

**PROCUREMENT PLANNING AND PERFORMANCE OF BUILDING, MINING
AND CONSTRUCTION MANUFACTURING FIRMS IN MACHAKOS COUNTY,
KENYA**

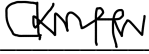
**BY
SYLVIA CHEMTAI KIPTOCH**

**A MANAGEMENT RESEARCH PROJECT PRESENTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR AWARD OF THE DEGREE OF
MASTER OF BUSINESS ADMINISTRATION, UNIVERSITY OF NAIROBI**

JULY 2022

DECLARATION

This research Project is my original work and has not been submitted for a degree in this or any other university

Signed  Date September 3, 2022

Sylvia Chemtai Kiptoch

Reg. D61/79373/2015

This research Project has been submitted for examination with my approval as the university supervisor

Signed  Date September 6, 2022

Ernest Akelo

Supervisor,

Lecturer

Department of Management Science & Project Planning,

Faculty of Business and Management Sciences

University of Nairobi

DEDICATION

I dedicate this project wholeheartedly to my loving husband Evans who has been a constant source of support and encouragement.

I also thank my Mum Eunice, Sister Yvonne, my children Maryann and Miguel who have prayed, loved me unconditionally and given me reasons to work hard for the things that I inspire to achieve.

ACKNOWLEDGEMENT

I acknowledge GOD for his protection in my academic journey. I also thank my supervisor, Ernest Akelo and Moderator Mr. Michael K. Chirchir for encouraging and supporting me as I was working on this project.

ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
EEA	European Economic Area
KAM	Kenya Association of Manufacturers
SPSS	Statistical Package for Social Sciences

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
ABBREVIATIONS AND ACRONYMS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABSTRACT	x
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background to the Study	1
1.2 Research Problem	6
1.3 Objective of the Study	7
1.4 Value of the Study	8
CHAPTER TWO	10
LITERATURE REVIEW	10
2.1 Introduction	10
2.2 Theoretical Literature Review	10
2.3 Empirical Literature Review	12
2.4 Challenges Faced in the Implementation of Procurement Planning	18
2.5 Summary of Literature Review	19
2.6 Conceptual Framework.....	19
2.7 Research Gaps	20
CHAPTER THREE	22
RESEARCH METHODOLOGY	22
3.1 Introduction	22
3.2 Research Design	22
3.3 Target Population	22
3.4 Data Collection	22
3.5 Data Analysis.....	23
CHAPTER FOUR	24
DATA ANALYSIS, FINDINGS AND DISCUSSION	24
4.1 Introduction	24
4.2 General Information	24
4.3 Procurement Planning Activities	27

4.4 Relationship between Procurement Planning and Performance.....	28
4.5 Challenges Faced in the Implementation of Procurement Planning	29
4.6 Discussion.....	31
CHAPTER FIVE	34
SUMMARY, CONCLUSION AND RECOMMENDATIONS	34
5.1 Introduction	34
5.2 Summary.....	34
5.3 Conclusion.....	35
5.4 Recommendations for Management and Policy	36
5.5 Limitations of the Study	37
5.6 Suggestions for Further Research.....	37
REFERENCES	39
APPENDICES.....	42
Appendix I: List of Building, Mining and Construction Manufacturing Firms in Machakos County, Kenya	42
Appendix II: Questionnaire	44

LIST OF TABLES

Table 4.1: Age distribution of respondents	24
Table 4.2: Period worked in the organization.....	25
Table 4.3: Position of Respondents in the Organization	26
Table 4.4: Highest Education Level Attained	26
Table 4.5: Procurement Planning Activities.....	27
Table 4.6: Regression Results	28
Table 4.7: ANOVA	28
Table 4.8: Coefficients and Significance.....	29
Table 4.9: Challenges Faced in the Implementation of Procurement Planning	30

LIST OF FIGURES

Figure 2.1: Conceptual Model	19
------------------------------------	----

ABSTRACT

This study sought to investigate the influence of procurement planning on performance of building, mining and construction manufacturing firms in Machakos County, Kenya. The specific objectives were to determine the procurement planning activities in the building, mining and construction manufacturing firms in Machakos County, Kenya. To establish the relationship between procurement planning and performance of building, mining and construction manufacturing firms in Machakos County, Kenya. To establish challenges faced in the implementation of procurement planning by manufacturing firms in Kenya. A descriptive research design was adopted targeting building, mining and construction manufacturing firms in Machakos County where procurement managers were the respondents. Census was used and data was obtained from first hand sources supported by the questionnaire. The analysis of the findings was done by SPSS and presented through tables. On the first objective, study established that building, mining and construction manufacturing firms in Machakos County did practice procurement planning activities that include supplier evaluation followed by cost estimation, procurement scheduling, and identification of needs and lastly hierarchy of plans. The results of the second objective showed that supplier evaluation had the greatest significant contribution towards performance of building, mining and construction manufacturing firms in Machakos County, Kenya followed by hierarchy of plans, procurement scheduling, cost estimation and identification of needs. On the last objective, there were underlying challenges in procurement activities in the building, mining and construction manufacturing firms in Machakos County, Kenya. The study concludes that the relevant procurement planning activities in an organization that significantly enhance performance include supplier evaluation, cost estimation, procurement scheduling, and identification of needs and lastly hierarchy of plans. It further concludes that implementation of procurement planning activities require the firm to overcome some underlying challenges like the constantly changing technologies. The study recommends that procurement managers working in building, mining and construction manufacturing firms in Machakos County should formulate relevant strategies in light of the changing technologies that pose a challenge in procurement planning processes. The finance managers of the building, mining and construction manufacturing firms in Machakos County should accurately carry out budgeting processes. The policy makers among building, mining and construction manufacturing firms in Machakos County should come up with relevant policies with regard to procurement planning activities that would improve performance.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The procurement function in any firm is important because of the enormous resources that firms consume and which mean that failure to plan for it would result in misappropriation. Through planning, organizations are able to anticipate their procurement needs so as to plan on when and from whom the goods and services are to be procured and at what cost (Roushdy, Mohamed, Hesham, Elzarka & Hafez, 2015). Through planning, organizations are able to connect with suppliers, vet them, and monitor them hence improve quality of supply function through determining the optimum number of suppliers. The supporting factor of buyer-supplier collaboration, according to Aimable, Osunsan, Florence, Comet, and Sarah (2019), is a cultural aspect made up of openness, mutuality, trust, information exchange and communication. The procurement planning leads to accountability and transparency in all the procurement functions that reflects on increased performance of the organization (Ondigi & Muturi, 2015). It sets out to answer the main procurement questions of what do you procure, when, from whom, time between placing orders and delivery, require staff numbers and value for money when procuring (Kituzi, 2016).

This study was anchored on two theories: Goal setting and institutional theories. According to goal-setting theory, the desire and purpose of achieving a goal is at the basis of motivation. When individuals or groups discover that their current output does not meet the acceptable standards, they are frequently encouraged to increase their effort or change their strategy. It helps in explaining the value of procurement planning by the manufacturing firms. Setting goals for the procurement functions and communicating the same, means that all the procurement staff know the procurement objectives, their responsibility to attaining the said

goal and standards set for results. The institutional theory is relevant in expounding how manufacturing firms can improve their performance through adopting procurement planning practices which lead to high performance of the procurement process.

Manufacturing firms use a lot of input materials which are sourced from different suppliers with different shelf lives. The procurement process within the manufacturing sector faces a lot of challenges (Osir, 2016), since they buy a lot of materials. The challenges include high storage costs, low production levels, break-downs, loss of materials and products becoming obsolete (Odero & Ayub, 2017). Procurement of some materials take months before they are delivered which means that proper planning needs to be made to ensure that there are no shortages or overstocking. Some of these issues can be sorted out if firms would invest in procurement planning so as to avoid instances where there are gaps between the physical products in stores and what is present in the stock ledger balance. Planning is very important especially in the manufacturing sector that depends on millions of volumes of raw materials needed for the production process

1.1.1 Procurement Planning

Procurement planning refers to the process by which businesses make decisions on what is to be procured, period when the procurement is to be done, and the locations or individuals to deliver (Lynch, 2016). It is one of key functions of procurement that needs to be well managed if an organization is to optimize its performance. As an organizational function, procurement planning sets in motion the whole process of acquisition of goods and services within an organization (Roushdy, *et al.*, 2015). A good plan is one that gives a detailed description of the process that one needs to go through from identification of supply needs to delivery of the procured goods or services. Proper planning of the procurement function in an organization helps in enhancing the process of gathering, analyzing, evaluating and

interpreting data and information with the aim of coming up with knowledge necessary for quality policy formulation (Masheti, 2016).

