



*ADDIS ABABA UNIVERSITY COLLEGE OF BUSINESS AND ECONOMICS, SCHOOL OF
COMMECE, GRADUATE STUDIES DEPARTMENT OF LOGISTICS AND SUPPLY CHAIN
MANAGEMENT*

***ASSESSMENT OF THE EFFECTS OF PROCUREMENT MANAGEMENT PRACTICES
ON PROCUREMENT PERFORMANCE IN THE CASE OF ETHIOPIAN
PHARMACEUTICALS SUPPLY AGENCY***

By: - Tadywos Sintayehu

**A THESIS FOR PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR DEGREE
OF MASTER OF ART IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT**

Advisor: Busha Temesgen (Ph.D.)

Addis Ababa, Ethiopia

June, 2022

ADDIS ABABA UNIVERSITY SCHOOL OF COMMERCE
LOGISTICS AND SUPPLY CHAIN MANAGEMENT DEPARTMENT
ASSESSMENT OF THE EFFECTS OF PROCUREMENT MANAGEMENT
PRACTICES ON PROCUREMENT PERFORMANCE IN THE CASE OF ETHIOPIAN
PHARMACEUTICALS SUPPLY AGENCY

By

Tadywos Sintayehu

Approved By Examining Board

Advisor

Signature

Internal examiner

Signature

External examiner

Signature

Declaration

I hereby declare that this study entitled ‘The Effect of procurement management practices on Procurement Performance: The Case of Ethiopian Pharmaceutical Supply Agency is my own work. All information in this research project has been gotten and displayed with scholastic rules and ethical conduct.

Student researcher

signature

Date

Tadywos Sintayehu

Letter of Certification

This is to confirm that Tadywos Sintayehu has conducted his research project on “The Effect of procurement management practices on Procurement Performance: The Case of Ethiopian Pharmaceutical Supply Agency”. This study fulfils the prerequisite for obtaining master’s degree from the university.

Advisor: Busha Temesgen (Ph.D)

Date:

Acknowledgments

I would like to thank people who helped me to complete the work contained in this thesis. The help of my Advisor Busha Temesgen (Ph.D) his valuable comment and guidance was of great value. I would like to thank my family unreserved encouragement. I would like to express my gratitude further to all of respondents from Ethiopian Pharmaceutical Supply Agency for their cooperation in filling and returning the questionnaires.

I express my sincere appreciation to all my staff members for their support, cooperation and encouragement for completion of this thesis.

Finally, I offer my heart full thanks to all those who supported me in any aspect during my study.

Table of Contents

List of Tables	viii
List of Figure.....	x
Abbreviation and acronyms	xi
ABSTRACT.....	xii
Chapter One	1
Introduction.....	1
1.1 Background of the study	1
1.2 Statement of the problem.....	4
1.3 Research questions	5
1.4 Research objective.....	6
1.5 Significance of the study	6
1.6 scope of the study	7
1.7 Limitation of the study	7
1.8 Operational Definition of terms.....	7
1.9 organization of the study	8
Chapter two.....	9
Related Literature Review	9
2.1 Theoretical Review	9
2.2 Empirical Literature Review	16
2.3 Conceptual framework	18
Chapter Three.....	19
Research Methodology	19
3.1 Description of study area.....	19
3.2 Research approach.....	20
3.3 Research design	20
3.4 Population and sampling	20
3.5 Sample design.....	20
3.6 Sample size	20
3.7 Data source and type.....	21
3.8 Data collection procedures	21

3.9	Data Analysis.....	21
3.10	Validity and Reliability test.....	21
3.11	Ethical consideration	22
CHAPTER FOUR.....		23
RESULTS AND DISCUSSION.....		23
4.1.	Introduction	23
4.2.	Response Rate	23
4.3	Quantitative data analysis.....	23
4.3.1	Result of the Survey and Discussion	23
CHAPTER FIVE		56
SUMMARY, CONCLUSION AND RECOMMENDATIONS.....		56
5.1	Introduction	56
5.2	Summary of Findings	56
5.3	Conclusion.....	57
5.4	Recommendations	58
Reference		58
Annexes I: QUESTIONNAIRE.....		61

List of Tables

Table 4.1: Demographic profile of the respondents.....	24
Table 4.2: Mean and standard deviation value of professional ethics.....	27
Table 4.3: Mean value and standard deviation of supplier selection and relationship.....	29
Table 4.4: Mean value of Specification.....	31
Table 4.5: Mean value of Employee satisfaction.....	33
Table 4.6: Mean value of Employee competency.....	35
Table 4.7: Understanding of the mission and vision of the organization.....	36
Table 4.8 : Having competent employee is useful in decreasing the lead time.....	36
Table 4.9: Having competent employee is useful in decreasing the cost of accusation.....	37
Table 4.10: All technical staff have taken enough supply chain courses Certificate.....	37
Table 4.11: Employee know in handling end to end the procurement practices.....	38
Table 4.12: Technical personnel's have enough knowledge in handling suppliers.....	38
Table 4.13: Mean value of Procurement policy.....	39
Table 4.14: EPSA's procurement practice done in accordance with the procurement policy.....	40
Table 4.15: Employees are aware of the procurement policy of EPSA.....	40
Table 4.16: EPSA prepares procurement related trainings for newly joined staffs before they start the procurement job.	40
Table 4.17: EPSA's procurement practices ensures that procurement policies are strictly followed throughout the process.....	41
Table 4.18: Procurement policy is not a constraint in the procurement practices.....	41
Table 4.19: Mean value of Lead time.....	42
Table 4.20: Suppliers deliver awarded products fully on time.	43
Table 4.21: Suppliers usually submit the required documents timely.	43
Table 4.22: Lead time usually achieved.....	43

Table 4.23: Suppliers are responsive for emergency order of EPSA.....	44
Table 4.24: Local agents of principal suppliers are responsive to facilitate the process between the two parties.	44
Table 4.25: L/C extension request is the major cause of stock out for EPSA.	44
Table 4.26: Incomplete shipment document is one of the causes of long procurement lead time.	45
Table 4.27: Mean value of Cost of accusation.....	45
Table 4.28: Extended lead time has increased the cost of accusation.....	46
Table 4.29: Failing to follow the procurement policy during procurement increases the cost of accusation.....	46
Table 4.30: Good specification will have a positive effect on the total cost of accusation.....	47
Table 4.31: Effectively managing the relationship with supplier is one way of decreasing the total cost of ownership.....	47
Table 4.32: By increasing employees' satisfaction its possible to decrease the total cost of ownership.....	47
Table 4.33: Having professionally competent employee means EPSA will get pharmaceuticals at lowest possible total cost.....	48
Table 4.34: Professionally ethical employee will contribute its part in having pharmaceuticals at a reasonable cost.....	48
Table 4.35: Summary of the above results	49
Table 4.36: Correlations.....	50
Table 4.37: Multi Collinearity test of independent variables.....	52
Table 4.38: Model Summary.....	52
Table 4.39: ANOVA.....	53
Table 4.40: Coefficients.....	54

List of Figure

Figure 1: Conceptual model 8

Abbreviation and acronyms

EPSA: Ethiopian pharmaceuticals supply agency

EPSS: Ethiopian pharmaceuticals supply services

FMOH: Federal Ministry of Health

FPPA: Federal public procurement and property Administration Agency

KPI: Key performance indicator

PFSA: Pharmaceuticals Fund and Supply Agency

PPA: public procurement and property Administration Agency

PPRA: Public procurement regulatory authority

TEC: Tender Endorsing Committee

ABSTRACT

Procurement performance is one of a core supply chain activity that can be influenced by procurement management practices. This study investigates the tender management practices on procurement performance of Ethiopian pharmaceutical supply agency. The study had six objectives, to find out the effect of supplier selection on procurement performance in EPSA, To determine the impact of procurement staff competence on EPSA's procurement performance, to determine the effect of item specification on procurement performance in EPSA, to evaluate the effect of professional ethics on procurement performance in EPSA, to evaluate the effect of procurement policy on procurement performance in EPSA and to determine the effect of employee satisfaction on procurement performance in EPSA. Explanatory research design was used in this study because it analyses the cause-effect relationship. Purposive sampling technique was employed in picking respondents for the study. Data was collected from a sample of 105 tender management, quantification and market shaping and contract management directorates technical staffs. Five-point Likert type of questionnaire was used to solicit primary data. The data analysis methods used were descriptive such as frequency and percentage and inferential statistics such as correlation, multi-Collinearity test and linear regression with the aid of the tool Statistical Package for Social Sciences (SPSS). Based on the correlation and regression analysis conducted to check the significance level of the relationship between the dependent and the independent variables, Employee competency, Specification, Employee satisfaction and Professional ethics have significant relationship and affect procurement performance while, Supplier selection and relationship and Procurement policy have positive relationship with procurement performance but it is not significant. The study concluded that the output given from the findings indicate that the six variables have positive relationship with procurement performance.

KEY WORDS: Procurement management practices; Employee competency; Specification; Employee satisfaction; Professional ethics; Supplier selection and relationship; Procurement policy procurement performance; Lead time; cost of accusation

Chapter One

Introduction

1.1 Background of the study

The purpose of this study is to determine the effects of procurement management practices on procurement performance in Ethiopian Pharmaceutical Supply Agency (EPSA).

procurement management is the process of finding and agreeing to terms, and acquiring goods, services, or works from an external source, often via a competitive bidding process. In general, the procurement management processes are: - budget and procurement planning; preparation of specification; preparation of bid document; then the tender is advertised and closes on the closing date. Then the tender will be opened by ad hoc committee which is appointed by the Director General. Another ad hoc committee is appointed to evaluate the tender, once the evaluation done it will be reviewed by Tender Endorsing Committee (TEC) then all the documents including the evaluation minute forwarded to the Director General for approval or rejection.

Procurement management practice is an increasingly important activity within most government ministries, and severe financial and operational consequences can result from the failure of optimizing the procurement practices (Munyaneza Robert 2017). It is important that organizations to constantly strengthening and improving the procurement practices to improve the procurement performance which is vital for an organization to win or survive in the global competitive market (Maurice Waswa Muya, 2019).

Procurement performance can be measured by key performance indicators (KPI) like lead time and cost of acquisition. And the procurement performance is affected by procurement management practices namely: supplier selection; professional competency of employee; item specification; professional ethics; procurement policy and employee satisfaction (Maurice Waswa Muya, 2019).

Appropriate suppliers' selection is one of the strategies for enhancing the procurement performance of an organization, because it has a direct influence on the company's

competitiveness and reputation. In order to understand which suppliers are performing well and which suppliers are not performing well supplier evaluation has to be done. One of the ways through which organizations strive to reduce supplier related inefficiencies is through assessment of suppliers. Organizations are constantly under pressure to find ways to cut material and production costs through engaging in strategic supplier selection process and evaluation (Munyaneza Robert 2017). The second one is professional competency of employee. For employee to deal with suppliers and handle well the procurement process, and ultimately to maintain the procurement performance they have to be competent enough professionally. The other practice that has effect on procurement performance is item specification. Good specification enables the buying organization to acquire/get quality product with lowest costs. In addition, good specification facilitates competition. (Maurice Waswa Muya, 2019). The fourth one that have effect on procurement performance is professional ethics. Procurement professionals are more than any other group within an organization, encounter daily situations that put ethics to the test and that is why they are viewed as important for the organizations optimal flow of high-quality, value-for-money materials or components from a suitable set of innovative suppliers (Eltantawy,2009). The fifth one is employee satisfaction. Employee satisfaction is a vital indicator of an organization's overall health, which is why many organizations employ regular surveys to measure employee satisfaction and track satisfaction trends over time. The last one is procurement policy. Procurement policy is an utmost important procurement function that contributes to the accomplishment of government operations and to the improvement of service delivery. (Nichols P, 2002).

Background of the study organization

As all pharmaceuticals purchased in EPSA is subject to pass the procurement processes it is vital to assess the effects of procurement practices on procurement performance. The practices of procurement affect the performance of procurements either positively or negatively.

Ethiopian Pharmaceuticals Supply agency (EPSA) the only governmental organization which procure pharmaceuticals from national and international manufactures and suppliers and distribute to all government health facilities as per their need via its 19 branches located in different parts of the country and of which 2 located in Addis Ababa. The head office located in

Addis Ababa, Arbegnoch Street, Addis Ketema sub-city, in front of St. Paulo's Hospital Millennium Medical College. There are 20 directorates in head office.

