the process of ordering, storing, and ensuring inventory at HP+ warehouse is kept at low cost, and the quality standard is upheld.

Procurement Management: is one such form of management, where goods and services are acquired from a different organization or firm**.** It also involves planning and directing the activities of purchasing agents who buy materials needed for the operations of HP+

Procurement Monitoring and Evaluation; auditing of HP+ procurement performance to understand whether procurement goals have been met; compliance of procurement process and identify key areas of the procurement cycle to develop appropriate risk and corruption prevention strategies

Procurement Planning; in this study it is the process of deciding what to buy, when and from what source. During the procurement planning process, the procurement method is assigned and the expectations for fulfillment of procurement requirements determined; indicators are scheduling, sequencing and activities definition

Performance of Health Policy Plus Project: It is the assessment of the ability of HP+ project to meet its key performance indicators shown by compliance of allocated budget, time schedule, quality standards and stakeholder satisfaction

Vendor Management; Ability of HP+ to sourcing and selection of vendors, negotiating contracts, managing relationships, evaluating performance, conduct vendor development programs efficiently and ensuring payments are made on a timely manner

1.12 Organizational of the Study

The Project is organized in five chapters as follows: Chapter one covers the background of the study, statement of the problem, purpose of the study, objectives and research questions. It also covers the significance of the study, assumptions of the study, limitations and delimitations of the study, definition of the significant terms as well as the organization of the study. Chapter two covers literature review which explains procurement management parameters and project performance, empirical literature, theoretical framework and conceptual framework, the relationship between the factors on the conceptual framework and research gaps. Chapter three outlines the research methodology which includes research design, target population, sample size, sampling technique, research instruments reliability and validity and procedures for data collection and analysis techniques. Chapter four present analysis and findings of the study as set out in the research methodology. The study closes with chapter five which presents the discussion, conclusion, and recommendations for action and further research.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter reviews past work and thoughts on influence of procurement management on project performance. The chapter develops a theoretical review to vindicate the need for this study and the empirical review on the five objectives. The chapter also examines the knowledge gap. The section finally concludes with conceptual framework in the proposed study.

2.2 Performance of Health Policy Plus Project

Mahaney and Greer (2014) indicate that the project implementation process is complex, usually requires extensive and collective attention to a broad aspect of human, budgetary and technical variables. In addition, projects often possess a specialized set of critical success factors in which if addressed and attention given will improve the likelihood of successful completion. On the other hand, Kahungura (2017) observe that if these factors were not taken seriously might lead to the failure of the project. Organizations today are operating under high level of uncertainty, projects implementations are open to all sorts of external influence, unexpected events, ever-growing requirements, changing constraints and fluctuating resource flows. This clearly shows that if projects are applied and steps are not taken in order to manage them effectively and efficiently, the chances of failure are high (Kahungura, 2017).

A project is highly influenced by the type of project procurement method used during implementation to meet project goals. Consequently, project clients often seek to select the best method that can help to achieve better project results. Different forms of project performance ways exists from which clients can choose from. There are terms of allocation of activities sequencing, process and procedure and organization approach in project performance (Klein & Chen, 2011). While some degree of poor cost and time schedule performance is inevitable in projects, it is possible to improve risk management strategies to minimize their negative impact and thus improve the project performance.

Customer request, legal requirement, market demand, and business needs are the fundamental approaches of setting project performance process. A well-defined project can reduce the risk of changes and delay during project scope definition. A budget and time definition can be arrived at

with effective needs identification which can alleviate the risk of shortfall that can lead to expensive changes or even project failure (Fageha & Aibinu, 2014).

Alzahrani and Emsley (2013) compared success criteria as measured by contractors and clients and found out that clients put more emphasize on satisfying the needs of other stakeholders, while contractors emphasis on minimizing project cost and duration. In addition, they found that all project stakeholders put products satisfying owner's needs as the first criteria. Thus, project success can be measured differently from the perspective of the different parties and there is need for deep understanding of project implementation. This study used Budget Compliance, Quality Adherence, Timely supply, mortality rate, access levels and health training reach as indicators for measuring the performance of HP+ Project.

2.3 Procurement Planning and Performance of Health Policy Plus Project

Procurement planning plays a key role in the successful project implementation, Frese (2013) argues that procurement planning requires excellent forward planning, including detailed planning of process implementation phases and milestones, budgeting, timeliness of tasks, fallback positions and re-planning. What that means is that the initial planning is not enough. Projects often take a wrong turn, or initial solutions prove unfounded, requiring re-planning and going back to the drawing board. As a result, the procurement plan may be subject to review from time to time as and when necessary.

A research on procurement approaches taken by oil companies in Kenya (Kamuru, 2014) concludes that corruption, absence of a strategic procurement plan and bad technology have been the primary impediments to achieving competitiveness among oil companies in Kenya. In a research on variables influencing the efficiency of procurement in the Ministry of Energy, Kiage (2013) discovered that planning, personnel distribution and contract management had a positive impact on procurement in the Ministry of Energy.

A research by Kabega, Kule and Mbera (2016) on the impact of public procurement procedures on the performance of public procurement initiatives in Rwanda discovered that there was a substantial connection between public procurement planning and performance and that good project performance in Rwanda was ascribed to sound public procurement planning. Wogube (2011) in Sironka Town Uganda on the link between procurement planning and project

performance shows that sound procurement planning has a favorable relationship with economic performance. In contrast to Wogube (2011), the present research handled procurement as a scheduling instrument and cover the impact it has on the general performance of the organization, including, but not restricted to, project and staff performance.

Project planning is a critical stage in the cost management process since an inaccurate budget can lead to poor project performance. Inaccurate budget may lead to quality compromise and variations with neither the client, end-user, nor design team being completely satisfied at the end. It is common mistake at planning stage is to use a schedule accommodation with areas and apply some historical costs without making adjustments for the many factors which affect project costs such as size of the project, location, price increases since the date of the data used, procurement method, overall quality of products, access and locational factors (WBDG, 2011).

The project cost that results from the planning cycle must be reasonable, attainable, and based on contractually negotiated costs and the statement of work. The basis for the budget is historical cost, best estimates, or industrial engineering standards. The budget must identify planned manpower requirements and its procurement, and management reserve Performance results standards are quantitative measurements and include such items as quality of work, quantity of work and cost of work (Kerzner, 2009).

In Sabiti, Basheka and Muhumuza (2011) study conducted in Uganda on developing public procurement performance measurement systems in developing countries: the Uganda experience, the authors note how proper procurement planning influence project performance. The researcher notes that the project problems arise when government ignore proper procurement planning in conducting public affairs, administrative systems are fragmented, tasks to be performed are so many.

Ocharo (2013) in his study on the factors affecting project performance: a case of ministry of Energy in Kenya notes that procurement planning is the process of choosing the most appropriate vendor to deliver a specified project so that the achievement of best value for money. Procurement methods are one of the critical steps in planning and bid evaluation methods are the key procedures through which a vendor is selected. Ocharo (2013) posits that planning is one of the main decisions made by the clients. In order to ensure that the project can be completed successfully, the client

must select the most appropriate contractor. Ocharo (2013) identifies procurement methods as the procedures used by the procuring entity to acquire goods, services and works.

On the other hand, Pilcher (2012) notes that procurement planning involves drawing up a shortlist of vendors deemed to have the appropriate qualifications to carry out the proposed work satisfactorily While negotiated or direct tendering is where the client invites a single contractor to submit a tender for a particular project. There is a tendency for entities to prefer using competitive methods of procurement given that they tend to promote transparency, economy and efficiency, and limit favoritism Lynch (2014). However, according to the study conducted by Masterman (2012), there is development of non-traditional procurement systems and which seem to be the favourite to most clients.

2.4 Vendor Management and Performance of Health Policy Plus Project

Vendor management is the process that empowers an organization to take appropriate measures for controlling cost, reducing potential risks related to vendors, ensuring excellent service deliverability and deriving value from vendors in the long-run. This includes researching about the best suitable vendors, sourcing and obtaining pricing information, gauging the quality of work, managing relationships in case of multiple vendors, evaluating performance by setting organizational standards, and ensuring that the payments are always made on time (Brown & Hyer, 2010)

Supplier relationship management is essential to the achievement of corporate supply chain leadership (Harland, 1996). In specific, strategic interactions with critical providers need to be understood in order to maximize value creation in procurement. Studies have shown that the effective management of these interactions contributes to a strong performance (Tan, 1999). Dimensions such as confidence and engagement are shown to play a significant part in high-value strategic interactions where particular investments are high and contractual governance alone is not sufficient In such relationships, it is essential for both sides to recognize that they are gaining value from the relationship if they do so.

Wangeci (2013) performed a survey on vendor management and supply chain efficiency in the alcoholic beverage sector in Kenya. The particular goals of the research were to determine the magnitude of SRM in the alcoholic beverage sector; to determine the effect of SRM on the supply chain performance of the alcoholic beverage sector in Kenya; and to identify the difficulties facing

the implementation of SRM in the alcoholic beverage sector in Kenya. The research found that companies in the alcohol beverage sector are moving towards cooperative relationships with their providers in order to enhance the efficiency of their supply chain.

Tangus (2015) researched the effect of vendor Management on Manufacturing Firms performance in Kisumu County, Kenya. Her research discovered that confidence is a critical factor in fostering engagement among supply chain partners. She also found that the existence of confidence greatly improves the likelihood of good procurement results. Lack of confidence between supply chain partners often results in inefficient and inefficient performance as transaction costs (verification, inspection and certification of their trading partners) increase.

In Ghana, public purchasing process is mandatory by Act 663 of 2003; that a formal procurement assessment or appraisal of vendors is required to determine performance. The performance of the Procurement process within the public system may be a direct or an indirect yield of the processes depending on the objectives, goals, expectation and customer satisfaction (Sollish and Semanik 2007). The foremost thing for consideration during the procurement process is identifying the specific needs, how to pay for these needs and a review of the whole output. (Emmert & Crocker 2008). In Ghana there is a direct correlation between public sector procurement vendor management and the functioning of set targets that are achieved. These procedures usually provide guidance on the period, value, supply time and availability rate of the product which are crucial to the vital performance of the functions of purchasing. Selecting a proficient and dependable contractor is one of the greatest problems consumers who wish to achieve project success face (Kumaraswamy & Anvuur, 2008).

Vendor assessments can encompass many diverse factors, for example, cost, technical capability, management aptitude, previous experience, the object of reference, environmental and quality management systems, financial solidity and concerted skills (Lam et al., 2011; Eriksson & Laan, 2007; Malmberg, 2007). Other authorities have considered the procurement practices to be similar to the supply chain management practices which is the set of activities undertaken by an organization to promote effective management of its supply chain (Koh et al., 2007).

There are approaches applied in integration, managing and coordination of suppliers in order to satisfy clients in effective way (Wong et al., 2015); as tangible activities/technologies that have a relevant role in the collaboration of a focal firm with its suppliers and/or clients (Vaart & Donk,

2008) and as the approach to involve suppliers in decision making, encouraging information, sharing and looking for new ways to integrate upstream activities. During the negotiating process, parties should think carefully about the kind of commitments they should be prepared to make. One way to build trust is to create a commitment structure that can be implemented in stages. The key to negotiating a beneficial outcome is the negotiators ability to consider all the elements of the situation carefully and to identify and think through the options. Organizations are required to seek the best value of working relationship for short term and long operations with suppliers.

2.5 E-Procurement and Performance of Health Policy Plus Project

Electronic procurement, otherwise known as e-procurement, is a business-to-business purchase and provision offering and web-based administration. E-procurement is evolving quickly as a model acquisition method in both the private and open sections in many countries. With the coming of the internet, a number of organizations are now offering innovative procurement practices (Goodfred, Evans, Doumbia & Hanson, 2015).

In her research on the effect of e-procurement at the Teachers Service Commission, Kingori (2013) discovered that there is a powerful connection between e-procurement, the level of ICT skills and the level of e-procurement implementation. This shows that the effectiveness of procurement is extremely correlated with e-Procurement application.

Vaidyanathan and Devaraj (2008) study on e-procurement performance analysis noted that meeting orders on time has greater impact on satisfaction than meeting orders accurately. So, after adopting e-procurement, the whole system should be managed cautiously in order to avoid shortage problems. Yu et al. (2008) state that if e-procurement is properly applied, it could provide benefits, otherwise it can cause damage to companies. Ronchi et al. (2010) have determined the six major benefits of e-procurement and prepared a classification type. Order cost, administrative cost, lead time, opportunity cost and opportunity cost of capital are used to calculate financial performance and decentralization, while transparency, control, buying reduction, supply-base rationalization are used to assess organizational performance. By making such a classification, they try to assess the value of adopting e-procurement in companies. The study noted that e-procurement had a positive impact on performance if properly managed.

According to Nzuve (2013), e-procurement adoption by the health sector comes with many benefits. For instance, organizations will be able to do away with problems such as compound products handling activities, unnecessary inventory, paper shuffling, data and process quality issues, carrying costs, poorly developed links to suppliers and lengthy order cycle times. The effects of e-tendering on organizational performance has been studied by Eadie et al. (2007), on the advantages of organization which uses E-procurement. The Eadie et al. (2007) study has been able to discuss the reduction in staff as an important way of producing competitive advantage through reduced costs with e-procurement practices organizational competitive advantage benefits in the market. Additionally, Eadie et al. (2007) has also captured on communication efficiency in the procurement process; with Hawking et al.(2004) also discussing on market intelligence. In as much as the study has been able to capture on various issues concerning e-tendering; a lot has not been covered in terms of studies relating to the transparency of the tendering process. The study has also captured the general aspect of e-tendering without mentioning the current issue in relation to high-income countries in comparison to low-income countries. There is no study that has been done on e-tendering in Kenya and thus an existing gap in knowledge.