Procurement planning function involves definition of the goals of within an organization, development of an overall strategy that would help achieve these desired goals, and coming up with a well-thought-out hierarchy of plans that help in integrating and coordinating the activities (Kituzi, 2016). It is the first stage of procurement processes. Good procurement planning promotes the overall level of accountability within an organization and directs all organizational activities into efficient and effective work roles that yield high returns (Mutai & Chirchir, 2015).

The planning of all procurement activities is beneficial to the organization as noted by Karungani and Ochiri (2017) with some of the benefits including the ability of the organization to get all materials and products procured and delivered when and where they are required to ensure that the manufacturing process runs smoothly at all times. The procurement plans also creates schedules and timelines in the procurement process, with aspects like consolidating all needs in one contract, checking out the suppliers and their credibility so as to have quality products. The management is also able to plan for staffing needs as dependent on the activities that are projected to take place within the firm (Masheti, 2016). While conducting the procurement planning process, it allows for the monitoring, control and evaluation of all activities that are undertaken in the firm. Lastly, it enhances the transparency, accountability and predictability of the procurement process, all aimed at improving the process and high performance outcomes (Lynch, 2016).

1.1.2 Procurement Performance

This entails how well the procurement functions have been organized to ensure procured goods are available at the right place, in the right quantity and quality (Hamza, Gerbi & Ali, 2017). It is measured by the extent to which the product function attains the stated goals and objectives (Luketero, 2016), that include cutting operational costs and getting best value for money. Akumuntu (2019) noted that procurement performance is measured in two ways; the first is effectiveness and the second is efficiency. Effectiveness is about lead times and quality of the products and efficiency is about linking the procurement plans, resources and implementation of the plans to actualize the objectives.

Efficiency considers communication, handling any complications along the procurement line and number of orders and re-orders. This will guide the management to make informed decisions on delivery of products (Hamza, Gerbi & Ali, 2017). To gain improved procurement performance, the managers must also optimally allocate resources to all functional areas. The resource usage must also be optimal to avoid wastages, deterioration, obsolete and lack of raw materials when needed. Kakwezi and Nyeko (2019) shared that in the past, measuring procurement was through cutting costs and in most cases the lowest prices were selected, such that there was no consideration for quality, delivery timelessness, compliance rates, defect rates and supplier lead times. In the manufacturing sector, procurement performance is a measure of supplier relations that ensure constant availability of the needed quality and quantity of products, supplies and inventories. Procurement performance will be measured in terms of how the procurement function is effective and efficient. This study will measure procurement performance through cost, timeliness and quality.

1.1.3 Building, Mining and Construction Manufacturing Firms in Machakos County, Kenya

The manufacturing sector in Kenya boasts of its robustness and contributes to the growth and development of the nation. They are registered with the umbrella body Kenya Association of Manufacturers (KAM). Priority sectors among manufacturing firms include: Building, Mining and Construction, Chemicals and allied, Energy, Electricals and Electronics, food and beverages, Fresh produce, leather and footwear, metal and allied, motor vehicle assemblers and accessories, paper and board, pharmaceuticals and medical equipment, plastic and rubber, service and consultancy, and textile apparels. The study will concentrate on manufacturing firms in 41 firms in Building, Mining & Construction within Machakos County, Kenya (Kenya Association of Manufacturers, 2021) (Appendix 1).

The Manufacturing sector in general plays an important role in economic development of the country as a whole and Machakos County in particular. They provide direct employment to persons working in the companies and indirect employment through persons employed in the construction industry in general. These manufacturing firms have employed many people and run large operations that require raw materials for processing to make products that are needed by the market (Mello, *et al.*, 2017). They also contribute immensely to income of the County Government through payment of licenses and national income through payment of taxes to the central Government. Therefore, procurement planning is critical in guaranteeing a steady supply of key inputs for a smooth production process. According to Kakwezi and Nyeko (2019) adopting procurement planning aspects can improve the performance of the manufacturing firms through avoiding wastes, procuring in bulk to enjoy economies of scale and reducing instances where goods become obsolete or inaccessible thus halting the production process.

Manufacturing firms in this sector face numerous challenges which influence their production efficiency (Kiplel and Keitany, 2018). Unless these challenges are exhaustively dealt with, optimal performance will not be achieved hence lead to losses through lost outputs. From time to time, manufacturing firms have faced conflicts with the community where they mine raw materials required to produce their output. In addition, some of their inputs are sourced from overseas which means they take time to be delivered (Namisonge, 2018). Any shortage of inputs is likely to affect the performance to a great extent. Therefore procurement planning is important to ensure that adequate inputs are available to ensure efficient production process. This will ensure that optimal inventories are maintained to avoid huge inventory holding costs and at the same time avoid losses as a result of input shortages.

1.2 Research Problem

Failure in addressing challenges associated with effective management of procurement activities has seen many businesses fail to achieve optimal procurement level (Ondigi & Muturi, 2015). The lack of planning in manufacturing sector means that the firms increase their cost of production as storage costs soar up, or stopping the production due to lack of raw materials, both situations mean the performance of these firms is harmed and opportunities are wastage (Mwangi, 2016). Since manufacturing firms handle a lot of materials, it then is important to see how planning for procurement influences their procurement performance and ultimately the firm's performance.

Several studies have looked at procurement planning and procurement performance, including Flynn (2018) who did a study on measuring procurement performance in Europe and looked at the countries in the European Economic Area (EEA). Procurement performance was measured in terms of adopted practices that maximize value for money

and results show that Scandinavian and Benelux nations were the best performing while Italy and Spain performed poorest. The study was done in Europe creating contextual gaps and conceptual ones since there is no mention of procurement planning.

In another study, John (2016) assessed the factors affecting procurement planning within public secondary schools in the County of Migori and noted that competence levels of staff, ethical conduct exhibited in the procurement process, budgeting, costing and forecasting measures affected the procurement planning. The study creates a conceptual gap as it does not link procurement planning to performance, the research adopted a case study method, hence the findings may not apply to other sectors like the manufacturing sector. Mutoro, Makokha and Namisonge (2018) investigated on procurement planning in the County of Bungoma and the factors that affect it; revealing that service delivery, integration among team members and equity in sharing resources and provision of the procurement plans led to successful procurement planning within the county. The study creates a conceptual gap since it fails to link procurement planning to firm performance.

The manufacturing firms face challenges in procurement process implementation through difficulties in procurement planning. These studies have also created knowledge gaps in terms of context, concept and methodologies, which need to be filled. This study aimed at filling these gaps by providing an answer to the question ‘how does procurement planning affect performance of building, mining and construction manufacturing firms in Machakos County, Kenya?’

1.3 Objective of the Study

This study sought to investigate the influence of procurement planning on performance of building, mining and construction manufacturing firms in Machakos County, Kenya

The Specific objective:

- i. To determine the procurement planning activities in the building, mining and construction manufacturing firms in Machakos County, Kenya.
- ii. To establish the relationship between procurement planning and performance of building, mining and construction manufacturing firms in Machakos County, Kenya.
- iii. To establish challenges faced in the implementation of procurement planning by manufacturing firms in Kenya.

1.4 Value of the Study

This study would be beneficial to management teams of manufacturing companies as it would help streamline their purchase planning by systematically expanding on the practices that have already been implemented. This study would be utilized as reference material for manufacturing organizations to provide management with information on how to implement acceptable purchasing methods in order to improve procurement performance.

This study would be useful to policymakers since it will provide a framework on which to build more efficient and effective policies on purchasing practices. The study would attempt to demonstrate to stakeholders the necessity of implementing purchasing procedures in an organization in order to improve procurement performance.

