Factors Affecting Centralized Government Procurement Performance: The Case of Public Procurement and Property Disposal Service (PPPDS)

A Research Report

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LIST OF ACRONYMS AND ABBREVIATIONS

ANOVA	Analysis of variance
BOs	Beneficiary Organizations
CPB	central purchasing body
CSA	Central Statistics Agency
ERPS	Enterprise Resource Planning System
FAs	Framework Agreements
GDP	Gross Domestic Product
ICT	Information Communication Technology
INTOSAI	The International Organization of Supreme Audit Institutions
MOED	Ministry of Education (Kenya)
OECD	Organization for Economic Cooperation and Development
PPPDS	Public Procurement and Property Disposal Service
SMEs	Small and Medium-Sized Enterprises
SPSS	Statistical Package for Social Sciences
SC	Supply Chain
UNDP	United Nations Development Program

Abstract

Despite its importance, limited scientific research has been undertaken to examine the factors that influence procurement performance in public institutions in Ethiopia specifically in Federal Public Procurement and Property Disposal Service (PPPDS). This study will aim to ascertain the determinants of procurement performance in public entities, a case of Federal Public Procurement and Property Disposal Service (PPPDS). The objective of the study is to identify the factors that affect centralized public/government procurement and examine if these factors predict procurement performance in federal PPPDS. The study employed a quantitative research approach and utilized descriptive and exploratory design. Participants of the study (n = 95) are employees of federal Public Procurement and Property Disposal Service (PPPDS) and Beneficiary public organization and data were collected using semi-structured questionnaires. Results of the study showed that procurement performance in PPPDS has better performance in terms of purchasing the right price, from the right source and right quantity, however, its delivery of quality and time is below standard. Moreover, factor variables that influence procurement performance in PPPDS indicated that most of the respondents do not believe PPPDS' procurement planning, organizational structure, contract management-administration, and procurement measurement (with their mean values, $M < 3.00$) practices and procedures fulfill basic requirements. In contrast, respondents believe that PPPDS has a better reputation in resource allocation and centralized purchasing strategies (with their mean values $M > 3.00$).

The correlation test shows that except for resource allocation and centralized purchasing strategies, the other variables - procurement planning, organizational structure, contract management-administration, and procurement measurement – have a direct and statistically significant influence on procurement performance. Regression analysis indicated that procurement planning, organizational structure, contract management, and administration and procurement measurement - jointly contribute 24.2% to the model, however, the only organizational structure that has statistically significant predicting power on procurement performance in PPPDS ($\beta = 0.35$, $t = 2.72$, $p = 0.008$). Finally, the limitations and results of the study are discussed and possible recommendations are suggested.

Key Words: *Procurement Planning; Organizational Structure; Contract Management; Procurement performance; Resource Allocation; Centralized Purchasing Bodies Strategies*

Chapter One Introduction

1.1 Background of the study

Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency identified a need and decided on its procurement requirement. Procurement continues through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services, and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Waters, 2004). Based on this definition, procurement holds an ultimate edge for the success or frailty of a firm, government, or non-government, efficient and effective use of resources.

Efficient and effective usage of resources and expenditure of funds is an eye-catching and important section in public institutions because resources and funds by the government are mainly sourced from the public. Uyarra and Flanagan (2010) admit that public procurements are very important components in the delivery of services and the functioning of various departments of government institutions. The government needs to ensure that goods and services are provided efficiently to the public. Mlinga (2009) also recommends procurement as a tool that can be used to drive economic, environmental, and social development, besides, it is a key to government service delivery. For these reasons, any democratic government throughout the world needs to be transparent and accountable in its use of public funds.

The report of the Organization for Economic Cooperation and Development (OECD) indicated that governments, as well as the international development community, are very much concerned about how corporate bodies, especially public entities apply the effectiveness and efficiency of procurement systems in achieving their procurement and organizational objectives respectively. Increasing the effectiveness and efficient use of state funds necessitates the existence, implementation, and operation of an adequate procurement system by all public entities to achieve the expected goal OECD (2010).