Based on the literature review on past studies done on influence of E-invoicing on project performance, Tanner, Wolfle, Schubert and Quade (2007) established that electronically, orders and invoices are the most often business documents that are exchanged between partners and that over 70 % of the companies electronic exchange of invoices (e-invoicing) is a current key topic; a study conducted by Geldenhuy et al. (2005) titled the introduced transaction costs discussed on individual corporations performance in asset transformation on cost economics, the cost of the infrastructure is reduced per transaction when the volume of transactions increases. The studies were done by Wanjera (2014) also discussed on the creation of a financially viable e-invoicing solution, corporate needs to create this critical mass by a value network of alliance partners and technology solution providers to add the necessary desirability for electronic invoicing through the Financial Supply Chain. Based on the study done by Buenger et al. (2005), the value drivers, indicating that organizations face different value propositions, which may change over time due to internal and external effect and experiences. In as far as the study was conducted to identify the benefits of e-invoicing; there is yet an existing gap in the achievement of knowledge on the benefits of e-invoicing in Kenya.

On the effect of e-payment on project performance, the study has been able to identify resources such as studies done by Porter (2001). Asumba e-Future Center (2007) on E-payment is in the global economy. Also, the studies that were conducted by Salnoske (1997) and Music et al. (2002) which discussed on e-payment potential in enhancing project success. Another study was that of Mentzer and John (2001) on the development of information technology and computer networks enhanced the usage of e-payment and improved the use of supply chain management (SCM).

2.6 Procurement Monitoring & Evaluation and Performance of Health Policy Plus Project

Brown and Hyer (2010) defined monitoring and evaluation as the tracking method during procurement management. Which is easy to what is advanced, in order to recognize modifications in the novel scheme. These scientists also stated that, in any monitoring and evaluation phase, there is a need for a team allocated to work on the project to agree on methods that are suitable to the monitoring method as one of the key performance indicators (KPIs) in the building of the project. They referred project control to choices, actions and procedures linked to differences in the execution of the project.

Makabira and Waiganjo (2014) in their research on the role of procurement procedures in the performance of the Kenya National Police Service in Makueni County discovered that procurement procedures such as growth, monitoring, evaluation and preparation of the workforce have played a major part in the performance of the Kenya National Police Service

Adu (2011) carried out a research on the impact of the Procurement Act on financial management in the Ashanti region of Ghana, which found that adherence to the Procurement Act significantly decreased government expenditure by decreasing waste and resource leakage through auditing, budgetary control, spending monitoring, cost-evaluation and value for cash.

According to Mbalangu (2013) in his study on procurement monitoring and project performance carried out in Uganda,supplier contractor monitoring has slowly become an important component for effective supplier relationship management that is directly linked to securing the supply of key commodities needed for sustaining business.

According to Kansiime (2014) in his study on the impact of public procurement reforms on service delivery in Uganda, he notes that monitoring of this formalized relationship allows an organisation a degree of control over the deliverables and performance requirements. The use of contracts in

business relationships has long been the lifeblood of a business, as the contracts provide the terms, pricing, and service levels of customer, partner and/or supplier relationships (Mbalangu, 2013). Contracts provide a framework by which an organisation manages and mitigates risk in its supplier relationships (Mbalangu, 2013). As a result, contracts have become the living breathing documents that control the dynamics of everyday business in an ever increasing fashion. The above study adopted qualitative techniques of data analysis compared to the proposed study that adopted mixed methodological approaches of data analysis.

Schmitz and Platts (2004) in their study conducted in Ghana did investigate the procurement reforms in Ghana. They assert that the main aim of contracting is to ensure that goods or services are delivered on time, at the agreed cost and at the specified requirements. It means developing effective working relationships with your suppliers, ensuring effective service delivery, maximizing value for money and providing consistent quality for stakeholders and end users (Schmitz & Platts, 2004). The primary goal for contractor monitoring within any company is to ensure that commitments and obligations to customers and suppliers are clearly visible to the relevant people in the organization and that they are executed upon (Schmitz & Platts, 2004). Contracts are used to control virtually every part of the trading relationship between buyers, sellers, and intermediaries, and have an impact on various functions within the enterprise. For example, the sell-side involves sales, marketing, finance, legal, sales operations and customer service. The earlier study pretested the results based on qualitative approaches, in 23 bridging the gap, this study pretested the results using both quantitative and qualitative methodological approaches.

Agere (2009) in his study on the effectiveness of contract management in Austria notes that contract monitoring requires the systematic management of contract creation, execution, compliance and analysis to maximize performance and minimize risk (Agere, 2009). With the increase in the complexity of doing business in public entities coupled with the increase in transaction volumes and value in an ever tightening regulatory framework has resulted in businesses taking note of the importance of proper monitoring of contractors (Bagaka & Kobia, 2010). The missing link on the earlier study is on the sampling techniques used.

2.7 Inventory Management and Performance of Health Policy Plus Project

Sandeep et al. (2007) postulate that inventory management may result in unwarranted losses if the organization always has stock outs, a lack of adequate warehousing plans, the delivery of incorrect products to clients, as well as absence of adequate paperwork for the products purchased. The

employees must comprehend and apply the inventory management methods to guarantee that the organization receives value for its cash. According to Macharia and Mukulu (2016), the just-in-time (JIT) stock technique is an approach in which materials, components and other products are ordered only in amounts needed to satisfy instant requirements. These items are then closely planned to be received exactly at the moment they are required. This will increase effectiveness, reduce waste and eventually minimize inventory management expenses and lead time expenses. They noted that the just-in-time (JIT) stock technique enables organizations to effectively meet projects set goals and objectives.

Cheruiyot (2013) postulates that companies should embrace lawful stock control methods, a competent and sensible inventory information system so that they can alter the expenses and hazards of stock control against the favorable conditions of getting stocks immediately open for smooth operation. Cut down inventory rates are equally undesirable as they interfere with development, loss of goodwill and high demand for expenses.

Inventory management is a complex decision making process that requires analysis of multiple criteria parameters, which in practice are usually non-deterministic in nature. Decisions are made in conditions of uncertainty. The most popular classical methods for determining inventory levels include Economic Order Quantity (EOQ) model, the Re-Order Point (ROP) models and Re-Order Cycle (ROC) (Krzyzaniak & Cyplik, 2007).Safety stock aims to cover the unexpected changes in the demand, Grzybwska, (2010).Inventory Management (IM) is an inter-disciplinary concept (Larson and Halldorsson, 2014).

Inventory management revolves around a cross- functional and across the boundaries of the firm (Ellram & Cooper, 2014). Halldorsson et al. (2007) argues that key aspects of inventory include the design and management of the structure through inter-organizational relationships. According to the 17th Annual State of Logistics Report Wilson (2016), business logistics cost as a percentage of US gross domestic product has grown to 9.5 percent, and of the over $1 trillion spent on logistics, approximately 33 percent is attributed to the cost of holding inventory. Thus, inventory management research is critical in procurement.

Inventory programs can make inventory commitment more efficient and improve customer service. In a recent examination of the future of the discipline of logistics and logistics research, Davis –Sramek And Fugate (2007) uncovered that leading discipline visionaries feel that one area

in which logistics researchers must focus on is coordination and collaboration, and subsequently, the inventory management literature published in logistics journals has evolved in recent years in that direction. Inventory management according to Heizer and Render (2016) indicated that businesses hold these stocks for various reasons, including protection against general shortages or potential problems with suppliers, or, because unit price rises may be imminent. Nevertheless, the literature focuses upon stock replenishment policies.

Typically, the resultant inventories enable firms to perform a service economically, without the beneficiaries suffering any untold delays. Thus inventory planning and control bears great significant. The order placing discipline minimizes the cost of transferring goods, besides shortening the associated lead times and that there are sufficient incentives for the parties to cooperate because the recipients pays for the upstream storage and freight in one way or another. Effective inventory management depends on understanding all the details of what is inventory management. By applying lean practices to all aspects of the inventory management cycle, organizations can reduce investment in standing inventory, plant rental, shipping costs, reverse logistics while maintaining or improving client service levels and in-stock metrics on critical inventory (Confessore, Rismondo & Stecca, 2014).

2.8 Theoretical Framework

This study was hinged on the Stakeholders Theory, Agency Theory, Socio-economic Theory and Systems Theory.

2.8.1 Agency Theory

The Agency's theory takes into account the fact that the parties involved in the project are developing different interests in the tendering process and the evaluation process. The relationship that exists within the parties may be referred to as an agency. Parties have an agency relationship when they cooperate and engage in an association that allows one party (principal) to delegate decisions and work to / or another (agent) to act on its behalf (Tenhiälä, Rungtusanatham & Miller, 2017). The basic premise of the Agency's theory is that; prospective objective disputes exist between the Principals and Agents; each Party acts in its own self-interest; there is frequent resemblance between Principals and Agents; agents are more risk-averse than the Principal; and efficacy is the criterion. Two future issues stemming from these assumptions may occur in the Agency Relationships: the Agency Problem and the Risk Sharing Problem (Xingxing 2012).

According to the theory party (principal) another (agent) contracted to conduct certain services on their behalf. The principal is passed on to the officer by the decision-making power. The distinction between consumers and vendors will lead in the two sides being concerned only with their own interests (Xingxing 2012). The principal agent relationships affects the decisions of top management engagement which in turn influences the relationship between organizations and vendors. The existence of a conflict of interest between officials contributes to the execution of procurement procedures against conventional policies that lead to a waste of time in the tendering and cancelation of tenders advertised and to the loss of procurement resources.

The Agency's Theory Model is based on the reality that information asymmetries and self-interest values lack the foundation for trusting their designated agents and will try to mitigate these issues by implementing processes to align agents ' interests with values and to decrease the scope of information asymmetries and opportunistic trends (Keng'ara, 2013). The theory is relevant because it determines how procurement managers execute procurement practices on behalf of HP+ and Donor Organization. Existence of poor principle agent relationship leads to low level of top management commitment and this also affects the relationship between institutions and the suppliers. Existence of conflict of interest amongst the agents leads to execution of procurement practices against the procurement policies and this leads to increased procurement budget and loss of procurement funds (Brown & Hyer, 2010). The research thus used this model to determine the impact of Vendor Management and Procurement monitoring and evaluation on the performance of Health Policy Plus (HP+) Project in Western Kenya.

2.8.2 Linear Policy Model

This model was developed by Grindle and Thomas (2000),also known as rational model and is the most widely-held view of the way in which policy is made. It outlines policy-making as a problem solving process which is rational, balanced, objective and analytical. In the model, decisions are made in a series of sequential phases, starting with the identification of a problem or issue, and ending with a set of activities to solve or deal with it. The policy model phases include; recognizing and defining the nature of the issue to be dealt with; identifying possible courses of action to deal with the issue; weighing the advantages and disadvantages of each of these alternatives; choosing the option which offers the best solution; implementing the policy and possibly evaluating the outcome (Grindle and Thomas, 2000).This model assumes that

policymakers approach the issues rationally, going through each logical stage of the process, and carefully considering all relevant information. If policies do not achieve what they are intended to achieve, blame is often not laid on the policy itself, but rather on political or managerial failure in implementing it (Hunja, 2009).Failure can be blamed on a lack of political will, poor management or shortage of resources that eventually hinders formulation and effective implementation of procurement practices. The theory is relevant to the study because linear policy model determines the process under which policies are made and implemented in an organization. The model assumes that failure in policy implementation of procurement practices can be blamed to poor management and shortage of resources and this implies that management support and budgetary allocation plays a key role in supporting policy implementation. Implementation of procurement policies is greatly determined by procurement planning, management support, budgetary allocation, and preparation of procurement progress reports, procurement records management and the employed procurement methods (Meredith& Mantel, 2012).

2.9 Conceptual Framework

Kombo and Tromp (2006) defines conceptual framework as a set of broad ideas and principles taken from relevant fields of enquiry and which are used to structure a presentation.