To academicians, much knowledge would be gained from this study. It would establish a better foundation to people who want to get into research in the future related to the relationship between purchasing practices and procurement performance. It would also act as reference material for upcoming academicians and researchers on other topics related to the one discussed here. It would serve as a foundation for researchers who intend to pursue additional research in the field.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section provides a presentation of the theoretical review that discusses the theories that underpin the study, an empirical literature review that presents previous studies done by various authors on the study's topic, a summary of the literature review, research gaps that highlight the need for the current study, and finally a conceptual framework that shows the existing relationship between the study variables of the study.

2.2 Theoretical Literature Review

The study was anchored on goal setting and the institutional theories which are discussed in detail below: The main theory was the goal setting theory which identifies targets, which then governs the procurement requirements and planning.

2.2.1 Goal Setting Theory

The theory was developed by Edwin Locke (1968) who began studies in the 1960s to set targets, substantially developed the theory, which began with Kurt Lewin's early work on degrees of aspiration. The study discovered an inductive link between goal setting and enhanced organizational performance. A goal is considered to be an event or assignment's aim that an entity actively wants to accomplish or achieve (Neubert & Dyck, 2016). Setting goals requires the intentional process of setting standards of success to achieve desired outcomes. This theory of goal setting clearly states that the root of motivation is the desire and purpose of accomplishing a goal.

This theory suggests that in motivating its superior performance; then the individual objectives defined by an organization should play an important role. This is because the

stakeholders pursue their priorities by holding their key goals (Locke & Latham, 2020). They either boost their results or change the targets if these goals are not reached, to make them more practical. If performance increases, the performance management system's objectives will be met. This theory states that procurement goals should be practical, and that the selection process should be directed toward accomplishing these goals/objectives. Higher production and performance are aided by goals that are relevant and constant. Misunderstanding prevents clear, measurable, and consistent goals from being set, followed by a deadline.

This theory relates to the study as it explains the value of procurement planning by the manufacturing firms. Setting goals for the procurement functions and communicating the same, means that all the procurement staff know the procurement objectives, their responsibility to attaining the said goal and standards set for results. This will result in higher performance for the procurement function in terms of delivery of high quality products, value for money by doing price comparisons and effective supplier relationships. Setting goals gives direction to all staff working in the procurement department of the manufacturing firms. As such, this theory exposes how setting goals for procurement function will improve procurement performance and the overall performance of the manufacturing firms.

2.2.2 Institutional Theory

The institutional theory is a well-known approach for studying the principles of public procurement. According to Scott (2004), there are multiple organizational pillars which include, normative, regulatory and cultural. He ascertains that organizations are made up of cultural-cognitive and regulatory elements that provide the logic of life, as well as related

operations and resources. The regulatory pillar focused on the use of rules, laws, and sanctions as enforcement policies, with experience serving as a foundation for compliance.

The normative pillar is concerned with the standards that govern how things will be done, and that value is the compliance basis. The cultural pillar is built on a shared understanding of beliefs and symbols. Public procurement is supervised by the Public Procurement and Asset Disposal Act 2015, which has the purpose of "providing processes for effective public procurement and the disposal of property by government organizations and related purposes." The new procurement Act was assented to on 7th January 2016, repealing the previous Act of 2005. This theory relates to the study as it shows how procurement planning that aligns to the procurement laws, practices and regulations lead to an effective and efficient procurement process. Applying the procurement practices mean that the manufacturing firms have sufficient materials to handling their production processes. Thus, the theory is relevant is expounding how manufacturing firms can improve their performance through adopting procurement planning practices which lead to high performance of the procurement process.

2.3 Empirical Literature Review

This section reviews studies relevant to this research. Both local and global studies are covered. In Tanzania, Brahim, Abada and Muhindo (2014) researched on how procurement planning is implemented in parastatals organizations using a case study of Tanzania Postal Bank Head Quarters in Dar-es-salaam. The study was aimed at assessing how procurement planning is implemented in Parastatals organizations. The analyzed data revealed that organizational procurement planning relies more on how the unit of procurement cooperates with user departments. Thus, the study recommends professionalizing the procurement function, making decisions based on the procurement plans and getting approvals from the

government sector. This was a case study, such that the findings and recommendations may not apply in other sectors and entities. The setting of the study was Tanzania hence the need to look at Kenyan background and context was in parastatals thus expand research to other sectors like manufacturing.

Changalima, Mushi and Mwiseje (2020) did a study on use of the strategic tool of procurement planning and its effectiveness in public procurement. The results show that procurement planning led to effective public procurement, with the procurement planning elements covering preparation of procurement plans, stakeholder involvement, complying with procurement regulations and practices and an adequate budget. The conclusions show that procurement planning significantly influence procurement effectiveness. The study looked at public entities in Tanzania creating contextual gap, and conceptually the study considered performance of procurement through effectiveness only and does not mention other elements.

Shanyika (2019) in the procurement planning and procurement costs study that was based in Harare. The public procurement and disposal of assets Act of 20915 makes its adoption compulsory for all public entities. The public sector must then develop procurement plans in line with projected annual budgets and implement the same. The study findings show that procurement planning negatively correlated to costs since the local authorities had forecasts for demands and supply for projects. Contextual gaps are such that the study was done in Harare and its local authorities hence need to expand research to Kenyan setting and the private entity firms. Conceptually, the study did not consider the performance of procurement function hence the need to cover that aspect.

Aimable, Osunsan, Florence, Comet and Sarah (2019) study was on procurement planning and value for money in some districts within the South Province in Rwanda. Study results revealed that procurement planning significantly affects value for money. The study concluded procurement planning affects value for money and recommended that procurement managers to involve stakeholders adopt procurement methods as per the project nature and follow procurement principles during bidding. The study context was Rwanda and its local government hence the need to consider the Kenyan setting and commercial sector.

Aladejebi and Adedeji (2015) researched on how procurement planning affects the performance of selected agricultural firms in Ondo State, Nigeria. The study was aimed at assessing how procurement planning affects the performance of agricultural firms in Ondo State, Nigeria. The study found that the majority of the companies have a very ineffective Enterprise Resource Planning (ERP) system for procurement. The agricultural firms were advised to introduce ERP system for managing and planning inventories and for accountability and transparency needs in public entities. The study focus was on agricultural firms and it will be interesting to consider manufacturing firms that have huge inventories and look at different background other than the Nigerian one. It is also unclear on where the data was sourced from and who was in the respondent list and how the data was collected and analyzed.

Salim and Kithaka (2019) conducted research in the County of Mombasa, Kenya, on how procurement strategy influences procurement performance of state companies. The goal of the study was to see how procurement strategy influences the procurement performance of State Corporations in Kenya's Mombasa County. The findings of the study demonstrated that identifying procurement needs had a significant impact on the performance of procurement state corporations in Kenya's Mombasa County. Transactions were

documented and recorded in the procurement planning function, which improved accountability and transparency. This study focused on state corporations and based it in Mombasa County and as a way to expand knowledge on procurement planning and procurement performance, the current study will look into business ventures and the manufacturing firms within Machakos County.

Another study was done by Onyango (2014) on how procurement planning affects the performance of an institution using a case study of Mombasa Law Court. Determining an organization's objectives, creating an overarching strategy to attain those objectives, and creating a detailed hierarchy of plans to integrate and managing the activities were all part of the procurement planning job. Findings show that procurement planning and implementation led to improved performance through extraction, distribution and allocation of resources and production of relevant knowledge of making good policies. The study was a case study of Mombasa Law Courts such that the findings and recommendations may be difficult to apply in other companies and industries. The study does not divulge where data was sourced from, the data collection and analysis process.

Leiyan (2016) conducted a study on the practices of procurement planning and performance of an organization using a case study of Nairobi University. The analyzed data revealed that procurement planning and training workforce helped in influencing the performance of an organization. The study recommended sound management of the procurement process, revitalization of the process, adoption of new technologies for improved performance. The study considers performance of the overall institution –Nairobi University and not specifically on procurement performance hence knowledge gaps in its concept. It is also a case study and findings may not apply to other firms and sectors like the manufacturing industries.