EPSA is a legal entity established under the law of Federal Democratic Republic of Ethiopia (FDRE) government to assure uninterrupted supply of pharmaceuticals to the public at an affordable price. The Pharmaceuticals Fund and Supply Agency (PFSA) now become EPSA was established in September 2007 by Proclamation No. 553/2007 as part of Pharmaceutical Logistic Master Plan implementation with the objectives of supplying to public health institutions quality assured essential pharmaceuticals at affordable prices in a sustainable manner to the public, play a complementary role in developmental efforts for health service expansion and strengthening by ensuring enhanced and sustainable supply of pharmaceuticals and create enabling conditions for enhancing the accumulation of funds in its revolving and cost recovery process and thereby ensure the realization of the objectives (taken from www.epsa.gov.et, accessed at 29 October, 2019). It procures pharmaceuticals from all over the world centrally and distribute to all 19 branches and then to respective health facilities as per their demand. This research focuses mainly on one of the agencies core directorates that is, tender management directorates (TMD); forecasting and market shaping directorate (FMSD) and contract management directorate (CMD). (FDRE proclamation number 553/2007)

The public sector, through Pharmaceuticals Fund and Supply Agency (PFSA) procures almost 70% of all the medicines consumed in Ethiopia, its procurement volume increased from US\$ 27 million in 2007 to US\$ 310 million in 2014. Most local manufacturers operate below their capacities and supply only about 20% of the local market. In the same year (2014), they supplied products to the value of US\$ 44.2 million. Ethiopia continues to experience growing demand for pharmaceuticals in the public sector. Since 2009/10, the annual value of product distributed by PFSA has grown from \$126 million to \$500 million in 2017/18. In 2018/19 the volume is projected to grow to \$750 million, and the 2016 – 2020 Health Sector Transformation Plan projects spending on pharmaceuticals and medical supplies in the public sector to reach almost \$1 billion by 2020, excluding the impact of introducing national health insurance.

Currently (less than one month) the '**agency**' changes its name to '**services**' therefore this research uses either Ethiopian Pharmaceutical Supply Agency (EPSA) or Ethiopian Pharmaceutical Supply Services (EPSS) interchangeably.

1.2 Statement of the problem

Organizations have to cope with a dynamic environment as market conditions are changing rapidly and customers are demanding better and better services. In response to the increasing demands from customers for quality services organization must implement strategies to achieve cost reduction, service quality improvement, increasing service coverage and delivery improvement.

EPSA's customers that is governmental health facilities always complains of not getting the requested pharmaceuticals from EPSA due to stock outs. Even though the agency initiates the procurement for all essential pharmaceuticals as early as possible, it fails to satisfy customers need. The reason for stock out is mainly due to extended lead time. The agency's standard lead time is <150 days but almost always fails to stick to this plan. Poor supplier selection strategies; poor professional competency of employee; having poor specifications; unacceptable professional ethics of employee; loop holes in procurement policy, unsatisfied employee are the major reasons.

Unless the agency solves the stated problems, it might losses its core value of establishment that is availing lifesaving pharmaceuticals to the public. For instance, currently some regions have started procuring selected items by themselves which were previously procured by EPSA.

Procurement practices touch many core aspects of the agency and, hence, its successful deployment and use are critical to the performance as well as the survival of the agency. If the organization's procurement practices are fragile and predisposed to regular discontinuities, they will fraught with recurrent delays and occasional inability to deliver the pharmaceuticals to the destination that is health facilities.

The procurement practice is still affected by bad works, poor quality goods and services. This ongoing issue has resulted in the agency's procurement/supply performance deterioration. The procurement practices of EPSA do not comply to set procurement practices and performance procedures, leading to irregular and subjective decisions that have had costly consequences for the agency, and the country at large. Failure to implement or delayed implementation of recommended procurement practices has resulted in unnecessarily high operation costs, poor

inventory control, unacceptable supplier appraisals standards, uncoordinated business activities, and failure to attract and retain experienced and skilled personnel in the procurement positions, thus affecting the function's performance. Even though EPSA standardizes its procurement practices it still lacks in implementing them. As a result, the agency faces extended lead time, frequent stock out of pharmaceuticals and finally leads customers' dissatisfaction.

Research study is therefore needed to analyse and recommend the best public procurement practices. Despite the fact that numerous scholars have conducted studies on procurement processes, none of the studies have particularly addressed the effect of procurement practices on procurement performances in Ethiopian Pharmaceutical Supply Agency. This has resulted in a large knowledge gap, which is the basis for this research.

Therefore, this study sought to bridge this gap by revealing procurement practices responsible for the poor performance of the agency, recommending potential solutions for tackling the stated problems.

1.3 Research questions

1. How supplier selection affects the procurement performance of EPSA?
2. How the procurement staff competency affects the procurement performance of the agency?
3. In what extent the procurement staff satisfaction affects the procurement performance of the agency?
4. What is the effect of procurement policy on the procurement performance of the agency?
5. How procurement staff professional ethics affects the procurement performance of EPSA?
6. What are the contributions of procurement specification on the performance of procurement of EPSA?

1.4 Research objective

1.4.1 General objective

Explaining effects of procurement management practices on procurement performances in the case of Ethiopian Pharmaceuticals Supply Agency (EPSA).

1.4.2 Specific objectives

1. To find out the effect of supplier selection on procurement performance in EPSA.
2. To determine the impact of procurement staff competence on EPSA's procurement performance.
3. To determine the effect of item specification on procurement performance in EPSA.
4. To evaluate the effect of professional ethics on procurement performance in EPSA.
5. To evaluate the effect of procurement policy on procurement performance in EPSA.
6. To determine the effect of employee satisfaction on procurement performance in EPSA

1.5 Significance of the study

The agencies main activities are collecting pharmaceuticals need from government owned hospitals and health facilities; from donors and ministry of health. Then the agency discusses and forecasts annual need in collaboration with stakeholders; this process chaired by forecasting and market shaping directorate (FMSD). After compiled the need the FMSD will send it to tender management directorate (TMD) which is responsible for procuring pharmaceuticals. Then the agency receives and distributed pharmaceutical through the warehouse and distribution directorate (WDD).

From the above-mentioned core directorate, the agencies performance is mainly affected by the TMD, that is the success and failures of the agencies mission is highly dependent on the strengths and weaknesses of TMD respectively. And in turn the procurement performance is highly affected by the procurement practices. Therefore, it is safe to say that the outcome of this study will have a visible practical benefit for the agency and other organization engaged in

similar works/services. Thus, these particular study findings will have a significance role in enhancing procurement performance in EPSA.

The finding of the study will provide base line information for other researchers who want to do further research in this regard.

1.6 scope of the study

The Core activities of Ethiopian Pharmaceuticals supply agency are pharmaceuticals selection, quantification, procurement and distribution. All activities except procurement are done at both head office and branch offices of the agency. Thus, the study has been conducted at head office of the agency which is the only area where pharmaceuticals purchase takes placed.

This particular study has described and explained effects of supplier selection; professional competency of employee; item specification; professional ethics; procurement policy and employee satisfaction in procurement performance. This study has limited to describing and explaining procurement practices and its effect on procurement performance.

1.7 Limitation of the study

This particular study can't be free from any limitation due to different conditions and circumstances. Among the factors affecting this particular study are shortages of reference materials which have done on similar title.

1.8 Operational Definition of terms

Agency: It represents Ethiopian Pharmaceuticals supply Agency according to this study. (FDRE Proclamation No 553/2007)

Investigator: a person who is responsible to conduct this research proposal. (Merriam-Webster dictionaries)

Medicines: In this particular study, it has similar meaning with drugs. (FDRE Proclamation No 553/2007)

Pharmaceuticals: a substance or mixture of substance that used to prevent, diagnose, mitigate and treat a disease and malformation which include medical equipment, medical supplies, laboratory reagent and Laboratory chemicals (FDRE Proclamation No 553/2007).

Pharmaceuticals procurement: - means the purchasing or obtaining of pharmaceuticals by any contractual means (FPPA, 2011, P. 15).

1.9 organization of the study

Generally, the research was organized into five chapters. The first chapter presents background of the study with special focus on procurement management practices, followed by background of the organizational, statement of the problem, basic research questions, general and specific objective and significance of the study, scope of the study, limitation of the study, definition of concepts and lastly organization of the study. The second chapter deals with theoretical and empirical literature review in which related reviews were presented and conceptual frame work. The third chapter presents a research methodology of the study which contains introduction, description of the study area, research approach, research design, study population, data source and type, data collection procedure, validity and reliability test, data analysis and ethical consideration. The fourth chapter presented assessment of result and discussion. The fifth chapter deals with summary of findings, conclusion and recommendation. Finally, the annex part comprises of reference and questionnaire.

Chapter two

Related Literature Review

This chapter will contain theoretical review; empirical review and conceptual framework. Theoretical literature deals with concepts and definition of procurement management practices.

2.1 Theoretical Review

Tender management is the process of efficiently preparing, selecting, and posting bids while maintaining a transparent audit trail that can be used to discover best practices for future. Too often when public sector buyers like EPSA re-tender, they have forgotten the lessons learned from previous tenders. Often EPSA retenders the procurement of pharmaceuticals partially or completely that is because it doesn't learn from previous mistakes. In fact, this problem reflects enough studies have not been done on EPSA.

2.1.1. Procurement management practices dimension

Professional competency of employee

The professional competency of employees has a significant effect for EPSA because all the procurement practices are done manually and so employees working in TMD's professional competency will have a direct effect on procurement performance. EPSA's employee involved in procurement should be committed to high standards for professional conduct. Competence has expected from supply chain management professionals. Developing business skills and increasing knowledge of supply management demonstrates a commitment to the profession and positively impacts the procurement performance. Since professional development requires continuing education and training organizations have to encourage their employee to develop themselves. (Maurice Waswa Muya et'al, 2019). As the study done in Rwanda Public Procurement Authority that there is a significant relationship between staff competences and procurement performance. Previous studies showed that there is a link between staff competence and procurement performance. The staff competence needs to be more effective and efficiency to

boost the performance of procurement. (Harriet MUTESI and Dr Ernest SAFARI, 2021) which is supported by (Elijah A. Elijah, et'al 2020)

Employee satisfaction

Besides the employees' competency the major issues raised regarding EPISA's employee is satisfaction. The HR industry uses the phrase "employee satisfaction" in a broad term to describe what level of satisfaction or contentment employees have with elements like their jobs, their employee experience, and the organizations they work for. Employee satisfaction is one of the most important indicators of an organization's overall health, as a result, many companies conduct frequent surveys to gauge employee happiness and follow trends over time. Employees who have a high level of satisfaction are satisfied with how their company treats them. While employee satisfaction is vital for retention, it is not always a predictor of success, while engagement which indicates an employee's passion for their work, among other things directly tied to output. Ideally, satisfaction occurs as a result of both material factors like compensation and benefits as well as less-tangible elements like engagement, recognition, and strong leadership. If an organization fails to address both sides of the equation, they may find they have a complacent team made up of materially satisfied employees who are content to do only what's required to remain employed. In one unpublished study done by EPISA's consultant team, the result shows that the agency is in danger zone regarding employee satisfaction. This study has explored the agencies employee satisfaction, since satisfaction has a magnificent effect for any organization not only it affects the output but also the existence of any organization.

Professional ethics

As Webster's Ninth New Collegiate Dictionary, the term "ethics" refers to the code of conduct that governs a person or an organization. The branch of philosophy that deals with distinctions between right and wrong –with the moral consequences of human action (A Dictionary of Epidemiology, 4th ed, 2001 (J.M. Last (ed)). A well-defined and established code of ethics must be followed by public procurement professionals and stakeholders. The public procurement

organization should develop an ethics code and expect its personnel to follow it, as well as demand commitment from all those with whom they do business. Because of stakeholder pressure ethical behavior in procurement performance is of particular relevance. Procurement professionals are more than any other group within an organization, encounter daily situations that put ethics to the test and that is why they are viewed as important for the organizations optimal flow of high-quality, value-for-money materials or components from a suitable set of innovative suppliers. Thus, understanding ethics and its impact on procurement performance is a key responsibility of supply managers (Eltantawy,2009). A study conducted in Kenya showed that there is a positive association between procurement performance and ethical issues (M. J. Maria et al. 2018)

Specification

A specification is a document that specifies the quality, kind, and standard that the necessary goods, services, works, or consulting services must meet. (Public Procurement Manual, 2011) Specifications often used to be one of the last items written before a package was issued for tender. In essence, specifications are about communication and the exchange of information between the Customer, the designer, the contractor and all stakeholders in the project. A specification can be found in a larger description of needs, such as a bid document. The requirements description usually describes what is needed by the organization rather than how it is to be provided. A good specification's goal is to allow suppliers and service providers to compare their products and services to defined requirements that are given on an equal footing. It will also allow the buying organization to competitively evaluate solicitation responses and determine functional equivalency, if appropriate. Even though the specification written in bid document expected to include information to facilitate fair competition and without compromising the need of the requisition department, it doesn't necessarily involve each and every thing.