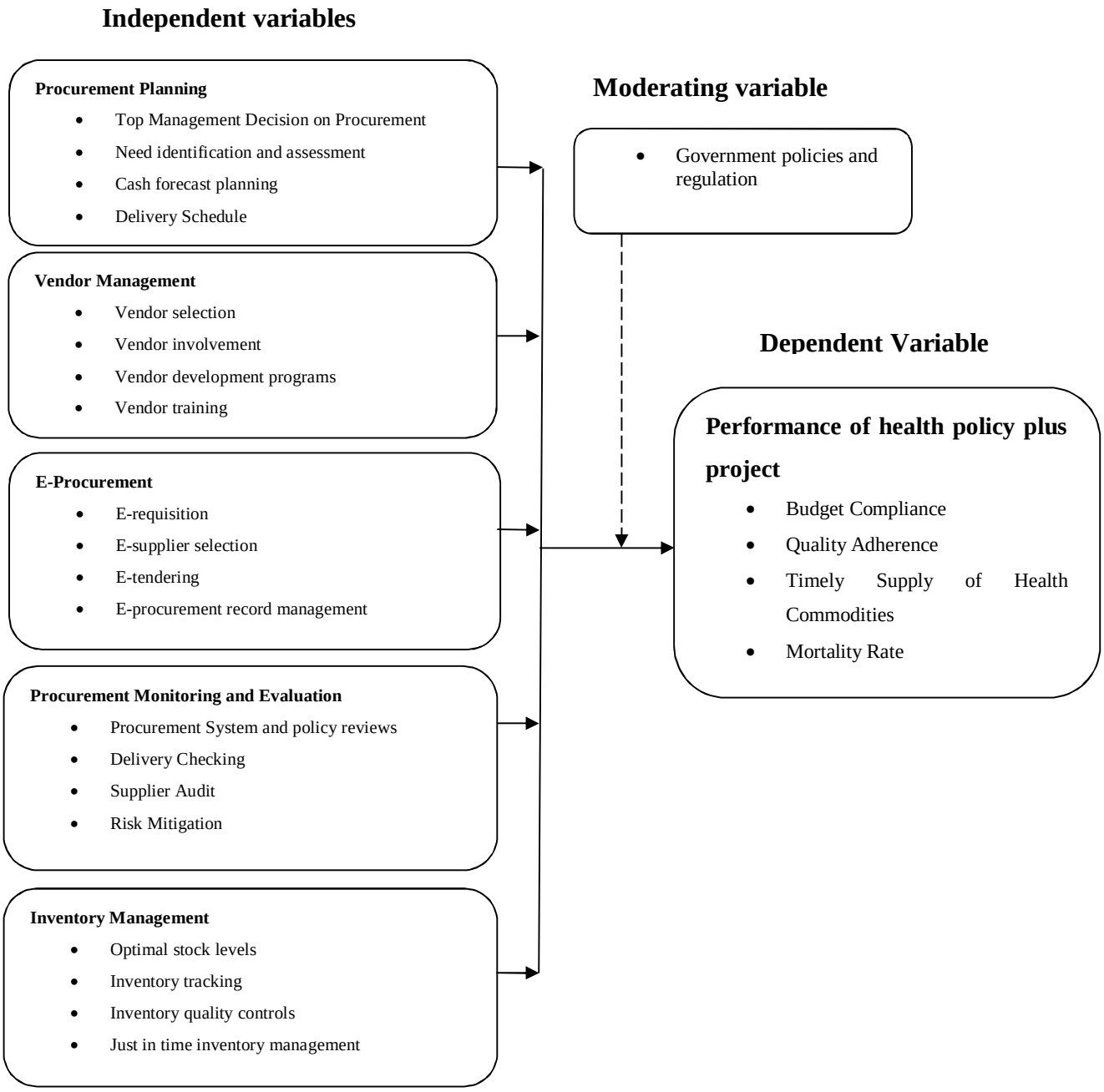

Figure 1: Conceptual Framework of the relationship between influence of procurement management on performance of health policy plus project

The conceptual framework for studies is the fundamental structure on which the study is based and, inter alia, offers the basis for studies (Bell, 2005). The framework also makes it easier for professionals and scientists to understand the results of the study. In reality, the design is the reference framework of the research study and offers a suitable basis on which the study is based. The framework promotes the research problem, the issues resulting from the issue and thus contributes to the creation of hypotheses.

Procurement planning in project enables project managers to undertake needs identification and assessment as well as plan for time, budget and scope of a project. These variables have a major influence on project accomplishment. Vendor management entails selection, involvement, vendor development programs aimed at creating a teamwork relationship with suppliers

E-procurement is involves carrying the entire procurement process via the web. Its entails e-requisition, tendering, selection, and payment. This enhances timely and low cost procurement if properly managed. Procurement monitoring and evaluation involves process undertaken to safeguard against loss such as policies, audit and delivery tracking. Inventory management is the the practice employed in a project to ensure no stock out and working capital is well managed.

2.10 Gaps in Literature Reviewed

Vaidyanathan and Devaraj (2008) study on e-procurement performance analysis noted that meeting orders on time has greater impact on satisfaction than meeting orders accurately. This study focused on e procurement unlike the current study that focused on procurement management. Tangus (2015) researched the effect of vendor Management on Manufacturing Firms performance in Kisumu County. This study was carried out in manufacturing industry unlike the current study that was carried out in health sector.

Makabira and Waiganjo (2014) in their research on the role of procurement procedures in the performance of the Kenya National Police Service in Makueni County. This study focused on Kenya National Police Service as an entity unlike this study which focused on Projects carries out by Health Policy Plus (HP+).

Table 2.1: Research Gaps

Variable	Author	Title of Study	Findings	Research gaps
Procurement Planning	Kabega, Kule and Mbera (2016)	Effect of procurement practices on performance of public projects in Rwanda	There was significant relationship between public procurement planning and performance and that the positive organizational performance in Rwanda was attributed by proper public procurement planning	This study investigated practices such as procurement planning, tendering system, and contract administration in the public sector and current study was carried in the health sector
E-procurement	Tanner, Wolfle, Schubert and Quade (2007)	The current trends and challenges in electronic procurement	The study established that electronically, orders and invoices are the most often business documents that are exchanged between partners and that over 70 % of the companies electronic exchange of invoices (e-invoicing) is a current key topic	The study did not review e-procurement tin the health sector
Vendor Management	Tangus (2015)	Effect of vendor Management on Manufacturing Firms performance in Kisumu County	The study established that vendor Management was critical in the performance of Manufacturing Firms in Kisumu County.	This study was carried out in manufacturing industry unlike the current study that was carried out in health sector.
Procurement Monitoring and Evaluation	Aleman and Guererro (2016)	Procurement practices and SMEs in global Supply chains in Switzerland	The study found that most SMEs in the second tier were excluded from benefits of good procurement practices.	The research showed that there was still a gap in the literature on Systematic evidence from monitoring and evaluation of pro-SME procurement Practices and their impacts on both economic and social upgrading of the intended SMEs
Inventory Management	Makabira and Waiganjo (2014	Role of procurement procedures in the performance of the Kenya National Police Service in Makueni County.	Procurement practices such as development, controlling, monitoring and training workforce played a great responsibility in the performance within the Kenya National Police Service.	The existing procurement practices in this study did not include inventory management of which if applied well, can improve performance of projects
Project Perfomance	Karanja and Kiarie (2015)	Impact of procurement practices on organizational performance in private scope: A case of Guaranty Trust Bank	The study noted that procurement planning was a major contributor to organizational performance and that procurement practices had a great influence on the performance of organisations	The study focused on influence of procurement planning on the performance of Health Policy Plus (HP+) Project in Western Kenya

2.11 Summary of Literature Review

Wangeci (2013) performed a survey on vendor management and supply chain efficiency in the alcoholic beverage sector in Kenya. The research found that companies in the alcohol beverage sector are moving towards cooperative relationships with their providers in order to enhance the efficiency of their supply chain. Tangus (2015) researched the effect of vendor Management on Manufacturing Firms performance in Kisumu County, Kenya. She also found that the existence of confidence greatly improves the likelihood of good supply chain results. In her research on the effect of e-procurement at the Teachers Service Commission, Kingori (2013) discovered that there is a powerful connection between e-procurement, the level of ICT skills and the level of e-procurement implementation. Tanner, Wolfle, Schubert and Quade (2007) established that electronically, orders and invoices are the most often business documents that are exchanged between partners and that over 70 % of the companies electronic exchange of invoices (e-invoicing) is a current key topic Makabira and Waiganjo (2014) in their research on the role of procurement procedures in the performance of the Kenya National Police Service in Makueni County discovered that procurement procedures such as growth, monitoring, and evaluation. Adu (2011) carried out a research on the impact of the Procurement Act on financial management in the Ashanti region of Ghana, which found that adherence to the Procurement Act significantly decreased government expenditure

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter consists of the research methodology to be used to determine the influence of procurement management on project performance. Research design, sample size, target population, sampling procedure and size, data collection as well as analysis are discussed under this section.

3.2 Research Design

This study employed descriptive survey research design. Nachmias and Nachmias (2012) depicts research design as a logical model of evidence that enables the researcher to make inferences on causal relationships between the research parameters. According to Mugenda and Mugenda (2003), the purpose of descriptive research design is to identify possible relations, values and characteristics with emphasis on frequency of occurrence. Bryman and Bell (2013) also noted that a descriptive design aims at obtaining information that describes existing phenomena by asking questions about individual attitudes, beliefs and perceptions. In addition, this method was selected since it is more accurate and precise as it describes events in a well-planned way (Orodho, 2015).

3.3 Target Population

The target population of this study was 106 comprising of management and procurement staff at Health Policy Plus (HP+) Project, County government supply chain officials and health facilities managers in western Kenya who are conversant with the subject matter of this study. According to Burns and Grove (2003) a population consists of all elements that meet certain research criteria. It can also be described as the whole collection of elements or units on which the researcher would like to make deductions from (Kothari, 2004). The population distribution is as shown in Table 3.1.

Table 3. 1: Target Population

Staff Positions	Population	Percentage
Management and procurement staff at Health Policy Plus (HP+) Project	52	49.1
Bungoma County government supply chain officials	7	6.6
Busia County government supply chain officials	7	6.6
Vihiga County government supply chain officials	8	7.5
Kakamega County government supply chain officials	8	7.5
Health Facilities Managers	24	22.6
TOTAL	**106**	**100.0**

3.4 Sampling Size & Sampling Procedures

The Nassiuma formula was used to determine the appropriate sample size of the study. This was because the target population consists of a large number of individuals participating in the study. Mugenda and Mugenda (2008) affirm that a research should take as big a sample as possible for good results.

3.4.1 Sample Size

The researcher assumed 95% confidence level, which is equivalent to standardized normal deviate value of 1.96 and an acceptable margin of error of 5% (standard value of 0.05).According to Silverman (2016) sample size (n) of Seventy-five (75) percent of the target population is sufficient for a study. To obtain the desired sample size for the study with the population of 106, Nassiuma (2000) formula was used since it's more precise than other formulas. The computation was as shown;

$$n = \frac{N\,(cv^2)}{Cv^2 + (N-1)\,e^2}$$

Where ***n***= sample size

N = population (106)

Cv= coefficient of variation (take 0.6)

e= tolerance of desired level of confidence (take 0.05) at 95% confidence level)

$$n = \frac{106\,(0.6^2)}{0.6^2 + (106-1)\,0.05^2} = 84$$

The ration was therefore 84/106 = 0.49. This was used across all the strata to get the sample for each stratum. A sample was drawn from each stratum as shown in Table 3.2

Table 3.2: Sampling Frame

Staff Positions	Population	Sample Size
Management and procurement staff at Health Policy Plus (HP+) Project	52	41.2
Bungoma County government supply chain officials	7	5.5
Busia County government supply chain officials	7	5.5
Vihiga County government supply chain officials	8	6.3
Kakamega County government supply chain officials	8	6.3
Health Facilities Managers	24	19.0
TOTAL	**106**	**84.0**

3.4.2 Sampling Procedures

The study used stratified random sampling. Stratified random sampling technique was used to select a representative sample from the target population. Sampling is the process of selecting a number of individuals for a study in such a way that the individual selected represents the large group from which they are selected. The strata was the groups of the respondents within the target population (category of employees).

3.5 Research Instruments

The study collected both primary and secondary data. A Questionnaire and interview guide were used to collect primary data. Secondary data was collected through document reviews and analysis. Sources of secondary data include published books, e-journals and HP+ updates. Questionnaires were administered to management and procurement staff at Health Policy Plus (HP+) Project. The questionnaire was closed ended questions to enable quantitative analysis. The closed questions were restrictive so as to facilitate the coding exercise. This aided in obtaining honest answers since the respondents might feel challenged to exercise their mind and participate freely in the exercise and this makes them gain confidence. The interview guide was also utilized in this study. The interview guide was used for County government supply chain officials and Health Facilities Managers. Interviews are particularly useful for getting the story behind a participant's experiences. The interviewer can pursue in-depth information around a topic. Interviews were useful as follow-up to certain respondents to questionnaires.

3.5.1 Pilot Testing of Instruments

The study carried out the pilot test at Care International Kenya which has similar characteristics as the study area. The study used 10% of the sample size which was 8 respondents from Care international Kenya. A pilot test is a study done in preparation for the main study. Orodho (2015) noted that pilot study is important in detecting possible errors in the measurement procedures, identification of unclear questions and determining the validity and reliability of the data to be collected. The aim of the pilot study was to make sure that any error or missing item is identified and addressed so as to guarantee comprehensiveness and consistency.

3.5.2 Validity of Research Instrument

According to Golafshani (2003) validity is concerned with whether the research measures what it is intended to measure or rather how true the research findings are. Golafshani (2003) identifies some unsystematic threats to reliability which include unforeseen happening before or during data collection, participants' refusal to cooperate and change of behavior of the participants. To guarantee validity, the researcher conducted both face validity and content validity tests on the instrument to ensure the objectives are clearly defined to operationalize the study expectation.