Chepkesis, Keitany and Kiplel (2018) conducted a study to find out how procurement planning affects the performance of suppliers in public institution using a case study of Moi University. The study adopted the use of an explanatory research design. The study findings revealed that planning plays a key role in enhancing value for money, enhancing quality, encouraging proper utilization of resources, enabling quick decision making and encouraging innovations which is aimed at solving problems and saving time. The Kenyan public procurement system is characterized as having weak legal framework and lacks professionalism, hence the need to make procurement planning compulsory as it helps in ensuring that there is efficient procurement of goods, works and services and tracking the procurement plans execution. The study is limited to the relation of procurement planning to supplier performance which is only one aspect of procurement performance. It is also a case study of Moi University alone and findings may not apply to other higher learning institutions and even other sectors of the economy.

Using a case study of the Agricultural Development Corporation in Nairobi, Willy and Njeru (2014) studied how procurement planning affects procurement performance. Procurement activities are designed to help in predicting needs, purchasing and acquiring supplies, transporting supplies to the organization, and tracking the status of supplies as an established asset. The value of procurement planning is measured in terms of quality, delivery, cost, and flexibility, all of which have an impact on the firm's competitiveness in meeting client needs. The study's findings demonstrated a substantial link between procurement planning and procurement performance. The study concluded that the availability of a procurement portfolio, effective logistics management, and adherence to procurement strategies all had a positive influence on procurement performance. The study covered only one firm, the agricultural development corporation and its findings may not apply to other firms and

industries especially business –oriented ones like manufacturing companies. The study is unclear on data collection participants, process and data analysis procedures.

Nyagah (2019) assessed the procurement planning effects to performance with the focus being the need for assessing the procurement planning function, the cost estimations, quality specification and risk evaluation for procurement planning. The research was done in Kilifi County government setting and findings show that the elements of procurement planning - need assessment, cost estimation, quality specification and risk evaluation –affected the performance of public entities and in this case the Kilifi County government. This study did not conceptualization of procurement planning is different from the current study and it was done in the context of the public entity that might have varied viewpoint to entities in the commercial sector. The gaps need then to be covered and extension of knowledge to commercial entities and expand on the elements for procurement planning.

Obura (2020) study was on procurement planning and considered the balance between procurement control and attaining value for money. Procurement planning usage was aimed at evaluating the entire procurement process in government institutions so as to have successful projects. This is done through budget preparation and executions and procurement function needed to understand needs of each sector. The study focus was on need identification, market survey, aggregation, and procurement methods employed by public sector institutions. The findings show a correlation between the study variables. The study context was the public sector institutions and there is need to expand research to cover private sector and consider the manufacturing firms.

2.4 Challenges Faced in the Implementation of Procurement Planning

Studies conducted by previous scholars have highlighted several challenges for instance; Basheka (2014) identified poor procurement planning resulting in inappropriate stocking which increases the costs of operations. At times, the forecasters of materials required in the manufacturing processes do not come up with precise budgets resulting in either over or under budgeting hence causing shortages or overstocking. This in turn affects the stock holding costing or the ordering costs thus negatively affecting procurement performance.

In another study, Kiplel and Keitany (2018) identified poor procurement procedures as a key challenge in procurement planning and performance. Poor procurement procedures result in loss of time, regular conflict of interests, loss of money and unfair competition. This situation is further made worse by limited employee requisite skills and experience in procurement planning.

Salim and Kitheka (2019) noted that changes in technology and system compatibility between suppliers and an organization can bring challenges in procurement planning. The constantly changing technology makes it difficult to integrate systems with suppliers and customers. This causes unnecessary delays making it difficult to plan with certainty. Anane and Kwarteng (2019) noted that bureaucracy in internal system that affects procurement planning. The internal control procedures and bureaucracies make it difficult for information to be shared freely thus delaying the flow of information.

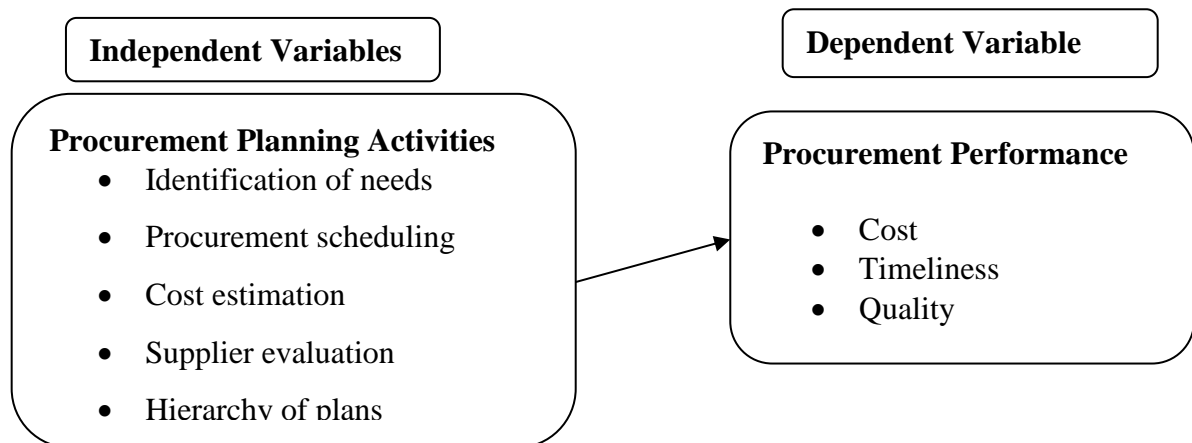
2.5 Summary of Literature Review

This study is anchored on the goal setting theory because of its advocate to setting targets which guide inventories and ultimate procurement planning. The chapter also reviewed various empirical studies which provide guidance on the methodologies adopted and the scope. It further identifies a number of challenges experienced by firms as they seek to implement procurement planning system for efficient operations. A summary of the studies reviewed in the empirical section is provided under appendix 1.

2.6 Conceptual Framework

The independent variable in this study is procurement planning activities which are measured by; identification of needs, Procurement scheduling, Cost estimates, Supplier evaluation and Hierarchy of plans. The dependent variable is procurement performance and is operationalized using cost, timeliness and quality.

Figure 2.1: Conceptual Model



Source: Researcher (2021)

2.7 Research Gaps

Table 2.1: Research Gaps

Author	Study	Findings	Gaps	How gaps are addressed in the Current study
Islam, Turki, Murad and Karim (2017)	Whether sustainable procurement practices improve the performance of an organization	There was a significant relationship between sustainable procurement practices and organizational performance	The study created a conceptual gap as it looked at whether sustainable procurement practices improve the performance of an organization	Influence of procurement planning on performance of manufacturing firms in Kenya
Brahim, Abada and Muhindo (2014).	How procurement planning is implemented in parastatals organizations using a case study of Tanzania Postal Bank Head Quarters in Dar-es-salaam	Organizational procurement planning relies more on how the unit of procurement cooperates with user departments.	The study was done in Tanzania hence creating a contextual gap	Influence of procurement planning on performance of manufacturing firms in Kenya
Hamza, Gerbi and Ali (2017)	The factors affecting procurement performance in the Awassa Textile Share Company	The procedures of procurement positively relates with procurement performance	The study created a contextual gap as it was done in Ethiopia	Influence of procurement planning on performance of manufacturing firms in Kenya
Aladejebi and Adedeji (2015)	Effect of procurement planning on the performance of selected agricultural firms in Ondo State, Nigeria	Majority of the companies have a very ineffective Enterprise Resource Planning (ERP) system for procurement.	The study was done in Nigeria hence creating a contextual gap	Influence of procurement planning on performance of manufacturing firms in Kenya
Salim and Kitheka (2019)	How procurement planning affects procurement	Identifying procurement needs had a	The study was done in Mombasa	Influence of procurement planning on

	performance of state corporations	significant impact on the	County hence creating a	performance of manufacturing
Author	Study	Findings	Gaps	How gaps are addressed in the Current study
	in the County of Mombasa	performance of procurement state corporations in Kenya's Mombasa County	contextual gap	firms in Kenya
Leiyan (2016)	The practices of procurement planning and performance of an organization using a case study of Nairobi University	Procurement planning and training workforce play a key role in influencing the performance of an organization	The study looked at the procurement practices hence creating a conceptual gap	Influence of procurement planning on performance of manufacturing firms in Kenya
Chepkesis, Keitany and Kiplel (2018)	How procurement planning affects the performance of suppliers in public institution using a case study of Moi University	Planning plays a key role in enhancing value for money, enhancing quality, encouraging proper utilization of resources, enabling quick decision making and encouraging innovations which is aimed at solving problems and saving time.	The study created a conceptual gap as it looked how procurement planning affects the performance of suppliers in public institution	Influence of procurement planning on performance of manufacturing firms in Kenya
Willy and Njeru (2014)	How procurement planning affects procurement performance using a case study of agricultural development corporation, Nairobi	Procurement planning strongly related with procurement performance	The study was done in the agricultural sector hence creating a contextual gap	Influence of procurement planning on performance of manufacturing firms in Kenya

Source: Researcher: (2021)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section reviews the study's design, target population and methods used in the process of collecting data as well as how the study findings are analyzed.