Supplier selection

According to report by Rwanda public procurement authority the choice of an organization's supplier should be guided by an elaborate evaluation of the potential suppliers since the suppliers can impact the performance of any procurement function or process. To mention some delayed deliveries, poor quality products or services, non-completion of orders and even threats of litigation due to delayed payments is a common scenario experienced by public institutions. Especially local manufacturers from which EPSA procures pharmaceuticals, does not have technically competent professional and their manufacturing capacity does not much EPSA's need as a result of this the agency suffers a lot. As collected information on organizations selection criteria of their trading partners, it is found out that strategic commitment and trading partner flexibility were among the factors that determine selection of trading partners. (Krop, E. and Iravo, M.A., 2016)

Procurement policy

A procurement policy is a collection of guidelines that the procurement team follows. These are rules that aid in the smoother execution of procurement transactions. Procurement policy is a critical procurement activity that contributes to successful government operations and improved service delivery. (Nichols P, 2002). According to a study (Anane, A., et'al 2019) Procurement Policy are significant determinants of service delivery thus a change in procurement policy will result in change in service delivery.

Various aspects of procurement policy have a distinct influence on procurement process. For instance, procurement policy that stimulates transparency and integrity in the procurement cycle positively influenced the procurement process. Good procurement policies result in greater service delivery for procurement firms. Transparency ensures that the procurement of goods, works and services are of high quality and meets the right specification which enables the organization to provide quality service. (Rehmatulla, et al, 2017)

2.1.2. Procurement performance

Lead time

A lead time is the time it takes for a process from start to finish. The major procurement issues in EPSA are the extended lead time. As described in the bottlenecks analysis and reports from the revised Pharmaceutical Sector Transformation Plan, EPSA's procurement lead time is too long. Hence, the team sought to find out the exact areas in the procurement process where the delays are occurred. As per the Agencies plan the maximum time to take from initiation to completion of a procurement processes is 150 days. But most of the procurement in EPSA took in average 243 days which is far from the proposed procurement lead time that is 150 days. The proposed procurement lead time didn't even achieve to the simplest procurement method-Direct procurement. According to the 2019 procurement lead time for direct tenders the average lead time was 203 days (EPSA, 2017-2019).

Cost of acquisition

A study conducted in Kenya, in government owned company shows the procurement practice is inefficiency in operations, huge financial losses and the provision of poor products and services. Which in turn attributes to poor governance, poor public sector financial management, bureaucratic wastage and pilferage in the management of parastatals, all of which subsequently lead to heavy budgetary burden to the public. (Mokogi et'al., 2015)

The cost of acquisition is the total expense incurred by an organization in acquiring an item through procurement. It includes all the costs for acquiring a good. This cost even gets higher due to poor procurement practices (Maurice Waswa Muya, 2019). Total cost is the sum of all money spent to acquire goods, and includes purchase price plus the costs of all other activities

needed to perform the action or series of actions. In many cases, purchase price is only a small fraction of total cost. So poor procurement management practices will increase the cost of acquisition even though the purchase price remain the same. If the specification doesn't meet the customers need the agency receives quotation with wrong specification which forces the agency to retender/re-advertise which surely increase the cost of acquisition (Fitzgerald, K.R., 2002).

2.1.3 Relationship between dimension of procurement management practices and procurement performance

Supplier selection should be guided by an elaborate evaluation of the potential suppliers since the suppliers can impact the performance of any procurement function or process. To mention some delayed deliveries which will increase the lead time; the supplier may deliver poor quality products or services which increases the cost of acquisition because as the buying organization receives poor quality products, they have to return it to the supplier. Returning pharmaceuticals to the supplier has its own cost and which will be added to the cost of acquisition. Therefore, there has to be an ongoing relationship between buyers and suppliers that involve a commitment over an extended time period, a mutual sharing of information and the risk (Kevin Moindi Omai.,2013).

Specification is a statement, which provides a description or list of characteristics required in an item. It can be thought of as a detailed description of what is required. It is vital that specifications for needed items must be clear and accurate and written to ensure that a maximum number of suppliers can compete for the business. If the specification is not complete and clear, the bidding process will be imperfect and will not produce the competition necessary to provide best value for money. Even if this unclear and incomplete specification can be solved through clarification letter it will increase the number of days of the tender floated on air which will ultimately increase the lead time.

Professional competency is vital for an organization to successfully implement its strategy and meeting its goal. If employee's lack some level of skills and knowledge to manage the procurement cycle effectively, bid evaluation and selection will only be based on lowest price(cheap) and not the lowest evaluated price. Cheap pharmaceuticals are the most expensive

one because they are mostly poor quality and/or near expiry. So whether the pharmaceuticals are poor quality or expired they have to be disposed by the buying organization. As the drugs disposed the organization loses two things one the cost of acquisition and two have to pay extra money to the firm who is going to dispose those drugs (Public Procurement Act (Act 663) 2003).

Employee satisfaction is one of the most important indicators of an organization's overall health. Unsatisfied employee will not care about finishing a given task on time even lesser so as to decrease the lead time. Unsatisfied employee will not see/check available options in order to decrease the acquisition cost and improve the performance of the organization.

The importance of professional ethics in procurement success cannot be understated. This has led to the call for ethics in public entities procurement as organizations are realizing that ethics can lead to improved operational and financial performance. Achieving the core principle of procurement is possible where the employees are ethically competent. Making ethical compromises in order to speed up operations or reduce the amount of scrutiny during the audit process, is going to costs companies to much money as well as it loses its profit (Maurice Waswa Muya, 2019).

Even if the importance and necessity of procurement policies is not questionable, it does also have some negative effect on the procurement practice and ultimately on procurement performance. One of the reasons for declining procurement performance of EPSA is local manufacturers. EPSA must procure from local manufacturers if any due to the circular given by Ministry of trade and industry. According to the report made by EPSA in 2019 all local manufacturers delivery is less than 50% even though they are agreed to deliver 100% in the contract. Due to this the agency suffers stock outs and end up in receiving complaints from hospitals which the Agency serves.

2.2 Empirical Literature Review

According to a study conducted in Kenya Ferry Services on four of the independent variable that is procurement specification, evaluation, staff competence and procurement ethics, the finding shows that the four variables studied explained 69% of variance in the effect of procurement management practices on procurement performance this means that, the other factors not studied contribute 31% of variance in dependent variable which calls for further studies to evaluate effect of procurement management practices on procurement performance. The analysis show that the procurement specification has 33.0% positive effect on procurement performance, whereas procurement evaluation activities have 28.5% effect on procurement performance and procurement staff competence have 11.6% effect on procurement performance and finally procurement ethics affects procurement performance by 18.3% (Maurice Waswa Muya et'al, 2019). Where as in a study conducted in Kenya shows that skills and experience to carry out procurements that is the staff competencies influence procurement performance to a large extent, which is staff competency accounts for 20.1% of variations in procurement performance (Japheth Ocharo Kiage, 2013).

There is also strong positive and significant relationship between staff competence and procurement performance in a study conducted in Kenya. These findings concur with those of Barsemoi, Mwangangi and Asienyo (2014) Their research discovered a 70% strong correlation between staff competence and procurement performance. Another study findings also revealed that, 97.20% of the respondents agreed that procurement performance has been influenced by experienced and skilled procurement personnel, only 2.80% of the respondents disagreed (Eliah A. Eliah, et'al 2020).

One study finding showed that 64.5% of the changes in the procurement performance are attributed to the change in the independent variables which is the professional ethics(M. J. Maria et al,2018).

Importance of specification are also proved in a study conducted in Tanzania. Findings unveiled that bidding documents ensure that tender specifications are met and bidding documents ensure timely delivery of the tender which in turn improve organizational performance. These findings

are in line with previous research with Brook (2015) that Inconsistencies between the bill of quantities and the drawings and specifications, as well as inadequate specification writing, and poorly prepared tender documents are common problems associated with tender documents in the UK (Mrema, A & Lyimo, B. J. (2019)).

Proper way of supplier selection has significant effects on procurement function performance. Supplier selection has 80% effect in achieving value for money. The findings above provide evidence of proof that the components of supplier selection are related to procurement function performance (Krop, E, et'al 2016). There is also a positive and significant relationship between supplier evaluation criteria and procurement performance in Kenya Seed Company (Korir, et'al, 2016). Research conducted in Rwanda indicates that supplier quality commitment have a relationship with Procurement performance. It indicates that there is positive relationship between Supplier quality commitment and Procurement performance (Munyaneza Robert, et'al 2017).

2.3 Conceptual framework

- A conceptual framework depicts the link between the dependent and independent variables diagrammatically. It helps to simply understand the relationship between variables because of its visual aid. Based on the above literature review, the following conceptual framework can be drawn.

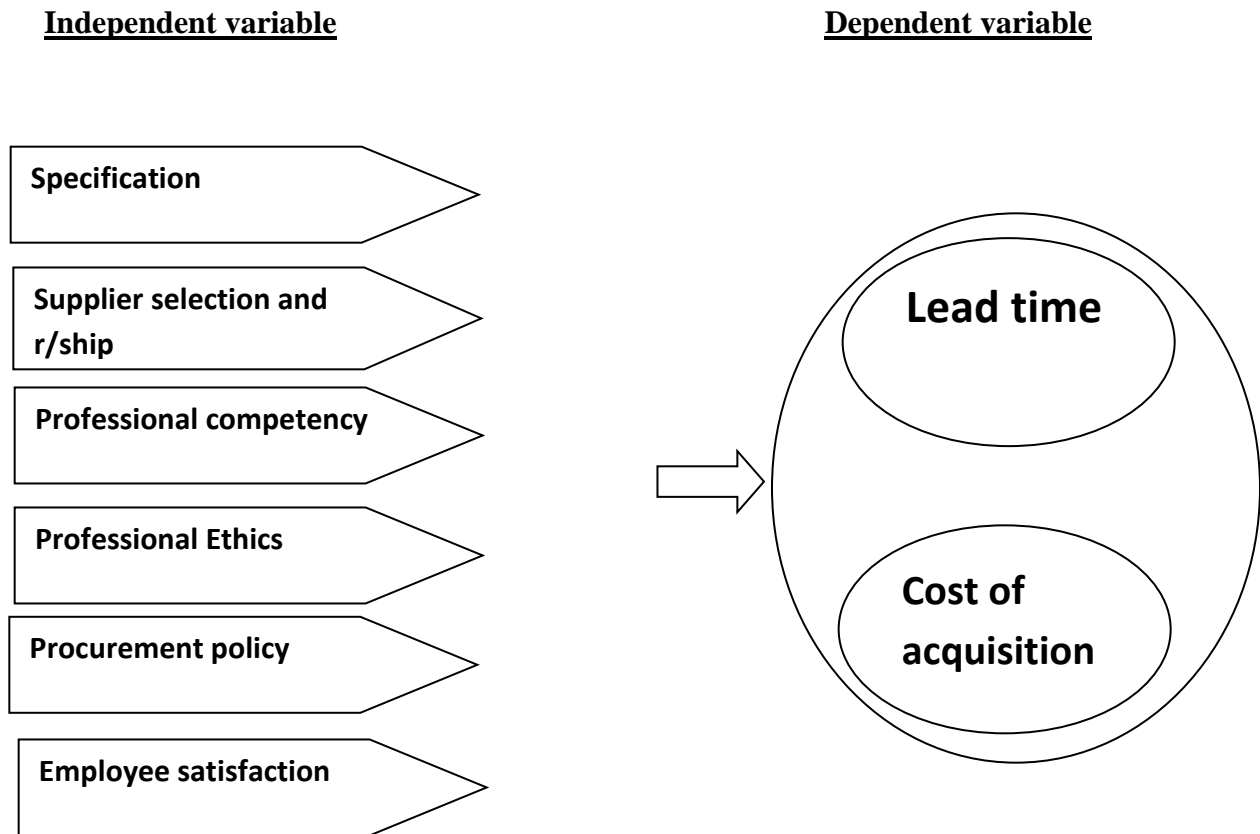


Figure 1: Conceptual model

(Maurice Waswa Muya, Susan Wanjiru, Dr. Evelyn Datche, 2019)

Chapter Three

Research Methodology

This chapter presents the research design and methods that are used to achieve the objectives of the research. It includes description of the study area, research approach, research design, study population, data source and type, data collection procedure, data analysis, validity and reliability test and ethical consideration that are used to achieve the objectives of the research.