3.5.3 Reliability of Research Instrument

Reliability as described by Cooper and Schindler (2011) is carried out to test the internal consistency of the questionnaire. Cronbach's alpha coefficient was utilized to obtain a correlation coefficient of the test scores. Mugenda and Mugenda (2008) indicates that test scores ranges between 0 to 1 and the instruments is considered reliable if the test score is closer to 1. A construct composite reliability co-efficient (Cronbach alpha) of 0.7 or above, for all the constructs is considered to be adequate for this study (Frankfort-Nachmias & Nachmias, 2012).

3.6 Data Collection Procedure

This study made use of a questionnaire and an interview guide to collect primary data. The questionnaire was administered to include top management and procurement staff at Health Policy Plus (HP+) Project by drop and collect later method and interviews were conducted to County government procurement officials and Health Facilities Managers. The questionnaire was collected after two days. Cooper and Schindler (2011) noted that the use of structured questions within a questionnaire and an interview guide enhances uniformity. The interview guide was administered through face to face interviews.

3.7 Data Analysis Techniques

In order to achieve the study objectives, the data collected was analyzed using descriptive statistics (measures of central tendency and variation measurements). The data analysis process involved several stages: For completeness and consistency, the completed questionnaires and interview guide were edited; the data was checked for errors and omissions before entering into statistical software for social sciences (SPSS V25). The quantitative data was analyzed using descriptive statistics such as frequencies and percentages, mean scores and standard deviation. The qualitative data from the open-ended questions were analyzed using conceptual content analysis and presented in prose. Data representation was done through tables. In addition, regression analysis was used to determine the influence of procurement management on project performance in Health Policy Plus (HP+). The regression model was as below;

$$\mathbf{Y= \beta_0 + \beta_1 X_1 + \varepsilon}$$

$$\mathbf{Y= \beta_0 + \beta_2 X_2 + \varepsilon}$$

$$\mathbf{Y= \beta_0 + \beta_3 X_3 + \varepsilon}$$

$$\mathbf{Y= \beta_0 + \beta_4 X_4 + \varepsilon}$$

$$\mathbf{Y= \beta_0 + \beta_5 X_5 + \varepsilon}$$

Where Y = Project performance

β_0 = Constant

β_1, β_2, β_3, β_4 and β_5 = Regression co-efficient

X_I = Procurement planning

X_2 =Vendor management

X_3= E-procurement

$X_{4=}$ Procurement monitoring & evaluation

X_5 =Inventory management

e = Error term

3.9 Ethical Consideration

To maintain ethics during the data collection period, the researcher first obtained an introductory letter from the University in order to introduce herself to Health Policy Plus (HP+) authorities, County Government Department of Health and facility managers. The respondents were requested to participate in the study by first explaining to them the intended purpose of the study and assuring

them that none of the third party had access to the information they disclose to the study. The respondents were not allowed to write their names nor the project they are dealing with.

3.10 Operationalization of Variables

Table 3.3 shows operationalization of the study variables.

Table 3. 3: Operationalization of Variables

Research Objective	Variable	Measuring of Indicators	Measuring Scale	Tools of Analysis	Type of analysis
To investigate the influence of procurement planning on the performance of HP+ Project in Kenya.	Procurement planning	-Top management decision on procurement -Need identification and assessment -Cash forecast planning; -Delivery Schedule	-Interval	Percentages Mean score Standard deviation	Descriptive statistics Regression analysis
To examine the impact of Vendor Management on the performance of HP+ Project in Kenya.	Vendor Management	-Vendor selection, -Vendor involvement -Vendor development programs -Vendor training	-Interval	Percentages Mean score Standard deviation	Descriptive statistics Regression analysis
To evaluate the effect of e-procurement on the performance of HP+ Project in Kenya	e-procurement	E-requisition E-supplier selection E-tendering E-tender evaluation E-procurement record management	-Interval	Percentages Mean score Standard deviation	Descriptive statistics Regression analysis
To examine the effect Procurement monitoring and evaluation on the performance of HP+ Project in Kenya	Procurement monitoring and evaluation	Procurement System and policy reviews Delivery checking Supplier audit Risk mitigation	-Interval	Percentages Mean score Standard deviation	Descriptive statistics Regression analysis
To evaluate the effect of inventory management on	Inventory management	Optimal stock levels Inventory tracking	-Interval	Percentages Mean score	

Research Objective	Variable	Measuring of Indicators	Measuring Scale	Tools of Analysis	Type of analysis
the performance of HP+ Project in Kenya	Performance of HP+ Project	Inventory quality controls Just in time inventory management Budget Compliance Quality Adherence Timely Supply of health commodities Mortality Rate Health Access Levels Health Training Reach	-Interval	Standard deviation Percentages Mean score Standard deviation	Descriptive statistics Regression analysis

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction

This chapter begins by considering the return rate of questionnaire and interview guide administered by the researcher. The background information of the respondents is also discussed in detail. Data that was collected was analyzed, presented and interpreted as guided by the research questions.

4.2 Questionnaire Return Rate

The study issued 84 questionnaires out of which only 73 respondents returned fully filled questionnaires. This represented a response rate of 86.9%. This is in accordance to Jankowicz (2010) who stated that a response rate of 50 percent or more is acceptable for analyses. The questionnaire return rate is as shown in Table 4.1.

Table 4. 1: Questionnaire Return Rate

Questionnaire Return Rate	Frequency	Percentage
Responses	73	86.9
Non-response	11	13.1
Total	**84**	**100.0**

4.2.1 Reliability Analysis

The study used construct reliability to determine the Cronbach's Alpha that tests the internal consistency of items on a scale. Bell (2010) recommended that the Cronbach's Alpha of variables that are above 0.70 threshold are considered reliable. The results of the reliability analysis are presented in the Table 4.2.

Table 4.2.1: Reliability Statistics

	Cronbach's Alpha	No. of Items
Procurement planning	0.852	7
Vendor management	0.934	7
E-procurement	0.731	7
Procurement monitoring and evaluation	0.795	7
Inventory management	0.711	7
Performance of Health Policy Plus (HP+) Project	0.718	7

The study revealed that vendor management had the highest coefficient of 0.934, followed by procurement planning which had a coefficient of 0.852, then procurement monitoring and evaluation with 0.795, E-procurement with 0.731, performance of Health Policy Plus (HP+) Project with 0.718 while Inventory management had the least coefficient of 0.711. Since all the five variables were reliable as their reliability values exceeded the prescribed threshold of 0.7, this implies that the research instruments were reliable and therefore required no amendments.

4.3 Demographic Information of Respondents

This study required the respondents to indicate their general information including gender, age bracket, education background and level of experience. This general information was presented in form tables.

4.3.1 Distribution of respondents by Gender

The researcher sought the respondents' gender. The respondents' responses were presented in Table 4.3.

Table 4.3: Distribution of respondents by Gender

Respondents	Frequency	Percent
Male	16	44.3
Female	20	55.7
Total	**36**	**100.0**

The findings show that 55.7% of the respondents were female while the male respondents were 44.3%. This implies that the researcher was not bias in data collection since all the respondents

were considered irrespective of their gender. The findings indicate that female respondents participate more in the performance of health policy plus project.

4.3.2 Distribution of respondents by highest level of education

The study also sought to know the respondents' highest level of education. The results were displayed on Table 4.4.

Table 4.4: Distribution of respondents by highest level of education

	Frequency	Percent
Diploma	5	13.1
Bachelor's degree	15	41.0
Masters	13	36.1
PhD	3	9.8
Total	**36**	**100.0**

The results show that 41.0% of the respondents indicated that they had attained a Bachelor's degree, 36.1% indicated that they had attained a Masters, 13.1% indicated that they had attained a Diploma and 9.8% indicated that they had a PhD. This shows that all the respondents who participated on the study were educated to understand and give reliable information on the subject matter of the study. This implies that the respondents also understand issues with technology which influences performance of health policy plus project.

4.3.3 Distribution of respondents level of experience

The respondents were required to indicate their level of experience in their work, the findings were shown in Table 4.5.

Table 4.5: Distribution of respondents by level of experience

	Frequency	Percent
Less than 2 years	12	34.3
3-5 years	8	21.3
6-10 years	4	10.6
11-20 years	10	27.9
21 years and above	2	5.9
Total	**36**	**100.0**

The findings show that 12(34.3%) of the respondents had less than 2years work experience, 10(27.9%) had 11-20years work experience, 8(21.3%) had 3-5years work experience, 4(10.6%) had 6-10 Years work experience while 2 (5.9%) had 21 years and above work experience. This implies that the respondents had been in service in their current positions long enough and therefore had the knowledge needed for the study.

4.4 Procurement Planning and Performance of Health Policy Plus (HP+) Project

The first objective sought to determine the influence of procurement planning on the performance of Health Policy Plus (HP+) Project in Western Kenya. The respondents were required to indicate their level of agreement with the influence of procurement planning aspects on the performance of Health Policy Plus (HP+) Project in Western Kenya. The responses were recorded on Table 4.6.

Table 4.6: Level of Agreement on the Influence of Procurement Planning Aspects on the Performance of HP+ Project

Statement	1	2	3	4	5	Mean	SD
1. Procurement decisions are carried out in compliance with all regulatory requirements and stakeholders interests	3(4.1)	4(5.5)	10(13.7)	16(22)	40(54.8)	3.74	1.46
2. Acquisition is clearly planned in terms of time, scope, quality and quantity	2(2.7)	7(9.5)	9(12.3)	25(34.2)	30(41.1)	4.05	1.04
3. Cash forecast planning is carried out to ensure project does not run short of required working cash flow and operates within budget provisions	6(8.2)	9(12.3)	13(17.8)	20(27.4)	25(34.2)	3.12	1.62
4. Delivery schedules are clearly planned and followed to ensure timely supply of health commodities	5(6.8)	8(10.9)	7(2.7)	18(24.7)	35(47.9)	3.30	1.31
Composite Mean						**3.55**	**1.36**

The findings reveal that the respondents agreed that procurement decisions are carried out in compliance with all regulatory requirements and stakeholders interests as illustrated by an average of 3.74 and that majority of the respondents agreed 56(76.8%). On whether acquisition is clearly planned in terms of time, scope, quality and quantity as illustrated, 30(41.1) strongly agreed, 25(34.2) agreed, 9(12.3) were neutral and 9(12.2%) disagreed. This is indicated with an average of 4.05 of the line item which has a positive influence on the variable as compared to the composite

mean that is 3.55. The respondents were neutral on whether the delivery schedules are clearly planned and followed to ensure timely supply of health commodities as illustrated by an average of 3.30 and cash forecast planning is carried out to ensure project does not run short of required working cash flow and operates within budget provisions as illustrated by an average of 3.12. On the interview guide, the respondents agreed that procurement decisions are carried out in line with stakeholders' interests and that delivery schedules for various supplies are clearly planned. To improve delivery timelines the facility managers proposed simplifying the internal processes and speeding up or minimizing the procurement cycle

The interviewees also mentioned that the project conducts need identification and assessment regularly, that is, every two months. They confirmed it is important because it helps the organization determine gaps preventing achievement of desired goals; contributes to programme planning, monitoring and evaluation, as well as project accountability.

4.5 Vendor Management and Performance of Health Policy Plus (HP+) Project

The research aimed at examining the influence of vendor management on the performance of Health Policy Plus (HP+) Project in Western Kenya. The respondents were required to indicate their level of agreement with the influence of vendor management aspects on the performance of Health Policy Plus (HP+) Project in Western Kenya. The responses were recorded on Table 4.7.

Table 4.7: Level of Agreement on the Influence of Vendor Management Aspects on the Performance of HP+ Project

Statement	1	2	3	4	5	Mean	SD
1. Supplier Selection is based on qualification, honesty, accountability and previous relationship with the supplier	5(6.8)	5(6.8)	11(18.6)	22(25.4)	30(36.4)	3.54	1.29
2. HP+ involves key suppliers on all its project to ensure efficiency and effectiveness in procurement.	4(11.3)	6(11.9)	15(20.1)	20(23.4)	28(29.7)	4.20	0.68
3. HP+ has supplier development programs to ensure supplier loyalty	5(12.7)	3(10.7)	12(15.3)	23(25.8)	30(34.6)	4.16	0.69
4. The organization trains key suppliers on best procurement practices	3(9)	4(8.8)	16(7.9)	25(29.3)	25(44)	3.56	1.23
Composite Mean						**3.87**	**0.97**

Table 4.7 show that the respondents agreed that HP+ involves key suppliers on all its project to ensure efficiency and effectiveness in procurement as shown by a mean score of 4.20; HP+ has supplier development programs to ensure supplier loyalty as shown by a mean score of 4.16; the organization trains key suppliers on best procurement practices as shown by a mean score of 3.56 and supplier selection is based on qualification, honesty, accountability and previous relationship with the supplier as shown by a mean score of 3.54. Further, the interviewees mentioned that the consultants contracted are always qualified and competent to provide the programme based budgeting training.

4.6 E-procurement and Performance of Health Policy Plus (HP+) Project

The study sought to evaluate the influence of e-procurement on the performance of Health Policy Plus (HP+) Project in Western Kenya. The respondents were required to indicate their level of agreement with the influence of e-procurement aspects on the performance of Health Policy Plus (HP+) Project in Western Kenya. The responses were recorded on Table 4.8.