Any government in the world applies one or more procurement systems in their governmental institutions. One of the systems is a centralized procurement system in which one centralized purchasing body is formed and directly involved with public procurements. According to OECD, a central purchasing body (CPB) is a contracting authority that: i) acquires goods or services intended for one or more contracting authorities; ii) awards public contracts for works, goods or services intended for one or more contracting authorities; or, iii)concludes framework agreements for works, goods or services intended for one or more contracting authorities. Numerous benefits are resulting from centralized purchasing activities, including better prices through economies of scale, lower transaction costs, and improved capacity and expertise (OECD, 2015).

According to OECD in its case study in productivity in public procurement in 2019, the roles of CPBs in OECD countries reaffirm their strategic role as an efficiency enabler in recent development. Central or coordinated purchasing is carried out in several ways, from the facilitation of purchasing through framework agreements to a more direct service involving aggregated purchasing and warehousing of products. Since 2014, CPBs in an increasing number of OECD countries have established framework agreements (FAs), as in Germany, Norway, Poland, and the Slovak Republic. At the same time, fewer countries' CPBs purchase on behalf of other contracting authorities (19 countries) in 2016, compared to 2014. CPBs in OECD countries increasingly focus on the strategic aggregation of demand through the development and use of procurement tools, including framework agreements and dynamic purchasing systems, to achieve greater value for money (OECD, 2019). According to OECD publication on preventing corruption in public procurement in 2016, the total volume of public procurement accounts for 12% of GDP and 92% of general government expenditure in OECD countries.

It is widely known by various researchers that developing countries account for a high degree of total expenditure. According to a World Bank report in 2013 public procurement accounts for 15% of the world's gross domestic product (GDP), and even more in African countries. This implies that governments of African countries spend huge amounts of money on public procurement. For example, in Ghana, public procurement accounts for 70% to 80% of the total government expenditure (Kumak, 2012). According to Basheka & Bisangabasaija (2009), public procurement accounts for 60% of Kenya and 70% of Uganda's public spending. Public procurement has a major impact on the national economy of Ethiopia, more than 60% of the total public expenditure and 14% of the GDP have been spent through public procurement in a year (Dubale, 2014). This represents that public expenditure withholds a high degree of public money and needs a careful assessment of each expenditure.

The federal Public Procurement and Property Disposal Service (PPPDS)was established in 2010 under Council of Ministers Regulation No. 184/2010 with the objectives of: i) To enable the timely supply of goods and services, which are commonly used by public bodies as well as goods and services that have national strategic significance in the desired quality and at prices attributable to economies of scale resulting from bulk purchases; ii) To enable speedy disposal by sale of properties of public bodies at fair prices, and; iii) To assist public enterprises in the procurement of goods and services and disposal of assets. (Berhanu, 2019). These objectives and service provisions account for 187 federal budgetary and ministry organizations situated in Addis Ababa and governmental higher education universities. To manage effectively and more efficiently the procurement process, PPPDS through the existing legal framework is required to consolidate the beneficiary entities' procurement needed to provide its mega procurement plan.

Various researchers found out that as public procurements withhold larger volume monetary expenditure of any given democratic government its effectiveness and efficiency, whether centralized or decentralized, is affected by many factors which affect public entities in achieving their goal and objectives which also affects the public and country's economic growth in return. Therefore, this study investigates and provides theoretical and empirical evidence on factors that affect centralized government procurement efficiency and effectiveness performance specifically at Federal Public Procurement and Property Disposal Service (PPPDS).

1.2 Statement of the problem

Public procurement is primarily the area of public administration concerned with the acquisition by the government of goods, works, and services from the marketplace, whether they are inputs required to carry out investment projects or those needed for the everyday functioning of government services and operations (Sanchez, 2013). Public procurement is the acquisition of goods and services at the best possible total cost of ownership, in the right quantity and quality, at the right time, in the right place, and from the right source for the direct benefit or use of corporations, or individuals, generally by contract (Breitman & Lucas, 1987).

