



School of Commerce

**THE EFFECT OF PROCUREMENT PRACTICE ON ORGANIZATIONAL
PERFORMANCE: THE CASE OF ETHIOPIAN DEFENSE FORCE
HIGHER EDUCATIONAL INSTITUTIONS**

BY

ARGACHEW ABEBE

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE AWARD OF THE DEGREE OF MASTER OF ARTS IN LOGISTICS AND
SUPPLY CHAIN MANAGEMENT, ADDIS ABABA UNIVERSITY, SCHOOL OF
COMMERCE**

ADVISOR

FESSEHA AFEWORK (Asst. Prof.)

**JUNE, 2021
HOLETA GENET**

Statement of Declaration

I, Argachew Abebe Melaku, declare that the thesis entitled “**The Effect of Procurement Practice on Organizational Performance in the case of Ethiopian Defense Force Higher Educational Institutions**” is my original work. I did this study independently with the advice and help of my research adviser Fesseha Afework (Asst. Prof.). Furthermore, this research has not been submitted to any other program or university and that all sources of information used have been properly acknowledged.

Declared by: Argachew Abebe Melaku

Signature _____ Date _____

This letter certifies that Argachew Abebe Melaku completed his research work on the topic of “**The Effect of Procurement Practice on Organizational Performance in the case of Ethiopian Defense Force Higher Educational Institutions**”. The work is unique and qualifies for the Master of Arts in Logistics and Supply Chain Management award.

Advisor: Fesseha Afework (Asst. Prof.)

Signature _____ Date _____



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BY

ARGACHEW ABEBE

APPROVED BY BOARD OF EXAMINERS

Fesseha Afework (Asst. Prof.)

Advisor

Signature

Date

Shiferaw Mitiku (Doc.)

Internal Examiner

Signature

Date

Nakachew Bashu (Doc.)

External Examiner

Signature

Date

Acknowledgements

First and foremost, I want to thank the Almighty GOD for giving me the inspiration to start and patience to finalize this thesis work. Secondly, I want to extend my honest gratitude to my advisor, Asst. Prof. FESSEHA AFEWORK for his constructive advice, commitment, encouragement and valuable guidance, positive suggestions and critical comments, and for being endlessly excited from the beginning to the end of the thesis. Furthermore, I am also thankful to all procurement staff of Ethiopian Defense Force higher educational institutions, for their cooperation in sharing data, filling out questionnaires, commitment for an interview and providing precious information concerning the procurement practice in their organization. Lastly, but not least, I would like to express thanks for my family, friends and colleagues, for their love, support, tolerance and encouragement throughout the study.

Table of contents

Statement of Declaration.....	i
Acknowledgements.....	iii
Table of contents.....	iv
List of Tables	vii
List of Figures.....	viii
List of Acronyms and Abbreviations.....	ix
Abstract.....	x
CHAPTER ONE.....	1
INTRODUCTION	1
1.1 Background of the Study.....	1
1.2 Background of the study area.....	2
1.3 Statement of Problem	2
1.4 Research Questions	4
1.5 Objectives of the Study	4
1.5.1 General Objective.....	4
1.5.2 Specific Objectives.....	4
1.6 Significance of the Study.....	4
1.7 Scope of the study	5
1.8 Limitation of the study	5
1.9 Operational definitions.....	6
1.10 Organization of the Study	7
CHAPTER TWO.....	8
RELATED LITERATURE REVIEW	8
2.1 Theoretical Framework	8
2.1.1 Principal-Agency Theory (PAT).....	8
2.1.2 Theory of Legitimacy	9
2.1.3 The Institutional Theory	9
2.2 Theoretical Literature Review.....	10
2.2.1 Procurement Practices	10
2.2.2 Organizational Performance	12
2.2.3 Challenges of Procurement Practices	14
2.3 Empirical Literature Review	15
2.4 Identified Literature Gap	17

2.5 Conceptual Framework	18
CHAPTER THREE	19
RESEARCH METHODOLOGY	19
3.1 Introduction	19
3.2 Description of the study area.....	19
3.3 Research Approach.....	19
3.4 The Research Design.....	19
3.5 Target Population and Sample.....	20
3.6 Data Sources and Method of Data Collection Instrument.....	20
3.7 Data Collection Procedure.....	21
3.8 Data Analysis Methods	22
3.9 Validity Test	22
3.10 Reliability Test.....	22
3.11 Ethical Consideration	23
CHAPTER FOUR.....	24
RESULT AND INTERPRETATION	24
4.1. Introduction.....	24
4.2 Demographic Profiles of Respondents	24
4.3 The degree to which procurement practices are executed in selected institutions	27
4.3.1 Procurement Planning.....	27
4.3.2 Procurement Controlling	29
4.3.3 Procurement Monitoring.....	30
4.3.4 Training Workforce	32
4.3.5 Inventory Management.....	33
4.3.6 Summary of findings of adoption of procurement practices	35
4.4 Procurement challenges.....	38
4.5 The impact relationship of procurement practice on organizational performance	39
4.6 Correlation Analysis.....	40
4.7 Tests for the Model Assumptions.....	42
4.7.1 Test for Multicollinearity.....	42
4.7.2 Test of Normality.....	43
4.7.3 Model fit	44
CHAPTER FIVE	47
SUMMARY, CONCLUSION AND RECOMMENDATIONS	47

5.1 Introduction	47
5.2 Summary of the Findings	47
5.2.1 Examining the adoption of procurement practice	47
5.2.2 The impact relationship between independent and dependent variables	48
5.2.3 Challenges of procurement practice	49
5.3 Conclusion.....	49
5.3 Recommendations	50
5.4 Suggestions for Further Research.....	52
APPENDIX I	xi
APPENDIX II	xviii
APPENDIX III.....	xix
APPENDIX IV.....	xxi

List of Tables

Table 1: Target Population.....	20
Table 2: Reliability of Pilot Test Result	23
Table 3: Reliability Test of Final Result.....	23
Table 4: Demographic Profiles of Respondents	24
Table 5: Interviewees' General Information	26
Table 6: Descriptive Statistics for Procurement planning items.....	27
Table 7: Descriptive Statistics for Procurement controlling items	29
Table 8: Descriptive Statistics for Procurement monitoring items	31
Table 9: Descriptive Statistics for training workforce items	32
Table 10: Descriptive Statistics for Inventory Management items.....	34
Table 11: summary of findings of adoption of procurement practice	35
Table 12: Descriptive Statistics for Organizational Performance items.....	35
Table 13: Descriptive Statistics for Procurement challenges items.....	38
Table 14: The impact relationship between procurement practice and organizational performance items.....	39
Table 15: Correlation Analysis	41
Table 16: Test for Multicollinearity.....	42
Table 17: Test of Normality.....	43
Table 18: Model Summary	44
Table 19: ANOVA	44
Table 20: Significance and Distribution of Coefficients	45

List of Figures

Figure 1: Conceptual model.....	19
Figure 2: Histogram and p-p plots show a normal distribution	43

List of Acronyms and Abbreviations

IM	- Inventory Management
LT	- Legitimacy Theory
M/G/H/A/M/A	- Major General Hayelom Araya Military Academy
NCO	- Noncommissioned Officer
OP	- Organizational Performance
PAT	- Principal-Agency Theory
PM	- Performance Measurement
PP	- Procurement Practice
PC	- Procurement Controlling
PM	- Procurement Monitoring
SCM	- Supply Chain Management
SPSS	- Statistical Package for Social Sciences
TWF	- Training Workforce

Abstract

Procurement practices are fundamental activities in governmental and other community sectors because procurement procedure is commonly a serious part of organizations' everyday expenses. The relationship of procurement to organizational performance, in particular, makes the acceptance of excellent practices to the success of organizations. This research required to study the effect of procurement practices on the organizational performance of Ethiopian Defense Force higher educational institutions to examine the procurement practices, determining the relationship between procurement practices and organizational performance, and finally identifying the challenges of procurement practices. The researcher used a descriptive and explanatory research design with the use of cross-sectional data. The target population was 68 selected Ethiopian Defense Force higher educational institutions procurement department only. Census sampling was applied because the target population is small in size. A questionnaire and interview were employed to collect primary data. From total respondents, 64 questionnaires were collected and analyzed representing a 94.1% response rate which was considered enough. A descriptive statistics data analysis and regression model presents the findings in tables and figures. The result showed that the Ethiopian Defense Force higher educational institutions were not well-practiced procurement and had not seen an improvement in their organizational performance. The effect of procurement practices on organizational performance in selected institutions was considered three organizational performance metrics; quality of goods/services, cost reduction, and lead time. The results indicated that procurement practices are positively related to organizational performance. The study also identified that the most challenges in the implementation of procurement were lack of proper training/inadequate human resource development and lack of resources to automate the procurement system. The researcher recommended that the selected institutions should give attention to all aspects of procurement practice to enhance better organizational performance.

Keywords: Procurement Practices, Organizational Performance, Institution

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Procurement practices are critical tasks in the government sector because the procurement practice is commonly a vital component of open expenditure in institutes. Carr and Smeltzer (1997) state that procurement practices comprise the events taken by the procuring institute to find the way and put together its performance to raise efficiency by lowering cost and time. According to Weele (2010), procurement is the performance of choosing retailers, strategic selection, making payment terms, compromise of agreements, and tangible procuring of goods. Lim (2014) defines procurement as the process of acquiring or procuring critical commodities, services, and work for an organization.

In current institutional acceptance success, one of the most significant practices is the linkage between procurement and organizational performance. Procurement is beginning to be adept in numerous businesses around the world, according to Hussein and Shale (2014). Kabega *et al.* (2016) stated that various government entities in both developing and developed countries have established procurement transformations based on rules and laws, but the fundamental issue has been regulatory compliance. Public organizations are set up to be big financiers, according to Roodhooft and Abbeele (2006) and they contract with enormous financial plans. As stated by Basheka and Bisangabasaija (2010), public procurement is acknowledged as a crucial component of service delivery and accounts for a significant portion of total costs.

According to Baily (2011), integrating procurement practices into different institutional activities and support roles for instance balancing manufacture by new instructions, demand arrangement, and delivery with consumer necessities has assisted various public institutions significantly develop their performance. As stated by Keith *et al.* (2016), strategic procurement procedures can impact the performance of enterprises and countrywide economies in most cases. Singhal (2011) on the other hand observed that any disturbance in procurement practices had a negative impact on institutional performance. According to Thai (2010), poorly coordinated procurement processes harm an organization's reserve prices and effectiveness over time and should be addressed more thoroughly by supply chain stability planners. Most important governmental agencies, such as the Ethiopian defense force higher educational institutions, must adjust to the

existing dynamic purchasing environment; procurement is essential because the entire procurement process can help to improve the responsiveness of the institution's procurement system.

Procurement has long been a neglected issue in Ethiopia, as it has been in other developing countries. As a result, it is reasonable and essential to research this area, and this study focused on evaluating the effect of procurement practice on organizational performance, primarily in the Ethiopian defense force higher educational institutions procurement process and implementation as a case study, and identified some challenges confronting the implementation of the procurement practices.

1.2 Background of the study area

The selected Ethiopian defense force higher educational institutions are colleges and training centers which are found under the Ethiopian Ministry of National Defense force which was established at different times. Ethiopian Military Academy has located in Holeta town west of Addis Ababa far around 40 km and it was established in 2002. Defense Command and Staff College has located in Addis Ababa around Sidist kilo and it was established in 2006. The Defense war college has also found in Addis Ababa around Kore and it was established in 2018. The mission of these higher educational institutions was to produce well-qualified and capable tactical, operational, and strategic level leaders, for all defense force units by providing quality education and training. The graduates of the Ethiopian Military Academy are first-line or junior officers. The Defense command and staff college graduates are higher operational leaders, whereas the Defense war college graduates are senior officers at strategic levels. These three higher educational institutions have their procurement departments that provide services like purchasing both consumable and non-consumable materials, contractual agreements, and relevant activities based on the mission of their institution.

1.3 Statement of Problem

As stated by Keith *et al.* (2016), Procurement is considered to be a part of the management of planning principles that focus on achieving effective performance competence in government organizations. In practice, a well-designed and implemented procurement method can serve as a cost-effective tool for ensuring national progress. According to Wambui (2013), some

developing countries are facing a dynamic procurement revolution, which adds to the complexity of procurement and performance, as well as internal and external dealings. Jibrin *et al.* (2014) stated that the major issue in the present procurement business is non-compliance and a humiliating execution procedure, rather than limited regulation models.

Wanyonyi (2015) discovered that many procurement activities in developing countries continue to be neglected, lack of proper direction, poor coordination, slow due to a large amount of bureaucracy, lack of open competition and transparency, lack of accessibility, varying levels of corruption, and a lack of well-trained and qualified procurement officers capable of conducting and managing procurement processes.

Different researchers have attempted to address several of the problems of public procurement in some public organizations in Ethiopia, as procurement plays a key role in performance improvement and the achievement of organizational objectives by providing the right quality of inputs for users at the right time and cost. Some of these studies include public procurement reform in Ethiopia: policy and institutional challenges and prospects by Yirga (2011); procurement planning and implementation effectiveness in Ethiopia by Anteneh (2015); procurement reform in Ethiopia: factors leading to effective public procurement implementation by Getnet and Tilahun (2014); and evaluation of procurement process at Addis Ababa Water and Sewerage Authority by Yonas (2014). As the same cases within the study area, some researches were attempted to conduct by different graduates at different times. For example, Assessment of budget management practices the case of M/G/H/A/M/A by Jibril Geriso (2017), The Effects of Mentoring on Military Personnel Retention: The case of Ethiopian Military Academies by Shewakena Aman (2015), The Effect of Recruitment & Selection Practice On Military Personnel Retention by Matiwose Belete (2019), The effect of conflict management on organizational performance the case of M/G/H/A/M/A by Mulate Sisay (2020). However, the researcher did not find the conducted researches on procurement practices in these institutions as far of searching. Thus, the researcher initiated to address and fills the knowledge gap in the literature concerning the effect of procurement practices like procurement planning, procurement monitoring, procurement controlling, training a workforce, and inventory management on the performance of selected Ethiopian defense force higher education institutions and answered the following research questions.