Table 4.8: Level of Agreement on the Influence of E-procurement Aspects on Performance of Health Plus Project

Statement	1	2	3	4	5	Mean	SD
1. There is a functioning online system to facilitate electronic requisition	3(4.1)	5(6.8)	5(6.8)	19(26)	41(56.2)	4.20	0.75
2. Supplier selection is carried out via online system	4(5.5)	3(4)	7(29.5)	22(30.1)	37(50.7)	2.85	1.35
3. Tenders are advertised through online system	1(1.4)	4(5.5)	12(16.4)	13(17.8)	43(58.9)	3.74	1.62
4. HP+ undertakes e-procurement record management	5(6.8)	6(8.2)	10(13.7)	17(23.2)	35(47.9)	2.79	1.56
Composite Mean						**3.39**	**1.32**

The results show that the respondents agreed that there is a functioning online system to facilitate electronic requisition as portrayed with a mean score of 4.20 and tenders are advertised through online system as portrayed with a mean score of 3.74 and standard deviation of 1.62. This show that the line item has a positive influence on performance of health policy plus project. The respondents were neutral on whether the supplier selection is carried out via online system as

portrayed with a mean score of 2.85 and HP+ undertakes e-procurement record management as portrayed with a mean score of 2.79. This indicates that the line item has a negative influence on the variable as the line item mean falls below the composite mean 3.39. The interviewees further noted that there was a functioning online system to facilitate electronic requisition of the required health commodities.

4.7 Procurement Monitoring & Evaluation and Performance of Health Policy Plus (HP+) Project

The research aimed to examine the influence of procurement monitoring and evaluation on the performance of Health Policy Plus (HP+) Project in Western Kenya. The respondents were required to indicate their level of agreement with the influence of procurement monitoring and evaluation aspects on the performance of Health Policy Plus (HP+) Project in Western Kenya. The responses were recorded on Table 4.9.

Table 4. 9: Level of Agreement on the Influence of Procurement Monitoring & Evaluation Aspects on the Performance of HP+ Project

Statement	1	2	3	4	5	Mean	SD
1. Procurement policies and systems are reviewed regularly to ensure they are up to date.	3(4.1)	5(6.8)	16(21.9)	20(27.4)	29(39.7)	3.77	1.13
2. Deliveries are properly checked to ensure they adhere to quality standards and as stated in the local purchase order(LPO)	3(4.1)	4(5.4)	13(17.8)	20(27.4)	33(45.2)	4.26	0.75
3. Supplier audit is carried out to ensure suppliers adhere to the required standards and timelines	4(5.4)	4(5.4)	16(21.9)	19(26)	30(41.1)	4.20	0.79
4. Risk mitigation is carried out to ensure project materials are protected against loss and waste	5(6.8)	5(6.8)	15(20.5)	23(31.5)	25(34.2)	3.74	1.14
Composite Mean						**3.99**	**0.95**

From the results, the respondents agreed that deliveries are properly checked to ensure they adhere to quality standards and as stated in the local purchase order (LPO) as depicted by an average score of 4.26; supplier audit is carried out to ensure suppliers adhere to the required standards and timelines as depicted by an average score of 4.20; procurement policies and systems are reviewed regularly to ensure they are up to date as depicted by an average score of 3.77 and risk mitigation is carried out to ensure project materials are protected against loss and waste as depicted by an average score of 3.74.

Further, the County supply chain Staff and Health Facilities Managers indicated that the project supplies health commodities as per set quality standards. The respondents also stated that the project employs post service rating, follow-up survey, in-app survey, customer effort score (CES), social media monitoring and documentation analysis to check whether deliveries are of quality standards.

To mitigate risk, the respondents indicated that the project has an initial assessment with an ongoing evaluation and monitoring program; promotes the reporting of safety and security concerns based on a culture of trust, respect, cohesiveness, and responsibility; enables leadership to make timely operational decisions consistent with the highest standards of personnel reliability; provides tools for the employees to be able to recognize behaviors and conditions that may be detrimental to a safe and secure working environment, as well as creates an environment for reporting such situations in a manner that is supportive and free from fear of reprisal and provides training and guidelines related to monitoring activities and expectations.

4.8 Inventory Management and Performance of Health Policy Plus (HP+) Project

The study sought to evaluate the influence of inventory management on the performance of Health Policy Plus (HP+) Project in Western Kenya. The respondents were required to indicate their level of agreement with the influence of inventory management aspects on the performance of Health Policy Plus (HP+) Project in Western Kenya. The responses were recorded on Table 4.10.

Table 4. 10: Level of Agreement on the Influence of Inventory Management Aspects on the Performance of HP+ Project

Statement	1	2	3	4	5	Mean	SD
1. Project inventory requisition has an optimal stock level which is strictly adhered to.	3(4.1)	3(4.1)	15(20.5)	25(34.3)	27(37.0)	3.25	1.09
2. Inventory is properly tracked to ensure its safe guarded against loss	5(6.8)	5(6.8)	17(23.3)	17(23.3)	29(39.7)	4.02	0.79
3. Stores are properly tracked to ensure inventory quality is maintained	3(4.1)	4(5.4)	18(24.7)	20(27.9)	28(38.4)	3.39	1.49
4. HP+ practice just in time inventory management	3(4.1)	4(5.4)	16(22.0)	20(27.4)	30(41.1)	4.28	0.76
Composite Mean						**3.74**	**1.03**

On whether project inventory requisition has an optimal stock level which is strictly adhered to as illustrated by a mean score of 3.25, the study found out that majority of the respondents 52(71.3%) agreed that there is adherence to inventory requisition and optimal stock level. At least 15(20.5%) were neutral and 6 (8.2%) disagreed. On whether the stores are properly tracked to ensure inventory quality is maintained as illustrated by a mean score of 3.39 and standard deviation of 1.03. The findings revealed the line item 3 was less than the composite mean which had a negative influence on the variable. The respondents agreed that HP+ practice just in time inventory management as illustrated by a mean score of 4.28 with a standard deviation of 0.76. the line item 4 has a positive influence on the variable since the mean is greater than the composite mean 3.74. On whether inventory is properly tracked to ensure its safe guarded against loss as illustrated by a mean score of 4.02, the findings revealed that the line item 3 has a positive influence on the variable level of agreement on performance of health plus project.

The respondents also noted that the project establishes annual stocking policies; prepares inventory budgets; maintains a perpetual inventory system; watches the inventory turnover ratio; establishes optimized purchasing procedures; and analyses and classifies ABC. Further, the respondents stated that HP+ Project supplies the required health commodities frequently within requested timelines and added that the challenges encountered due to delays included: delay in preparing technical specifications, scope of work or terms of reference; failure to start the procurement process on time; extension of bid or proposal submission date; delay in opening bids or proposals received;

delay in starting or finishing the evaluation process; delays during the approval process; and delay in contract negotiations.

4.9 Performance of Health Policy Plus (HP+) Project

The research also sought to determine the extent to which the respondents were in agreement on the statements regarding Health Policy Plus (HP+) Project performance. The findings are as displayed on Table 4.11.

Table 4.11: Performance of Health Policy Plus (HP+) Project

Statement	1	2	3	4	5	Mean	SD
1. HP+ always adheres to set project budget provisions	1(1.4)	3(4.1)	16(21.9)	20(27.4)	33(45.2)	3.53	1.09
2. Project quality standards are strictly adhered to for provided Health commodities and training consultants	2(2.7)	3(4.1)	10(13.7)	28(38.4)	30(41.1)	2.85	1.52
3. Health Commodities are supplied within timelines	4(5.4)	7(9.6)	12(16.4)	30(41.1)	20(27.4)	3.84	1.13
4. There is a reduction in HIV related Mortality due to access of ART	6(8.2)	6(8.2)	10(13.7)	27(36.9)	24(32.9)	3.79	1.02
5. Expanded access to key health commodities like ARVs & Test Kits	3(4.1)	10(13.7)	12(16.4)	18(24.6)	30(41.1)	3.74	1.26
6. There is increased capacity of County health management teams on Programme based budgeting because of HP+ training	4(5.4)	4(5.4)	15(20.5)	25(34.2)	25(34.2)	3.79	0.89
7. Increased budget for health and HIV	4(5.4)	8(11)	12(16.4)	29(39.7)	20(27.4)	3.85	0.81
Composite Mean						**3.63**	**1.10**

The study sought find out on whether HP+ always adheres to the set project budget provisions. The findings indicated were that majority of the respondents 53(72.6%) agreed that the line item number 1 has an influence although the mean of the line item as represented by 3.53 is lower than the composite mean at 3.63 and standard deviation of 1.09. This implies that the line item negatively influences variable. On whether the project quality standards are strictly adhered to for provided Health commodities and training consultants, the study found out that the line item 2 has a negative influence on variable as the mean 2.85 and the standard deviation 1.52 is less than the composite the 3.63 and standard deviation 1.10. The respondents were neutral on whether project quality standards are strictly adhered to for provided Health Commodities and training consultants as illustrated by a mean score of 2.85.

The results reveal that the respondents agreed that there was an increased budget for health and HIV as shown by a mean score of 3.85; project activities are completed within the set timeframe as illustrated by a mean score of 3.84; there is a reduction in HIV related Mortality due to access of ART as illustrated by a mean score of 3.79; This implies that the three line items positively influence the variable since their means and standard deviations are greater than the composite mean 3.63. There is increased capacity of County health management teams on Programme based budgeting because of HP+ training as illustrated by a mean score of 3.79; expanded access to key health commodities like ARVs & Test Kits as illustrated by a mean score of 3.74 and HP+ always adheres to set project budget provisions as illustrated by a mean score of 3.53.

The interviewees also added that there has been a reduction in HIV related Mortality due to access of ART supplied by HP+ Project. Further, they noted that the access to key health commodities like ARVs & Test Kits had increased; there's an improvement in capacity of county health management teams in planning and budgeting due to the provided training on Programme Based Budgeting; ALL the County Health Management teams were trained on programme based budgeting. The respondents further mentioned that the budget for HIV has been increased over the years and that the county health teams have been working hard to ensure full execution of HIV line item in the national budget.

4.10 Regression Analysis

A multiple regression analysis was conducted to test the influence among predictor variables. The research used statistical package for social sciences (SPSS V 25.0) to code, enter and compute the measurements of the multiple regressions. The model summary was presented in the Table 4.12.

Table 4. 12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.881	0.776	0.739	2.037

The study used coefficient of determination to evaluate the model fit. The adjusted R^2, also called the coefficient of multiple determinations, is the percent of the variance in the dependent explained uniquely or jointly by the independent variables. The model had an average adjusted coefficient of determination (R^2) of 0.739 and which implied that 73.9% of the variations in performance of Health Policy Plus (HP+) Project in Western Kenya are explained by changes in procurement

planning, vendor management, e-procurement, procurement monitoring and evaluation and inventory management.

The study further tested the significance of the model by use of ANOVA technique. The findings are tabulated in Table 4.13.

Table 4. 13: Analysis of Variance (ANOVA)

	Sum of Squares	Df	Mean Square	F	Sign.
Regression	488.713	5	97.743	20.778	.000
Residual	141.121	30	4.704		
Total	**629.834**	**35**			

From the ANOVA statics, the study established the regression model had a significance level of 0.000 which is an indication that the data was ideal for making a conclusion on the population parameters as the value of significance (p-value) was less than 5%. The f-calculated value was greater than the f-critical value (20.778>2.5336) an indication that procurement planning, vendor management, e-procurement, procurement monitoring and evaluation and inventory management have a significant influence on performance of Health Policy Plus (HP+) Project in Western Kenya. The significance value was less than 0.05 hence the model was significant.

In addition, the study used the coefficient table to determine the study model. The findings are presented in the Table 4.14.

Table 4. 14: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
(Constant)	0.986	0.123		8.016	.000
Procurement planning	0.813	0.387	0.717	2.101	.037
Vendor management	0.767	0.236	0.681	3.250	.001
E-procurement	0.701	0.311	0.680	2.254	.030
Procurement monitoring and evaluation	0.598	0.219	0.503	2.731	.007
Inventory management	0.789	0.198	0.702	3.985	.000

The regression equation obtained from this outcome was: -

$$\mathbf{Y = 0.986+0.813X_1 + e}$$

$$\mathbf{Y = 0.986+0.767X_2 + e}$$

$$\mathbf{Y = 0.986+0.701X_3 + e}$$

$$\mathbf{Y = 0.986+0.598X_4 + e}$$

$$\mathbf{Y = 0.986+0.789X_4 + e}$$

As per the study results, it was revealed that if all independent variables were held constant at zero, then the performance of Health Policy Plus (HP+) Project in Western Kenya will be 0.986. From the findings, the study revealed that if procurement planning increases by one unit, then performance of Health Policy Plus (HP+) Project in Western Kenya would increase by 0.813. This variable was significant since p=0.037 is less than 0.05.

The study further revealed that if vendor management changes it would lead to 0.767 change in performance of Health Policy Plus (HP+) Project in Western Kenya. The variable was significant since p-value=0.001<0.05. The findings also show that a unit increase in the score of e-procurement would lead to a 0.701 increase in the score of performance of Health Policy Plus (HP+) Project in Western Kenya. This variable was significant since p-value=0.030 was less than 0.05.