Another study by Okinyi & Muturi (2016), points out that poor procurement performance in the public has been a problem due to academic qualifications and experience, contract management and procurement planning process, which include needs that are not well identified and estimated, unrealistic budgets and inadequacy of skills of procurement staff, traditional procedures and inability to embrace electronic procurement, poor coordination of activities, and lack of proper regulations greatly influence the efficiency of the procurement process in a public institution. Their study also disclosed that lack of expertise, political interference, weak institutional structures, inability to implement monitor policies and laws are the most significant factors affecting procurement performance in the public sectors.

Internationally, public procurement plays a vital role in the service delivery and performance of public organizations (Dzuke & Naude 2015). Procurement systems are central to the effectiveness of development expenditure. Budgets get translated into services largely through the governments' purchases of goods, services, and works. It is estimated that 18.42% of the world's Gross Domestic Product (GDP) is spent through public procurement (Mahmood, 2010). It is further estimated that public procurement accounts for 9%–13% of the GDP of the economies of developing countries. In Angola, public procurement accounts for 58%, it accounts for 70% of public spending (Thai, 2001), 40% in Malawi, 58% in Angola, 70% of Uganda's public spending (Basheka and Bisangabasaija, 2010), and 60% in Kenya (Akech, 2005). Other researchers indicated that the public procurement expenditure of any country involves a huge amount of monetary funds. Public procurement accounts for a significant share of governments' annual expenditures globally, with governments spending approximately $11 trillion per annum on public procurement (Hetland 2012)

Around the world, public procurement is dominant for the delivery of public services and the performance of public entities (Dzuke & Naude 2015). Different researches as well as scholars identified that deprived procurement planning and lack of proper management of the procurement process which includes assessment of needs that are not adequately identified and estimated impractical budgets, and inadequacy of skilled procurement staff responsible for procurement, adaptation, and Utilization of ICT in the procurement, poor procurement performance measurement are the major drawbacks in the public procurements. (Amemba, Nyaboke, Osoro & Mburu (2015), Licenji (2015), Mamiro (2010), Kakwezi and Nyeko (2010), Rotich (2011)). Amemba et.al (2015) concluded the selection of the most suitable procurement methods, with appropriate justifications, record keeping is also a major challenge in the sense that very few public entities have designated records management officers as the most predominant challenges in the public procurement process. In addition, they asserted that the adoption of ICT would bring about enormous opportunities for public entities such as public entities to remain competitive or to become successful. Lack of adequate skills and specialized knowledge has been observed as a significant problem in public procurement, as procurement officers are required to provide value for money while taking into account strategic considerations.

Rotich (2011) admits that the evaluation or measurement of procurement performance has always been a vexing problem for procurement professionals. He asserts that traditionally, firms concentrate on analyzing their internal trends which do not portray the true picture of how they compare well with competitors. Such an approach ignores what the competitors are doing. Lenders (1997) reveals that a firm does not wish to make known to its competitors how or what it is doing for obvious competitive reasons. This has been the case in the public sector where procuring entities have not been making available their procurement data due to the sensitive nature of the data. On the other hand, Baquero (2005) argues that traditional government contracts worldwide have tended to focus on inputs rather than outputs. He suggests that the focus should instead be on what projects can deliver rather than how much the project costs, which calls for a high level of performance management in the entire process.

In Ethiopia, Getahun (2015) asserted that more project works are being affected due to the loose legal framework, lack of an effective procurement process, weak capacity of procurement staff, unclear institutional and organizational arrangements for processing procurement and decision-making in an award of contracts, which is the main cause of insufficient service delivery in all public sectors. Furthermore, according to Aberu (2017) & Bekele (2015), the Ethiopian public sector working program mostly extended to the coming years, due to the lack of effective procurement. These can be expressed as goods/services or works not being procured on time because of the work programs affected by procurement planning that led to poor need identification/assessment system, non-participatory planning, non-adherence to the procurement plan; lack of procurement staff competency in the organizational structure; Contact management; performance measurement; Resources allocation and centralized purchasing body strategies considered to influence the effectiveness and efficiency of the procurement performance of public entities.