3.1 Description of study area

Ethiopian pharmaceuticals supply Agency is the study area of this research. The agency has been established in 2007 by proclamation number 553/2007 with mandate to avail affordable and quality pharmaceuticals sustainably to all public health facilities in the country. It has 19 branches in different regions and Addis Ababa which supply pharmaceuticals for more than 4,000 public health facilities of the country. The head office is located in Addis Ababa Addis Ketema Sub-City approximately 2.8 km west of the city center (Addis Ababa). The Agency is organized into three main sub process namely, quality management unit, In-bound and Outbound logistics units. Under quality management unit capacity building and operation research directorate is supervised. There are three functional area units under inbound logistics units namely Quantification & Market Shaping Directorate, Tender Management Directorate and Contract Management Directorate. The third unit is outbound unit includes Warehouse & Inventory Management Directorate and Distribution & Fleet Management Directorate. Five other functional units like Fund management (RDF & Program), Human Resource Development Directorate & General Service Directorate, Planning M & E, and MIS Directorate at head office level serve as supportive processes. Each main sub unit is managed by deputy director general.

3.2 Research approach

The research has used quantitative research approach since the findings from the assessment has been quantified and numerically expressed with figures, percentages and degree. Based on specific objective of the study close ended questions has been prepared and the findings has been expressed in amount and quantity.

3.3 Research design

The research uses descriptive and explanatory research design to describe and explain the procurement practices and their effects on procurement performance in Ethiopian Pharmaceuticals Supply Agency. This method focuses on both describing of the research subject and “why” of the research subject.

3.4 Population and sampling

The target population were employees from tender management directorate; market shaping and quantification directorate; and contract management directorate excluding supportive staff (non-technical persons) were the target populations to assess the procurement practices. A total of 105 employees from three directorates is considered as a target population.

3.5 Sample design

All individuals under these directorates except non-technical staffs was the candidate of this study. Because of the specificity nature of the study only technical staffs was selected.

3.6 Sample size

Purposive sampling was used.

3.7 Data source and type

For this research primary data has been used as a data source. The data has been collected by using questionnaires, which has close ended questions.

3.8 Data collection procedures

Structured questionnaire which contains closed ended questions has been prepared as per the characteristics of specific objective. After getting permission from concerned body the questionnaires have been administered to all candidates to collect the required data. The questions were prepared to address each specific objectives of the study and any clarification that has been needed during filling of questionnaires, the investigator has clarify to the candidates accordingly.

3.9 Data Analysis

The data analysis has been managed in a proper and systematic manner of the research methods using quantitative data analysis technique. The collected data has been checked by the researcher on daily bases for incompleteness or inconsistency.

After checking its correctness and completeness, the data has been analyzed using Statistical Packages for the Social Sciences (SPSS) software. Frequency table and percentage has been employed to summarize the information of respondents and descriptive statistics like percentage, ratio, mean, standard deviations and correlation and regression has been used to express the result of specific objectives. Finally, the discussion of result and interpretation of analysis has been provided. It has been presented using tables, charts and appropriate data presentation tools. Based on findings of the study conclusions and recommendation has been drawn.

3.10 Validity and Reliability test

Validity test

In the validation process of this study, copies of the questionnaire and copies of the research questions has been given to experts. The comments of the experts has been included in the questionnaires. Having validated the questionnaire, a pilot test has been carried out on sample populations in order to see how the subject would react to the questionnaire whether the items are clear enough and easily understood and whether there is the need to include more items in certain areas. Accordingly, all distributed questionnaire has been returned. Then, the comment found from pilot study has been incorporated to the main questionnaires.

Reliability test

The rationale for this internal consistency is that the individual items or indicators of the scale should all be measuring the same concept and thus be highly inter-correlated. Reliability is the extent to which a variable or group of variables is consistent in what it is designed to measure. A high value of the Cronbach alpha coefficient suggests that the items that make up the scale are internally consistent and measure the same underlying construct. Cronbach alpha values greater than 0.70 have been considered as a suitable test of scale reliability.

3.11 Ethical consideration

Before the start of data collection, supportive letters have been delivered to Ethiopian Pharmaceutical Supply Agency to get permission for data collection. All the information and documents including the questionnaire filled has been used ethically without falsifying the original intention of the respondents and also kept confidential. To ensure the confidentiality of the respondents the researcher told the respondents not to write their name in the questionnaire. Respondents have the right to safety from physical or psychological harm, to be informed at all aspects of a research task, keep their privacy and Confidentiality and also have the right to withdraw from the research any time.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1. Introduction

In this chapter, the data collected from respondents have been presented and discussed. The chapter begins by presenting the response rate, background information of respondents under the demographic variables, followed by data presentation and discussion.

4.2. Response Rate

As indicated in chapter three, the respondents were tender management, Contract management and quantification and market shaping directorate staffs. One hundred five (105) questioners were distributed and 97(92%) were returned with full information. From distributed questionnaires 8(8%) were not returned. And finally, data collected from 97 respondents were analyzed.

4.3 Quantitative data analysis

4.3.1 Result of the Survey and Discussion

4.3.1.1 Demographic characteristics of the respondents

The first part of the questioner contains the socio-demographic information of participants. Accordingly, the following variables about the respondents were summarized in tables. These variables are Sex, Age, Educational background, Years of experience, Field of study and Job title/position in the organization.

Table 4.1: Demographic profile of the respondents

S.N	Characteristic of respondents		Frequency	Percent
1	Sex	Male	58	59.8
		Female	39	40.2
		Total	97	100.0
2	Age	18-25	29	29.9
		26-35	54	55.7
		36-45	14	14.4
		Above 46	0	0
		Total	97	100
3	Educational background	Certificate	0	0
		Diploma	0	0
		Degree	78	80.4
		Master	19	19.6
		Total	97	100.0
4	Years of Experience	0-<3	26	26.8
		3-<7	36	37.1
		7-<10	21	21.6
		10-<13	13	13.4
		>13	1	1.0
		Total	97	100.0
5	Field of study	Pharmacist	68	70.1
		Laboratory technologist	19	19.6
		Biomedical Engineer	7	7.2
		Management	2	2.1
		Banking and finance	1	1.0
		Total	97	100.0
6	Job title/position	Procurement officer	85	87.6
		Procurement coordinator	10	10.3
		Procurement director	2	2.1
		Total	97	100.0

Source: Field survey, 2022

Effect of procurement management practices on procurement performance

The above table shows a total of 97 respondents were participated of which sex distribution was 58 (59.8 %) male and 39 (40.2 %) female respondents were involved. This shows that most of the organization's supply chain actors are males.

Concerning respondents age, 29 (29.9%) falls in the category of 18-25 years, 54 (55.7%) falls within 26 to 35 years and 14 (14.4 %) are falls 35 to 45 years. Therefore, it shows that a greater number of people fall into this category which is within 26 to 35 years which represents 55.7%. It shows that the majority of EPISA employees are young and are at their best working age.

Regarding educational background 78 (80.4%) of the respondents were with the qualification of Degree and the remaining 19 (19.6%) were Masters. This shows that 100 % of the respondents are with the qualification of Degree and Masters. Therefore, it can be assumed that respondents are able to understand and clearly identify the existing effect relationship between procurement management practice and procurement performance. Moreover, it increases the validity of the findings.

In the case of work experience 26 (26.8%) of total respondents have work experience less than 3 years, 36(37.1%) within 3-<7 years, 21(21.6%) within 7-<10 years, 13(13.4%) within 10-<13 years and the remaining 1(1%) were above 13 years. This shows that about 71(73.2) % of the respondents work experiences are above or equal to three years. This implies that the respondent`s experience enable them to know the effect of procurement practices on procurement performance in the organization.

The other parameter is the field of study of the participant, pharmacists were 68(70.1%) of total respondents, laboratory technologist 19(19.6%), biomedical engineer 7(7.2%), management 2(2.1%) and banking and finance 1(1%). In this regard most of the employee are pharmacists and laboratory technologists.

The last parameter is job title/ position, in this regard procurement officer dominate with a frequency of 85(87.6%) out of 97 respondents, procurement coordinator 10(10.3%) and procurement director 2(2.1%). From this data we can grasp that most of the employee are procurement officers with 85(87.6%) which are involved in the technical part of the procurement so they know the challenges and the most influencing part of the procurement practices.

4.3.1.2 Descriptive Analysis of the Effect of procurement management practices on Procurement Performance

Concerned respondents' perceptions were captured along 49 items corresponding to the five dimensions using Likert scale that were introduced to measure the study constructs. Respondents rated their extent of perception from strongly disagree to strongly agree. 1 = Strongly Disagree (SD), 2 = Disagree (D), 3 = Neutral (N), 4 = Agree (A), 5 = Strongly Agree (SA). To determine the minimum and the maximum length of the 5-point Likert type scale, the range is calculated by $(5 - 1 = 4)$ then divided by five as it is the greatest value of the scale $(4 \div 5 = 0.80)$. Afterwards, number one which is the least value in the scale was added in order to identify the maximum of this cell. The length of the cells is determined below:

- From 1 to 1.80 represents (strongly disagree).
- From 1.81 until 2.60 represents (do not agree).
- From 2.61 until 3.40 represents (neutral).
- From 3.41 until 4.20 represents (agree).
- From 4.21 until 5.00 represents (strongly agree). (Likert, R. 1932)

For all the Six procurement management practices (independent variables) that include professional ethics, supplier selection & relationship, specification, employee satisfaction, employee competency and procurement policy and also the procurement performance which is the dependent variable that include lead time and cost of acquisition mean score computed for elements of each variable. The average mean result of variables is separately presented, analysed and interpreted as follows.

A) Professional ethics

Table 4.2: Mean and standard deviation value of professional ethics

	The organization has a zero tolerance to acceptance of gifts of any kind.	Information access must meet ethical guidelines, contractual obligations and government regulations.	Your organization has developed a written code of ethics that outlines what is considered ethical and unethical behavior	There is no a limited nominal value to which gifts should not be exceeded.	One’s level of education determines the understanding and practicing of ethical behavior.	When a violation of the code of ethics occurs, the organization takes appropriate disciplinary action on a consistent basis.
Valid	97	97	97	97	97	97
Missing	0	0	0	0	0	0
Mean	4.32	4.19	4.16	4.21	4.21	4.34
Std. Deviation	.511	.507	.534	.519	.539	.498
Mean of mean=4.24						

Source: Field survey, 2022

The mean values of professional ethics elements were calculated between 4.16 and 4.34 with comparable standard deviations that range between 0.498 and 0.539. The highest mean value is “when a violation of the code of ethics occurs, the organization takes appropriate disciplinary action on a consistent basis; then the organization has a zero tolerance to acceptance of gifts of any kind; followed by both there is no a limited nominal value to which gifts should not be

exceeded; and One's level of education determines the understanding and practicing of ethical behavior" with the same mean of 4.21. The fifth and the sixth are information access must meet ethical guidelines; contractual obligations and government regulations and your organization has developed a written code of ethics that outlines what is considered ethical and unethical behavior respectively, as we order them from highest mean score to the lowest.

With highest mean is recorded in the sixth element of the question that is when a violation of the code of ethics occurs, the organization takes appropriate disciplinary action on a consistent basis. Which shows that the organization take appropriate disciplinary action whenever it is necessary, that means the employees know that the organization do not tolerate unethical action, which negatively reinforce employees not to participate in an unethical action. Even though the organization good in penalize wrong doings, it has lower preventive mechanism, which is shown in the third elements of this variable that is your organization has developed a written code of ethics that outlines what is considered ethical and unethical behavior as compared to the other elements with mean score of 4.16.