Moreover, the study showed that if all other variables are held constant, variation in procurement monitoring and evaluation variates performance of Health Policy Plus (HP+) Project in Western Kenya by 0.598. This variable was significant since p=0.007 was less than 0.05. Finally, the study revealed that variation in inventory management would change the performance of Health Policy Plus (HP+) Project in Western Kenya by 0.789. This variable was significant since p-value=0.000 was less than 0.05.

Overall, procurement planning had the greatest influence on performance of Health Policy Plus (HP+) Project in Western Kenya followed by inventory management, then vendor management, then e-procurement while procurement monitoring and evaluation had the least influence on the performance of Health Policy Plus (HP+) Project in Western Kenya. All the variables were significant since p-values were less than 0.05.

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents summary of the data findings, discussion of the data findings, conclusion drawn from the findings highlighted and recommendation made. The conclusions and recommendations drawn are focused on addressing the objective of the study.

5.2 Summary of the Findings

The study sought to investigate the influence of procurement planning on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study revealed that if procurement planning increases by one unit, then performance of Health Policy Plus (HP+) Project in Western Kenya would increase by 0.813. This variable was significant since p=0.037 is less than 0.05. The study established that procurement planning has a strong positive and significant influence on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study found that the acquisition is clearly planned in terms of time, scope, quality and quantity and procurement decisions are carried out in compliance with all regulatory requirements and stakeholders interests. The study also found that delivery schedules are clearly planned and delivered within set timelines and cash forecast planning is carried out to ensure project does not run short of required working cash flow and operates within budget provisions.

The research aimed at examining the influence of vendor management on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study revealed that if vendor management changes it would lead to 0.767 change in performance of Health Policy Plus (HP+) Project in Western Kenya. The variable was significant since p-value=0.001<0.05. The research found that vendor management has a significant influence on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study found that HP+ involves key suppliers on all its project to ensure efficiency and effectiveness in procurement; HP+ has supplier development programs to ensure supplier loyalty; the organization trains key suppliers on best procurement practices and supplier selection is based on qualification, honesty, accountability and previous relationship with the supplier.

The study sought to evaluate the influence of e-procurement on the performance of Health Policy Plus (HP+) Project in Western Kenya. The findings also show that a unit increase in the score of e-procurement would lead to a 0.701 increase in the score of performance of Health Policy Plus (HP+) Project in Western Kenya. This variable was significant since p-value=0.030 was less than 0.05. The study found that e-procurement influences the performance of Health Policy Plus (HP+) Project in Western Kenya positively and significantly. The study also found that there is a functioning online system to facilitate electronic requisition and tenders are advertised through online system/platform as portrayed. The study found that supplier selection is carried out via online system/platform as portrayed and HP+ undertakes e-procurement record management.

The research aimed to examine the influence of procurement monitoring and evaluation on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study showed that if all other variables are held constant, variation in procurement monitoring and evaluation variates performance of Health Policy Plus (HP+) Project in Western Kenya by 0.598. This variable was significant since p=0.007 was less than 0.05. The research found that procurement monitoring and evaluation has a positive and significant influence on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study found that deliveries are properly checked to ensure they adhere to quality standards and as stated in the local purchase order (LPO); supplier audit is carried out to ensure suppliers adhere to the required standards; procurement policies and systems are reviewed regularly to ensure they are up to date and risk mitigation is carried out to ensure project materials are protected against loss and waste.

The study sought to evaluate the influence of inventory management on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study revealed that variation in inventory management would change the performance of Health Policy Plus (HP+) Project in Western Kenya by 0.789. This variable was significant since p-value=0.000 was less than 0.05. The study found that inventory management has a positive and significant influence on the performance of Health Policy Plus (HP+) Project in Western Kenya. The study found that HP+ practice just in time inventory management and inventory is properly tracked to ensure its safe guarded against loss. The study also found that stores are properly tracked to ensure inventory quality is maintained and project inventory requisition has an optimal stock level which is strictly adhered to.

The research also found that the HP+ project always adheres to set budget provisions and that project quality standards are strictly adhered to for provided Health Commodities and training consultants. The project supplies health commodities in a timely way to the counties there is a reduction in HIV related Mortality due to access of ART and expanded access to key health commodities like ARVs and test kits; there's is increased capacity of County health management teams on programme based budgeting because of HP+ training

5.3 Discussion of the Findings

The following subsections entail the discussions of findings per objective linked to the literature.

5.3.1 Procurement Planning and Performance of Health Policy Plus (HP+) Project

The study found that the acquisition is clearly planned in terms of time, scope, quality and quantity and procurement decisions are carried out in compliance with all regulatory requirements and stakeholders interests. In relation to these findings Frese (2013) argues that procurement planning requires excellent forward planning, including detailed planning of process implementation phases and milestones, budgeting, timeliness of tasks, fallback positions and re-planning. Frese (2013) added that projects often take a wrong turn, or initial solutions prove unfounded, requiring re-planning and going back to the drawing board. As a result, the procurement plan may be subject to review from time to time as and when necessary. A procurement plan helps Procuring entities to achieve maximum value for expenditures on goods and services to be delivered and enables the entities to identify and address all relevant issues pertaining to a particular procurement before they publicize their procurement notices to potential suppliers of goods and services. Also Kabega, Kule and Mbera (2016) on the impact of public procurement procedures on the performance of public procurement initiatives in Rwanda discovered that there was a substantial connection between public procurement planning and performance and that good project performance in Rwanda was ascribed to sound public procurement planning.

The study also found that delivery schedules are clearly planned and delivered within set timelines (Basheka, 2009) states that without adequate attention to procurement planning, the respective procuring agencies will only be left with ad hoc procurement systems which cannot in most cases translate into value for money and will thus affect service delivery. Procurement planning can also help in consolidation of similar procurement requests from different requesters into bigger tender allowing wider competition, time saving and considerable lower prices. The study also found that

cash forecast planning is carried out to ensure project does not run short of required working cash flow. WBDG. R (2011) state that project planning is a critical stage in the cost management process since an inaccurate budget can lead to poor project performance. Inaccurate budget may lead to quality compromise and variations with neither the client, end-user, nor design team being completely satisfied at the end. Kerzner (2009) added that the project cost that results from the planning cycle must be reasonable, attainable, and based on contractually negotiated costs and the statement of work. The basis for the budget is historical cost, best estimates, or industrial engineering standards. The budget must identify planned manpower requirements and its procurement, and management reserve. Kamuru (2014) also concludes that corruption, absence of a strategic procurement plan and bad technology have been the primary impediments to achieving competitiveness among oil companies in Kenya.

5.3.2 Vendor Management and Performance of Health Policy Plus (HP+) Project

The study found that HP+ involves key suppliers on all its project to ensure efficiency and effectiveness in procurement; HP+ has supplier development programs to ensure supplier loyalty; the organization trains key suppliers on best procurement practices and supplier selection is based on honesty, accountability and previous relationship with the supplier. This is in line with Harland (1996) who asserts that supplier relationship management is essential to the achievement of corporate supply chain leadership. In specific, strategic interactions with critical providers need to be understood in order to maximize value creation in procurement. Vaart and Donk (2008) stated that organizations are required to seek the best value of working relationship for short term and long operations with suppliers. Tan (1999) moreover stated that dimensions such as confidence and engagement are shown to play a significant part in high-value strategic interactions where particular investments are high and contractual governance alone is not sufficient In such relationships, it is essential for both sides to recognize that they are gaining value from the relationship if they do so. In addition Tangus (2015) researched the effect of vendor Management on Manufacturing Firms performance in Kisumu County, Kenya and revealed that confidence is a critical factor in fostering engagement among supply chain partners and that the existence of confidence greatly improves the likelihood of good procurement results.

5.3.3 E-procurement and Performance of Health Policy Plus (HP+) Project

The study also found that there is a functioning Enterprise Resource Planning System to facilitate electronic requisition and tenders are advertised through online system/platform as portrayed. The study found that supplier selection is carried out via online system/platform as portrayed and HP+ undertakes e-procurement record management. Yu et al. (2008) state that if e-procurement is properly applied, it could provide benefits, otherwise it can cause damage to companies. In addition, Vaidyanathan and Devaraj (2008) noted that meeting orders on time has greater impact on satisfaction than meeting orders accurately. So, after adopting e-procurement, the whole system should be managed cautiously in order to avoid shortage problems. Wanjera (2014) also discussed on the creation of a financially viable e-invoicing solution, corporate needs to create this critical mass by a value network of alliance partners and technology solution providers to add the necessary desirability for electronic invoicing through the Financial Supply Chain. Kingori (2013) studied effect of e-procurement at the Teachers Service Commission and discovered that there is a powerful connection between e-procurement, the level of ICT skills and the level of e-procurement implementation which shows that the effectiveness of procurement is extremely correlated with e-Procurement application.

5.3.4 Procurement Monitoring & Evaluation and Performance of Health Policy Plus (HP+) Project

Brown and Hyer (2010) defined monitoring and evaluation as the tracking method during procurement management. The study found that deliveries are properly checked to ensure they adhere to quality standards and as stated in the local purchase order(LPO); supplier audit is carried out to ensure suppliers adhere to the required standards; procurement policies and systems are reviewed regularly to ensure they are up to date and risk mitigation is carried out to ensure project materials are protected against loss and waste. Schmitz and Platts (2004) stated that the primary goal for contractor monitoring within any company is to ensure that commitments and obligations to customers and suppliers are clearly visible to the relevant people in the organization and that they are executed upon. According to Kansiime (2014), the use of contracts in business relationships has long been the lifeblood of a business, as the contracts provide the terms, pricing, and service levels of customer, partner and/or supplier relationships. Mbalangu (2013) noted that contracts provide a framework by which an organisation manages and mitigates risk in its supplier

relationships. The main aim of contracting is to ensure that goods or services are delivered on time, at the agreed cost and at the specified requirements. It means developing effective working relationships with your suppliers, ensuring effective service delivery, maximizing value for money and providing consistent quality for stakeholders and end users. In addition, Agere (2009) in his study on the effectiveness of contract management in Austria notes that contract monitoring requires the systematic management of contract creation, execution, compliance and analysis to maximize performance and minimize risk. With the increase in the complexity of doing business in public entities coupled with the increase in transaction volumes and value in an ever tightening regulatory framework has resulted in businesses taking note of the importance of proper monitoring of contractors.

5.3.5 Inventory Management and Performance of Health Policy Plus (HP+) Project

Krzyzaniak and Cyplik (2007) noted that inventory management is a complex decision making process that requires analysis of multiple criteria parameters, which in practice are usually non-deterministic in nature. Decisions are made in conditions of uncertainty. The study found that HP+ practice just in time inventory management and inventory is properly tracked to ensure its safe guarded against loss. The study also found that stores are properly tracked to ensure inventory quality is maintained and project inventory requisition has an optimal stock level which is strictly adhered to. Sandeep et al. (2007) postulate that inventory management may result in unwarranted losses if the organization always has stock outs, a lack of adequate warehousing plans, the delivery of incorrect products to clients, as well as absence of adequate paperwork for the products purchased. According to Macharia and Mukulu (2016), the just-in-time (JIT) stock technique is an approach in which materials, components and other products are ordered only in amounts needed to satisfy instant requirements. Cheruiyot (2013) postulates that companies should embrace lawful stock control methods, a competent and sensible inventory information system so that they can alter the expenses and hazards of stock control against the favorable conditions of getting stocks immediately open for smooth operation. Cut down inventory rates are equally undesirable as they interfere with development, loss of goodwill and high demand for expenses.

5.4 Conclusions

The study concluded that procurement planning influenced performance of Health Policy Plus (HP+) Project in Western Kenya positively and significantly. Moreover, it was clear that if projects

are applied and steps are not taken in order to manage them effectively and efficiently, the chances of failure are high. Therefore, a project is highly influenced by the type of project procurement method used during implementation to meet project goals. It was clear that procurement planning requires excellent forward planning, including detailed planning of process implementation phases and milestones, budgeting, timeliness of tasks, fallback positions and re-planning. The study deduced that a procurement plan is an instrument used for implementing a budget and it should be prepared by the user departments with a view to avoiding or limiting excess votes in the entities' budgets and for ensuring that procurements don't proceed unless there are adequate funds to pay for them.

The research also concluded that vendor management influences the performance of Health Policy Plus (HP+) Project in Western Kenya positively and significantly. It was established that researching about the best suitable vendors, sourcing and obtaining pricing information, assessing the quality of work, managing relationships in case of multiple vendors, evaluating performance by setting organizational standards, and ensuring that the payments are always made on time influences the performance of Health Policy Plus (HP+) Project. In addition the study established that the foremost thing for consideration during the procurement process is identifying the specific needs, how to pay for these needs and a review of the whole output.

The study concluded that E-procurement influenced performance of Health Policy Plus (HP+) Project in Western Kenya positively and significantly. It was established that if e-procurement is properly applied, it could provide benefits, otherwise it can cause damage to companies. The study deduced that e- procurement practice reduces tender processing time, eliminates postal, printing & storage costs, suppliers are able to access tenders/quotation/requests any time anywhere in the world, alteration of tender documents is impossible or easy to detect, neither party can deny sending or receiving documents, provides fairness to all regardless of geographic location of a supplier and it improves audit trails.