Generally, Many procurement activities endure from disregard, need of direction, interference, destitute coordination, need of open competition and transparency, varying levels of corruption, debasement, unbendable and bureaucratic frameworks and, and most importantly not having a staff of trained and qualified procurement specialists, who are competent to conduct and oversee such procurement, in a professional, timely and cost-effective manner affect the procurement process and performance undesirably. Despite having various studies undertaken on procurement performance in public procurement, there are still gaps that need to be addressed such as the previous studies do not clearly explain the factors such as planning, organizational structure, contract management, performance measurement, resource allocations, and centralized purchasing body strategies. Similarly, they measure the procurement performance of public entities by focusing on the process with little emphasis on the achievement of procurement objectives. This prompted the researcher to conduct the study at Federal Public Procurement and Property Disposal Service (PPPDS).

1.3 Research Objectives

1.3.1 General Objectives

The general objective of this research is to identify the factors that affect centralized public/government procurement and examine if these factors predict procurement performance in federal Public Procurement and Property Disposal Services.

1.3.2 Specific Objectives

The specific objectives of the study are:

i. To determine the extent to which the public procurement planning implementation affects the centralized procurement effectiveness and efficient performance of the federal Public Procurement and Property Disposal Services.

ii. Determine the extent to which the PPPDS's institutional authority and organizational structure influence the effectiveness and efficiency of centralized procurement performance at federal Public Procurement and Property Disposal Services?

iii. To assess the effect of contract management on the effectiveness and efficiency of the centralized procurement performance of the federal Public Procurement and Property Disposal Services.

iv. Determine the extent to which the functional performance measurement affects the effectiveness and efficiency of the centralized public procurement practices in the federal Public Procurement and Property Disposal Services.

v. To assess the effect of resources allocation on the effectiveness and efficiency of the centralized public procurement practices in the federal Public Procurement and Property Disposal Services.

vi. Determine the extent to which centralized purchasing bodies' strategies affect the effectiveness and efficiency of centralized procurement performance at federal Public Procurement and Property Disposal Services.

vii. To examine if the factors such as procurement planning, organizational structure, contract management and administration, performance measurement, resource allocation, centralized purchasing body strategies predict the procurement performance.

1.3 Research Questions

Based on the specific objectives of the study, these research questions are synthesized as follows:

1.3.1 What is the level of effect of planning implementation in the centralized procurement effectiveness and efficient performance of the federal Public Procurement and Property Disposal Services?

1.3.2 What is the level of effect of PPPDS's institutional authority and organizational structure on the effectiveness and efficiency of centralized procurement performance at federal Public Procurement and Property Disposal Services?

1.3.3 How does contract management affect the effectiveness and efficiency of the centralized procurement performance of the federal Public Procurement and Property Disposal Services?

1.3.4 What is the degree of effect of functional performance measurement on the effectiveness and efficiency of the centralized public procurement practices in the federal Public Procurement and Property Disposal Services?

1.3.5 How does resources allocation affect the effectiveness and efficiency of centralized procurement performance at federal Public Procurement and Property Disposal Services?

1.3.6 What is the effect of Centralized purchasing bodies' strategies on the effectiveness and efficiency of centralized procurement performance at federal Public Procurement and Property Disposal Services?

1.4 Significance of the Study

The research work is about centralized purchasing systems and their effects on government institutions. The study also provides different literature and empirical evidence about the challenges of centralized purchasing in public organizations. The research is expected to help broaden the researcher's knowledge base on centralized procurement to government institutions particularly to the federal public procurement and property disposal service in Ethiopia. The research output might serve as a secondary data source in the process of improvement of the policies of the government procurement system. This research might also be used as the basis for future research works by other students and researchers in similar areas of study and serve as a reference source for future researchers.

1.5 Scope of the Study

The scope of the study is delimited to the central public procurement practices operated by Federal Public Procurement and Property Disposal Services. Even though there might be many variables that affect the effectiveness and efficiency of centralized procurement, this study is delimited to procurement planning, organizational structure, contract management, performance measurement, resource allocations, and centralized purchasing body strategies. The study covers federal budgetary public bodies situated in Addis Ababa which are benefiting from the purchasing of the framework agreements, goods, works, consultancy, or other services from Public Procurement and Property Disposal Services. On the other hand, the study does not cover the decentralized procurement practices in federal government organizations. In addition, the study does not address procurement activities of state-owned enterprises (SOE) and procurement activities of public bodies situated in or outside the capital city of Ethiopia, Addis Ababa, respectively.