3.2 Research Design

A descriptive research design was adopted by the study due to its important role in the quest of determining the answers to who, what, where and how. This research design has been used successfully in previous studies (Brahim et al., 2014; Changalima et al., 2020; and Siedlecki, 2020) on different elements of procurement planning and firm performance.

3.3 Target Population

The population of this study was building, mining and construction manufacturing firms in Machakos County. According to KAM (2020), they are 41 in number (Appendix I). This sector was selected because of the large volume of raw materials required which need to be matched with demand for finished product to ensure adequate arrangements are put in place to avoid excess or under stocks. Since this number is not too large, a census was taken.

3.4 Data Collection

Collection of primary data was done through use of a questionnaire. The questionnaire had closed-ended questions, using a five-point Likert scale. The questionnaire used the five-point Likert scale where: 1= very little extent; 2 = Little Extent; 3= Moderate Extent; 4= Large Extent and 5= Very Large Extent. The questionnaire was divided into sections such that section A covered general information of the respondents and the firms; section B had

statements on procurement planning activities, section C had statements on procurement performance while section D covered the challenges in procurement planning and.

The researcher adopted a “drop and pick later” method of data collected. Phone calls were made to the respondents to remind them to fill the questionnaire. For those who preferred responding through email, a soft copy was shared to improve response rate. The respondents were the procurement managers or their equivalents.

3.5 Data Analysis

The collected data was cleaned, arranged and coded before being entered into SPSS version 25.0 for analysis. Descriptive analysis such as means and standard deviation were produced to aid in interpretation of data collected. Inferential statistics were conducted through regression analysis to show the strength of how procurement planning and procurement performance relates to each other. Regression analysis showed how procurement planning activities were linked to procurement performance and how the challenges affect procurement performance. The following was the model adopted:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon$$

Where **Y** = Procurement Performance (composite score of cost, timeliness and quality)

X₁= Identification of procurement needs

X₂ = Procurement scheduling

X₃= Cost Estimation

X₄= Supplier Evaluation

X₅= Hierarchy of plans

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

This chapter is set out to detail the findings of analysis based on the objectives. The chapter covers the response rate, descriptive and inferential statistics which basically comprises of regression results.

4.1.1 Response Rate

From the 41 questionnaires that were administered to procurement managers, 33 were dully filled and returned giving a response rate of 80.5%. This response rate was considered adequate for generalization of findings to the population of interest (Babbie, 2010).

4.2 General Information

This section collected information on the respondents to ascertain their suitability of taking part in the study. It specifically covered their age, period worked in their organizations, positions held, and highest level of education attained. The findings are discussed below starting with age distribution:

Table 4.1: Age distribution of respondents

Age (years)	Frequency	Percent
18 to 25	3	9
26 – 35	9	27
36- 45	14	43
Above 45	7	21
Total	33	100

Source: Research Data (2021)

From Table 4.1, it can be seen that majority of the respondents were aged between 36 to 45 years at 43% followed by those aged between 26-35 years. The age category with the least number of respondents was 18 to 25 years at 9%. These findings indicate that the

respondents were drawn from diverse age categories within the organizations. It therefore can be concluded the findings are a representative of all age categories in an organizational setting.

4.2.1 Period Worked in the Organization

Data on the period that the respondents had worked in their organization was as shown in the Table 4.2:

Table 4.2: Period worked in the organization

Period (Years)	Frequency	Percent
Below 3 years	5	15
3-6 years	7	21
7-10 years	13	39
More than 10 years	8	24
Total	33	100

Source: Research Data (2021)

The results in Table 4.2 indicate that majority of the respondents had worked in their organization a period of between 7-10 years at 39% followed by those that had worked for more than ten years at 24% and those who had worked for between 3 to 6 years at 21%. The least category at 15% had worked for less than 3 years. These findings show that majority of the respondents had worked in their respective organizations for more than three years. Therefore, they understood well the operations of the firm to provide valid information sought by the study on procurement planning and performance.

4.2.2 Position in the Organization

Data on the position held by the respondents in their organizations was as shown in the Table 4.3:

Table 4.3: Position of Respondents in the organization

Position	Frequency	Percent
Procurement director	3	9
Senior Procurement officer	11	33
Supply chain management officer	9	28
Commercial Manager	7	21
Others	3	9
Total	33	100

Source: Research Data (2021)

From the responses, majority of the respondents held the position of senior procurement officer at 33% followed by those holding the position of supply chain management officer at 28%. The least category was procurement directors and others at 9% each. These findings show that the respondents held different procurement positions in their organizations. This shows that they had experience on procurement operations of their firm hence had the information sought for by the study.

4.2.3 Highest Education Level Attained

Data on the highest education levels attained by the respondents is shown below:

Table 4.4: Highest Education Level Attained

Education Level	Frequency	Percent
Diploma	4	12
Degree	19	58
Masters	9	27
PhD	1	3
Total	33	100

Source: Research Data (2021)

From the results in Table 4.4, majority of the respondents had a degree as their highest level of education at 58% followed by those with masters' level at 27%. A further 12% had

diploma while 3% had PhD. This shows that the respondents were learned and hence could read and understand the questions in the questionnaire to provide relevant information.

4.3 Procurement Planning Activities

The study sought to determine the procurement planning activities in the building, mining and construction manufacturing firms in Machakos County, Kenya. This section details the findings of means and standard deviations that were used to interpret the Likert scale. To begin with, the researcher generated values of means and standard deviation across the statements on the Likert scale and average values were determined per variable and presented as shown in Table 4.5.

Table 4.5: Procurement Planning Activities

	Mean	Rank
Supplier Evaluation	3.93	1
Cost Estimation	3.89	2
Procurement Scheduling	3.77	3
Identification of Needs	3.65	4
Hierarchy of Plans	3.59	5

Source: Research Data (2021)

Table 4.5 shows that the highly embraced procurement activities among the construction manufacturing firms in Machakos County include supplier evaluation (M=3.93) followed by cost estimation (M=3.89), procurement scheduling (M=3.77), identification of needs (M=3.65) and lastly hierarchy of plans (M=3.59). Therefore, it can be inferred that manufacturing firms in Machakos County did practice procurement planning activities.

4.4 Relationship between Procurement Planning and Performance

The second objective sought to establish the relationship between procurement planning and performance of building, mining and construction manufacturing firms in Machakos County, Kenya. In achieving this objective, procurement planning activities were regressed against procurement performance with the findings as presented in the subsequent sections. Table 4.6 is the findings of the model summary.

Table 4.6: Regression Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.796 ^a	.633	.617	1.51383

Source: Field Data (2021)

From Table 4.6, $R^2=.633$, this implies that 63.3% change in performance of building, mining and construction manufacturing firms in Machakos County, Kenya is explained by procurement planning activities. It then follows that aside from procurement planning activities, there are still other factors with an influence on performance of these firms and this deserves further studies.