The study further concluded that procurement monitoring and evaluation significantly influences the performance of Health Policy Plus (HP+) Project in Western Kenya positively and significantly. The study concluded further that monitoring of a formalized relationship allows an organisation a degree of control over the deliverables and performance requirements. Also, monitoring and evaluation ensures that commitments and obligations to customers and suppliers

are clearly visible to the relevant people in the organization and that they are executed upon. Moreover, the study further deduced that Monitoring and evaluation are important practices in project management as they help in reinforcing effective actions and triggering corrective actions. Monitoring and evaluating a project helps to identify challenges in the management of the project and make recommendations, which stimulates organizational learning to improve processes and management of projects.

The study concluded that inventory management influences performance of Health Policy Plus (HP+) Project in Western Kenya positively and significantly. It was clear that employees must comprehend and apply the inventory management methods to guarantee that the organization receives value for its cash. The study established that effective inventory management depends on understanding all the details of what is inventory management. By applying lean practices to all aspects of the inventory management cycle, businesses can reduce investment in standing inventory, plant rental, shipping costs, reverse logistics while maintaining or improving customer service levels and in-stock metrics on critical inventory.

5.5 Recommendations

1. The study recommends for thorough inventory management, Health Policy Plus project should adopt the Inventory optimization tools that have been gaining ground as organizations seek to evaluate their entire network and determine the best inventory policies for each product at each node in their supply chain. These are typically stand-alone software tools that use data from Enterprise Resource Planning systems. These optimization tools take into account demand variability, supply variability, and replenishment parameters to determine how much inventory to hold in order to guard against variability.
2. The study recommends Health Policy Plus project to consider fully integrating Vender Managed Inventory to enhance the level of Supplier Relationship Management within and outside the organization. Full integration will also ensure that all the supply chain members especially the HP+ procurement staff and the suppliers are deeply integrated and collaborated. This would not only boost the supplier relationship management practice but also impact on flow of information from both ends enhancing the project's level of efficiency and effectiveness.

3. HP+ Should be closely monitoring supplier activity. Most systems track the inbound receipt of ordered goods: There is a promise date, an actual receipt date, quantity ordered, quantity received, and the condition in which it was received. These are metrics that can be tracked and analyzed to determine a supplier's reliability. After identifying unreliable suppliers, HP+ can deal with them and resolve any issues and work toward improving a supplier's performance—or hold more of their inventory to guard against their variability.
4. HP+ should review their procurement threshold table that dictates all the standard procurement and contractual templates that are required especially for high cost procurements. The researcher recommends that the threshold limits are increased and the number of forms be merged and adopted in the right formats to give procurement staff less administrative work, reduce the procurement cycle and approval process. This will lead to improved timely supply of health commodities and contracting of all required consultants. At HP+ project there is a need to ensure that the procurement staff comply to set rules and regulations and maximize usage of the online systems, this will enhance procurement of quality goods on a timely manner, compliance with budgetary provisions and transparency in vendor selection. The ERP System should be fully adopted and utilized in the project procurement process to boost performance of the project.
5. The study recommends that for effective procurement planning there is need to develop the skills of the employees on developing quality procurement plans based on the approved work plan and budgets. The top level and lower level employees should be involved in formulation and development of the procurement plans so as to make the process of implementation easier and acceptable by all employees. The procurement personnel need to carefully study and understand the procurement thresholds in different requirements of the procurement plan and adopt relevant procurement methods, effective strategies to enjoy economies of scale and discounts and timely procurement of goods and services.
6. Further, the Project needs to ensure recruitment of skilled personnel and progressively review various templates to ensure they are updated regularly. The study recommends for use of participatory approaches during monitoring and evaluation of project. The study also recommends that training needs should be regularly assessed for the project staff with regard to monitoring.

5.6 Suggestion for Future Studies

The study focused on determining the influence of Procurement Management on Project Performance of Health Policy Plus (HP+) Project in Western Kenya. The study recommends that a similar study to be conducted on other parts of Kenya. Also, there is need to establish other procurement management practices that influence the performance of Health Policy Plus (HP+) Project.

REFERENCES

Adu, W. (2011). *Institutional theory*. Thousand oaks, CA: Sage.

Agere, A. (2009). *Organizational Issues in Health Care Management.* New York: Spectrum.

Aleman, J. G. & Guererro, K. (2016). A socio-economic theory of regulatory Compliance. *International Journal of Social Economics*, 26(1/2/3), 184-193.

Alzahrani, J. I. & Emsley, M. W. (2013). The impact of contractors' attributes on construction project success: A post construction evaluation. *International Journal of Project Management*, 31(2), 313-322.

Asumba e-Future Center. (2007). *Production and Operations Management*. Lagos: Saban Publishers.

Bagaka, T. & Kobia J. (2010). *Organizing and managing work*, Financial Times: Prentice Hall.

Basheka, B. (2009). *Public procurement reform in Africa, a tool for effective governance of the public sector and poverty reduction UN published*. Cambridge, NY: Cambridge University Press.

Bell, J. L. M. (2005). Examining the dynamics of consumer expectations in a Chinese technology? *Journal of marketing.* 66(3), 98-111.

Brown, K. & Hyer, O. (2010). *Production and Operations Management*, National Open University of Nigeria (NOUN), MBA 701 Course Book.

Brownell, J. (2005). Benchmarking in Public Procurement, *Benchmarking an International Journal*, 15(6), 782-793.

Bryman, A. & Bell, E. (2013). *Business Research Methods*, 2nd edition. Oxford University Press Inc.

Buba, S. P. G. & Tanko, B. L. (2017). Project Leadership and Quality Performance of Construction Projects. *International Journal of Built Environment and Sustainability*, 4(2), 34-7.

Buenger, D. R., Mafini, C. & Makhubele, D. T. (2005). *Investigating Municipal Procurement*

Burns M.N. & Grove A. (2003). "*Research methods for business students*," 5/e New Delhi: Pearson Education.

Caritas, P, Julius, S. & Zenon, G. P. (2016). *E-Procurement implementation: critical analysis of success*

Caruso, J. B. (2014). *Good enough! IT investment and business process performance in higher education.* Edu cause Center for Applied Research.

Cheruiyot, K. P. (2013). Impact of integrated supply chain on performance at Kenya Tea Development Agency. *International Journal of Social Sciences and Entrepreneurship*, 1(5), 194-203.

Confessore, E., Rismondo E. & Stecca, T. (2014). Profitability through Effective Management of Materials. *Journal of Economics and International Finance*, 1(4), 99-105.

Cooper, D., & Schindler, P. (2011). *Business research methods (10th ed.).* New York: McGraw-Hill/Irwin.

Davis –Sramek, P. & Fugate, M. (2007). *Materials Management: An Intergrated Approach*. New Delhi: Prentice Hall.

Dimitri, N., Dini, F. & Piga, G. (2006). *When procurement should be centralized*?. Handbook of Procurement, Cambridge University Press, Cambridge, NY.

Eadie, W. (2007). Migrating to internet based e- procurement: factors affecting e- procurement adoption and migration at the firm level*", Information and Management Journal*, 43(1), 204- 221.

Ellram, R.& Cooper V. (2014). Materials Management-profit centre; *Indian Institute of Materials Management Journal,* 8(6), 75-83.

Emmert, G. & Crocker O. (2008). Assessment of Materials Management in the Kenyan Manufacturing Firms. Exploratory Survey of Manufacturing Firms Based in Nairobi. *Journal of Social Sciences*, 22(8), 88-110.

Eriksson, D. & Laan R. (2007). *Production and Operations,* 5th Ed. London: Cassel

Fageha, AS & Aibinu. A (2014). *Innovations in Health Service Delivery*: *the corporatization of public hospitals*

Frankfort-Nachmias C, & Nachmias D. (2012). *Research methods in the social sciences*, 5th edn. St. Martin Press, Inc., London.

Freeman, M. (2006). On the complementarity of chaos/complexity theory and stakeholder's theory in understanding the second language acquisition process. *Bilingualism: Language and Cognition*, 10(1), 35-37.

Frese, R. (2013). *Project Success and Failures*: *What causes success, What is failure, and How can you improve your odds for success?*

Gakinya, A. M. (2013). *Inventory Management and Supply Chain Performance of Non-Governmental Organizations in the Agricultural Sector,* Kenya. Doctoral dissertation, University of Nairobi.

Geldenhuy, R.B. Jacobs, R.F. Aquilano, N.J. & Agarwal, N.K. (2005). *Operations Management for competitive Advantage*, 11th Ed. New Delhi: Tata Mc-Graw Hill.

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, 8(4), 597–607.

Goodfred, R., Evans F. Doumbia, R. B., & Hanson, N. J. (2015). *Operations and Supply Management*. Boston: Mc-Graw Hill.

Grzybwska, J. (2010). *Operations management.* New Delhi: Prentice-Hall.

Halldorssonet. E.N, Okioga. C.K, Otieno. R.O & Mangare (2007). Challenges facing procurement committees in implementing the procurement act, a case of secondary school's procurement committees, in Kisii county Kenya. *Elimix international journal*. Arts. 48(2012) 9186-9191.

Harland, C. M. (1996) 'Supply chain management: relationships, chains and networks', *British Journal of Management,* 7(Special Issue), 4-19.

Hawking, J. T., Stank, T. P. & Esper, T. L. (2004). Supply chain management and its relationship to logistics. Marketing, production, and operations management. *Journal of business logistics*, 29(1), 31-46.

Heizer, W. & Render, J. (2016). *Public health sector efficiency in Kenya: estimation and policy implications.* Nairobi: Institute of Policy Analysis and Research.

Hornstein, W. P. (2015). *Fighting corruption in tactical procurement*. PhD dissertation.

Hui, W. S., Othman, R. O., Norma, O., Rahman, R. A. & Haron, N. H. (2011). Procurement issues in Malaysia. *International journal of public sector Management*, 24(6), 567-593.

Hussein, J. & Shale, L. (2014). Service guarantees: a strategic mechanism to minimize customers? perceived risk in service organizations. *Managing service quality*, 11(1), 112-121.

Jeppesen R. (2010). Accountability in public procurement- transparency and the role of civil society. *United Nations Procurement Capacity Development Centre*. 6(3), 126-135.

Jibrin M. S., Ejura S. B. & N. I. (2014). The public procurement reforms in Nigeria: implementation and compliance challenges. *Journal of Asian Business Strategy*. 4(12), 153-166.

Kabega, C., Kule, J. W., & Mbera, Z. R. (2016). Effect of procurement practices on performance of public projects in Rwanda. *International Journal of Economics, Commerce and* .Management United Kingdom, 4(5) 377 – 397.

Kahungura, R. K. (2017). *Influence of project management practices on performance of mobile transfer in Kenya, a case of Orange money, Kenya*, Unpublished MBA project report, Jomo Kenyatta University of Agriculture and Technology.

Kansiime, C. (2014). *Reforms and human healthcare*, 1st edition, Nairobi: AMREF: strategies for hope and action aid.

Karanja M. K. & Kiarie D. (2015). *Influence of Procurement Practices on Organization Performance In Private Sector In Kenya: A Case Study Of Guaranty Trust Bank Kenya Ltd.* Unpublished MBA project report, Jomo Kenyatta University of Agriculture and Technology.

Keith, B., Vitasek, K., Manrodt, K. & Kling, J. (2016). *Strategic sourcing in the new economy: harnessing the potential of sourcing business models for modern procurement*. New York: Palgrave Macmillan.

Keng'ara, I. (2013). Compliance culture. A conceptual framework. Journal of management and organization, 19(7), 702-714.

Kerzner, H. (2009). *Project Management: A systems approach to planning, scheduling, and controlling* (10th ed.). New Jersy: John Wiley and Sons.

Kiage, J. O. (2013). Factors Affecting Procurement Performance: A Case of Ministry of Energy. *International Journal of Business and Commerce.* 3(1), 54-70.

Kingori, M. (2013). The effect of e-procurement on supply chain management at teachers' service commission. *International Journal of Social Sciences and Entrepreneurship,* 3(4), 17-20.

Klein, J. & Chen, H. (2011). The Influence of Information System on Project Implementation Policies and Project Leadership on Eventual Outcomes, *Project Management Journal* 5632 (3), 49-55.

Koh, C., Williams, B., Randall, W. S. & Thomas, R. (2007). An inventory of theory in logistics and SCM research. *The international journal of logistics management*, 21(3), 404-489.

Kombo, D.K. & Tromp, D. L. A. (2006). *Proposal and Thesis writing*: *An introduction*. Nairobi: Pauline's Publications Africa.

Kothari, C.R. (2004). *Research Methodology, Methods and Techniques*. New Delhi: Wishwa Prakshan.

Krzyzaniak R.E. & Cyplik L. (2007). Procurement capacity development: from theory to practice. *In Proceedings of the 3rd international public procurement*, 2(1), 28-34.

Kumaraswamy, K. & Anvuur, D. (2008). "Quality management in iris healthcare". *The service industries journal*, 21(1), 149-168.

Lam, D. H. & Lang, J. M. (2011). Comparing three signals of service quality: *Journal of Services Marketing*, 23(1), 23-34

Larson, RA & Halldorsson ME. (2014) Consumer-directed health care for persons under 65 years of age with private health insurance: United States, 2007. *Nchs data brief*, 3(15), 1–8.

Lisa, J. (2010), Effects of public procurement on the use of donor funded projects a case of Moi Teaching and Refferal Hospital. *International journal of public sector Management*, 3(10), 5-18.