The response for element one that is 'the organization has a zero tolerance to acceptance of gifts of any kind' shows that 62(63.9%) respondents agree, and 33(34%) of the respondents strongly agrees with this element and only 2(2.1%) of the respondents are neutral with this element. Which means that employees are aware and understand the organizations code of ethics and they know the organization will not tolerate them if they accept any gift whether its small or not.

Information access must meet ethical guidelines, contractual obligations and government regulations. In this regard 69(71.1%) of the respondents agree, 23(23.7%) of the respondents strongly agrees with this element and only 5(5.2%) respondents are neutral. This is also another representation for the positive effect of professional ethics on procurement performance. The third one is; your organization has developed a written code of ethics that outlines what is considered ethical and unethical behavior. Which also shows the positive effect of element three with 7(7.2%) neutral, 67(69.1%) of the respondents agrees and lastly 23(23.7%) of the respondents strongly agrees with this element. Even though the mean is smaller than the other still the result is good by itself.

The 5(5.2%) are neutral, 67(69.1%) are agrees and 25(25.8%) of the respondents are strongly agrees with these particular questions, that is there is no a limited nominal value to which gifts should not be exceeded. The mean of element four is 4.21 which is similar to that of element five that is one’s level of education determines the understanding and practicing of ethical behavior. Regarding element four 6(6.2%) respondents are neutral, 65(67%) of the respondents are agree and the rest 26(26.8%) of the respondents are strongly agreed. Which shows how significant this variable is on the procurement performance.

The highest mean and lowest standard deviation is recorded in the last element of the professional ethics that is ‘when a violation of the code of ethics occurs, the organization takes appropriate disciplinary action on a consistent basis.’ with 4.34 mean and 0.498 standard deviation. In this regard only 1(1%) of respondents are neutral, 62(63.9%) of the respondents are agreed and the rest 34(35.1%) of the respondents are strongly agreed. Which implies that the organizations are good in penalizing wrong doings and this element result supports element one results because the organization will not tolerate wrong doings.

B) Supplier selection and relationship

Table 4.3: Mean value and standard deviation of supplier selection and relationship

	EPSA conduct regular meeting and discussion with potential suppliers to improve their performance.	The procurement practice of EPSA facilitate in getting technically competent suppliers	Suppliers’ production plan considers the EPSA’s strategic goals.	EPSA has appropriate metrics to measure and manage supplier’s performance.	EPSA’s purchasing power is attractive for suppliers.	EPSA gives credit/ho nor for best performing supplier.
N Valid	97	97	97	97	97	97
Missing	0	0	0	0	0	0
Mean	3.91	4.06	4.11	4.07	4.11	4.18

Std. Deviation	.614	.642	.627	.617	.610	.629
Mean of mean=4.07						

Source: Field survey, 2022

The mean values of Supplier selection and relationship elements were calculated between 3.91 and 4.18 with comparable standard deviations that range between 0.61 and .642. From this variable the first element that is-‘EPSA conduct regular meeting and discussion with potential suppliers to improve their performance’ has got the lowest mean value of 3.91 which showed that the organization was weak in conducting meeting with suppliers as compared with the other elements of this variable. Even though the organization did not conduct meetings with suppliers at regular basis it keeps the relationships with them by giving credit/honor for best performing supplier which is shown in the last element of this variable in which EPSA gives credit/honor for best performing supplier and its mean value is 4.18.

When we see each element one by one, from 97 respondents 23(23.7%) are neutral, 60(61.9%) are agreed and 14(14.4%) strongly agreed with element EPSA conduct regular meeting and discussion with potential suppliers to improve their performance. In this regard even if significant number of the respondents are neutral most of the respondents are agreed with this element. The second one is whether or not the procurement practice of EPSA facilitate in getting technically competent suppliers. From this it noted that 17(17.5%) are neutral which is smaller than the first element that means most of the respondents are agreed on this element than the first one; 57(58.8%) are agreed and 23(23.7%) are strongly agreed.

The second lowest mean are recorded in this element with 4.06 and with high standard deviation that is 0.642. Third element is suppliers’ production plan considers the EPSA’s strategic goals. Which element is included in the questionnaire to know the organizations positions in the eye of suppliers. So that 14(14.4%) of the respondents are neutral, 58(59.8%) of the respondents are agreed and 25(25.8%) of the respondents are strongly agreed with this element. When we see mean it is 4.11 which is the second highest mean and also similar to the fifth elements, both elements are included to show the organizations position in the eye of the suppliers. And from this we can grasp that the organization has a good reputation by the suppliers according to the employees of EPSA. The fourth questions was ‘EPSA has appropriate metrics to measure and manage supplier’s performance’. In this regard 15(15.5%) responds neutral, 60(61.9%) responds

agree and the rest that is 22(22.7%) responds strongly agree. As you can see the fourth element shows the third lowest mean with mean value of 4.07 which is in line with the first two lowest mean which indicate that the organization has to work closely in order to build and maintain relationship with suppliers.

The fifth element is EPSA’s purchasing power is attractive for suppliers, which has the second highest mean of 4.11 and the lowest standard deviation of 0.61. In this element 13(13.4%) of the respondents are neutral, 60(61.9%) of the respondents are agreed and 24(24.7%) of the respondents are strongly agreed. The attractiveness of the organization by suppliers might be due to the buying capacity of EPSA, since it is the highest pharmaceutical buying organization in Ethiopia.

The last question of the second variable is to understand whether EPSA gives credit/honor for best performing supplier, because which gives hint whether the organization recognize or not suppliers. In this regard the data shows good result, with the highest mean of 4.18 and with 12(12.4%) respondents are neutral, 56(57.7%) respondents are agreed and 29(29.9%) of the respondents are strongly agreed with this element. Which shows that the organization has good relationship with suppliers.

C) Specification

Table 4.4: Mean value of Specification

	EPSA has clear specification for pharmaceuticals procured	EPSA has platform to give clarification for any inquire.	All tender requirements of EPSA are stated in the bidding document.	EPSA respond timely when complain is raised in the procurement process.	The tender evaluation criteria of EPSA are clear and understandable for suppliers	Having clear specification is essential to decrease the cost of accusation
N Valid	97	97	97	97	97	97
Missing	0	0	0	0	0	0
Mean	4.36	4.22	4.37	4.30	4.21	4.27
Std. Deviation	.598	.599	.682	.615	.611	.638

Mean of Mean=4.29

Source: Field survey, 2022

The mean values of specification elements were calculated between 4.21 and 4.37 with comparable standard deviations that range between 0.598 and 0.682. From this variable the fifth element- “The tender evaluation criteria of EPSA is clear and understandable for suppliers” has got the lowest mean value of 4.21 which showed that the organizations specifications are somehow unclear as compared with the other elements of specification elements. The highest mean is recorded for the third element that is all tender requirements of EPSA are stated in the bidding document which is 4.37. By seeing the content of the lowest and the highest mean it is possible to conclude that even if EPSA discloses the tender requirements in the bid document, suppliers fail to understand it.

The first element in this variable is EPSA has clear specification for pharmaceuticals procured, with 6(6.2%) of the respondents are neutral, 50(51.5%) of the respondents are agreed and 41(42.3%) of the respondents are strongly agreed. This element has the second highest mean score which shows that EPSA has clearly describe its needs. When we see the second element EPSA has platform to give clarification for any inquire most of the respondents are agreed and strongly agreed with 58(59.8%) and 30(30.9%) respectively and few respondents that is 9(9.3%) are neutral. Which shows that the organization has a mechanism in giving clarification whenever it arises

The third one is all tender requirements of EPSA are stated in the bidding document. In this regard most of the respondents are strongly agreed which is 47(48.5%), agree 39(40.2%) and only 11(11.3%) respondents are neutral. This result implies that the EPSA’s bid document are standard, clear, inclusive and acceptable since the highest respondents are agreed plus this element recorded the highest mean. The fourth one is EPSA respond timely when complain is raised in the procurement process. The result of this element is inline with the second element as both shows high mean value. In this regard most of the respondents agreed with 52(53.6%), and next strongly agree which is 37(38.1%) and the last one is neutral with the score of 8(8.2%). As I have said earlier in element two the organization has a mechanism to give clarification to suppliers, it is also shown here that EPSA has not only the mechanism but also responds as fast as possible.

The fifth one is the tender evaluation criteria of EPSA is clear and understandable for suppliers. Which has a mean value of 4.21 which is the smallest one when it is compared to the other elements but since specification elements mean difference is not significant, we can say respondents are also give high score for this elements as well. So that 10(10.3%) of the respondents are neutral, 57(58.8%) of the responses are agree and 30(30.9%) of the responses are strongly agree. What we get from this score is EPSA’s evaluation criteria are clear and understandable which is good for boosting the procurement performance.

The last element of specification is about to know the effect of specification on one of our dependent variables that is cost of accusation. In this regard 87 respondents answer was agree or strongly agree. With 51(52.6%) agree and 36(37.1%) strongly agree; only 10(10.3%) respondents are neutral. From this result we can see that how specification affects the procurement performance.

D) Employee satisfaction

Table 4.5: Mean value of Employee satisfaction

	I’m satisfied with my job	There are opportunities for individual career growth within the organization	Having satisfied employee is useful in decreasing the lead time	Having satisfied employee is useful in decreasing the cost of accusation	I’m planning to continue working for the organization for the next 2 years	I would recommend this agency as a good place to work
N Valid	97	97	97	97	97	97
Missing	0	0	0	0	0	0
Mean	3.37	3.57	4.08	4.07	3.54	3.46
Std. Deviation	.546	.644	.640	.681	.646	.662
Mean of mean=3.68						

Source: Field survey, 2022

Effect of procurement management practices on procurement performance

The mean values of employee satisfaction elements were calculated between 3.37 and 4.08 with comparable standard deviations that range between 0.546 and 0.681. From this variable the first element that is about whether employees are satisfied with their current job which has the lowest mean value of 3.37 which showed that employees are not satisfied with their current job. The highest mean is recorded for the third element that is having satisfied employee is useful in decreasing the lead time which is 4.08, this finding is almost similar to the fourth elements which is having satisfied employee is useful in decreasing the cost of accusation with mean value of 4.07. Which implies that satisfaction are bases in boosting procurement performance.

The first question in employee satisfaction was are you satisfied with your current job. In this regard most of the respondents are neutral for this question with 64(66%), and 30(30.9%) of the respondents agreed and only 3(3.1%) of the respondents are strongly agreed. The second element is -there are opportunities for individual career growth within the organization. For this 50(51.5%) of them are neutral, 39(40.2%) of them agreed and only 8(8.2%) of them strongly agreed. Which implies that most of the respondents do not think they will grow their career, so that are looking for other recruiting agencies.

The third element is about the effect of employee satisfaction on lead time which is one indicator of procurement performance. In this regard 16(16.5%) of the response are neutral, 57(58.8%) of the response are agree and 24(24.7%) of the response are strongly agree. Similar finding are noticed in fourth element that shows the effect of employee satisfaction on cost of accusation which is one indicator of procurement performance. In this regard 19(19.6%) of the response are neutral, 52(53.6%) of the response are agree and 26(26.8%) of the response are strongly agree. From this value we can notice that the positive correlation of employee satisfaction on procurement performance

The fifth one is about employees will work for the next two years and the findings are not good for the organization. So the results are 53(54.6%) neutral, 36(37.1%) agree and only 8(8.2%) strongly agree. The last one is about whether they recommend the organization as good work place. The results are good as of the fifth element for the organization which are 61(62.9%) neutral, 27(27.8%) agree and only 9(9.3%) strongly agree. So, from the above two elements we can learn that employees are not satisfied with organization.