1.4 Research Questions

- 1 How procurement is being practiced in Ethiopian defense force higher educational institutions?
- 2 What is the relationship between the existing procurement practices (procurement planning, controlling, monitoring, training workforce, and inventory management) and the actual organizational performance on these areas in the Ethiopian defense force higher educational institutions?
- 3 What are the challenges of procurement practices in Ethiopian defense force higher educational institutions?

1.5 Objectives of the Study

1.5.1 General Objective

The major objective of this study is to assess the effect of procurement practices on the organizational performance of Ethiopian defense force higher educational institutions.

1.5.2 Specific Objectives

The specific objectives are:

1. To examine the Ethiopian defense force higher educational institutions' procurement practices.
2. To find out the link between the existing procurement practices (procurement planning, procurement controlling, procurement monitoring, training workforce, and inventory management) and the actual organizational performance on these areas in Ethiopian defense force higher educational institutions.
3. To find out the challenges of procurement practices at the Ethiopian defense force higher educational institutions.

1.6 Significance of the Study

One of the significance of this study was it could help the Ethiopian Defense force higher educational institutions' leadership bodies to prepare work plans related to procurement practices and find out some possible solutions for the probable challenges that may occur and the other significance of this study would be helpful to procurement department members because it would provide insight into how procurement practices influence the institution's performance and how difficulties in the procurement process can be minimized. It would be also helpful for the

selected higher educational institutions' procurement department to understand how the most effective delivery of goods/services increases their effectiveness and image by examining how organizational procurement practices add to their performance and how they can hamper performance. Moreover, the results of this study would aid those scholars and academics who are interested in conducting more research on performance based on procurement procedures.

1.7 Scope of the study

The research was conducted in Ethiopian defense force higher education institutions that provided quality education and training under the Ethiopian Ministry of National Defense and they are located throughout Ethiopia. Among the many higher education institutions found under Ethiopian Defense Force, the study was conducted on 3 selected institutions which were Ethiopian Military Academy, Defense Command and Staff College, Defense War College. The Ethiopian Military Academy is located in the special zone of Oromia, Holeta town, The Defense Command and Staff College is located in Addis Ababa around Sidist kilo and the Defense War College is located in Addis Ababa around Kore. These higher educational institutions were chosen based on their professional hierarchy and involvement in procurement activities (planning, controlling, monitoring, training workforce, and inventory management). Whereas the study's conceptual focused on the effects of procurement practices on organizational performance in selected higher educational institutions, the study's practical focus was on the effects of procurement practices on organizational performance in selected higher educational institutions to have effective and efficient procurement policies and processes, considering the following procurement practices planning, controlling, monitoring, workforce training, and inventory management. The investigation was limited in scope to the 2019/2020 fiscal year, which ran from July 2019 to June 2020.

1.8 Limitation of the study

In the study, some limitations occurred such as the lack of willingness of the respondents to fill out the questionnaires as well as providing the required data with care because the procurement practices were a sensitive work sector within the public. In addition some respondents were unable to return the questionnaire just on time.

1.9 Operational definitions

Procurement Practices

Procurement practices can be defined as activities that include procurement planning, procurement controls, procurement monitoring, and workforce training, and these were the foundation of this study, with inventory management included (Makabira & Waiganjo 2014).

Organizational performance

It is the actual outcomes of an institution or organization by anticipating aims and objectives in terms of cost reduction, quality goods/services delivery, and lead time. (Upadhaya, Munir & Blount 2014).

Military Academy

It is an education and training institution where officer cadets are trained and educated in military **science** and leadership to become 1st line officers (Unpublished Ethiopian Army education and training policy 2020).

Command and Staff College

It is a military education and training institution where higher officers receive staff training and education in military science and leadership (Unpublished Ethiopian Army education and training policy 2020).

Defense War College

It is a military education and training institution that trains senior military and civilian leaders, who can effectively analyze complicated security threats, give solutions and direction by creating well-organized cooperation with other national and regional security and intelligence forces (Unpublished Ethiopian Army education and training policy 2020)

Institution

It is an organization that was established for training and educational purposes such as college, academy, university, and other training centers within Ethiopian Defense Force. (Unpublished Ethiopian Army education and training policy 2020)

1.10 Organization of the Study

The study was organized into five chapters. The first chapter deals with the introductory part of the study including the background of the study and study area, statement of the problem, objectives of the study, research questions, the significance of the study, the scope of the study, limitations of the study, definitions of terms, and organization of the study. The second chapter is focused on the relevant literature review. The third chapter deals with research Methodology. The fourth chapter deals with the overall findings of the study which prevail about the effect of procurement practices on organizational performance in selected higher educational institutions. Finally, chapter five is concerned with a summary of major findings, conclusion, and recommendation part of the study.

CHAPTER TWO

RELATED LITERATURE REVIEW

This chapter examines a critical evaluation of literature by other academics and authors who have attempted to shed light on procurement procedures and organizational effectiveness. This chapter focuses on the theoretical evaluation of procurement practices and the issues that these procedures pose to an organization's performance. This section would also provide the empirical review and conceptual foundation.

2.1 Theoretical Framework

There are different types of theories that are related to the study. From those theories, the principal-agency theory, legitimacy theory, and institutional theory were addressed. Each of these theories is described in brief as follows:

2.1.1 Principal-Agency Theory (PAT)

According to Health Norman (2004), economists developed this model to address the problem of principals and agents, in which agents are convinced to perform a duty for the principle. The PAT is concerned with the agreement that is made for a person or agent to behave in the best interests of another (principal). The postulates and proposals of PAT are relevant to procurement and performance challenges. For example, the Defense force finance directorate, which is the principal of the Defense Force higher educational institutions, in this case, selects management (agents) to operate on their behalf. Accordingly, the procurement management of Defense Force higher educational institutions was given authority to make independent decisions on behalf of the Defense force finance directorate.

Buyers in agency relationships are likely to encounter potential hazards while monitoring supplier quality. By default buyers expect suppliers to deliver high-quality goods and services whereas providers may be unwilling to invest highly in quality. According to Zu and Kaynak (2012), the differences among buyers and suppliers inevitably lead to the two parties focusing only on their self-interests. PAT defines how procurement managers perform procurement activities on behalf of government agencies. If the principal and agent have a strained connection, it may have an impact on the link between the providers and organizations. Thus, the

study emphasizes this model to find out the procurement practices' function and the performance of institutions in the case of selected Ethiopian defense force higher educational institutions.

2.1.2 Theory of Legitimacy

This theory asserts as stated by Wilmshurst Frost (2000) that organizations have the authority to clarify their functions to their respective essential actors particularly if the organization is a public organization that should express its benefits to society. According to Suchman (1995), the LT is a broad assumption or view that any organization's operations are legitimate and feasible in a system based on societal ideas ethics characterization, and norms. The LT notion strongly suggests that the societal agreement among the government and public entities is in jeopardy of being abolished. In the perspective of procurement in governmental organizations such as the Defense Forces' higher educational institutions difficulties such as rejecting dishonesty and prejudice may arise affecting the use of legitimacy theory.

The study used legitimacy theory to see if procurement officials disclose procurement practices to improve their standing among key government stakeholders and the general public Procurement managers in Defense Force higher educational institutions may choose to legitimate and implement procurement techniques based on their states' or engaged sections' understanding. Nonetheless different public managers appear to have various ideals about public expectations and how their particular local authorities' agencies and still departments should meet those goals as viewed by society.

2.1.3 The Institutional Theory

Lowell's (1994) institutional theory which describes institutions as regulatory systems explains the impacts of external institutional influences on organizations Interest groups, public opinion, government agencies, courts, and professions are all involved in various actors in an environment that embraces the laws and norms established by institutions. The actors and organizational environment are referred to in this study as the norms that describe the players in the environment as well as the stress that these norms apply on some other stakeholders in the environment One of the institutional theory's strengths is its capacity to describe non-choice organizational behavior such as how organizations comply to norms without opposing them and perform public functions (Lowell Massachusetts 1994).

Institutions, based on Scott (2003), are invented of cultural-cognitive and regulative factors that, when combined with linked activities and resources provide a sense to live. The three foundations of institutions, according to the author, are regulatory, normative, and cultural cognition. With stress on compliance, the regulatory pillar stresses the employment of regulations, laws, and authorities as enforcement methods. The normative support refers to rules that govern the way things should be made and the values that should be prioritized. The cultural pillar is based on common understanding (beliefs).

Therefore, even if the above three stated theories are a very important foundation for this study the Principal-Agent Theory (PAT) is the base model employed to determine the formation of this study because the study is conducted in a public organization and acts as a principal (procurement managers) and agent (Defense Force finance directorate) in the process of budget allocation, monitoring, controlling, and finally auditing from the side of government body and planning, procuring, delivering for users, and reporting for the superior body from the side of procurement managers.

2.2 Theoretical Literature Review

2.2.1 Procurement Practices

Procurement practices as defined in this study include activities that include procurement planning, controlling, monitoring, training workforce, and inventory management. According to Kaufmann (2009), an institution's procurement functions are governed by practices and actions that are completely different resulting in strategic and operational procedures.

Purchasing goods and services throughout a variety of channels necessitates the use of organizational procurement. According to Kierkegaard (2006), government procurement procedures can be governed by three main beliefs: all parties attracted to have a similar chance to offer tenders, all inquiries must be treated equally to eliminate discrimination based on the contractor's nationality or the source of goods or services, and all-losing and award processes must include the public to eliminate prejudice based on the contractor's nationality or the source of the goods or services, all inquiries must be treated equally, as well as all-losing and award procedures ought to include the use of objective criterion. Proper procurement practice application provides several benefits to a company and its strategic initiatives including the

quacking and flow of essential information among buyers and suppliers as well as the ability to respond rapidly to highly competitive fresh market entrants (Dong, Xu & Zhu 2009). As making it easy to match orders conversely improves financial control, procurement methods provide operational benefits such as improved audits and security (Rubera & Ordanini 2008).

a) Procurement Planning

The foundation of a work institution is proper project planning and assignment of individual roles. As stated by Brown and Hyer (2010), planning entails determining the main function, scope description, client necessities, and classification of procurement activities, time estimation regarding the delivery of goods/services as quoted and scheduled, and roles assignment, among other things. The component of planning can be answering the questions of expectations of organizational results and the organization's wish to achieve by the successful implementation of the project.

To comprehend the critical role that planning plays in the effective implementation of projects solid planning preparations are required which could include well-detailed process scheduling of implementation stages and job appropriateness milestones re-planning as well as backup positions (Frese & colleagues 2003). According to Saunders (1997) observation, planning can also involve forecasting which assists in the expenditure prediction process and profit and loss account. Finally, in my belief, the role of planning in procurement is to defend any delays in public project completion and avoid budgetary related situations which may be uncertain holdbacks to project accomplishment.

b) Controlling and Monitoring

Brown and Hyer (2010) described how to regulate and monitor the system tracking process using a checklist that ranges from simple to complex to detect changes in the unique plan. They referred to task control as decisions actions and procedures that are related to task implementation variations controlling and monitoring activities necessitates a shift in the task management process that allows for suitable variance. Control and monitoring are critical to implementation success because they force a regular comparison of aims and performance (Chandra 2008). Therefore projects of procurement monitoring contract systems tend to have a

significant impact on an individual's ability to make decisions to de-escalate or increase their commitments.

c) Inventory Management

Inventory management is a complex decision-making process that requires analysis of multiple criteria parameters, which in practice are usually non-deterministic. Inventory Management is an interdisciplinary concept (Larson & Halldorsson 2014). Inventory management research is vital in procurement as inventory programs can make inventory commitment more efficient and improve customer service.

Warehousing and storage records ought to be figured out inside the acquisition cycle and their supervision of the economy to have an opportunity to be harmonized for records that relate to economic projects of procuring procedures. The records acquisition management officers need supervision to make any duties easy for the management of storeroom records. It might be vital that store records require being properly kept in an organized way. It will be especially dominant to have continuous harmonization of hard work within the officials that are answerable for managing the economy for procurement financial records. The records administration branches settled at the side of procurement must give adequate course and power in the management of storage records close to various records in various entities (PPOA 2008).

d) Training Workforce

The procurement workforce ought to be qualified on the particular importance of ethics in their job and the way they can get direction while faced with challenges. It required being understandable in the code of conduct how procurement workers should act under moral ideals. When presented with a conflict of interest, training programs and seminars, according to Handfield (2006), may have a favorable impact on ethical employee behavior. The majorities of organizations, according to Chizu (2012), have clerical purchasing and supply operations.