Table 4.7: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	348.398	5	69.6796	30.4012216	.000 ^b
Residual	201.667	27	2.292		
Total	550.065	32			

Source: Field Data (2021)

The statistics from Table 4.7 are as follows, $F=30.40$, $p<0.05$, an indication that on overall, the regression model of the study was significant. Table 4.8 gives the beta coefficients and significance.

Table 4.8: Coefficients and Significance

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.856	1.830		2.107	.038
Identification of Needs	.131	.064	.033	2.047	.033
Procurement Scheduling	.189	.085	.029	2.224	.039
Cost Estimation	.138	.062	.057	2.226	.010
Supplier Evaluation	.711	.089	.787	7.956	.000
Hierarchy of Plans	.224	.087	.025	2.575	.035

Source: Field Data (2021)

From Table 4.8, the study noted that supplier evaluation ($\beta=.711$, with a p-value of less than 0.05 and t of greater than 1.96) had the greatest significant contribution towards performance of building, mining and construction manufacturing firms in Machakos County, Kenya followed by hierarchy of plans ($\beta=.224$, and a p-value of less than 0.05 and t statistic of greater than 1.96), procurement scheduling ($\beta=.189$, with a p-value of less than 0.05 and a t statistic of greater than 1.96), cost estimation ($\beta=.138$, with a p-value of less than 0.05 and a t statistic of greater than 1.96) and identification of needs ($\beta=.131$, with a p-value of less than 0.05 and a t-statistic of greater than 1.96).

4.5 Challenges Faced in the Implementation of Procurement Planning

The third objective sought to establish challenges faced in the implementation of procurement planning by building, mining and construction manufacturing firms in Machakos County.

Table 4.9: Challenges Faced in the Implementation of Procurement Planning

	Mean	Std. Dev
Constantly changing technology makes it difficult to integrate systems with customers	3.96	.881
Constantly changing technology makes it difficult to integrate systems with suppliers	3.94	.958
Bureaucracy in internal system affect our procurement planning	3.94	.725
Delays in shipping of materials affect our procurement planning implementation	3.75	.990
Acquiring trading licenses is tedious	3.74	.865
System integration with suppliers present some compatibility issues	3.71	.845
Budgeting inaccuracies affect our procurement planning implementation	3.58	.975
Poor procurement procedures affect our procurement planning implementation	3.52	.794
We experience challenges in procurement planning due to inaccuracies in forecasters of materials	3.50	.741
Average	3.74	.864

Source: Field Data (2021)

From Table 4.9, the value of average is given as 3.74, an indication that there were underlying challenges in procurement activities in the studied firms. In essence, the constantly changing technologies (M=3.96) presently a great challenge in procurement planning followed by bureaucracy in internal system (M=3.94), the constantly changing technology made it difficult to integrate systems with suppliers (M=3.94). The other challenges include delays in shipping of materials (M=3.75), acquiring trading licenses was tedious (M=3.74) and that system integration with suppliers presented some compatibility issues (M=3.71). The other challenge was the fact that budgeting inaccuracies (M=3.58),

poor procurement procedures ($m=3.52$) as well as inaccuracies in forecasters of materials ($M=3.50$). Thus, an array of challenges affected procurement planning activities among building, mining and construction manufacturing firms in Machakos County.

4.6 Discussion

The study sought to determine the procurement planning activities in the building, mining and construction manufacturing firms in Machakos County, Kenya. The study established that building, mining and construction manufacturing firms in Machakos County did practice procurement planning activities. This observation is supported by Lynch (2016) who procurement planning refers to the process by which businesses make decisions on what is to be procured, period when the procurement is to be done, and the locations or individuals to deliver. Roushdy, *et al.*, (2015) said that procurement planning is one of key functions of procurement that needs to be well managed if an organization is to optimize its performance and that as an organizational function, procurement planning sets in motion the whole process of acquisition of goods and services within an organization.

The second objective sought to establish the relationship between procurement planning and performance of building, mining and construction manufacturing firms in Machakos County, Kenya. The results showed that 63.3% change in performance of building, mining and construction manufacturing firms in Machakos County, Kenya is explained by procurement planning activities. The study noted that supplier evaluation ($\beta=.711$, $p<0.05$ & $t>1.96$) had the greatest significant contribution towards performance of building, mining and construction manufacturing firms in Machakos County, Kenya followed by hierarchy of plans ($\beta=.224$, $p<0.05$ & $t>1.96$), procurement scheduling ($\beta=.189$, $p<0.05$ & $t>1.96$), cost estimation ($\beta=.138$, $p<0.05$ & $t>1.96$) and identification of needs ($\beta=.131$, $p<0.05$ & $t>1.96$). These findings are supported by John (2016) who noted that competence levels of

staff, ethical conduct exhibited in the procurement process, budgeting, costing and forecasting measures affected the procurement planning. Mutoro et al. (2018) revealed that service delivery, integration among team members and equity in sharing resources and provision of the procurement plans led to successful procurement planning within the county. Changalima et al. (2020) show that procurement planning led to effective public procurement, with the procurement planning elements covering preparation of procurement plans, stakeholder involvement, complying with procurement regulations and practices and an adequate budget.

Shanyika (2019) show that procurement planning negatively correlated to costs since the local authorities had forecasts for demands and supply for projects. Aimable et al. (2019) said procurement planning affects value for money and recommended that procurement managers to involve stakeholders adopt procurement methods as per the project nature and follow procurement principles during bidding. Salim and Kitheka (2019) demonstrated that identifying procurement needs had a significant impact on the performance of procurement state corporations in Kenya's Mombasa County. Onyango (2014) show that procurement planning and implementation led to improved performance through extraction, distribution and allocation of resources and production of relevant knowledge of making good policies. Leiyan (2016) revealed that procurement planning and training workforce helped in influencing the performance of an organization. The study recommended sound management of the procurement process, revitalization of the process, adoption of new technologies for improved performance. Chepkesis et al. (2018) revealed that planning plays a key role in enhancing value for money, enhancing quality, encouraging proper utilization of resources, enabling quick decision making and encouraging innovations which is aimed at solving problems and saving time. Willy and Njeru (2014) demonstrated that the

availability of a procurement portfolio, effective logistics management, and adherence to procurement strategies all had a positive influence on procurement performance.

The third objective sought to establish challenges faced in the implementation of procurement planning by building, mining and construction manufacturing firms in Machakos County. From the results, the value of average is given as 3.74, an indication that there were underlying challenges in procurement activities in the studied firms. Basheka (2014) identified poor procurement planning resulting in inappropriate stocking which increases the costs of operations. In essence, the constantly changing technologies (M=3.96) presently a great challenge in procurement planning followed by bureaucracy in internal system (M=3.94), the constantly changing technology made it difficult to integrate systems with suppliers (M=3.94). Salim and Kitheka (2019) noted that the constantly changing technology makes it difficult to integrate systems with suppliers and customers. This causes unnecessary delays making it difficult to plan with certainty. The other challenges include delays in shipping of materials (M=3.75), acquiring trading licenses was tedious (M=3.74) and that system integration with suppliers presented some compatibility issues (M=3.71). The other challenge was the fact that budgeting inaccuracies (M=3.58), poor procurement procedures (M=3.52) as well as inaccuracies in forecasters of materials (M=3.50). Kiplel and Keitany (2018) identified poor procurement procedures as a key challenge in procurement planning and performance. Thus, an array of challenges affected procurement planning activities among building, mining and construction manufacturing firms in Machakos County. Aladejebi and Adedeji (2015) found that the majority of the companies have a very ineffective Enterprise Resource Planning (ERP) system for procurement.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

A summary of the analyzed findings is detailed in this chapter. The conclusion and recommendations are also indicated. The areas requiring further research are also pointed out in this chapter.

5.2 Summary

The study sought to determine the procurement planning activities in the building, mining and construction manufacturing firms in Machakos County, Kenya. The study established that building, mining and construction manufacturing firms in Machakos County did practice procurement planning activities. In fact, the highly embraced procurement activities among the construction manufacturing firms in Machakos County include supplier evaluation followed by cost estimation, procurement scheduling, and identification of needs and lastly hierarchy of plans.