E) Employee competency

Table 4.6: Mean value of Employee competency

		There is a clear understanding of the mission and vision of the organization	Having competent employee is useful in decreasing the lead time	Having competent employee is useful in decreasing the cost of accusation	All technical staff have taken enough supply chain courses (Certificate)	Employee know in handling end to end the procurement practices	Technical personnel's have enough knowledge in handling suppliers
N	Valid	97	97	97	97	97	97
	Missing	0	0	0	0	0	0
	Mean	4.27	4.41	4.35	4.11	4.11	4.08
	Std. Deviation	.654	.625	.596	.659	.593	.534
Mean of mean=4.22							

Source: Field survey, 2022

The mean values of employee competency elements were calculated between 4.08 and 4.41 with comparable standard deviations that range between 0.534 and 0.654. From this variable the mean of the elements are almost similar with average mean value of 4.22, but they have small differences so to show this small differences the sixth element that is about “technical personnel’s have enough knowledge in handling suppliers” has the smallest mean compared to the other elements that is 4.08 and the largest mean registered in the second element followed by the third element with mean value of 4.41 and 4.35 respectively, which are the elements that have a direct relationship with dependent variable that is lead time and cost of accusation. So, getting a high mean value for element two and three means this variable has a significant effect on procurement performance.

➤ **Employee competency-element one**

When we see element one which is about whether the mission and vision of the organization are clearly understandable by employees, as you can see from the below table most respondents are agree or strongly agree with this element which means this element has a significant effect on procurement performance.

Table 4.7: Understanding of the mission and vision of the organization

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	11	11.3	11.3	11.3
Agree	49	50.5	50.5	61.9
Strongly Agree	37	38.1	38.1	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Employee competency-element two**

In this regard only 7(7.2%) of the employees are neutral to this element. In addition to this the mean of this element is the highest one (refer table 6 for mean) so there is a significant correlation with procurement performance.

Table 4.8: Having competent employee is useful in decreasing the lead time

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	7	7.2	7.2	7.2
Agree	43	44.3	44.3	51.5
Strongly Agree	47	48.5	48.5	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Employee competency-element three**

As you can see from the below table the effect of competency on cost of accusation, the significance is high, plus the mean of this element is the second highest value. From this we can say that competency have a direct and significant effect on procurement performance.

Table 4.9: Having competent employee is useful in decreasing the cost of accusation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	6	6.2	6.2	6.2
Agree	51	52.6	52.6	58.8
Strongly Agree	40	41.2	41.2	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Employee competency-element four**

In this regard the mean of this element is the second smallest one, so the effect of element four is a little bit lower on procurement performance as compared to the other elements, even if the mean of this element is high by itself without comparing it with other elements of this variable. Only 16(16.6%) of the respondents are neutral but the rest that is 81(83.4%) of the respondents are agree or strongly agree.

Table 4.10: All technical staff have taken enough supply chain courses Certificate

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	16	16.5	16.5	16.5
Agree	54	55.7	55.7	72.2
Strongly Agree	27	27.8	27.8	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Employee competency-element five**

The fifth element is about employees' experience and knowledge in handling procurement practices from end to end. The result shows that it has significant effect on procurement performance with only 12(12.4%) of the respondents are neutral and the rest are agree and strongly agree.

Table 4.11: Employee know in handling end to end the procurement practices

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	12	12.4	12.4	12.4
Agree	62	63.9	63.9	76.3
Strongly Agree	23	23.7	23.7	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Employee competency-element six**

In the final element still the significance of this element is high even if the mean value is somehow the smallest as compared to the other elements. When we see the significance 69(71.1%) of the respondents are agreed with this element.

Table 4.12: Technical personnel's have enough knowledge in handling suppliers

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	10	10.3	10.3	10.3
Agree	69	71.1	71.1	81.4
Strongly Agree	18	18.6	18.6	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

F) Procurement policy

Table 4.13: Mean value of Procurement policy

		EPSA's procurement practice done in accordance with the procurement policy	Employees are aware of the procurement policy of EPSA	EPSA prepares procurement related trainings for newly joined staffs before they start the procurement job.	EPSA's procurement practices ensures that procurement policies are strictly followed throughout the process	Procurement policy is not a constraint in the procurement practices
N	Valid	97	97	97	97	97
	Missing	0	0	0	0	0
Mean		4.22	4.27	4.05	4.22	4.28
Std. Deviation		.599	.550	.584	.544	.515
Mean of mean=4.21						

Source: Field survey, 2022

The mean values of procurement policy elements were calculated between 4.05 and 4.28 with comparable standard deviations that range between 0.515 and 0.599. From this variable the mean of the elements are almost similar with average mean value of 4.21 but they have small differences to show this small differences the third element that is about 'EPSA prepares procurement related trainings for newly joined staffs before they start the procurement job.' has the smallest mean compared to the other elements that is 4.05 and the largest mean registered in the fifth element followed by the second element with mean value of 4.28 and 4.27 respectively. The elements in this variable have almost similar mean value having a positive value of affecting the procurement performance.

The following tables shows the frequency and percentage of responses for each element: -

➤ **Procurement policy-element one**

Table 4.14: EPSA’s procurement practice done in accordance with the procurement policy

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	9	9.3	9.3	9.3
Agree	58	59.8	59.8	69.1
Strongly Agree	30	30.9	30.9	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Procurement policy-element two**

Table 4.15: Employees are aware of the procurement policy of EPSA

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	5	5.2	5.2	5.2
Agree	61	62.9	62.9	68.0
Strongly Agree	31	32.0	32.0	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Procurement policy-element three**

Table 4.16: EPSA prepares procurement related trainings for newly joined staffs before they start the procurement job.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	14	14.4	14.4	14.4
Agree	64	66.0	66.0	80.4
Strongly Agree	19	19.6	19.6	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Procurement policy-element four**

Table 4.17: EPSA’s procurement practices ensures that procurement policies are strictly followed throughout the process

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	6	6.2	6.2	6.2
Agree	64	66.0	66.0	72.2
Strongly Agree	27	27.8	27.8	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Procurement policy-element five**

Table 4.18: Procurement policy is not a constraint in the procurement practices

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	3	3.1	3.1	3.1
Agree	64	66.0	66.0	69.1
Strongly Agree	30	30.9	30.9	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

G) Lead time

Table 4.19: Mean value of Lead time

	Suppliers deliver awarded products fully on time.	Suppliers usually submit the required documents timely.	Lead time usually achieved	Suppliers are responsive for emergency order of EPSA.	Local agents of principal suppliers are responsive to facilitate the process between the two parties.	L/C extension request is the major cause of stock out for EPSA.	Incomplete shipment document is one of the causes of long procurement lead time.
Valid	97	97	97	97	97	97	97
Missing	0	0	0	0	0	0	0
Mean	3.78	4.10	3.66	4.03	4.16	4.08	3.99
Std. Deviation	.710	.568	.877	.567	.472	.493	.621
Mean of mean=3.97							

Source: Field survey, 2022

The mean values of lead time elements were calculated between 3.66 and 4.16 with comparable standard deviations that range between 0.472 and 0.877. From element five it is noticed that local agents of principal suppliers are responsive to facilitate the process between the two parties (EPSA and supplier) with mean value of 4.16. The second highest value is recorded in the second element which is ‘suppliers usually submit the required documents timely, with mean value of 4.10. The fourth highest mean is recorded in the third element of this variable that is suppliers are responsive for emergency order of EPSA. From these three elements of this variable, we can see the importance of suppliers and local agents in order to minimize the lead time of pharmaceutical procurement. The third highest mean value recorded in the sixth element with 4.08 mean value, that shows the effect of Letter of credit extension on lead time. The lowest mean value is recorded in the third element which is 3.66, the reason for this lower mean value is 7(7.2%) of the respondents disagree with this value as shown in the table 22 below.

➤ **Lead time element one**

Table 4.20: Suppliers deliver awarded products fully on time.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	37	38.1	38.1	38.1
Agree	44	45.4	45.4	83.5
Strongly Agree	16	16.5	16.5	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Lead time element two**

Table 4.21: Suppliers usually submit the required documents timely.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	11	11.3	11.3	11.3
Agree	65	67.0	67.0	78.4
Strongly Agree	21	21.6	21.6	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Lead time element three**

Table 4.22: Lead time usually achieved

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Disagree	7	7.2	7.2	7.2
Neutral	38	39.2	39.2	46.4
Agree	33	34.0	34.0	80.4
Strongly Agree	19	19.6	19.6	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Lead time element four**

Table 4.23: Suppliers are responsive for emergency order of EPSA.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	14	14.4	14.4	14.4
Agree	66	68.0	68.0	82.5
Strongly Agree	17	17.5	17.5	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Lead time element five**

Table 4.24: Local agents of principal suppliers are responsive to facilitate the process between the two parties.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	4	4.1	4.1	4.1
Agree	73	75.3	75.3	79.4
Strongly Agree	20	20.6	20.6	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Lead time element six**

Table 4.25: L/C extension request is the major cause of stock out for EPSA.

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	8	8.2	8.2	8.2
Agree	73	75.3	75.3	83.5
Strongly Agree	16	16.5	16.5	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Lead time element seven**

Table 4.26: Incomplete shipment document is one of the causes of long procurement lead time.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	19	19.6	19.6	19.6
	Agree	60	61.9	61.9	81.4
	Strongly Agree	18	18.6	18.6	100.0
	Total	97	100.0	100.0	

Source: Field survey, 2022

H) Cost of accusation

Table 4.27: Mean value of Cost of accusation

	Extended lead time has increased the cost of accusation	Failing to follow the procurement policy during procurement increases the cost of accusation	Good specification will have a positive effect on the total cost of accusation	Effectively managing the relationship with supplier is one way of decreasing the total cost of ownership	By increasing employees' satisfaction its possible to decrease the total cost of ownership	Having professionally competent employee means EPSA will get pharmaceuticals at lowest possible total cost	Professionally ethical employee will contribute its part in having pharmaceuticals at a reasonable cost
N Valid	97	97	97	97	97	97	97
Missing	0	0	0	0	0	0	0
Mean	4.34	4.26	4.14	4.22	4.31	4.05	4.28
Std. Deviation	.748	.740	.677	.599	.566	.619	.608
Mean of mean=4.23							

Source: Field survey, 2022

The mean values of cost of accusation elements were calculated between 4.05 and 4.34 with comparable standard deviations that range between 0.566 and 0.748. From this variable we can

see that extended lead time is the main reason for the increase of the cost of accusation which shown in the above table of element one with 4.34 average mean value. The second element that have effect on cost of accusation is located in the fifth column in which employee satisfaction has the most effect on cost of accusation next to extended lead time with average mean value of 4.31. Third element that have the most effect on cost of accusation is failing to follow professional ethics which is located in the seventh column with average mean value of 4.28. The fourth factor is procurement policy which have average mean value of 4.26. The lowest mean value is recorded in the sixth column which is employee competency according to the above findings.

➤ **Cost of accusation element one**

Table 4.28: Extended lead time has increased the cost of accusation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	16	16.5	16.5	16.5
Agree	32	33.0	33.0	49.5
Strongly Agree	49	50.5	50.5	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Cost of accusation element two**

Table 4.29: Failing to follow the procurement policy during procurement increases the cost of accusation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	17	17.5	17.5	17.5
Agree	38	39.2	39.2	56.7
Strongly Agree	42	43.3	43.3	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Cost of accusation element three**

Table 4.30: Good specification will have a positive effect on the total cost of accusation

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	16	16.5	16.5	16.5
Agree	51	52.6	52.6	69.1
Strongly Agree	30	30.9	30.9	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Cost of accusation element four**

Table 4.31: Effectively managing the relationship with supplier is one way of decreasing the total cost of ownership

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	9	9.3	9.3	9.3
Agree	58	59.8	59.8	69.1
Strongly Agree	30	30.9	30.9	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Cost of accusation element five**

Table 4.32: By increasing employees' satisfaction its possible to decrease the total cost of ownership

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	5	5.2	5.2	5.2
Agree	57	58.8	58.8	63.9
Strongly Agree	35	36.1	36.1	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Cost of accusation element six**

Table 4.33: Having professionally competent employee means EPSA will get pharmaceuticals at lowest possible total cost

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	16	16.5	16.5	16.5
Agree	60	61.9	61.9	78.4
Strongly Agree	21	21.6	21.6	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

➤ **Cost of accusation element seven**

Table 4.34: Professionally ethical employee will contribute its part in having pharmaceuticals at a reasonable cost

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Neutral	8	8.2	8.2	8.2
Agree	54	55.7	55.7	63.9
Strongly Agree	35	36.1	36.1	100.0
Total	97	100.0	100.0	

Source: Field survey, 2022

I) Summary

Table 4.35: Summary of the above results

Items	N	Mean	Standard deviation
Professional ethics	97	4.24	0.34
Supplier selection and relationship	97	4.07	0.40
Specification	97	4.29	0.44
Employee satisfaction	97	3.68	0.44
Employee competency	97	4.22	0.41
Procurement policy	97	4.21	0.37
Lead time	97	3.97	0.36
Cost of accusation	97	4.23	0.47

Source: Field survey, 2022

The above table shows the overall calculated mean scores of all the six procurement management practices which is the independent variables and the two-procurement performance which is the dependent variables that we have discussed above.