2.2.2 Organizational Performance

Upadhaya, Munir, and Blount (2014) say that organizational performance is the actual results of an organization and its future goals and objectives. Reduced cost quality of goods/services delivered productivity and lead-time are all indicators of organizational effectiveness (Mchopa, *et al.* 2009). According to Hamon (2003), Performance Measurement (PM) is the most

important aspect for good management and recognizing and quantifying the impact of Supply Chain Management (SCM) on it improves organizational performance. However, in supply chain management studies the topic of performance does not receive enough attention. Financial targets met and labor force satisfaction can be used as indications of an organization's performance; similarly, according to Ho. (2008), organization performance can be measured based on the efficacy and efficiency of the institution. In all, the performance measures procurement practices have a positive relationship or generally affect the level of organizational performance.

a) Cost reduction

Cost reduction according to Asaolu and Nassar (2007) is an expression that refers to a conscious and proactive endeavor to increase efficiency. It manifests itself in a variety of ways including increased production and waste reduction. According to Lucey (1996), cost reduction is a concept that seeks to reduce expenses from a previously established norm or standard without sacrificing the project's or service's quality.

b) Quality of service delivered

According to Yusoff, Ismail, and Newell (2008), service quality is a major priority in the government-private sector and service industries and businesses. For service-oriented firms competition to improve service quality is now acknowledged as a crucial strategic concern. An organization with a high level of service quality leads to a high level of customer satisfaction as a forerunner to generating a continuous competitive advantage (Guo, Duff & Hair 2008). Customer happiness, market success, new offerings, and staff connections are all factors considered when evaluating an institution's performance (Delaney *et al.* 2006).

c) Lead time

According to Elsmar.com (2004), People throughout the world expect items at the lowest feasible price. They place a higher emphasis on quality and delivery time in today's highly competitive global market and businesses are striving to gain a competitive advantage and increase profitability by cutting costs, enhancing the quality, and increasing delivery. Li. (2000) investigated the effects of lead time which is defined as the time between receiving a customer's order and receiving the supplied items.

2.2.3 Challenges of Procurement Practices

According to Tukuta and Saruchera (2015), the major problems which are faced by professionals of procurement in the upcoming country include lack of sound and effective regulatory framework, poor corporate governance, procurement costs, technological developments, reduced quality, and damaged goods.

a) Poor Corporate Governance

The satisfaction of the effort is determined by the individual's viewpoint and his or her outcome should correspond to the anticipated results (Thierry Van & Eerde 1996). Lack of competent corporate leadership can result in significant worker turnover which is common in all economic sectors negatively affecting the stability and development of the firm (Chiboiw, Chipunza & Samuel 2010). Employees' expectations for salary payment and incentive may not be achieved as evidenced by low performance and excessive labor turnover. According to Howard and Miller (1993), the comparison of employees' input-output ratios should be made across various regions that approve of inequity. Poor corporate governance results in employees quitting their jobs due to a lack of equity and justice.

b) Lack of Sound and Effective Framework of Regulation

Procurement is characterized by non-supportive policies that act as roadblocks to the acquisition of products and services (Tukuta & Saruchera 2015). Complicated legal and policy frameworks can jeopardize procurement effectiveness (Bolton 2006).

c) Development in Technology

The technical process is dynamic and as a result, technical change is associated with significant startup costs. Finance constraints are a major impediment to capital projects, particularly in developing nations. The majority of procurement activities in the modern world, according to Savage Fransman and Jenkins (2013), are conducted online. According to Schapper *et al* (2006), organizations in third world nations are still lagging behind. Non-adoption and poor technical interchange in third world countries were caused by weak strategic alliances insufficient infrastructure and change aversion.

d) Cost of Procurement

Order handling and processing results in the placement of stock orders based on cost disparities. As a result, procurement costs include processing costs in various departments', supplier orders transmission, transportation of orders left out in goods, material processing purchase, and order handling at the point of receivership (Kapoor & Kansal 2003). Hunja (2003), on the other hand, observed that the failed decision demanded targets of goods and services in the organization's receiving point.

e) Reduced Quality

In the presence of ideal systems, goods, and processes, poor quality costs and costs of bad quality may become extinct. In the year 1987, international business machine quality specialists popularized the book *Poor Quality Costs* by James H. Harrington (William 2010). International business machine companies embarked on the process of studying their costs of quality and came up with this idea in the 1960s (Zu Kaynak 2012). Feigenbaum's reference to "cost of quality" as a precise technicality on the other hand makes it simple for the uninitiated to believe that production is based on higher quality. Harrington used the term "poor quality costs" emphasizing that the idea that firms spend on product discovery and avoidance is more than a cost offset that decreases product failures (Watson & Howarth 2012).

f) Damaged Goods

The primary basic reasons for procurement errors, particularly in the case of rapidly growing firms, are decisions made based on emotions, timely purchase, supplier preferences, and placing orders over the phone. Policymakers ensure that all orders are placed simultaneously at the start of every particular organization. Ground hitting and running usually equates to ignoring the warning signs in the procurement process, which can result in inventory cost overruns before purchases are compensated through revenue streams. A stronger and more comprehensive procurement system needs more deliberate decision-making on urgent purchases (William 2010).

2.3 Empirical Literature Review

A variety of research on procurement practices and their effects on organizational performance has been undertaken both globally and locally. The researcher wanted to learn about the many

types of researches or studies that had already been done or written in the field to come up with opinions regarding what had been said about it. For this study, some studies from various authors were used to provide suggestions and even recommendations for further research. The following are the studies that are used by researchers.

2.3.1 The effect of Procurement Practices on Organizational Performance

Makabira and Waiganjo (2014) researched the title of “The role of procurement practices on performance of Kenya National Police Service in Makueni County” and discovered that Procurement practices such as development, controlling, monitoring, and training workforce played a great responsibility in the performance within the Kenya National Police Service.

Karanja and Kiarie (2015) researched Guaranty Trust Bank to indicate the impact of procurement practices on organizational performance in private scope. Their purpose was to demonstrate the effect of procurement practices on an organization’s performance in the private scope in Kenya. The study showed that procurement practices had a significant impact on the performance of private sector firms and helped in saving money that would have been lost. As a result, the private sector is not wasting time. Procurement planning was also identified as a significant factor in organizational performance in the study.

In Geneva, Ricarda (2016) investigated the impact of procurement practices in the electronic sector. His goal is to look into the impact of procurement procedures on the global electronics supply chain. He discovered that improving procurement processes is critical for a smooth and effective supply chain not only worldwide, but also regionally and locally.

The impact of procurement methods on the performance of Rwandan government building projects was investigated by Caritas, Julius, and Zenon (2016). The study's major goal was to look at the impact of procurement methods on the performance of Rwanda's public procurement administration. They discovered that procurement planning improves the performance of the Bugesera District Office construction. They claimed that positive performance in construction enterprises can be attained through procurement strategy and practices.

Roman (2017) discovered that some public procurement performances were found to be non-compliant with public procurement rules and regulations due to inefficiency, opaque

procurement processes, and a lack of understanding of rules and regulations, prompting responsible government authorities to commit to improving those specific areas of public procurement deficiencies.

2.3.2 Challenges of procurement practice

Yirga (2011) conducted a study on public procurement reforms in Ethiopia. The objectives of the study were to give a better insight into the challenges and prospects of the public procurement system and assess the nature and system of public procurement practices and the underlying factors that hinder public procurement activities in Ethiopia. The study was designed as descriptive unstructured interviews have been conducted with various stakeholders. In addition, the researcher employs different secondary data sources. As a result, the findings of this study revealed that the Federal Government's procurement system has undergone significant improvement. Strengthening the workforce of the Public Procurement Agency, making the legislation more comprehensive, and working with other stakeholders such as civil society organizations and the media on maintaining openness and combating corruption are among the study's recommendations.

Based on his research into public procurement planning and implementation, Abera Gelgelu (2016) contends that limited capacity in conducting needs assessments, describing needs, and late submission of requirements, insufficient staffing of procurement units in terms of number and skill required, and limited quality training in planning activities and procurement document preparation at each stage, lack of practice in the announcement of the annual procurement plan, a limited capacity in conducting a market survey, costing and scheduling procurement activities, contract management, and monitoring; shortage and turnover of qualified professional, limited practice in periodic review of effectiveness in planning and implementation of public procurement are among major challenges of the public procurement.

2.4 Identified Literature Gap

To sum up, many academicians agree that the procurement function is critical to any organization's success. Accurate application of procurement principles and processes, as well as a thorough grasp of these by public procurement practitioners, are essential for a successful public procurement outcome. According to the literature study, studies on procurement practices

and their advantages to the company have been conducted. The above-mentioned literature review largely focuses on Procurement Practices, which revealed several potential performance indicators. However, the study has revealed that there are various significant gaps in the present literature regarding the acceptance and adoption of procurement practice implementation. Ethiopia is one of the countries where procurement planning is a critical function that influences whether or not services are delivered effectively.

Various researchers have attempted to address some of the issues surrounding public procurement in Ethiopia and other nations. These include Yirga (2011)'s Public Procurement Reform in Ethiopia: Policy and Institutional Challenges; Anteneh (2015) assessed procurement planning and execution effectiveness in Ethiopia; Getnet and Tilahun (2014) published Procurement Reform in Ethiopia: Factors Leading to Effective Public Procurement Implementation, Yonas (2014) evaluated the procurement procedure at the Addis Ababa Water and Sewerage Authority; Walker and Brammer (2007) studied sustainable procurement in the UK public sector; Kabega, Kule, and Mbera (2016) studied the effect of procurement practices on the performance of public projects in Rwanda; and Makabira and Waiganjo studied the role of procurement practices on the performance of the Kenya National Police Service in Makueni County (2014).

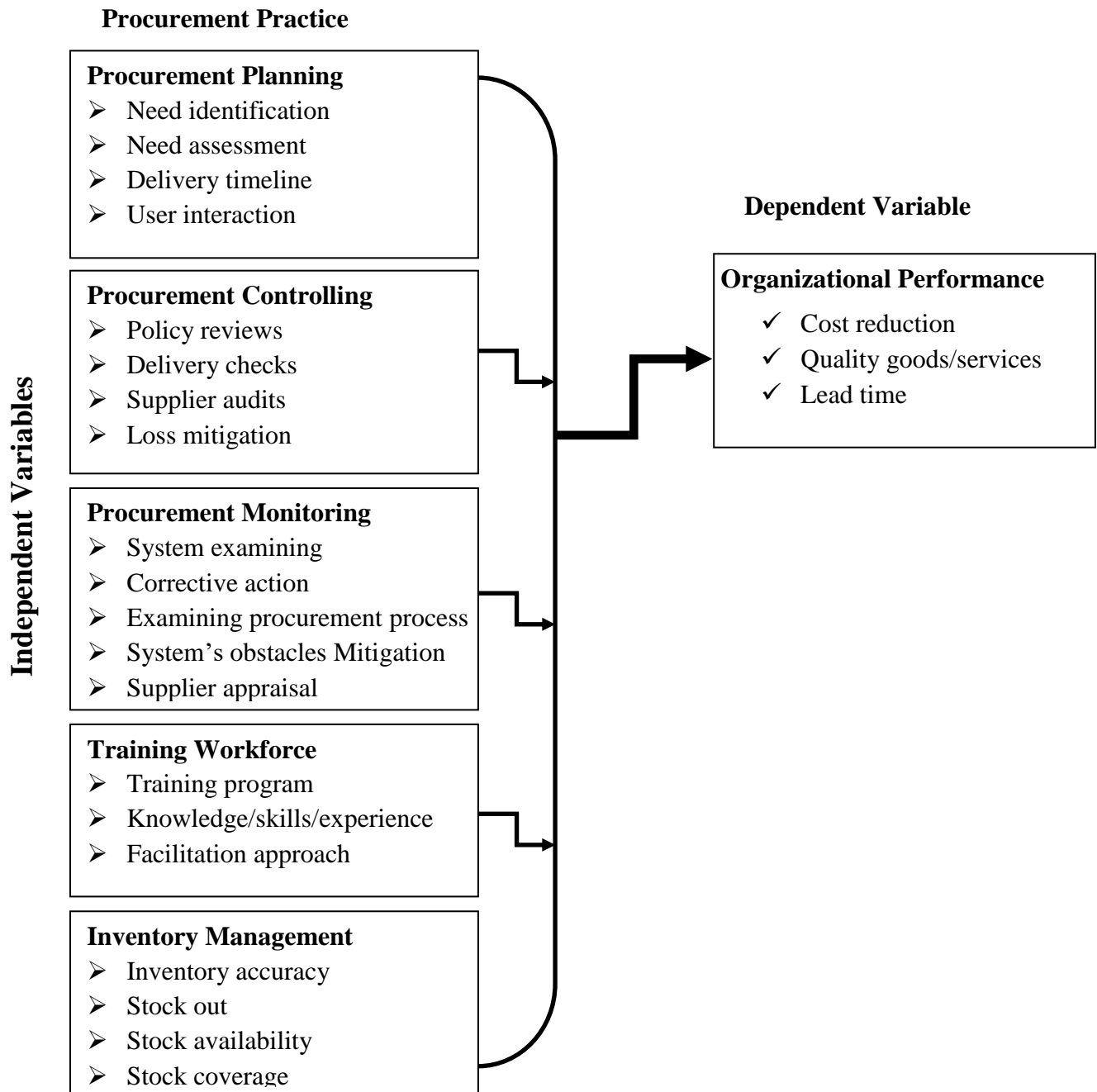
The researcher would assess how procurement practices affect the performance of selected Defense Force higher educational institutions. Because none of the previous studies had addressed the effect of procurement practices on the performance of these selected defense force higher educational institutions, the study has assessed the practices of planning, controlling, monitoring, workforce training, and inventory management, as well as their consequences on organization performance.