The second objective sought to establish the relationship between procurement planning and performance of building, mining and construction manufacturing firms in Machakos County, Kenya. The results showed that over half percent change in performance of building, mining and construction manufacturing firms in Machakos County, Kenya is explained by procurement planning activities. The study noted that supplier evaluation had the greatest significant contribution towards performance of building, mining and construction manufacturing firms in Machakos County, Kenya followed by hierarchy of plans, procurement scheduling, cost estimation and identification of needs.

The third objective sought to establish challenges faced in the implementation of procurement planning by building, mining and construction manufacturing firms in Machakos County. From the results, an array of challenges affected procurement planning activities among building, mining and construction manufacturing firms in Machakos County. In essence, the constantly changing technologies presently a great challenge in procurement planning followed by bureaucracy in internal system, the constantly changing technology made it difficult to integrate systems with suppliers. The other challenges include delays in shipping of materials, acquiring trading licenses was tedious and that system integration with suppliers presented some compatibility issues. The other challenge was the fact that budgeting inaccuracies, poor procurement procedures as well as inaccuracies in forecasters of materials.

5.3 Conclusion

There are several procurement planning activities that a firm can put in place. The mining and construction manufacturing firms in Machakos County have appreciated the need to have in place procurement planning activities. The highly embraced procurement activities among the construction manufacturing firms in Machakos County include supplier evaluation followed by cost estimation, procurement scheduling, and identification of needs and lastly hierarchy of plans.

Several benefits accrue to a firm that practice procurement planning activities. This study has demonstrated that in order to significantly enhance performance, firms must constantly embrace procurement planning activities. In other words, procurement planning activities are prerequisites for better performance. In fact, over half percent change in performance is explained by procurement planning activities. Supplier evaluation has the greatest significant contribution towards performance of building, mining and construction

manufacturing firms in Machakos County, Kenya followed by hierarchy of plans, procurement scheduling, cost estimation and identification of needs.

A firm must overcome a number of challenges in order to fully implement procurement planning activities. In essence, the constantly changing technologies presently a great challenge in procurement planning followed by bureaucracy in internal system, the constantly changing technology made it difficult to integrate systems with suppliers. The other challenges include delays in shipping of materials, acquiring trading licenses was tedious and that system integration with suppliers presented some compatibility issues. The other challenge was the fact that budgeting inaccuracies, poor procurement procedures as well as inaccuracies in forecasters of materials.

5.4 Recommendations for Management and Policy

This study recommends that the procurement managers working in building, mining and construction manufacturing firms in Machakos County should formulate relevant strategies in light of the changing technologies that pose a challenge in procurement planning processes. The finance managers of the building, mining and construction manufacturing firms in Machakos County should accurately carry out budgeting processes.

The policy makers among building, mining and construction manufacturing firms in Machakos County should come up with relevant policies with regard to procurement planning activities that would drive performance. The policy makers at KAM should equally come up with sound regulations for their member firms that would support procurement planning activities in these firms.

5.5 Limitations of the Study

The study was limited by a small sample of 41 building, mining and construction manufacturing firms. This as a limitation because it constrains generalization of the findings to the entire building, mining and construction in Kenya as the sample size was limited. The study was limited to two variables, procurement planning and organizational performance. The study was also limited to information from the auxiliary sources as gathered through questionnaire.

The target respondents were hesitant to take part in the study citing sensitivity of the information being asked which may negatively affect the performance of their organization. To overcome this challenge, the researcher assured the respondents that the data requested was purely for academic purposes. None of the data was going to be used for any other purpose.

Some of the respondents were too busy to take part in the study owing to their tight schedule. To overcome this challenge, the researcher adopted a drop and pick later method. In addition, the researcher made repeat visits to the respondents' place of work reminding them to fill in and return the questionnaire. This helped in improving the response rate to what was recorded.

5.6 Suggestions for Further Research

Contextually, the present study focused on building, mining and construction manufacturing firms in Machakos County. Thus, the focus of future studies should be on publicly operating manufacturing firms in Kenya. Aside from the manufacturing sector, the focus of future studies should be on other firms like the commercial state corporations in Kenya. Future

studies should be conducted to link the implication of procurement planning activities on other proxies like operational performance.

REFERENCES

- Aimable, N., Osunsan, O. K., Florence, I., Comet, K. F., & Sarah, N. (2019). Procurement Planning on Value for Money among selected districts in Southern Province, Rwanda.
- Aimable, N., Osunsan, O. K., Florence, I., Comet, K. F., & Sarah, N. (2019). Procurement planning on value for money among selected districts in Southern Province, Rwanda. *Journal of Research in Business and Management*, 7(1), 34-40.
- Akumuntu, J. (2019). A study of efficiency and effectiveness of procurement processes and performance. *Journal of Research in Management, Economics and Commerce*, 9(5), 1-9.
- Aladejebi, O. A., & Adedeji, A. O. (2015). Effect of procurement planning on the performance of selected agricultural firms in Ondo State, Nigeria. *International Journal of Finance and Procurement*, 8(2), 45-56.
- Changalima, I. A., Mushi, G. O., & Mwiseje, S. S. (2020). Procurement planning as a strategic tool for public procurement effectiveness: Experience from selected public procuring entities in Dodoma city, Tanzania. *Journal of Public Procurement*. 4(2), 124-132.
- Chepkesis, K. M., Keitany, P., & Kiplel, M. (2018). Effect of procurement planning on supplier's performance in public institution: A case of Moi University. *Europeans Journal of Logistics, Purchasing and Supply Chain Management*, 6(2), 1-9.
- Flynn, A. (2018). Measuring procurement performance in Europe. *Journal of Public Procurement*, 18(1), 2-13.
- Hamza, S. B., Gerbi, A., & Ali, S. H. (2017). Factors affecting procurement performance in the case of Awassa textile share company. *Global Journal of Management and Business Research*. 6(2), 538-547.
- Issa, A. M. (2018). *Effects Of Procurement Planning On The Performance Of Projects Among Humanitarian Organizations In Somalia: A Case of International Organization for Migration (IOM)–Somalia* (Doctoral dissertation, MUA).

- John, P. O. (2016). Factors Affecting Procurement Planning In Public Secondary Schools in Kenya: A Case Study of Secondary Schools in Migori County. *Imperial Journal of Interdisciplinary Research*, 2(8), 58-67.
- Kakwezi, P., & Nyeko, S. (2019). Procurement processes and performance: Efficiency and effectiveness of the procurement function. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, 3(1), 538-547.
- Leiyani, A. P. (2016). *Procurement practices and organizational performance: Case study of the University of Nairobi* (Doctoral dissertation, University of Nairobi).
- Locke, E. A., & Latham, G. P. (2020). Building a theory by induction: The example of goal setting theory. *Organizational Psychology Review*, 10(3-4), 223-239.
- Luketero, E. (2016). *Determinants of procurement performance in commercial Banks within East Africa* (Doctoral dissertation, University of Nairobi)
- Lynch, J. (2016). Procurement planning and the procurement plan: Why are they important? The Procurement Class Room.
- Mello, T. M. D., Eckhardt, D., & Leiras, A. (2017). Sustainable procurement portfolio management: a case study in a mining company. *Production*, 27, 738-747.
- Mutai, D. K., & Chirchir, M. K. (2015). Impact of Procurement Policies and Procedures on Supply Chain Performance of Commercial Banks in Kenya. *International Journal of Science and Research (IJSR)*, 3(11), 446-455.
- Mutoro, W. J., Makokha, E. N., & Namisonge, G. (2018). Factors Affecting Procurement Planning in Bungoma County Government in Kenya. *International Academic Journal*. 10(3-4), 913-989.
- Neubert, M. J., & Dyck, B. (2016). Developing sustainable management theory: goal-setting theory based in virtue. *Management Decision*. 6(3), 823-829.
- Ondigi, S. K., & Muturi, W. (2015). Factors Affecting Public Procurement of Hospital Supplies in Public Health Institutions In Kenya. *International Academic Journal*. 10(4), 813-889.