J) Correlation among independent and dependent Variables

A correlation is a statistical test that provides insight on the relationship (if any) between two variables. Hence, in this study Pearson Correlation Coefficient (r) was utilized to look at the relationship; between the two dependent variables and the six independent variables by using a two-tailed test.

Table 4.36: Correlations

Effect of procurement management practices on procurement performance

	EQC	SSC	SPC	ESC	ECC	PPC	LTC	CA C
Pearson Correlation	1	.097	.024	-.019	.114	-.071	.212*	.153
Sig. (2-tailed)		.346	.816	.854	.266	.491	.037	.136
N	97	97	97	97	97	97	97	97
Pearson Correlation	.097	1	.483**	-.002	.406**	.394**	.276**	.410**
Sig. (2-tailed)	.346		.000	.987	.000	.000	.006	.000
N	97	97	97	97	97	97	97	97
Pearson Correlation	.024	.483**	1	.086	.411**	.439**	.446**	.486**
Sig. (2-tailed)	.816	.000		.401	.000	.000	.000	.000
N	97	97	97	97	97	97	97	97
Pearson Correlation	-.019	-.002	.086	1	.081	.168	.194	.269**
Sig. (2-tailed)	.854	.987	.401		.432	.099	.057	.008
N	97	97	97	97	97	97	97	97
Pearson Correlation	.114	.406**	.411**	.081	1	.424**	.408**	.540**
Sig. (2-tailed)	.266	.000	.000	.432		.000	.000	.000
N	97	97	97	97	97	97	97	97
Pearson Correlation	-.071	.394**	.439**	.168	.424**	1	.305**	.319**
Sig. (2-tailed)	.491	.000	.000	.099	.000		.002	.001
N	97	97	97	97	97	97	97	97

Pearson Correlation	.212*	.276**	.446**	.194	.408**	.305**	1	.577**
Sig. (2-tailed)	.037	.006	.000	.057	.000	.002		.000
N	97	97	97	97	97	97	97	97
Pearson Correlation	.153	.410**	.486**	.269**	.540**	.319**	.577**	1
Sig. (2-tailed)	.136	.000	.000	.008	.000	.001	.000	
N	97	97	97	97	97	97	97	97

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field survey, 2022

The above table shows the correlation coefficient of the six factors affecting procurement performance where all are positively correlated with procurement performance of EPSA within the range of 0.153 up to 0.577. When we further look at into each factor with their coefficients which indicates the six independent variables on lead time (dependent variable one): Professional ethics($r=0.212$), Supplier selection and relationship($r=0.276$), Specification($r=0.446$), Employee satisfaction($r=0.194$), Employee competency($r=0.408$) and Procurement policy($r=0.305$)

When we further look at into each factor with their coefficients which indicates the six independent variables on cost of accusation (dependent variable two): Professional ethics($r=0.153$), Supplier selection and relationship($r=0.410$), Specification($r=0.486$), Employee satisfaction($r=0.269$), Employee competency($r=0.540$) and Procurement policy($r=0.319$)

Hence, Professional ethics, Supplier selection and relationship, Specification, Employee satisfaction, Employee competency and Procurement policy have a significant correlation with procurement performance.

K) Regression Analysis

It is conducted to know the extent which dependent variable is explained by the independent variables. The regression was conducted between the six independent variables that are Professional ethics, Supplier selection and relationship, Specification, Employee satisfaction,

Employee competency and Procurement policy and the dependent variable that is the procurement performance.

Multi Collinearity Tests

Multi collinearity refers the highly correlation situation of independent variables.

Table 4.37: Multi Collinearity test of independent variables

Model	Collinearity Statistics	
	Tolerance	VIF
Professional ethics	.961	1.041
Supplier selection and relationship	.684	1.463
Specification	.667	1.499
Employee satisfaction	.964	1.038
Employee competency	.714	1.401
Procurement policy	.685	1.461

a. Dependent Variable: Procurement performance

Source: Field survey, 2022

The result in the table shows that the tolerance for all independent variable is greater than 0.1 and all VIF<10 which shows no series issue between collinearity between independent variables. Therefore, multi collinearity does not seem to be a problem for the variables.

Table 4.38: Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.690 ^a	.476	.441	.27596

a. Predictors: (Constant), PPC, EQC, ESC, SSC, ECC, SPC

b. Dependent Variable: procurement performance

Source: Source: Field survey, 2022

The model summary shown on the table displays the significance and percentage of variation in procurement performance which is due to the independent variables that are Professional ethics, Supplier selection and relationship, Specification, Employee satisfaction, Employee competency and Procurement policy. Multiple correlations R of +0.690^a represent the combined correlation of all the independent variables. This means that there is a relationship between the variables.

You can see from our value of 0.476 that our independent variables explain 47.6% of the variability of our dependent variable. And 52.4% (100%-47.6%) of the variation is caused by factors other than the predictors included in this model.

To accurately report the data interpretation of "Adjusted R Square" (adj. R²) is another important factor. A value of 0.441 in this indicates true 44.1% of variation in the outcome variable is explained by the predictors which are to keep in the model. Since the discrepancy are small so we can say a good fit of model.

Table 4.39: ANOVA

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.215	6	1.036	13.603	.000 ^b
	Residual	6.854	90	.076		
	Total	13.069	96			

a. Dependent Variable: procurement performance

b. Predictors: (Constant), PPC, EQC, ESC, SSC, ECC, SPC

Source: Field survey, 2022

In the ANOVA the above table, we have the F value of 13.603 which is with significance $p < 0.05$. This shows that the dependent is significantly related to the six independent variables taken together as a set. The multiple correlations are therefore highly significant. In order to see the contribution of factors that affect procurement performance, regression analysis of

procurement management practices (independent variable) was conducted. As shown in below table, provides the result of multiple regression analysis beta coefficient and significance.

Table 4.40: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.027	.556		-.049	.961
	EQC	.165	.085	.151	1.939	.056
	SSC	.079	.086	.085	.922	.359
	SPC	.267	.078	.321	3.438	.001
	ESC	.177	.065	.212	2.726	.008
	ECC	.301	.081	.338	3.735	.000
	PPC	.009	.093	.009	.095	.924

Dependent Variable: procurement performance

Source: Field survey, 2022

The standardize beta esteem appears the number of standard deviation that the result will alter in predictor as a result of one standard deviation alter. The standard deviation units are specifically comparable; hence, they give a better knowledge of a predictor in the model. The large value of beta coefficient in an independent variable has the more vital determinant in foreseeing the dependent variable. The standardize beta esteem for employee competency is 0.338. This appears that, this variable has generally solid degree of significance in affecting procurement performance than the other five factors. Similarly, the standardized beta value for specification is 0.321 which shows this factor has slightly lower degree of importance than employee competency but higher than the other four factors. The third highest beta value recorded in employee satisfaction which is 0.212. The fourth highest beta value are recorded for professional

ethics which is 0.151. Lowest beta value recorded for supplier selection and relationship and procurement policy which is 0.085 and 0.009 that have low importance in affecting the procurement performance. The smallest beta value for supplier selection and relationship and procurement policy might be due many factors the sample size and other factors.

The coefficient table shows significant regression coefficients, such as employee competency is significant at $p < 0.05$). That means, keeping Professional ethics, Supplier selection and relationship, Specification, Employee satisfaction and Procurement policy constant, one unit of increase in employee competency will increase procurement performance by 0.301 unit (with $P < 0.05$). The other one is keeping Professional ethics, Supplier selection and relationship, employee competency, Employee satisfaction and Procurement policy constant, a one unit increase in specification will increase procurement performance by 0.267 unit (with $P < 0.05$). The third one is keeping Professional ethics, Supplier selection and relationship, employee competency, specification and Procurement policy constant, a one unit increase in employee satisfaction will increase procurement performance by 0.267 unit (with $P < 0.05$), the other one is keeping Specification, Supplier selection and relationship, employee competency, Employee satisfaction and Procurement policy constant, a one unit increase in professional ethics will increase procurement performance by 0.165 unit (with $P > 0.05$), but, professional ethics is not significant because $p > 0.05$. But this does not mean that the variable, professional ethics doesn't have effect on procurement performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study was carried out to establish the effect of procurement management practices on procurement performance in case of Ethiopian Pharmaceutical Supply Agency (EPSA). The study had six objectives, to find out the effect of supplier selection on procurement performance in EPSA, to establish the effect of procurement staff competence on procurement performance in EPSA, to determine the effect of item specification on procurement performance in EPSA, to evaluate the effect of professional ethics on procurement performance in EPSA, to evaluate the effect of procurement policy on procurement performance in EPSA and to determine the effect of employee satisfaction on procurement performance in EPSA. This chapter deals with the summary of the six objectives findings, the conclusions and recommendations.

5.2 Summary of Findings

In this study, the researcher looked for the effect of procurement management practices on procurement performance from EPSA employee perspective in the case of Ethiopian pharmaceutical supply agency (EPSA).

Pharmaceuticals procurement is somehow different from other commercial goods procurement due to special nature of pharmaceuticals. They are expensive, sensitive to the environment; determine the health status of a given community and require trained human power on the area. They have significant commercial and health value in the given country.

The study showed the effect of procurement management practices on the procurement performance and the direction and strength of independent variables on the dependent variables. To meet these objectives, the collected data were processed in both descriptive and inferential statistics, specifically correlation and regression analysis were made to know the level of relationship and the degree of it respectively.

From the demographic profile of respondents 59.8% were male and the rest 40.2% were female respondents. In relation to respondent education level, minimum of degree from which we can

infer that the respondents are educated and they understood better the subject in the discussion. Finally, the work experiences of the respondents, 73.2% of the employees have greater than three years of work experience.

The analysis result illustrates that the mean score values for procurement management practice variables have high mean value (between 3.68 and 4.29), which indicates the procurement management practice variables and procurement performance have positive relationships. From the result of mean score value, we can say that EPSA has a good procurement performance.

The study also found a significant positive correlation among the six procurement management practice variables these are Professional ethics, Supplier selection and relationship, Specification, Employee satisfaction, Employee competency and Procurement policy and Procurement performance. The correlation result depicts there is a relationship between independent and dependent variables and relationship is significant. The result of the regression analysis also depicts Employee competency, Specification, Employee satisfaction and Professional ethics has statistically significant relationship with procurement performance in ascending order. But on the contrary Supplier selection and relationship and Procurement policy have low significant effect on procurement performance.

5.3 Conclusion

The output given from the findings indicate that the six variables have positive relationship with procurement performance. Based on the correlation and regression analysis conducted to check the relationship and the significance level between the dependent and the independent variables, Employee competency, Specification and Employee satisfaction have significant relationship and affect procurement performance while, Professional ethics, Supplier selection and relationship and Procurement policy have positive relationship with procurement performance but it is not significant.

Therefore, the study concludes that competent employee, proper procurement specification and satisfaction of employee determines the success of procurement performance. However, the study concludes that incompetent employee, poor specification and unsatisfied employee is a major setback of procurement performance

Whereas the rest two independent variables Professional ethics, Supplier selection and relationship and Procurement policy have a positive effect on procurement performance of the organization but the effect is not significant.

5.4 Recommendations

Based on the discoveries, the researcher proposes the following points as recommendation to the problem.

The study has shown us procurement management practices can affect the performance of the procurement so that we can manipulate these practices in order to enhance the organizations procurement performance.

Regarding the employee satisfaction the organization has to work to identify employees need and to give response accordingly. Even if the organization has competent procurement professionals it has to work on retaining them since significant number of respondents are not sure whether they will work or not for the next 2 years.

The organization has to give training for newly joined staffs before they start the actual job, since most of the employees do have health-related educational background with limited knowledge on procurement. So, all staffs have to be equipped with courses of procurement and supply chain management courses, since employee satisfaction has a positive and significant effect on procurement.