2.5 Conceptual Framework

A conceptual framework is a set of concepts and/or assumptions that act as a study map, showing the link among research variables (Mugenda & Mugenda 2008). It is used to demonstrate the link between independent and dependent variables. Figure 2.1 below shows the diagrammatical relationship among independent and dependent variables. The independent variables of this study are inventory management, training workforce, procurement monitoring, procurement controlling, and procurement planning. According to the literature, good inventory management,

workforce training, procurement monitoring, procurement controlling, and procurement planning can all lead to improved organizational performance. The dependent variable is organizational performance, which may be measured in terms of fulfilling goals through cost savings, service quality, and lead time.

Figure 1: Conceptual model



Source: Researcher, 2021

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology is very important because it helps the researchers to concentrate on the research problems and offers the overall structure for the processes that researchers should follow. It is also very crucial to get significant data to achieve the objectives of the study. Therefore this chapter presents the description of the study, the research approach design, data sources, data collection instruments and procedures, sampling design and sample size, data analysis methods, validity and reliability test and ethical considerations of the study.

3.2 Description of the study area

“The Effect of Procurement Practice on Organizational Performance” is the title of the study. Ethiopian Military Academy in Holeta Genet, Defense Command and Staff College in Addis Ababa, and Defense War College in Addis Ababa were the key data collection organizations for this study. The rationale for choosing those three higher educational institutions stems from their shared objective of developing multiple levels of military leaders at tactical, operational, and strategic levels for all defense force units through high-quality education and training. As a result, in their core aim and practice of procurement, they have a nature of mutuality with one another.

3.3 Research Approach

To collect and evaluate data effectively and efficiently, the researcher used both qualitative and quantitative research approaches. Using a qualitative method may quickly explain actual events simply and thoroughly. The quantitative method can also be used to do statistical analysis of numerical data.

3.4 The Research Design

A descriptive and explanatory research design was used in this study. Descriptive research is adequate for obtaining existing information on events to describe and explain them (Salaria 2012). To determine the relationship between dependent and independent variables, explanatory research was used. This study was well-suited for a selected research design since it aided in

determining the impact of procurement practices on the organizational performance of selected Ethiopian Defense Force higher educational institutions.

3.5 Target Population and Sample

The study was conducted on the entity of selected Ethiopian defense force higher education institutions that had a total workforce of 600 for the year 2020/2021 (each institution's human resource management). Under each institution, there were different functional departments such as command staff department, human resource management, logistics management, finance management, procurement department, education, and training department and other subsections and desks. However, the researcher only focused on the management body and procurement departments of the selected higher educational institutions as the study's target population.

Table 1: Target Population

No.	List of each institutions' procurement department	Total no. of employees in each institutions' department
1	Ethiopian Military Academy procurement department	26
2	Defense Command and Staff College procurement department	23
3	Defense War College procurement department	19
Total		68

Source: Each institution's human resource management, (2021).

According to Salganik (2006), while determining sample size, the three most important elements for getting crucial data from sample respondents must be considered. The degree of precision, confidence, or risk in the qualities being evaluated, and the degree of variability in the attributes being evaluated are all criteria that assist researchers to determine the appropriate sample size. In this particular study, Census sampling was used to collect data from the entire target population because the target population was small and it was easy to remove sample error as well as provide data on all of the individuals in the target population.

3.6 Data Sources and Method of Data Collection Instrument

This study employed both primary and secondary data. Secondary data were gathered from the institution's quarterly, half-yearly, and annual reports, as well as a review of the institution's procurement publications and literature on the issue. Systematic questionnaires with both closed

and open-ended questions, as well as a structured interview, were used to collect primary data. The questionnaire consists of demographic data and questions relating to research objectives. To increase the extent of information to be obtained from the respondents concerning procurement practices in those selected Ethiopian defense force higher educational institutions, the study used two types of data collection methods.

a) Questionnaires

In this study, structured questionnaires were prepared in the form of a Likert scale to collect the required data concerned on the effect of procurement practice on organizational performance specifically: procurement planning, controlling, monitoring, training workforce, and inventory management and their factors and challenges that institutions faced during the process of implementing procurement practices. For this purpose, the researcher used the standard instrument. According to Creswell (2003), such a data collecting instrument was developed to capture vast amounts of data without putting respondents under unnecessary stress. The Questionnaire was prepared before the time of distribution and the researcher discussed with those selected workers how to respond correctly to minimize risks of improper responses. The author from which the questionnaire was adopted was Angela Pereruan Leiyan (2016) with the study titled “Procurement Practices and Organizational Performance”.

b) Interview

According to Zikgmund *et al.* (2003), an interview is a flexible method of determining outcomes. Human language is extremely valuable in revealing the motivations underlying people's behaviors. Structured interview questions were prepared for 6 persons (2 members of each institution's finance commandant and the head of each institution's procurement departments) by using non-probability sampling (judgmental sampling) to discuss the issues in detail. Time table for an interview with respondents was set before the time of interviewing considering their interest to discuss the matter.

3.7 Data Collection Procedure

Pilot tests with research instruments were undertaken before actual data collection to ensure that the questions were clear and face validity. This was accomplished by distributing questionnaires to a selected group of people. The validity of questionnaires was checked and corrections were made before the distribution for respondents.

3.8 Data Analysis Methods

The approaches of descriptive and inferential statistics were utilized in this study (correlation and regression analysis). Correlation analysis is a statistical approach for exploring correlations between variables, according to Park and Lord (2009). As Vohra (2011) stated that regression analysis is a methodology for determining the effect of one variable on another. Thus, descriptive statistics such as mean and standard deviation were used in the study with the help of SPSS version 2020. The information acquired through interviews was examined using content analysis. Multiple regression analysis was utilized to determine the impact of procurement practices on organizational performance. By utilizing the following approach, multiple linear regression models were employed to investigate the linkage between procurement methods and organizational performance.

$$OP = a + X_1PP + X_2PC + X_3PM + X_4TW + X_5IM$$

Where, OP = Organizational Performance

PM = Procurement monitoring

a = Constant

TW = Training workforce

PP = Procurement Planning

IM = Inventory management

PC = Procurement controlling

X₁..... X₅ are regression coefficients of the independent variables.

3.9 Validity Test

The most significant criterion, according to R. Kothari (2004) is validity, which shows how an instrument measures what it is supposed to assess. Because the researcher employ the adopted questionnaire from Angela Pereruan Leiyan (2016) with the study named "Procurement Practices and Organizational Performance," the study's measurement was legitimate.

3.10 Reliability Test

According to Taylor, Bogdan, and DeVault (2015), instrument dependability relates to the consistency with which the instrument measures the variables. In the reliability test, the researcher was used to analyze the consistency of the questionnaire over time using Cronbach's alpha and SPSS version 2020. It is used to determine whether the substance of the questions is reliable by testing internal consistency. According to statistical interpretation, the closer the reading of Cronbach's Alpha to digit 1, the higher the reliability is in internal consistency. Overall, reliabilities less than 0.60 are measured to be poor, those in the 0.70 range, acceptable,

and those over 0.80 good. (<http://www.ats.ucla.edu/stat/spss/faq/alpha.html>). Based on these facts, the reliability of the study would be stated in the below table.

Table 2: Reliability of Pilot Test Result

Cronbach's Alpha	Number of Items
0.810	31

Table 3: Reliability Test of Final Result

Procurement Practices	No. of Items	Cronbach Alpha's Coefficient
Procurement Planning	06	0.734
Procurement Controlling	06	0.798
Procurement Monitoring	05	0.900
Training Workforce	03	0.801
Inventory Management	04	0.705
Challenges of Procurement Practices	07	0.823
Total Reliability Coefficients	31	0.890

Source: SPSS Result, 2021

3.11 Ethical Consideration

According to Akaranga and Makau (2016), while conducting research, researchers should follow guidelines related to authorship, copyright and patenting policies, data sharing regulations, and confidentiality restrictions. People should be invited to participate in the study voluntarily, according to Kothari C.R (2004).

The researcher conducted this study while considering all ethical issues, such as writing a formal letter from the organization working for the organizations in the study area, maintaining the confidentiality of respondents, informing respondents about the purpose of the study in advance, and asking them to volunteer, and conducting the research formally by requesting the organization's permission to be researched. This study did not include any irrelevant information about the organizations or individual responders. Rather than personal information, the questions focused on the respondents' opinions based on each of the consequences. Furthermore, the questionnaires were codified and kept confidential following proper collection. Finally, to avoid plagiarism, suitable citations were used.

CHAPTER FOUR

RESULT AND INTERPRETATION

4.1. Introduction

This section explains the study's findings based on the research tools mentioned in the preceding parts. The goal of this research was to see how procurement practices affect the performance of Ethiopian Defense Force higher educational institutions. All of the questions that make up the procurement practices and organizational performance components were asked using a Likert scale with values ranging from 5 (“strongly agree”) to 1 (“strongly disagree”). The mean values of 1.00 - 1.99 were classified as very low, 2.00 - 2.99 as low, 3.00 - 3.49 as a medium, 3.50 - 4.49 as high, and 4.50 - 5.00 as extremely high. The three organizational performances considered in this study were cost reduction, quality of goods/service, and lead time. Data were collected from three defense force higher educational institutions (Ethiopian Military Academy, Defense Command and Staff College, and Defense War College) based on the questionnaires. In addition, from these three higher educational institutions, 6 persons (2 from each) were interviewed and this helped the researcher to discuss the issues in detail. 68 questionnaires were distributed and only 64 (94.1%) were returned. The returned questionnaires were completed and analyzed after editing.

4.2 Demographic Profiles of Respondents

The study required to find the general information of the respondents involved in the study with consideration to the gender, age, rank, educational status, and service year.

Table 4: Demographic Profiles of Respondents

No.	Items	Variables	Frequency	Percent
1	Gender	Male	39	60.9
		Female	25	39.1
		Total	64	100.0
2	Age	18-25 years	5	7.8
		26-35 years	25	39.1
		36-45 years	23	35.9
		46-55 years	11	17.2
		Total	64	100.0

3	Rank	Private	2	3.1
		NCO	10	15.6
		Line officer	28	43.8
		Higher Officer	8	12.5
		Civilian	16	25
		Total	64	100.0
4	Educational level	Certificate	12	18.8
		Diploma	25	32.8
		Undergraduate	18	28.1
		Postgraduate	4	12.5
		Other	5	7.8
		Total	64	100.0
5	Service year	Less than 1 year	2	3.1
		1-5 years	5	7.8
		6-10 years	14	21.9
		11-15 years	12	18.8
		16-20 years	4	6.3
		Above 20 years	27	42.2
		Total	64	100.0

Source: Survey Data, 2021

The gender item indicated in the above table 4, reveals that out of 64 respondents 39 (60.9%) were male and the remaining 25 (39.1%) were female. This makes clear that the majority of the members of procurement in the selected Defense force higher educational institutions were male respondents. This means that the participation of females in the procurement sector was less than males.

The age item in the above table shows that 25 (39.1%) were between 26-35 years group, 23 (35.9%) were between 36-45 years age class, 11 (17.2%) were between 46-55 years category and 5 (7.8%) respondents were between 18-25 years category. This indicates that the maximum numbers (75%) of respondents were between the 26-45 years age category and it was a productive age category to easily handle the procurement practices in the institutions.

The rank category in the above table indicates, 28 (43.8%) were line officers, 16 (25%) were civilians, 10 (15.6%) were NCOs, 8 (12.5%) were higher officers, and 2 (3.1%) were private soldiers. So, this reveals that the maximum percentage (68.8) of respondents was line officers and civilians that enable the sector to share experiences among civilian and military.

The fourth item in the above table shows 25 (39.0%) had a diploma, 18 (28.1%) were first-degree holders, 12 (18.8%) had a certificate, 5 (7.8%) had other level of education and 4 (6.3%) of them were post graduated. Therefore, the majority of respondents were qualified in terms of education profile to manage the procurement practices.

The service year item of the above table indicates that out of total respondents 27 (42.2%) of them had more than 20 years service, 14 (21.9%) were categorized between 6-10 years' service, 12 (18.8%) were grouped between 11-15 years service, 5 (7.8%) had 1-5 years service, 4 (6.3%) had 16-20 years service, and 2 (3.1%) of them had less than 5-year service. Even though the procurement practice was a changeable and dynamic activity, the respondents were well-experienced workers because the majorities (61%) of respondents were grouped into 6-15 years service and more than 20 years service.

Table 5: Interviewees' General Information

No.	Respondents	Level of Education	Field of Study	Service year in position	Frequency
01	Ethiopian Military Academy Finance Commandant	1 st Degree	Leadership	Two years	1
02	Ethiopian Military Academy Procurement department head	Diploma	Logistics	One year	1
03	Command and Staff College Finance Commandant	1 st Degree	Leadership	One year	1
04	Command and Staff College Procurement department head	1 st Degree	Management	Three years	1
05	Defense War College Finance Commandant	1 st Degree	Management information science	Two years	1
06	Defense War College Procurement department head	2 nd Degree	Mechanical Engineering	One year	1
Total Respondents					6

Source: Survey Data, 2021

As stated with table 5 above, two of the interviewees were 1st degree holders in Leadership, two of them had 1st degree in Management and management information science respectively, and the rest two interviewees had 2nd degree in Mechanical Engineering and Diploma in Logistics respectively which were not directly related professions to procurement practice with shorter work knowledge and skill. This shows that the interviewees were not as much as capable of substantial experience in procurement practice. However, they were able to give helpful responses to the raised interview questions.