- Onyango, C. J. (2014). Effects of procurement planning on institutional performance: A case study of Mombasa Law Court. *International Journal of Science and Research (IJSR)*, 3(11), 446-455.
- Osir, E. O. (2016). Role of e-procurement adoption on procurement performance in state corporations in Kenya: A case of Kenya Utalii College. *International Academic Journal of Procurement and Supply Chain Management*, 2(1), 66-100.
- Paulraj, A., Chen, I. J., & Blome, C. (2017). Motives and performance outcomes of sustainable supply chain management practices: A multi-theoretical perspective. *Journal of Business Ethics*, 145(2), 239-258.
- Roushdy, M., Mohamed, M., Hesham, S., Elzarka, S., and Hafez, L. (2015). *Investigating the Impact of Suppliers Relationship Management on Firms' Performance: A Multiple Case Study Approach on Manufacturing Companies in Egypt*. Proceedings of the 2015 International Conference on Operations Excellence and Service Engineering Orlando, Florida, USA, September 10-11.
- Salim, A., & Kitheka, S. (2019). Effect of procurement planning on procurement performance of state corporations in Mombasa County, Kenya. *The Strategic Journal of Business and Change Management*, 6(3), 816-833.
- Shanyika, A. (2019). *The impact of procurement planning on procurement cost: at the City of Harare (2016 to 2018)* (Doctoral dissertation, BUSE).
- Siedlecki, S. L. (2020). Understanding descriptive research designs and methods. *Clinical Nurse Specialist*, 34(1), 8-12.
- Verroiopoulos, A., & Sfakianaki, E. (2015). An investigation to the trends of outsourcing and its impact on procurement, planning procedures and organization in construction companies in Greece. *International Journal of Energy Science and Engineering*, 1(4), 148-152.
- Willy, K., & Njeru, A. (2014). Effects of procurement planning on procurement performance: a case study of agricultural development corporation, Nairobi. *International Journal of Business and Commerce*, 3(12), 58.

APPENDICES

Appendix I: List of Building, Mining and Construction Manufacturing Firms in Machakos County, Kenya

1. Afrikstones Limited
2. Bamburi Cement Limited
3. Boyama Building Materials
4. Bluestone Limited
5. Building Construction Concepts Ltd
6. Cemex Holding Limited
7. Dittman Construction Company Ltd
8. Erdermann Gypsum Limited
9. Gjenge Makers Ltd
10. Halai Concrete Quarries
11. Greystone Industries Ltd'
12. Hydro Water Well (K) Ltd
13. Homa Lime Co. Ltd
14. Kay Construction Co. Ltd
15. Kenya Builders & Concrete Ltd
16. Kenbro Industries Limited
17. Kurawa Industries Limited
18. Krystalline Salt Ltd
19. Koto Housing Kenya Ltd
20. Laxmanbhai Ltd
21. Mayleen (K) Ltd

22. Mombasa Cement Limited
23. Mineral Enterprises Ltd
24. National Cement Limited
25. Orbit Enterprises Ltd
26. Pride Enterprises Ltd
27. Questworks Ltd
28. Rai Cement Ltd
29. Roofing Kenya Limited
30. Rexe Roofing products
31. Savannah Cement Ltd
32. Saj Ceramics Ltds
33. Shanga Engineering Works Limited
34. Shajanand Creative Limited
35. Skylark Construction Ltd
36. Silverstone Quarry Limited
37. Superstone 2006 Ltd
38. Tiptop Construction Ltd
39. Vallem Construction Ltd
40. Wotech Kenya Limited
41. Laxmanbhai Ltd

Source: KAM (2021)

Appendix II: Questionnaire

PROCUREMENT PLANNING AND PERFORMANCE OF BUILDING, MINING AND CONSTRUCTION MANUFACTURING FIRMS IN MACHAKOS COUNTY, KENYA

Introduction

a

This questionnaire has been developed for academic use only. It is designed to collect data on procurement planning and procurement performance of manufacturing firms in Kenya. The data requested will be handled with highest level of confidentiality and privacy.

SECTION A: GENERAL INFORMATION

Kindly tick (✓) reflecting your response to each question / Statement

1. Age (Years)

18-25 () 26 – 35 Years () 36- 45 years ()

Above 45 years ()

2. How long have you worked in this organization?

Below 3years () 3-6 years () 7-10 years ()

More than 10 years ()

3. What is your position in the organization?

Procurement director () Senior Procurement officer ()

Other please specify ()

4. What is your highest level of education?

Diploma () Degree () Masters ()

SECTION B: PROCUREMENT PLANNING ACTIVITIES

5. To what extent do you agree with the following statements related to different aspects of procurement planning? Use a scale of 1-5 where: 1= very little extent; 2 = Little Extent; 3= Moderate Extent; 4= Large Extent and 5= Very Large Extent.

	IDENTIFICATION OF NEEDS	1	2	3	4	5
i.	The need to procure within our organization is raised by employees in their respective departments / business unit					
ii.	All procurement needs are assessed by the departmental heads					
iii.	Our firm does market analysis to identify suitable suppliers					
iv.	All procurement needs are approved by the departmental heads					
v.	All procurement needs take into account the timeframe required to procure goods and services					
PROCUREMENT SCHEDULING						
i.	All procurement plans are developed prior to development of specifications					
ii.	Our organization gathers adequate information on prevailing goods and services to ensure those procured are of high standard					

iii.	End users are involved in establishing the desired quality of goods and services to be procured					
iv.	We conduct regular supplier evaluations to only retain those supplying good quality items					
v.	The quality to be procured is normally determine by the user unit					
vi.	We develop a quality checklist for all commodities procured by our organization					
COST ESTIMATION						
i.	The cost of procured goods / services in our organization is in line with the prices prevailing in the market at any given moment					
ii.	The prices at which we procure goods and services gives a good savings for our organization					
iii.	We normally do a price analysis of goods to be procured to settle on the best value for money					
iv.	We conduct regular market surveys to ascertain the best prices for different commodities procured by our organization					
v.	Our organization has established procurement cycle to manage its inventory costs					
vi.	An analysis is carried out regularly to identify obstacles in time so as to deal with them					

vii.	We supervise all purchases closely to ensure conformity with purchase orders issued					
SUPPLIER EVALUATION						
i.	We evaluate the capacity of our suppliers prior awarding tenders					
ii.	Our supplier evaluation is done objectively					
iii.	Our suppliers are always notified of the tendering processes					
iv.	We have integrated our systems with those of our suppliers					
HIERARCHY OF PLANS						
i.	Procurement planning starts at the departmental level					
ii.	Departments escalate their procurement needs to strategic business units					
iii.	Procurement plans are developed per strategic business unit					

SECTION C: PROCUREMENT PERFORMANCE

6. Please score the extent of your agreement on each of the following statements related to procurement performance is as far as the situation relates to your organization. Use a scale of 1-5 where: 1= very little extent; 2 = Little Extent; 3= Moderate Extent; 4= Large Extent and 5= Very Large Extent.

	Needs Assessment	1	2	3	4	5
i.	All procurements in our organization are done at a competitive market price					
ii.	All procurement in our organization are delivered on time without delays					

iii.	All procurements in our organization ensure consistently high quality goods and services					
------	--	--	--	--	--	--

SECTION D: CHALLENGES FACED IN THE IMPLEMENTATION OF PROCUREMENT PLANNING

7. Below is a list of several challenges faced by firms in the Implementation of Procurement Planning? Use a scale of 1-5 where: 1= very little extent; 2 = Little Extent; 3= Moderate Extent; 4= Large Extent and 5= Very Large Extent.

	Needs Assessment	1	2	3	4	5
iv.	Acquiring trading licenses is tedious					
v.	System integration with suppliers present some compatibility issues					
vi.	We experience challenges in procurement planning due to inaccuracies in forecasters of materials					
vii.	Delays in shipping of materials affect our procurement planning implementation					
viii.	Budgeting inaccuracies affect our procurement planning implementation					
ix.	Poor procurement procedures affect our procurement planning implementation					
x.	Constantly changing technology makes it difficult to integrate systems with suppliers					
xi.	Constantly changing technology makes it difficult to integrate systems with customers					

xii.	Bureaucracy in internal system affect our procurement planning					
------	---	--	--	--	--	--