The organization has to keep checking and updating the specification of items to be procured, since specification has a positive and significant effect on procurement performance.

Lastly the organization has to work on professional ethics of its employees by giving trainings and by taking appropriate disciplinary actions whenever a violation of the code of ethics occurs.

The sample was drawn from only EPSA procurement staffs that is from three directorate, thus this study may be limited in its generalization of the findings. It can be replicated with a larger, more representative sample. It is also recommended that this study can be replicated in different public sectors within Ethiopia which participate in similar business as of EPSA.

Reference

- 1) Anane, A., Adoma, V. and Awuah, G., 2019. The effect of procurement practices on service delivery: a case study of VRA, Ghana. *Asian Journal of Economics, Business and Accounting*, pp.1-23.
- 2) Eliah A. Eliah, Haruna Issa Athumani. 2020, THE INFLUENCE OF STAFF COMPETENCY ON PERFORMANCE OF PROCUREMENT MANAGEMENT UNITS IN TANZANIAN TRAINING INSTITUTIONS: CASE STUDY OF VOCATIONAL EDUCATION AND TRAINING AUTHORITY, *International Journal of Economics, Commerce and Management*.
- 3) Eltantawy, R.A., Fox, G.L. & Guinipero, L. (2009). Supply management ethical responsibility: reputation and performance impacts. *An International Journal*, 14 (2) pp. 99–108.
- 4) ETHIOPIAN PHARMACEUTICALS SUPPLY AGENCY (EPSA) Tender Management Lead Time Analysis (2017-2019)
- 5) FDRE proclamation number 553/2007
- 6) Fitzgerald, K.R., 2002. Best practices in procurement. ASCET—Achieving Supply Chain Excellence through Technology, 4.
- 7) Ghana, the Public Procurement Act (Act 663) 2003
- 8) Harriet MUTESI and Dr Ernest SAFARI, 2021, The Impact of Staff Competence on Procurement Performance In Public Procurement In Rwanda A case of Rwanda Public Procurement Authority, *International Journal of Advanced Scientific Research and Management*, Volume 6 Issue 7.
- 9) Jackline Akoth Odero, Shitseswa E. Ayub, 2017, EFFECT OF PROCUREMENT PRACTICES ON PROCUREMENT PERFORMANCE OF PUBLIC SUGAR MANUFACTURING FIRMS IN WESTERN KENYA, *International Journal of Management Research & Review*, Volume 7/Issue 4/Article No-15/521-535.
- 10) Japheth Ocharo Kiage., 2013. Factors Affecting Procurement Performance: A Case of Ministry of Energy, *International Journal of Business and Commerce* Vol. 3, No.1.
- 11) Jeptepkeny, P., 2015. Effects of Procurement Procedures on project performance: A case study of light construction projects at Kenya Ports Authority, Mombasa. *European Journal of Logistics Purchasing and Supply Chain Management*, 3(1), pp.1-11.

- 12) Karanja, M.K. and Kiarie, D., 2015. Influence of tendering practices on organization performance in private sector in Kenya: a case study of Guaranty Trust Bank Kenya Ltd. *International Journal of Business & Law Research*, 3(2), pp.44-60.
- 13) Karimi, K.J. and Odari, S., FACTORS AFFECTING THE IMPLEMENTATION OF PUBLIC PROCUREMENT PROCESSES IN KENYA: A CASE STUDY OF THE MERU COUNTY GOVERNMENT PROCUREMENT DEPARTMENT.
- 14) Kazibwe, N., 2014. *Critical Success Factors for Out Sourced Distribution Services and the Performance of National Medical Stores, Uganda* (Doctoral dissertation, Uganda Management Institute).
- 15) Kevin Moindi Omai.,2013. DETERMINANTS OF ELECTRONIC PROCUREMENT ON SUPPLY CHAIN PERFORMANCE: A SURVEY OF TEA FACTORIES IN KISII COUNTY-KENYA. *INTERDISCIPLINARY JOURNAL OF CONTEMPORARY RESEARCH IN BUSINESS*, VOL 4, NO 12.
- 16) Korir Taaita, Iravo Mike, Berut Zipporah., 2016 EFFECTS OF SUPPLIER EFFICIENCY ON PROCUREMENT PERFORMANCE IN KENYA SEED COMPANY, KITALE, KENYA., *International Journal of Recent Research in Commerce Economics and Management (IJRRCEM)*, Vol. 3, Issue 4, pp: (192-214).
- 17) Krop, E. and Iravo, M.A., 2016. Effects of supplier selection on performance of procurement function in public sector: A case of West Pokot County government. *International Academic Journal of Procurement and Supply Chain Management*, 2(2), pp.51-73.
- 18) Likert, R. 1932. A Technique for the Measurement of Attitudes. *Archives of Psychology*, 140,
- 19) Makali Juliet Maria, Wainaina Githii, Ombati Ogoro Thomas, 2018. Ethics and Procurement Performance of Humanitarian Organizations in Kenya. *American Journal of Industrial and Business Management*, 8, 833-849
- 20) Maurice Waswa Muya, Susan Wanjiru, Dr. Evelyn Datche, 2019. Effects of Tender Management Practices on Procurement Performance at Kenya Ferry Services. *INTERNATIONAL JOURNALS OF ACADEMICS & RESEARCH* ISSN: 2617-4138 *IJARKE Business & Management Journal*, Vol. 1, Issue 4

- 21) Mokogi, W.N., Mairura, C. and Ombui, K., 2015. Effects of tendering practices on the performance of commercial state owned enterprises in Nairobi County. *International Journal of Scientific and Research Publications*, 5(6), pp.2250-3153.
- 22) Mrema, A & Lyimo, B. J. (2019). Influence of tendering process on organization performance, a case of the Nelson Mandela African Institution of Science and Technology. Olva Academy – School of Researchers, Vol. 2, Issue 3.
- 23) Munyaneza Robert, Dr. Patrick Mulyungi, 2017, The Effect of Supplier Appraisal on Procurement Performance in Government Ministries in Rwanda; A Case Study of Mininfra, *International Journal of Science and Research (IJSR) ISSN: 2319-7064*
- 24) Nichols P. Regulating transnational bribery in times of globalization and fragmentation. *The Yale Journal of Internal law*. 2002; 24(1):257-304.
- 25) Odero, J.A. and Ayub, S.E., 2017. Effect of tendering practices on procurement performance of public sugar manufacturing firms in Western Kenya. *International Journal of Management Research and Reviews*, 7(4), p.521.
- 26) Odhiambo, A.C. and Theuri, F.S., 2015. Effects of Public Procurement Processes on Organization Performance. *International Journal of Scientific and Research Publications*, 5(9), pp.1-6.
- 27) Oloo, O., Atambo, W. and Muturi, W., 2017. Effects of Tendering practices on the Performance of Public Hospitals in Kenya: A comparative study of Hospitals in Homabay and Kisii Counties. *International Journal of Social Science and Information Technology*, 3(2), pp.1899-1916.
- 28) Omai, K.M., 2013. Determinants of electronic procurement on supply chain performance: a survey of tea factories in Kisii County-Kenya. *Interdisciplinary Journal of Contemporary Research in Business*, 4(12), pp.399-425
- 29) PUBLIC PROCUREMENT MANUAL, 2011
- 30) Rehmatulla N, Smith T, Tibbles L. The relationship between EU's public procurement policies and energy efficiency of ferries in the EU. *Marine Policy*. 2017; 75:278-289.

Annexes I: QUESTIONNAIRE

Addis Ababa University

College of business and Economics

School of commerce

Questionnaire on assessment of the effects of procurement management practices on procurement performance.

This questionnaire has been designed for academic use only. It aims to establish the effect of tender management practice on procurement performance. Please note that the data that you provide will be handled with utmost confidentiality and privacy. Thank you for your consideration.

➤ Don't write your name.

Part I: General Information and Demographic background of respondents Please tick (✓) or provide your own answers where applicable.

1. Gender Male Female

2. Age

18-25 26-35 36-45 Above 46

3. Educational background

Certificate Diploma Degree Masters Others (specify) _____

4. Years of Experience in your company

0-<3 3-<7 7-<10 10-<13 >13

5. Field of study

Pharmacist

Laboratory technologist

Biomedical Engineer

Other (specify) -----

6. What is your position in this organization?

Procurement officer

Procurement coordinator

Procurement Director

Others (please specify) _____

Part II: Main Questionnaire.

Please rate to what degree you agree on the following statements regarding procurement management practices and its effect on procurement performance. The scale below will be applicable: 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree

SN	Professional Ethics	1	2	3	4	5
1	The organization has a zero tolerance to acceptance of gifts of any kind.					
2	Information access must meet ethical guidelines, contractual obligations and government regulations.					
3	Your organization has developed a written code of ethics that outlines what is considered ethical and unethical behavior					

Effect of procurement management practices on procurement performance

4	There no a limited nominal value to which gifts should not be exceeded.					
5	One's level of education determines the understanding and practicing of ethical behavior.					
6	When a violation of the code of ethics occurs, the organization takes appropriate disciplinary action on a consistent basis.					
SN	Supplier selection and relationship	1	2	3	4	5
1	EPSA conduct regular meeting and discussion with potential suppliers to improve their performance.					
2	The procurement practice of EPSA facilitate in getting technically competent suppliers					
3	Suppliers' production plan considers the EPSA's strategic goals.					
4	EPSA has appropriate metrics to measure and manage supplier's performance.					
5	EPSA's purchasing power is attractive for suppliers.					
6	EPSA gives credit/honor for best performing supplier.					
SN	Specification	1	2	3	4	5

Effect of procurement management practices on procurement performance

1	EPSA has clear specification for pharmaceuticals procured					
2	EPSA has platform to give clarification for any inquire.					
3	All tender requirements of EPSA are stated in the bidding document.					
4	EPSA respond timely when complain is raised in the procurement process.					
5	The tender evaluation criteria of EPSA is clear and understandable for suppliers					
6	Having clear specification is essential to decrease the cost of accusation					
SN	Employee satisfaction	1	2	3	4	5
1	I'm satisfied with my job					
2	There are opportunities for individual career growth within the organization					
3	Having satisfied employee is not useful in decreasing the lead time					
4	Having satisfied employee is not useful in decreasing the cost of accusation					
5	I'm planning to continue working for the organization for the next 2 years					
6	I would recommend this agency as					

Effect of procurement management practices on procurement performance

	a good place to work					
SN	Employee competency	1	2	3	4	5
1	There is a clear understanding of the mission and vision of the organization					
2	Having competent employee is useful in decreasing the lead time					
3	Having competent employee is useful in decreasing the cost of accusation					
4	All technical staff have taken enough supply chain courses (Certificate)					
5	Employee know in handling end to end the procurement practices					
6	Technical personnel's have enough knowledge in handling suppliers					
SN	Procurement policy	1	2	3	4	5
1	EPSA's procurement practice done in accordance with the procurement policy					
2	Employees are aware of the procurement policy of EPSA					
3	EPSA prepares procurement related trainings for newly joined staffs before they start the procurement job.					
4	EPSA's procurement practices ensures that procurement policies					

Effect of procurement management practices on procurement performance

	are strictly followed throughout the process					
5	Procurement policy is a constraint in the procurement practices					
SN	Lead time	1	2	3	4	5
1	Suppliers deliver awarded products fully on time.					
2	Suppliers usually submit the required documents timely.					
3	Lead time usually achieved					
4	Suppliers are responsive for emergency order of EPSA.					
5	Local agents of principal suppliers are responsive to facilitate the process between the two parties.					
6	L/C(letter of credit) extension request is the major cause of stock out for EPSA.					
7	Incomplete shipment document is one of the causes of long procurement lead time.					
SN	Cost of accusation	1	2	3	4	5
1	Extended lead time has increased the cost of accusation					
2	Failing to follow the procurement policy during procurement increases the cost of accusation					
3	Good specification will have a positive effect on the total cost of					

Effect of procurement management practices on procurement performance

	accusation					
4	Effectively managing the relationship with supplier is one way of decreasing the total cost of ownership					
5	By increasing employees' satisfaction its possible to decrease the total cost of ownership					
6	Having professionally competent employee means EPSA will get pharmaceuticals at lowest possible total cost					
7	Professionally ethical employee will contribute its part in having pharmaceuticals at a reasonable cost					