Lwiki, T. (2013). The Impact of Inventory Management Practices on Financial Performance of Sugar Manufacturing Firms in Kenya. *International Journal of Business, Humanities and Technology,* 3(5), 4-12.

Lynch, M., (2014). *Challenges hospital administrators must overcome to succeed in today's rapidly changing industry*. Goyal, r. C. (2006). *Hospital Administration and Human Resource Management.* 4th Ed. New Delhi: Prentice-Hall.

Macharia, S. M. & Mukulu, E. (2016). Role of Just- In -Time in Realization of an Efficient Supply Chain Management: A Case Study of Bidco Oil Refineries Limited, Thika. *The Strategic Journal of Business & Change Management*, 3(6), 123-152.

Mahaney, C.J. & Greer J. (2014). "Managing the global supply base through purchasing portfolio management," *Journal of purchasing and supply management*, 12(4), 209-217,

Makabira D. K. & Waiganjo E. (2014). Role of procurement practices on the performance of corporate organizations in kenya: a case study of Kenya National Police Service. *International Journal of Academic Research in Business and Social Science*. 4(10), 369 – 389.

Malmberg.H. (2007). *Medical practitioners' management handbook*, 2nd edition, USA: Hopkins publishers.

Masiko D. R. (2013). *Strategic procurement practices and procurement performance among commercial banks in Kenya*. Unpublished Thesis of Master of Business Administration (MBA). School of Business, University of Nairobi.

Masterman, R. (2012). *Private delivery and public goals: mechanisms for ensuring that hospitals meet public objectives.*

Mbalangu, U.S. (2013) *General Services Administration and KHI V.* Thai, Florida Atlantic University U.S. Federal government procurement, structure, process and current issues Ghana daily graphic newspaper.

Mentzer, C. & John, B. (2001). The relationship between service quality, customer satisfaction and buying intentions in the private hospital industry". *South African, journal of business management*, 35 (4), 27-37.

Mugenda, O. M. & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative Approaches*. Nairobi: African Centre for Technology Studies.

Mugenda, O. M. & Mugenda, A. G. (2008). *Research methods: Quantitative and qualitative Approaches*. Nairobi: African Centre for Technology Studies.

Music, P. and Kegels, G., (2002). A realistic approach to the evaluation of the quality management movement in health care systems: a comparison between European and African contexts based on mintzberg‟s organizational models. *International journal of health planning and management*. 19(4), 3-17.

Mwikali, R. & Kavale, S. (2012). Factors Affecting the Selection of Optimal Suppliers in Procurement Management. *International Journal of Humanities and Social Science*, 2 (14), 189-193.

Nwabuzor, P. (2005). Government procurement as a policy tool in South Africa. *Journal of Public procurement*, 6(2), 193–217.

Ocharo, K. J. (2013). Factors affecting procurement performance: A case of ministry of energy. *International Journal of Business and Commerce*, 3(1), 54-70.

Orodho J.A. (2015). *Techniques of Writing Research Proposals and Reports in Education and Social Sciences*. Maseno Kenya. Kanezja Publisher.

Pilcher, R. (2012). *Principles of Construction Management (3rd edition)*. London: McGraw- Hill

Potter, A. (2001). Adoption of E- procurement in Hong Kong; An empirical Research, *International Journal production economics*, 33(1), 133-135.

Ricarda. A.M (2016). Inventory management and supply chain performance. *Non-Governmental*. 31(2), 313-322.

Ronchi, A., Gupta, M. & Palmer, R.J. (2010). *Moving Procurement Systems to the Internet: The Adoption and Use of e- procurement technologies models*. Stanford: GSB.

Salnoske, J. (1997). "The digital divide." *Journal of Computer Assisted Learning*, 22(5), 320-334.

Sandeep, E. C., Passarelli, S. & Barrett, C. B. (2007). The timeliness and cost-effectiveness of the local and regional procurement of food aid. *World Development*, 49(2), 9-18.

Schiele, H., Horn, P. & Vos, B., (2011). Estimating cost-saving potential from international sourcing and other sourcing levers: relative importance and tradeoffs, *International Journal of Physical Distribution & Logistics Management*, 41(3), 315 –36.

Schmitz RA, & Platts CK. (2004). Consumer-driven health care may not be what patients need caveat emptor. *jama. Jan 21*, 301(3), 321–3.

Silverman, G., T. (2016). *An Evaluation of the Impact of the Public Procurement and Disposal Regulations on Procurement in Kenya Public Universities*. Kenya. Doctoral dissertation, University of Nairobi.

Sollish, D., D, & Semanik, R., (2007). Attitudes to service quality: the expectation gap. *Nutrition and food science*, 33(2), 165-173.

Sullivan, K., Kashiwagi, D., & Chong, N. (2010). *The Influence of an Information Environment on a Construction Organization's Culture*: A Case Study" *Advances in Civil Engineering Article*, 387608(10), 2-5.

Sutinen A.J. & Kuperan, J.E, (1999). "Expanding the framework of internal and external validity in quantitative Research," *Research In the Schools*, 10(1), 71-89.

Tan, D. (1999). *E-governance in Ghana*: *National Information Clearing House*. Montego Bay, Jamaica, International Institute for Communication and Development.

Tangus, C. (2015).Effect of supplier relationship management practices on performance of manufacturing firms in Kisumu County, Kenya. *International Journal of Economics, Commerce, and Management*, 3(11), 499-512.

Tenhiälä, L., Rungtusanatham, J.C. & Miller, T. (2017): "Critical success factors for B2B e-procurement use within the UK NHS pharmaceutical supply chain*" International Journal of Operations and production Management,* 29(11), 1156- 1185.

Vaart, K. and Donk,B.(2008).*Purchasing and Supply Chain Management*, 7th ed. London: Prentice Hall.

Vaidyanathan, L. A. & Devaraj, S. (2008). Factors Affecting Effective Implementation of Inventory Management Systems in the Public Sector (A Case Study of National Aids Control Council). *International Journal of Social Sciences Management and Entrepreneurship*, 1(2), 17-32.

Wambui, E. N. (2013). Role of procurement on organization performance; a survey study of public secondary schools in Imenti North District, Kenya. *International Journal of Social Sciences Entrepreneurship*, 1(3), 289 – 302.

Wangeci, R. (2013), *Supplier relationship management and supply chain management in alcoholic beverage industry in Kenya.* Unpublished Research Project, University of Nairobi.

Wanjera, S. M. (2014). Role of Just-In-Time in Realization of an Efficient Supply Chain Management: A Case Study of Bidco Oil Refineries Limited, Thika. *Strategic Journal of Business & Change Management*, 3(2).

Wanyonyi, S.C., & Muturi, W. (2015). Factors affecting performance of procurement function among public technical training institutions in Kisumu County, *Kenya. International Journal of Economics, Commerce and Management*, 3(5), 325-337.

Watson S. (2010). *The internet and the customer-supplier relationship*. Ashgate Publishing Ltd, Aldershot, UK.

WBDG, R. (2011). *Risk management and construction* (2nd ed.). Oxford: Blackwell Publishers.

Wilson, W. (2016). *Contribution of e-procurement in enhancing procurement process*, Unpublished Research Project, Kenya Institute of Management.

Wogube, S. (2011).*Procurement planning and Performance in public Enterprises.* Unpublished Thesis, Makerere University. Uganda.

Wong, S., Tinggi, M., & Kadri, N. (2015). Inventory management in Malaysian construction firms: impact on performance. *SIU Journal management*, 1(2), 59-60.

Xingxing, Z. (2012). An agency theory perspective on supply chain quality management. *Journal of Supply Chain Management*, 31, (9), 111-116.

Yu, Y-W., Yu, H-C., Itoga, H. & Lin, T-R. (2008) '*Decision-making factors for effective industrial e-procurement*', Technology in Society, 30(1), 163–169.

APPENDICES

Appendix 1: Introduction Letter

BRIDGET MUTAI

P.O BOX …..,

Date……..

Health Policy Plus (HP+)

P.O BOX…..,

Nairobi.

Dear Sir/Madam,

RE: ACADEMIC RESEARCH DATA COLLECTION

This is to seek permission to carry out my academic research project in Health Policy Plus (HP+). I am a bona fide student from the University of Nairobi undertaking a Master's degree of Arts in Project planning who is pursuing a research project entitled; "Influence of procurement management on project performance - a case study of the health policy plus (hp+) project. A structured questionnaire has been formulated to assist in collection of data from respondents The data collected will be treated with utmost confidentiality and none will be shared or used for any other purpose other than for academic research without your permission.

Attached herewith is a copy of the questionnaire to be used for data collection. Waiting for your positive feedback on the same.

Yours sincerely,

BRIDGET MUTAI

Appendix II: Questionnaire for Management and procurement staff at Health Policy Plus (HP+) Project

Kindly tick (√) the option that best describes you. Also fill in the blanks where applicable.

SECTION A: BACKGROUND INFORMATION

1. Respondent Profile

i. Gender Male [ ] Female [ ]

ii. Highest level of education

Diploma [ ] Bachelors degree [ ] Masters [ ] PHD [ ]

iii. level of experience

0-2 Years [ ] 3-5 Years [ ] 6-10 Years [ ] 11-20 Years [ ]

21 Years and above [ ]

SECTION B: PROCUREMENT MANAGEMENT PRACTICES

Kindly indicate your level of agreement with the following statements on the extent to which the following procurement management practices affect performance of Health Policy Plus (HP+) Project. Use a scale of 1-5 where 1= Strongly disagree, 2= Disagree, 3= Neutral, 4=Agree and 5= Strongly agree. Use (√) to indicate what is applicable.

Procurement planning	**1**	**2**	**3**	**4**	**5**
Acquisition is clearly planned in terms of time, scope, quality and quantity					
Cash forecast planning is carried out to ensure project does not run short of required working cash flow and operates within budget provisions					
Delivery schedules are clearly planned and followed to ensure timely supply of health commodities					
Procurement decisions are carried out in compliance with all regulatory requirements and stakeholders interests					
Vendor management	**1**	**2**	**3**	**4**	**5**
Supplier Selection is based on qualification, honesty, accountability and previous relationship with the supplier					
HP+ involves key suppliers on all its project to ensure efficiency and effectiveness in procurement.					
HP+ has supplier development programs to ensure supplier loyalty					

The organization trains key suppliers on best procurement practices					
E-procurement	**1**	**2**	**3**	**4**	**5**
There is a functioning online system to facilitate electronic requisition					
Supplier selection is carried out via online system/platform					
Tenders are advertised through online system/platform					
HP+ undertakes e-procurement record management					
Procurement monitoring & evaluation	**1**	**2**	**3**	**4**	**5**
Procurement policies and systems are reviewed regularly to ensure they are up to date.					
Deliveries are properly checked to ensure they adhere to quality standards and as stated in the local purchase order(LPO)					
Supplier audit is carried out to ensure suppliers adhere to the required standards and timelines					
Risk mitigation is carried out to ensure project materials are protected against loss and waste					
Inventory management	**1**	**2**	**3**	**4**	**5**
Project inventory requisition has an optimal stock level which is strictly adhered to.					
Inventory is properly tracked to ensure its safe guarded against loss					
Stores are properly tracked to ensure inventory quality is maintained					
HP+ practice just in time inventory management					

SECTION C: PROJECT PERFORMANCE

Please tick where appropriate on the extent to which you agree on the following statements regarding Health Policy Plus (HP+) Project performance.

Project Performance	1	2	3	4	5
HP+ always adheres to set project budget provisions					
Project quality standards are strictly adhered to for provided Health Commodities and training consultants					
Health Commodities are supplied within timelines					
There is a reduction in HIV related Mortality due to access of ART					
Expanded access to key health commodities like ARVs & Test Kits					
There is an improvement in capacity of County Governments in health sector planning and budgeting through training on PBB					
Increased budget for health and HIV					

Thank you

Appendix III: Interview Guide for County Staff and Health Facilities Managers

1. In your view, are procurement decisions for the projects carried out in line with stakeholders' interests?
2. a) Does the project conduct need identification and assessment regularly?
   b) How often is this done?
   c) Explain the importance of this to the project performance.
3. Are delivery schedules for various health supplies clearly planned and adhered to? What can be done to improve on this?
4. Is there a functioning online system to facilitate electronic requisition of your required health commodities?
5. Does the Project Supply Health Commodities as per set quality Standards and timelines?
6. Are the consultants contracted qualified and competent to provide the Programme based budgeting training?
7. How does the organization check whether deliveries are of quality standards?
8. Does HP+ Project supply required health commodities within requested timelines? What are some of the challenges encountered due to delays?
9. What risk mitigation practices does the organisation carry out to ensure project materials are protected against loss/waste and supply disruption?
10. How does the Project ensure optimal stock levels
11. Briefly describe the health trainings carried out by the project? Are they relevant and done within timelines to assist department of Health in annual budgeting?
12. Is there a reduction in HIV related Mortality due to access of ART supplied by HP+ Project?
13. Has the access to key health commodities like ARVs & Test Kits increased or decreased?
14. Do you think there's an improvement in capacity of county health management teams in planning and budgeting due to training on Programme Based Budgeting?
15. Are all the County Health management teams trained on programme based budgeting?
16. Is there an increased budget for HIV? Does county health teams ensure full execution of HIV line item in the national budget?