4.3 The degree to which procurement practices are executed in selected institutions

The respondents were requested to mention the quality of the procurement processes utilized by Ethiopian Defense Force higher educational institutions, by rating how important procurement planning, controlling, monitoring, personnel training, and inventory management was to their procurement practices. As a result, the study's findings are provided in the tables below.

4.3.1 Procurement Planning

The study intended to determine the degree to which the procurement planning practices were implemented in Ethiopian Defense Force higher educational institutions as presented below.

Table 6: Descriptive Statistics for Procurement planning items

No.	Items	N= 64	Minimum	Maximum	Mean	Standard Deviation
1	Management members are involved in the procurement planning.		1	5	2.28	1.374
2	Need assessment is undertaken by respective heads of department for goods and services required.		1	5	3.69	1.355
3	Budget approval is obtained for the required items before purchase orders are placed.		1	5	3.61	1.476
4	Procurement planning sets in motion the entire procurement process in your institution.		1	5	2.30	1.411
5	The procurement needs are clearly defined by the heads of department.		1	5	2.50	1.369

6 Delivery schedules that fit in the institution requirements are drawn with the suppliers.	1	5	2.31	1.446
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Source: Survey Data, 2021

The above table 6 shows that management members are involved in procurement planning with a mean of 2.28, that respective heads of department conduct need assessments for required goods and services with a mean of 3.69, that budget approval is obtained for required items before purchase orders are placed with a mean of 3.61, and that procurement planning sets in motion the procurement process. With a mean of 2.30, the procurement needs are clearly defined by the heads of the department having a mean of 2.50, and Delivery schedules that fit in the institution requirements are drawn with the suppliers having a mean of 2.31. Procurement planning practice had an aggregate mean of 2.7812. This indicates that the procurement planning practices in Ethiopian Defense Force higher educational institutions had less extent of implementation. (Mean <3.0).

According to the reply of Ethiopian Defense Force higher educational institutions' procurement department heads on interview questions, the procurement process is not perfect due to less involvement of stakeholders in preparation of procurement planning. For instance lack of constructive support from higher commandants, less capacity in the identification of fit suppliers because they didn't have a strong and permanent relationship, lately releasing budget funds, and the bureaucracy that they have.

Brown and Hyer (2010) indicate that planning consists of the identification of the main purpose, scope definition, requirements of customers, and identification of activities of procurement, time estimation which can be based on delivery of goods and services as per cost quoted and scheduled, responsibilities assignment among other many involvements.

According to Frese *et al.* (2003), excellent planning preparations are required to understand the critical role of planning in the successful implementation of projects, and these could include well-detailed process scheduling of implementation phases and task timelines, milestones, re-planning, and fallback positions.

Consequently, the above result of the questionnaire and interview is in contrast to the literature. Procurement planning practice has been less adopted in Ethiopian Defense Force higher

educational institutions. Generally, in terms of procurement planning, there is no such participation of management members, needs assessment of goods and services were properly undertaken by the concerned body, budget approval was obtained from the concerned body before purchase orders were placed, Procurement planning did not set the entire procurement process, the delivery schedules that fit in the institution requirements were not drawn with the suppliers, and the procurement needs were not clearly defined by the heads of department.

4.3.2 Procurement Controlling

The study deliberated at finding the level to which the procurement controlling practices were adopted in Ethiopian Defense Force higher educational institutions as presented below.

Table 7: Descriptive Statistics for Procurement controlling items

No.	Items	N= 64	Minimum	Maximum	Mean	Standard Deviation
1	Your institution periodically reviews the existing procurement policies.	1	1	5	2.20	1.275
2	Procurement bids are opened and evaluated by an independent committee.	1	1	5	2.30	1.318
3	The technical abilities and legal personality of the suppliers are evaluated before contract awarding.	1	1	5	2.13	1.202
4	Received goods and services are checked against the local purchase order.	1	1	5	2.23	1.366
5	Invoices are checked against the local purchase order and delivery note before payment.	1	1	5	3.47	1.458
6	Losses are prevented through continuously checking the purchase processes.	1	1	5	2.55	1.479

Source: Survey Data, 2021

The findings stated in table 7 above show that the institutions periodically reviewed the existing procurement policies which had a mean of 2.20, procurement bids were opened and evaluated by an independent committee had a mean of 2.30, the technical abilities and legal personality of the

suppliers were evaluated before contract awarding had a mean of 2.13, received goods and services were checked against the local purchase order had a mean of 2.23, invoices were checked against the local purchase order and delivery note before payment had a mean of 3.47, and losses were prevented through continuously checking the purchase processes had a mean of 2.55. Procurement controlling practice had an aggregate mean of 2.4609. This reveals that the execution of procurement controlling practices in Ethiopian Defense Force higher educational institutions was less (mean <3.0).

Based on the interview question, there was a gap to control the overall procurement process due to a lack of adequate knowledge and skill from higher to lower level commandants as well as the technical and environmental volatility. In addition to this, they had a problem with preparing clear specifications, controlling the quality of procured goods/services and there was a problem of procurement ethics. So, the role of the management to avoid the above problems is weak.

Brown and Hyer (2010) explained how to control the process of system tracking a checklist from simple to complex to detect changes in the new plan. They defined task control as decisions, activities, and procedures that are related to task execution variations. Controlling tasks necessitates a shift in the task management method that is utilized to create variation appropriately.

As a result, the above finding of the questionnaire and interview was contradictory to the literature. Procurement controlling practice had been less executed in Ethiopian Defense Force higher educational institutions. Therefore, in the case of procurement controlling practice, the institutions did not periodically review the existing procurement policies, procurement bids were not opened and evaluated by an independent committee, the technical abilities and legal personality of the suppliers were not evaluated before contract awarding, received goods and services were not checked against the local purchase order, invoices were checked against the local purchase order and delivery note before payment, losses were not prevented through continuously checking the purchase processes.

4.3.3 Procurement Monitoring

The study required the view of the respondents on how procurement practice was being supervised at the Ethiopian Defense Force higher educational institutions as stated in table 8.

Table 8: Descriptive Statistics for Procurement monitoring items

No.	Items	N=6 4	Minimum	Maximum	Mean	Standard Deviation
1	Reviews of the procurement system are done at regular intervals.		1	5	2.23	1.218
2	Close supervision of purchases are done as a way of controlling costs.		1	5	2.28	1.374
3	Corrective actions are taken once discrepancy is identified in the procurement processes.		1	5	2.30	1.243
4	Obstacles in the procurement process are mitigated in a timely manner.		1	5	2.36	1.452
5	Supplier evaluation is periodically undertaken to ensure quality of the goods and services.		1	5	2.23	1.400

Source: Survey Data, 2021

The results presented in the above table 8 shows that procurement is monitored moderately through reviewing of the procurement system at regular intervals with the mean of 2.23, close supervision of purchases being done as a way of controlling costs with a mean of 2.28, corrective actions being taken once discrepancy is identified in the procurement processes with a mean of 2.30, obstacles in the procurement process being mitigated on time with a mean of 2.36, and supplier evaluation being undertaken periodically to ensure the quality of the goods and services with a mean of 2.23. Procurement monitoring practice had an aggregate mean of 2.2844. This indicates that the procurement monitoring practice in Ethiopian Defense Force higher educational institutions had less implementation.

According to the interview question's response, there were problems in monitoring procurement practice like unavailability of knowledge-based guidance and supervision from management to procurement personnel, lack of commitment to solve the difficulty faced in the process of procurement practice on time.

Monitoring, according to Chandra (2008), is a critical component of implementation success because it forces a regular comparison of aims and performance. As a result, procurement

monitoring contract system initiatives can have a significant impact on an individual's ability to de-escalate or escalate their commitments.

Accordingly, as observed in the above questionnaire and interview findings it is in contrast with the literature. The procurement monitoring practice was not as much implemented in Defense force higher educational institutions. Thus, from the side of procurement monitoring practice, the reviews of the procurement system were not done at regular intervals, close supervision of purchases was not made as a way of controlling costs, supplier evaluation was not periodically undertaken to ensure the quality of the goods and services, obstacles in the procurement process was not mitigated on time, corrective actions were not taken once discrepancy was identified in the procurement processes.

4.3.4 Training Workforce

The study sought the opinion of the respondents on how training workforce was being implemented at the Ethiopian Defense Force higher educational institutions as stated in below.

Table 9: Descriptive Statistics for training workforce items

No.	Items	N=64	Minimum	Maximum	Mean	Standard Deviation
1	Assignment of manpower to the procurement department is based on professional qualification.		1	5	2.12	1.315
2	Your institution has procurement training programs in place to improve employees' skill.		1	5	2.28	1.485
3	Training in procurement practice has improved performance of procurement staff in your institution.		1	5	2.48	1.491

Source: Survey Data, 2021

The finding stated in the above table 9 implies that training workforce in the practice of procurement was less implemented throughout assignment of manpower to procurement department based on professional qualification with the mean of 2.12, the majority of respondents also differed as institutions were procurement training programs in place to improve

employees' skill with the mean of 2.28, and training in procurement practice has improved performance of procurement staff in the institutions with a mean of 2.48. Training workforce in the practice of procurement had an aggregate mean of 2.3698. This means that the selected Ethiopian Defense Force Higher Educational institutions were not focused on improving their workers with essential knowledge and skill on practices of procurement.

According to the interview question's response, the existence of serious problems concerning the procurement workforce. In the position of procurement manager as well as procurement officers the assignment of manpower did not considering the qualification that was needed in the procurement sector. In addition to this, there was no adequate and continuous training program to improving the capacity of the procurement workers even though short training was given per year by the defense finance directorate.

While presented with a conflict of interest, training programs and seminars, according to Handfield (2006), may have a favorable impact on ethical employee behavior. Procurement personnel should be educated on the importance of ethics in their jobs and how to seek guidance when faced with ethical difficulties. The code of conduct should spell out how procurement workers should act under ethical principles.

However, the above finding was in contrast to the literature. Training workforce in the practice of procurement was less adopted in selected Ethiopian Defense Force Higher Educational institutions. Therefore, in terms of training the workforce in the practice of procurement, the institutions were not assigned the manpower based on their professional qualification, the institutions had no scheduled procurement training programs in place to improve employees' skill and the training given in the institutions has not improved performance of procurement staff.

4.3.5 Inventory Management

The respondents were requested to respond with their ideas concerning the practice of inventory management in Ethiopian Defense Force higher educational institutions as stated in the table below.

Table 10: Descriptive Statistics for Inventory Management items

No.	Items	N=64	Minimum	Maximum	Mean	Standard Deviation
1	Your institution has created systems and processes that identify inventory requirements.	1	1	5	2.25	1.414
2	Your institution observes stock level replacement techniques.	1	1	5	2.23	1.318
3	The stock distribution occurred based on needs assessment.	1	1	5	2.34	1.472
4	Your institution handles all functions related to the tracking and management of material.	1	1	5	2.30	1.256

Source: Survey Data, 2021

The outcomes presented in the above table 10 shows that a greater part of the respondents disagreed with a mean of 2.25 as the institutions had set systems and processes that identify inventory requirements, the institution observes stock level replacement techniques with the mean of 2.23, the stock distribution being occurred based on needs assessment with a mean of 2.34, and their institution handled all functions related to the tracking and management of material with a mean of 2.30. Therefore, the inventory management practice of the selected Ethiopian Defense Force higher educational institutions had an aggregate mean of 2.2656 that implies the existence of weak inventory management practice in institutions.

As stated in the interview responses, the inventory management practice in institutions had several problems such as lack of knowledge and skill of store workers to handle inventories properly, to distribute for users as per requested before in need assessment on time, bureaucracy problem, lack of coordination with procurement workers before procuring goods.

According to Larson and Halldorsson (2014), inventory management is an interdisciplinary concept. Inventory management is a complex decision-making process that requires analysis of multiple criteria parameters, which in practice are usually non-deterministic. Inventory management research is vital in procurement. Inventory programs can make inventory commitment more efficient and improve customer service.

Even though inventory management is a complex decision-making process and interdisciplinary practice to improve customer service, the result gained from the study is in contrast to the literature. Inventory management practice in selected Ethiopian Defense Force higher educational institutions has less performance.

4.3.6 Summary of findings of adoption of procurement practices

Table 11: summary of findings of adoption of procurement practice

Procurement Practices	No. of Items	Mean	Std. Deviation
Procurement Practice	06	2.7812	.67120
Procurement Controlling	06	2.4609	.70632
Procurement Monitoring	05	2.2844	.77238
Training Workforce	03	2.3698	1.02546
Inventory Management	04	2.2656	.87500

Source: Survey Data, 2021

The summary gives a general representation of the findings of the adoption of procurement practices. The results indicate that procurement planning (mean 2.7812 and standard deviation .67120); Procurement controlling (mean 2.4609 and standard deviation .70632); Procurement monitoring (mean 2.2844 and standard deviation .77238); Training Workforce (mean 2.3698 and standard deviation 1.02546) and Inventory Management (mean 2.2656 and standard deviation .87500).

The study discovered that these procurement practices were not practiced to a high degree. Thus, Ethiopian Defense Force higher educational institutions had not enough implementation which shows that they did not benefit from the implementation of procurement practices and negatively affect organizational performance related to quality, cost, and on-time delivery.

Table 12: Descriptive Statistics for Organizational Performance items

No.	Items	N=64	Minimum	Maximum	Mean	Standard Deviation
1	The department focuses on how much they spent, where, when, and why.		1	5	2.42	1.355

2	The department carefully analyzes the cost that they are buying goods and services.	1	5	2.22	1.351
3	The department controls the cost through carefully forecasting, planning, budget preparation, reporting and monitoring.	1	5	2.05	1.147
4	The department manages the cost to avoid unnecessary spending.	1	5	2.59	1.422
5	The department maintains the cost effectiveness through cost reduction that means spending less for goods and services.	1	5	2.48	1.333
6	Quality goods are procured based on prepared specifications to be procured.	1	5	2.41	1.318
7	The department delivers the quality service timely to users.	1	5	2.44	1.320
8	The planning of the quality control is initiated in all departments of the institution.	1	5	1.95	1.105
9	There is feedback from employees on the quality of procured goods and service.	1	5	3.87	1.351
10	The procurement unit provides the required purchasing services on time.	1	5	2.55	1.332
11	There is a very long process in the procurement of goods and services.	1	5	2.36	1.429
12	The procurement unit uses a short method to distribute the purchased items.	1	5	2.53	1.345

Source: Survey Data, 2021

The result presented in the above table 12 shows the extent of Ethiopian Defense Force higher educational institutions' performance in terms of cost reduction, quality, and lead time. The procurement department focuses how much they spent, where, when, and why had a mean of 2.42, carefully analyzing the cost that they are buying goods and service had a mean of 2.22, controlling the cost through carefully forecasting, planning, budget preparation, reporting, and monitoring had a mean of 2.05, managing the cost to avoid unnecessary spending had a mean of

2.59, maintaining the cost-effectiveness through cost reduction that spending less for goods and service had a mean of 2.48.

Item No. 6 above indicates the quality goods are procured based on prepared specifications to be procured had the mean of 2.41 delivering the quality service timely to users had the mean of 2.44, the planning of the quality control is initiated in all departments of the institutions had the mean of 1.95, the feedback from employees on the quality of procured goods and service had the mean of 3.87, providing the required purchasing services on time had a mean of 2.55, a very long process in the procurement of goods and services had the mean of 2.36; and using a short method to distribute the purchased items had the mean of 2.53. The organizational performance of selected Ethiopian Defense Force higher educational institutions had an overall mean of 2.4896 which indicates less performance in terms of reasonable cost reduction, procuring quality goods/services, and has less time management regarding procurement practice.

Organizational performance, according to Upadhaya, Munir, and Blount (2014), is the difference between an institution's actual outcomes and its anticipated outputs, or goals and objectives. Organizational performance can be measured through cost reduction, quality of goods/services delivered, productivity, and lead time, according to Mchopa *et al.* (2009). According to Hamon (2003), performance assessment is the most important aspect for good management, and recognizing and quantifying the impact of supply chain management on it improves organizational performance. Financial targets met and employee happiness can be used as indications of an organization's performance. Similarly, Ho (2008) discovered that organization performance may be measured based on the efficacy and efficiency of the institution. Procurement practices have a positive association with or affect the degree of organizational performance in all performance indicators.

However, the findings gained from the above table contrast the literature due to the selected Ethiopian Defense Force higher educational institutions being weak in executing procurement practices that resulted in low performance in case of cost reduction, quality goods/ services, and lead time.

4.4 Procurement challenges

The respondents were requested to forward their opinion concerning procurement challenges facing their work environment.

Table 13: Descriptive Statistics for Procurement challenges items

No.	Items	N=64	Minimum	Maximum	Mean	Standard Deviation
1	Interference by college's management in the procurement processes.	1	1	5	3.30	1.498
2	Insufficient planning by user departments.	1	1	5	3.56	1.379
3	Lack of qualified suppliers for some specialized goods/services.	1	1	5	3.67	1.415
4	Delays in the supply of goods /services by some suppliers.	1	1	5	3.89	1.236
5	Non-adherence to product/services specifications.	1	1	5	3.70	1.330
6	Delays in procurement of urgently required goods/services due to restrictions by public procurement and disposal regulations.	1	1	5	2.64	1.441
7	Complex regulations effected by the public procurement law.	1	1	5	2.23	1.354

Source: Survey Data, 2021

The result indicated in the above table 13 reveals that the interference by college's management in the procurement processes had a mean of 3.30; the insufficient planning by user departments had a mean of 3.56, lack of qualified suppliers for some specialized goods/services had a mean of 3.67, Delays in the supply of goods/services by some suppliers had a mean of 3.89, Non-adherence to product/services specifications had a mean of 3.70, the delays in procurement of urgently required goods/services due to restrictions by public procurement and disposal regulations had a mean of 2.64, and the complex regulations effected by the public procurement law had a mean of 2.23. The procurement challenge in Ethiopian Defense Force higher

educational institutions had an aggregate mean of 3.2857 that implies the moderate existence of procurement challenges.

According to Tukuta and Saruchera (2015), procurement experts in developing countries confront several issues, including a lack of a strong and effective regulatory framework, inadequate corporate governance, procurement costs, technical advancements, lowered quality, and damaged items.

Hence, the procurement challenges stated the findings are to some extent related to the literature. The procurement challenges were high faced in selected Ethiopian Defense Force higher educational institutions. Therefore, the institutions' management highly interferes in the procurement processes, the insufficient planning by user departments was highly existed, there was also a highly lack of qualified suppliers for some specialized goods/services, very delays in the supply of goods/services by some suppliers, and highly Non-adherence to product/services specifications. However, the respondents disagreed with the occurrence of delays in procurement of urgently required goods/services due to restrictions by public procurement and disposal regulations as well as the complex regulations effected by the public procurement law.

4.5 The impact relationship of procurement practice on organizational performance

The respondents were requested to forward their ideas about the nature and extent of the impact of procurement execution in Ethiopian Defense Force higher educational institutions. Therefore, the table below indicates the study finding.

Table 14: The impact relationship between procurement practice and organizational performance items

No.	Items	N=64	Minimum	Maximum	Mean	Standard Deviation
1	Procurement practices conducted by your institution have a positive impact on the institution's performance.		1	5	2.33	1.404

2	Procurement practices adopted by your institution have contributed to users' department satisfaction.	1	5	2.33	1.298
3	Procurement practices implemented in your institution have resulted in procurement cost reduction.	1	5	2.53	1.309
4	Procurement practices adopted by your institution have resulted in quality goods/services.	1	5	2.14	1.167
5	Procurement practices adopted by your institution have resulted in timely delivery of goods and services.	1	5	2.38	1.363

Source: Survey Data, 2021

The finding affirmed in the above table 14 indicates that the procurement practices conducted by the institutions have a less positive impact on institution's performance with the mean of 2.33, procurement practices adopted by the institutions have less contributed on users' department satisfaction, less resulted in procurement cost reduction, less resulted in quality goods/services, and resulted in timely delivery of goods and services with the mean of (2.33, 2.53, 2.14, and 2.38) respectively. The impact relationship between procurement practice and organizational performance in Ethiopian Defense Force higher educational institutions had an aggregate mean of 2.3406 which indicates that the relationship between procurement practice and organizational performance regarding user's satisfaction, cost reduction, quality goods and services, timely delivery of goods and services had weak implementation and taken as the institutions were not serving their members by providing rapid and quality service in the procurement sector.

4.6 Correlation Analysis

The goal of the study was to see if there was a link between procurement procedures and organizational performance. A linear connection between procurement practices and organizational performance was revealed in the preceding descriptive analysis. Pearson's correlation was then employed to categorize the kind of correlation by bearing in mind the predictor variables (Procurement Practices (PP), Procurement Controlling (PC), Procurement Monitoring (PM), Training Workforce (TWF), Inventory Management (IM)) that were strongly

or weakly interconnected with the dependent variable (organizational performance). The means of the variables were calculated and clustered into five measurements to create Pearson's correlation matrix: Procurement Planning, Procurement Controlling, Procurement Monitoring, Training Workforce, and Inventory Management. The Pearson's correlation coefficient is represented by r and is by design bound as -1.0 r 1.0, according to Bluman, Allan G. (2013). The correlation coefficient has a range of -1.0 to +1.0. If the value of r is close to +1.0, there is a strong positive linear relationship between the variables. If the value of r is close to -1.0, there will be a strong negative linear relationship between the variables. However, if there is no or only a weak linear relationship between the variables, the value of r will be close to 0. The commonly used set of descriptors for the examination of correlation coefficients for social science is based on the following interval values (Cohen 1988).

- ✚ Value of 0.00-0.09 supposed as no correlation
- ✚ Value of 0.10-0.29 supposed as the low correlation
- ✚ Value of 0.30-0.49 supposed as the medium correlation
- ✚ Value of 0.50-1.00 supposed as the high correlation

Table 15: Correlation Analysis

		PP	PC	PM	TWF	IM	OP
PP	Pearson Correlation	1					
	Sig. (2-tailed)						
PC	Pearson Correlation	.888**	1				
	Sig. (2-tailed)	.000					
PM	Pearson Correlation	-.066	-.001	1			
	Sig. (2-tailed)	.607	.994				
TWF	Pearson Correlation	.594**	.624**	.327**	1		
	Sig. (2-tailed)	.000	.000	.008			
IM	Pearson Correlation	.084	.133	.829**	.464**	1	
	Sig. (2-tailed)	.510	.294	.000	.000		
OP	Pearson Correlation	.647**	.732**	.539**	.700**	.588**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

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

Source: SPSS result, 2021

Note: **PP** is Procurement Planning, **PC** is Procurement Controlling, **PM** is Procurement Monitoring, **TWF** is Training Workforce, **IM** is Inventory Management and **OP** is Operational Performance.

As indicated in above table 15, all the independent variables (Procurement practices) have a positive relationship with organizational performance. This strong link demonstrates that as the procurement practices change, organization performance changes in the same direction at changeable degrees. The positive correlation among all identified procurement practices (planning, controlling, monitoring training workforce, and inventory management) with organizational performance was high with (r=.647, .732, .539, .700, and .588) respectively.

4.7 Tests for the Model Assumptions

4.7.1 Test for Multicollinearity

According to Hair *et al.* (2010); Martz (2013) in statistics, multicollinearity is a situation in which two or more independent variables in a multiple regression model are extremely correlated, implying that one can be linearly predicted from the others with a considerable degree of accurateness. In this study, the results of multicollinearity are documented in the table below.

Table 16: Test for Multicollinearity

Model	Collinearity Statistics	
	Tolerance	Variance Inflation Factor
Planning	.200	5.010
Controlling	.197	5.081
Monitoring	.294	3.400
Training workforce	.449	2.227
Inventory Management	.271	3.683

Source: SPSS result, 2021

Tolerance value of 0.1 or less than as cited as problematic collinearity even though 0.2 and above has been recommended and variance inflation factor value ≥ 10 are often suited as indicative of problematic collinearity. Therefore, the values of tolerance and variance inflation factor for each independent variable were within the interval of 0.1 - 10 which means multicollinearity was not a difficulty in this study.

4.7.2 Test of Normality

Elliott AC and Woodward (2007) declare statistical inaccuracies are frequent in scientific publications with around half of all articles containing at least one inaccuracy. Many of the statistical procedures are based on the assumption that the data follows a normal distribution. The supposition of normality is particularly critical and the value of the score greater than +2 or less than -2 is significant.

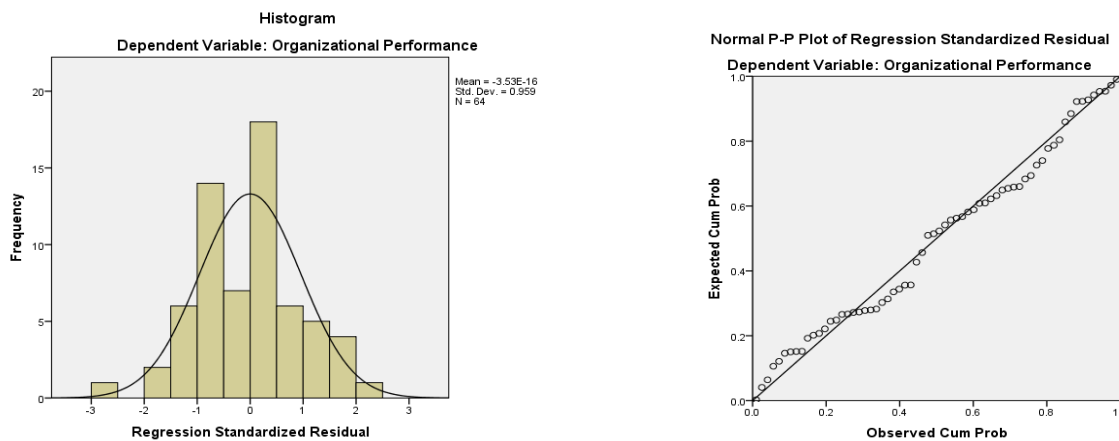
Table 17: Test of Normality

Procurement Practices	Skewness	Kurtosis
Procurement Planning	.608	.282
Procurement Controlling	.690	.179
Procurement Monitoring	1.569	1.737
Training workforce	.831	-.666
Inventory Management	1.310	.754

Source: SPSS result, 2021

As shown in the above table 17 analysis, Procurement Planning had a skewness of 0.608 and a tolerance of 0.282; the Procurement Controlling had a skewness of 0.690 and a tolerance of 0.179; Procurement Monitoring had a skewness of 1.569 and a tolerance of 1.737; Training workforce had a skewness of 0.831 and a tolerance of -0.666; and Inventory Management had a skewness of 1.310 and a tolerance of 0.754. Generally, the intervals of skewness and kurtosis statistics for variables were within -2 and +2 so the data was normally distributed.

Figure 2: Histogram and p-p plots show a normal distribution



Source: SPSS result, 2021

4.7.3 Model fit

Table 18 below illustrates the outcome for differences among the dependent and independent variables. Even though the R^2 value does guarantee that the model fits the data fine, the study implied that R^2 was the best pointer for how well the independent variables clarify variations on dependent variables. R^2 is the coefficient of determination and shows how organizational performance is influenced by procurement practices together.

Table 18: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	0.917 ^a	0.841	0.828	0.28835

Source: SPSS result, 2021

Table 18 above shows that the coefficient of determination was found to be .841 which means that variations in procurement practices cause 84.1% variation in dependent variable organizational performance with 15.9% clarified by other factors captured in the error term. Hence, the outcome indicates that the predictors identified in the study are influencers of organizational performance to a high extent that shows a strong relationship between the variables was there.

Table 19: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.551	5	5.110	61.458	.000 ^b
	Residual	4.823	58	.083		
	Total	30.373	63			

Source: SPSS result, 2021

The P-value (Sig.) is 0.000 or < 0.05 indicating that the organizational performance model is significant at the 5% level of significance, indicating that it is a good prediction model. The F-statistic was 61.458 with a P-value of 0.000 which is < 0.05 . This implies that the model was statistically significant at the 5% level of significance indicating that procurement practices have a statistically significant correlation with organizational performance.

A multivariate regression model was applied to find out the importance of each of the five independent variables (procurement planning, controlling, monitoring, training workforce, and inventory management) concerning organizational performance in implementing procurement practices. Therefore, the following table of coefficients deals with each involvement of independent variables to variation in the dependent variable.

Table 20: Significance and Distribution of Coefficients

	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
(Constant)	.023	.144		.162	.872
Procurement Planning	.094	.104	.102	.901	.371
Procurement Controlling	.482	.097	.550	4.973	.000
Procurement Monitoring	.310	.062	.400	5.041	.000
Training workforce	.092	.046	.133	2.015	.049
Inventory Management	.112	.064	.137	1.735	.088

Source: SPSS result, 2021

The regression model created is;

$$Y = .023 + .094PP + .482PC + .310PM + .092TWF + .112IM$$

The above table 20 shows, Procurement Controlling practice has a positive relationship with organizational performance but the relationship is statistically not significant at the 5% significance level ($\beta = .482$; $p = .0000 < .05$). Procurement Monitoring practice has a positive linkage and the correlation is statistically significant at the 5% significance level ($\beta = .310$; $p = .000 < .05$). Training workforce has a positive relationship with organizational performance and is statistically significant at the 5% significance level ($\beta = .092$; $p = .049 < .05$). However, Procurement Planning practice has a positive relationship with organizational performance but the linkage is not statistically significant at the 5% significance level ($\beta = .094$; $p = .371 > .05$). Inventory Management has a positive relationship with organizational performance; it is not statistically significant at the 5% significance level ($\beta = .064$; $p = .088 > .05$). Nevertheless, it is shown that all predictors' coefficients are positive which means that a change in predictors has an effect on organizational performance in the same way.

From the above results, the procurement controlling, procurement monitoring, and training workforce practices were created to have positive statistically significant linkages with organizational performance. Yet, procurement planning and inventory management were created to have insignificant linkages which were not statistically important. The coefficients were positive for all procurement practices that would show increasing identified procurement practices, leading to higher organizational performance.

In general, the reliability of regression coefficients on the procurement practices clued that these variables are essential factors influencing organizational efficiency at different levels even though the correlation for procurement controlling practice, procurement monitoring, and Training workforce practices were significant. Though procurement planning practice and Inventory Management has a positive linkage but the correlation is not statistically significant predictors of organizational performance. Moreover, the findings show that multicollinearity did not occur as a problem in the study because all the variables that met the criteria of Tolerance should be > 0.1 and $VIF < 10$.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings on procurement practices implemented at Ethiopian Defense Force higher educational institutions, the impact they had on organizational performance and challenges faced by the institutions. A conclusion on the general results of the study is given followed by recommendations based on the findings of the study. Finally, the suggestions on areas that can be considered for further research are discussed.

5.2 Summary of the Findings

This study required to attain three objectives namely; to examine the Ethiopian defense force higher educational institutions procurement practices, to determine the relationship between procurement practices and organizational performance in Ethiopian defense force higher educational institutions, and to find out the challenges of procurement practices at Ethiopian defense force higher educational institutions.

5.2.1 Examining the adoption of procurement practice

Procurement planning practice has been adopted less in Ethiopian Defense Force higher educational institutions with an aggregate mean of 2.7812. The detailed findings under procurement planning were explained as follows: there was no such participation of management members, Procurement planning did not set the entire procurement process, the delivery schedules that fit in the institution requirements did not drawn with the suppliers, and the procurement needs were not clearly defined by the heads of department whereas needs assessment of goods and services were properly undertaken by the concerned body and budget approval was obtained from the concerned body before purchase orders were placed.

Procurement controlling had an aggregate mean of 2.4609 that implies the weak controlling system of procurement practice in Ethiopian Defense Force higher educational institutions. As a result, the detailed findings from questionnaires and interview questions were: the institutions did not periodically review the existing procurement policies, procurement bids were not opened and evaluated by an independent committee, the technical abilities and legal personality of the

suppliers were not evaluated before contract awarding, received goods and services were not checked against the local purchase order, invoices were checked against the local purchase order and delivery note before payment, losses were not prevented through continuously checking the purchase processes.

The procurement monitoring practice was not as much implemented in Defense force higher educational institutions with an aggregate mean of 2.2844. Thus, the reviews of the procurement system were not done at regular intervals, close supervision of purchases was not made as a way of controlling costs, supplier evaluation was not periodically undertaken to ensure the quality of the goods and services, obstacles in the procurement process was not mitigated on time, immediate corrective actions were not taken once discrepancy was identified in the procurement processes.

Training workforce in the practice of procurement was less adopted in selected Ethiopian Defense Force higher educational institutions with an aggregate mean of 2.3698. Therefore, in terms of training workforce practice, the institutions were not assigned the manpower based on their professional qualification, the institutions had no scheduled procurement training programs in place to improve employees' skill, and the training given in the institutions did not improve the performance of procurement staff.

The inventory management practice had an aggregate mean of 2.2656. It was weakly adopted in Ethiopian Defense Force higher educational institutions. This shows that the institutions did not set systems and processes that identify inventory requirements, the institutions did not observe stock level replacement techniques, the stock distribution did not occur based on needs assessment, and the institutions did not handle all functions related to the material management.

5.2.2 The impact relationship between independent and dependent variables

The impact relationship between procurement practice and organizational performance in Ethiopian Defense Force higher educational institutions had an aggregate mean of 2.3406 which indicates that less relationship between procurement practice and organizational performance regarding user's satisfaction, cost reduction, quality goods and services, timely delivery of goods and services.

The positive correlation among procurement practices (planning (.647), controlling (.732), monitoring (.539), training workforce (.700), and inventory management (.588)) with organizational performance was high. The regression model provided the coefficient of determination was found to be .841 which means that variations in procurement practices cause 84.1% variance in the dependent variable.

5.2.3 Challenges of procurement practice

The procurement challenge in Ethiopian Defense Force higher educational institutions had an aggregate mean of 3.2857 that implies the moderate existence of procurement challenges. Hence, the institutions' management highly interferes in the procurement processes, the insufficient planning by user departments were highly existed, there was also a high lack of qualified suppliers for some specialized goods/services, very delays in the supply of goods/services by some suppliers, and highly non-adherence to product/services specifications. However, there was no occurrence of delays in procurement of urgently required goods/services due to restrictions by public procurement and disposal regulations as well as there are no complex regulations caused by the public procurement.

5.3 Conclusion

The study required to establish the procurement practices adopted by Ethiopian Defense Force higher educational institutions. The study brought to a close all the desired procurement practices (procurement planning, procurement controlling, procurement monitoring, training workforce, and inventory management) implemented to a lesser extent. This is an indication that the acceptance and use of procurement practices were not the major strategies in ensuring high organizational performance with reducing cost, providing quality goods/services, and just in time delivery. In detail, the execution of procurement practices in these selected Ethiopian Defense Force higher educational institutions concluded by the researcher is stated briefly as follows:

The procurement planning practice did not fulfill the entire procurement process because of a knowledge gap and less commitment; the procurement controlling practice in the desired institutions was not successful due to a lack of knowledge and skill among commandant and quality assurance members of the institutions in identifying the quality, cost, and time related issues of procured goods/services, as well as a lack of cooperation in assigning a separate

professional and technical team to reduce procurement control issues; procurement monitoring practice was implemented less due to a lack of sufficient capability to closely supervise and monitor the entire procurement system; procurement members, including procurement managers, were not placed based on their profession, and there was no ongoing on-the-job or scheduled training to improve the knowledge and skill gap; The inventory management practice was the other concerned procurement practice in this study that had poor execution in terms of setting up a suitable systems, techniques and distribution mechanisms.

Moreover, the study also intended to determine the relationship of implemented procurement practices on organizational performance at Ethiopian Defense Force higher educational institutions. From the outcomes, procurement practices had a negative significant impact on the organizational performance of the institutions. More significantly, procurement practice, namely planning, controlling, monitoring, training workforce, and inventory management had a great influence on the organizational performance of Ethiopian Defense Force higher educational institutions. Furthermore, the relationship between all the procurement practices in this study and organizational performance was significant at $P < 0.05$ and R^2 of .841 shows that all the independent variables could offer 84.1% justification of variation or changes in organizational performance of Ethiopian Defense Force higher educational institutions.

The reliability of regression coefficients on the procurement practices implies that the variables are essential issues that influence organizational effectiveness even though at different extents. Therefore, based on the findings of the study, the research question was answered and the conclusion is that less practicing procurement led to reduced organizational performance for Ethiopian Defense Force higher educational institutions. Finally, the study concluded that lack of all stakeholder engagement, shortage of inadequate human resource development, lack of skilled manpower placement, and lack of commandant members' knowledge-based participation to control the process of procurement significantly challenged the adoption of effective procurement practices in Ethiopian Defense Force higher educational institutions.

5.3 Recommendations

Procurement practices ought to be effectively utilized to develop organizational performance of Ethiopian Defense Force higher educational institutions in providing quality goods/service,

effective cost reduction, and on-time delivery. Therefore, based on the above major findings and the conclusions, the following recommendations are forwarded to maintain the institutions in considering their future procurement practice.

- ✍ The procurement department had better continuously give a brief orientation and make awareness for users about requesting procurement needs including what items of goods/services deserve for the departments with specifications to collect the request procurement needs before preparation of procurement planning.
- ✍ The researcher suggested that the management of institutions improve the procurement controlling and monitoring mechanism by developing the capability of controllers and monitors specifically quality assurance and approval committee as well as commandant and all concerned bodies. Thus, it needs a training program to enhance the required knowledge and skills in the field of procurement controlling and monitoring sector.
- ✍ The institutions' human resource management are recommended to improve placement of professional workforce, facilitate training programs, promote experience sharing or knowledge-flow activities from well-performing organizations to fill the existing knowledge and skill gap related to the procurement sector.
- ✍ Inventory management systems by its nature need automated arrangements to meet the intended service delivery expectations in logistical activities. Therefore, a strong suggestion has been given to the institutions' financial management to improve the execution of inventory management based on the desired system service delivery.
- ✍ Since procurement practices have a significant relationship with organizational performance, it is desirable if the management body of the institutions has looks into and consider procurement processes to improve organizational performance.
- ✍ In general, since procurement practices affect organizational performance, special attention should be given to knowledge and skill-based planning, controlling and monitoring procurement practices as well as developing the capability of the workforce through continuous and scheduled training programs and proper managing of inventories to satisfy

the users by providing quality goods/services timely. In addition, the institutions should work on improving competitive advantage through expanding strategic potential relationships in procurement practices to minimize the major challenges facing the procurement sector.

5.4 Suggestions for Further Research

The study focused on the study of procurement practices and the performance of organizations in the military higher educational institutions sector. The researcher suggested additional research on similar titles but in other military institutions. It can help to find out whether the same effects can be detained factually in military organizations. The results of the study will encourage the practitioners in Ethiopian Defense Force higher educational institutions to explore the implementation of Procurement. The result of the study can help the managers and procurement department heads of institutions in planning for a successful procurement transformation.

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APPENDICES

APPENDIX I QUESTIONNAIRES



School of Commerce

Dear Respondent,

I am pursuing a Master's Degree in Logistics and Supply Chain Management at the Addis Ababa University School of Commerce. I respectfully urge that you take the time to complete this questionnaire, which aims to determine procurement practices and organizational performance at Ethiopian defense force higher educational institutions. Please take a few moments to complete the attached questionnaire so that I can finish the study, for which I will be grateful. Please complete the blank areas at the end of each question or statement, or simply mark the applicable boxes with a tick. This information will be kept strictly confidential and used solely for academic purposes. You are not required to include your name. Any additional information you believe is necessary for this study will be appreciated. Your involvement in this study will be beneficial since it will help us reach the study's objectives. Please be as honest and truthful as possible in your response.

Thanks in advance for your support.

Regards,

Argachew Abebe

Student of Addis Ababa University School of Commerce

Phone No. **0913207248**

Email abelargachew@gmail.com

QUESTIONNAIRE

Please tick (✓) the box that matches your answer to the questions and give the answers in the spaces provided as appropriate.

SECTION 1: BACKGROUND INFORMATION

1. Gender of respondent

Male Female

2. Age of respondent

18 – 25 years 26 - 35 years Above 55 years

36 - 45 years 46 - 55 years

3. Rank of respondent

Private Line Officer Civilian

NCO Higher Officer

4. Education level of respondent

Certificate Undergraduate

Diploma Postgraduate

Any other, please specify _____.

5. Service year of respondent

Less than 1 year 6 – 10 years 16 – 20 years

1 – 5 years 11 – 15 years Above 20 years

SECTION 2: PROCUREMENT PRACTICES

Among the procurement practices listed below, which one has been adopted by your organization? Indicate based on the scale below;

5 = Strongly agree

3 = Neutral

2 = Disagree

4 = Agree

1 = Strongly disagree

A. Procurement Planning	5	4	3	2	1
Management members are involved in the procurement planning.					
Need assessment is undertaken by respective heads of department for goods and services required.					
Budget approval is obtained for the required items before purchase orders are placed.					
Procurement planning sets in motion the entire procurement process in your institution.					
The procurement needs are clearly defined by the heads of department.					
Delivery schedules that fit in the institution requirements are drawn with the suppliers.					

Any other, please specify

B. Procurement Controlling	5	4	3	2	1
Your institution periodically reviews the existing procurement policies.					
Procurement bids are opened and evaluated by an independent committee.					
The technical abilities and legal personality of the suppliers are evaluated before contract awarding.					
Received goods and services are checked against the local purchase order.					
Invoices are checked against the local purchase order and delivery note before payment.					
Losses are prevented through continuously checking the purchase processes.					

Any other, please specify

C. Procurement Monitoring	5	4	3	2	1
Reviews of the procurement system are done at regular intervals.					
Close supervision of purchases are done as a way of controlling costs.					
Corrective actions are taken once discrepancy is identified in the procurement processes.					
Obstacles in the procurement process are mitigated in a timely manner.					
Supplier evaluation is periodically undertaken to ensure quality of the goods and services.					

Any other, please specify

D. Training workforce in procurement practices	5	4	3	2	1
Assignment of manpower to the procurement department is based on professional qualification.					
Your institution has procurement training programs in place to improve employees' skills.					
Training in procurement practice has improved performance of procurement staff in your institution.					

Any other, please specify

E. Inventory Management	5	4	3	2	1
Your institution has created systems and processes that identify inventory requirements.					
Your institution observes stock level replacement techniques.					
The stock distribution occurred based on needs assessment.					
Your institution handles all functions related to the tracking and management of material.					

Any other, please specify

SECTION 3: CHALLENGES OF PROCUREMENT

Listed below are some of the challenges /barriers which prevent institutions from adopting Procurement practices. Please rank by a tick in the right box the degree to which you agree with these challenges using the following rating;

5 = Strongly agree 3 = Neutral 2 = Disagree
4 = Agree 1 = Strongly disagree

Challenges	5	4	3	2	1
Interference by college’s management in the procurement processes.					
Insufficient planning by user departments.					
Lack of qualified suppliers for some specialized goods/services.					
Delays in the supply of goods/services by some suppliers.					
Non-adherence to product/services specifications.					
Delays in procurement of urgently required goods/services due to restrictions by public procurement and disposal regulations.					
Complex regulations affected by public procurement law.					

Please specify any challenges or difficulties to the procurement practice at the selected Ethiopian defense force higher educational institutions (your institution).

SECTION 4: IMPACT RELATIONSHIP INDICATION QUESTIONS

What is the impact relationship between Procurement Practices and organizational performance in selected Defense force higher educational institutions? Please specify the effect of procurement practices on organizational performance based on measurements.

5 = Strongly agree 3 = Neutral 2 = Disagree
4 = Agree 1 = Strongly disagree

Measurements	5	4	3	2	1
Procurement practices conducted by your institution have a positive impact on the institution's performance.					
Procurement practices adopted by your institution have contributed to users' department satisfaction.					
Procurement practices implemented in your institution have resulted in procurement cost reduction.					
Procurement practices adopted by your institution have resulted in quality goods/services.					
Procurement practices adopted by your institution have resulted in timely delivery of goods and services.					

Any other, please specify

SECTION 5: ORGANIZATION PERFORMANCE

What is the extent to which the selected Ethiopian defense force higher educational institutions (your institution) achieved organization performance based on the following measurements?

5 = Strongly agree

3 = Neutral

2 = Disagree

4 = Agree

1 = Strongly disagree

Cost reduction Measurements	5	4	3	2	1
The department focuses on how much they spent, where, when, and why.					
The department carefully analyzes the cost that they are buying goods and services.					
The department controls the cost through carefully forecasting, planning, budget preparation, reporting and monitoring.					
The department manages the cost to avoid unnecessary spending.					
The department maintains the cost effectiveness through cost reduction that spending less for goods and services.					
Quality Measurements					
Quality goods are procured based on prepared specifications to be procured.					

The department delivers the quality service timely to users.					
The planning of the quality control is initiated in all departments of the institution.					
There is feedback from employees on the quality of procured goods and service.					
Lead time Measurements					
The procurement unit provides the required purchasing services on time.					
There is a very long process in the procurement of goods and services.					
The procurement unit uses a short method to distribute the purchased items.					

Any other, please specify _____.

APPENDIX II

INTERVIEW QUESTIONS



School of Commerce

Part 1: General Information

1. Level of education: _____
2. Field of study: _____
3. How long have you worked in your current position? _____

Part 2: Main Interview Questions

1. What is the level of adoption in each procurement practice (planning, controlling, monitoring, training workforce and inventory management)?
2. What are the effects of procurement practices execution on organizational performance of your institution?
3. Please explain as thoroughly as possible the challenges or difficulties that your institution faced during the process of implementing procurement practice.
4. Do you think your suppliers are supplying goods and services according to the contract agreement?

APPENDIX III

Descriptive statistics for all independent variables

[DataSet1] C:\Users\Argachew\Desktop\Final SPSS\sav

Descriptive Statistics (Procurement Planning)

	N	Mean	Std. Deviation
Management members are involved in the procurement planning.	64	2.28	1.374
Need assessment is undertaken by respective heads of department for goods and services required.	64	3.69	1.355
Budget approval is obtained for the required items before purchase orders are placed.	64	3.61	1.476
Procurement planning sets in motion the entire procurement process in your institution.	64	2.30	1.411
The procurement needs are clearly defined by the heads of department.	64	2.50	1.369
Delivery schedules that fit in the institution requirements are drawn with the suppliers.	64	2.31	1.446
Valid N (list wise)	64		

Descriptive Statistics (Procurement Controlling)

	N	Mean	Std. Deviation
Your institution periodically reviews the existing procurement policies.	64	2.20	1.275
Procurement bids are opened and evaluated by an independent committee.	64	2.30	1.318
The technical abilities of the suppliers are evaluated before contract awarding.	64	2.13	1.202
Received goods and services are checked against the local purchase order.	64	2.23	1.366
Invoices are checked against the local purchase order and delivery note before payment.	64	3.47	1.458
Losses are prevented through continuously checking the purchase processes.	64	2.55	1.479
Valid N (list wise)	64		

Descriptive Statistics (Procurement Monitoring)

	N	Mean	Std. Deviation
Reviews of the procurement system are done at regular intervals.	64	2.23	1.218
Close supervision of purchases are done as a way of controlling costs.	64	2.28	1.374
Corrective actions are taken once discrepancy is identified in the procurement processes.	64	2.30	1.243
Obstacles in the procurement process are mitigated in a timely manner.	64	2.36	1.452
Supplier evaluation is periodically undertaken to ensure quality of the goods and services.	64	2.23	1.400
Valid N (list wise)	64		

Descriptive Statistics (Training Workforce)

	N	Mean	Std. Deviation
Assignment of man power to procurement department is based on professional qualification.	64	2.16	1.359
The college has procurement training programs in place to improve employees' skills.	64	2.28	1.485
Training in procurement practice has improved staff knowledge and skills.	64	2.48	1.491
Valid N (list wise)	64		

Descriptive Statistics (Inventory Management)

	N	Mean	Std. Deviation
The college has created systems and processes that identify inventory requirements.	64	2.25	1.414
The college observes stock level replacement techniques.	64	2.23	1.318
The stock distribution is occurred based on needs assessment.	64	2.34	1.472
The college handles all functions related to the tracking and management of material.	64	2.30	1.256
Valid N (list wise)	64		

APPENDIX IV

Collinearity statistics between independent variable

Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
Procurement Controlling	.564	1.774
1 Procurement Monitoring	.301	3.326
Training Workforce	.463	2.159
Inventory Management	.272	3.681

a. Dependent Variable: Procurement Planning

Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
Procurement Monitoring	.294	3.398
1 Training Workforce	.474	2.111
Inventory Management	.272	3.682
Procurement Planning	.572	1.749

a. Dependent Variable: Procurement Controlling

Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
Training Workforce	0.450	2.223
1 Inventory Management	0.728	1.373
Procurement Planning	0.204	4.902
Procurement Controlling	0.197	5.079

a. Dependent Variable: Procurement Monitoring

Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
Inventory Management	0.294	3.406
1 Procurement Planning	0.206	4.858
Procurement Controlling	0.208	4.817
Procurement Monitoring	0.295	3.394

a. Dependent Variable: Training Workforce

Coefficients^a

Model	Collinearity Statistics	
	Tolerance	VIF
Procurement Planning	0.200	5.007
1 Procurement Controlling	0.197	5.079
Procurement Monitoring	0.789	1.268
Training Workforce	0.486	2.059

a. Dependent Variable: Inventory Management

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.917 ^a	.841	.828	.28835

a. Predictors: (Constant), Inventory Management, Procurement Planning, Training Workforce, Procurement Monitoring, Procurement Controlling

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	25.551	5	5.110	61.458	.000 ^b
Residual	4.823	58	.083		
Total	30.373	63			

Dependent Variable: Organizational Performance

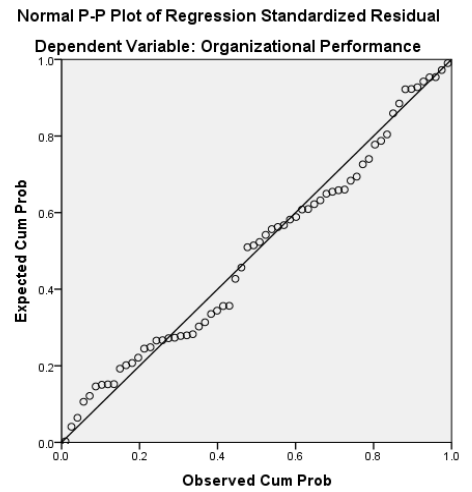
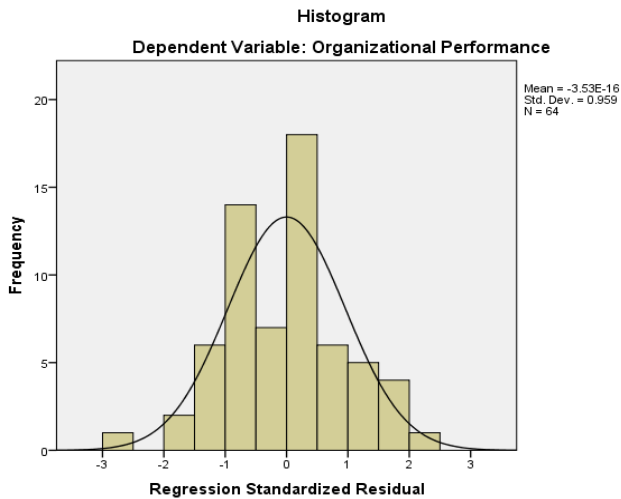
Predictors: (Constant), Inventory Management, Procurement Planning, Training Workforce, Procurement Monitoring, Procurement Controlling

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.023	.144		.162	.872
Procurement Planning	.094	.104	.102	.901	.371
Procurement Controlling	.482	.097	.550	4.973	.000
Procurement Monitoring	.310	.062	.400	5.041	.000
Training Workforce	.092	.046	.133	2.015	.049
Inventory Management	.112	.064	.137	1.735	.088

a. Dependent Variable: Organizational Performance

Histogram and p-p plots show a normal distribution



Descriptive Statistics

	Skewness	Kurtosis
	Statistic	Statistic
Procurement Planning	.608	.282
Procurement Controlling	.690	.179
Procurement Monitoring	1.569	1.737
Training Workforce	.831	-.666
Inventory Management	1.310	.754
Organizational Performance	1.096	1.102
Valid N (list wise)		

Correlations

		PP	PC	PM	TWF	IM	OP
PP	Pearson Correlation	1	.888**	-.066	.594**	.084	.647**
	Sig. (2-tailed)		.000	.607	.000	.510	.000
	N	64	64	64	64	64	64
PC	Pearson Correlation	.888**	1	-.001	.624**	.133	.732**
	Sig. (2-tailed)	.000		.994	.000	.294	.000
	N	64	64	64	64	64	64
PM	Pearson Correlation	-.066	-.001	1	.327**	.829**	.539**
	Sig. (2-tailed)	.607	.994		.008	.000	.000
	N	64	64	64	64	64	64
TWF	Pearson Correlation	.594**	.624**	.327**	1	.464**	.700**
	Sig. (2-tailed)	.000	.000	.008		.000	.000
	N	64	64	64	64	64	64
IM	Pearson Correlation	.084	.133	.829**	.464**	1	.588**
	Sig. (2-tailed)	.510	.294	.000	.000		.000
	N	64	64	64	64	64	64
OP	Pearson Correlation	.647**	.732**	.539**	.700**	.588**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	64	64	64	64	64	64

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