1.6 Limitation of the Study

The first limitation that the researcher encountered is the lack of related previous research as empirical evidence and published documents in the area of study specific to centralized public procurement in Ethiopia. In addition, despite the researcher has planned to collect data using random sampling technique, due to the public offices' bureaucracy and rigidities, the study employed purposive sampling based on availability and willingness of the offices and their employees and similarly, the responsive rate of participants has been limited to 82.6% (n = 95). Moreover, though the researcher has not only explained the confidentiality of respondents' identity and the information they provide but also received signed consent forms, around 41% (n = 39) of the respondents were reluctant to report their job positions and this might be due to fear of identification. Furthermore, Even though it takes less than 20 minutes to fill out the questionnaire developed for this study, a trend was observed that from most of the respondents only actively and attentively involving themselves in reacting to those items positioned towards the beginning of the questionnaire template compared their reaction to those items positioned towards the ending while encoding their response into the SPSS.

1.7 Organization of the study

This research report is organized into five chapters. Chapter one depicts the background of the study, the background of the organization, statement of the problem, general and specific objectives of the study, research questions, significance of the study, the scope of the study, limitation of the study, and definition of terms respectively. Chapter two of the research deals with all relevant theoretical, empirical, and conceptual literature on the study topic. The third chapter presents the research methodology including research design, research approach, description of the study area, the population of the study and the sampling technique utilized and data sources and types, data collection instruments, data analysis methods, reliability and validity tests, and ethical procedures employed in their respective order. Chapter four presented the results of the study, interpretation of the outcomes, and discussion of the results. The final chapter (chapter five) presents summaries of findings, conclusions, and possible recommendations respectively.

1.8 Definition of Terms

Central purchasing body (CPB) is a contracting authority that: i) acquires goods or services intended for one or more contracting authorities; ii) awards public contracts for works, goods, or services intended for one or more contracting authorities; or, iii) concludes framework agreements for works, goods or services intended for one or more contracting authorities. Numerous benefits are resulting from centralized purchasing activities, including better prices through economies of scale, lower transaction costs, and improved capacity and expertise (OECD, 2015).

A centralized purchasing system refers to one that gives a department an ultimate authority to make all the buying of goods and services within an organization. In centralized purchasing, various departments of an organization make their requisitions through a centralized buying unit that scrutinizes, adjusts, and consolidates (puts together) all the orders placed to come up with one big order (Van, 2000).

Public procurement is defined as the government's activity of purchasing goods and services needed to perform its functions. It refers to procurement planning, contract placement, and contract administration (Arrowsmith, 2010).

Effectiveness is the degree to which something is successful in producing the desired result – success (Julius, 2016).

Procurement Planning is the process of deciding what to buy, when and from what source. During the procurement planning process, the procurement method is assigned and the expectations for the fulfillment of procurement requirements are determined (Julius, 2016).

Chapter Two Literature Review

2.1 Introduction

This chapter comprises three major sections. The first two portions discuss the theoretical and empirical review of the related literature on the factors that affect public/government procurement performance in federal Public Procurement and Property Disposal Services successively. Finally, the third part conceptualizes the theoretical/conceptual framework and enlists the research hypotheses of the study.

2.2 Theoretical Literature Review/ Conceptual Review

2.2.1 Meaning and nature of Public Procurement

Public procurement is a recently introduced and captivating field, given its clear and misdirecting dullness as a subject, its undeniably huge significance for governments, for industry, and for whole economies (as it were moderately as of late acknowledged), and since it has pulled in within the final few decades sudden intrigued and excitement for its 'promises' to furthering public policy however unmatched by much research investigation. On the other hand, various kinds of definitions briefly elaborate the nature of the term "Public Procurement" provided by different researchers and scholars. These definitions, hereunder, are presented while it would be difficult to accept a single definition as a generic terminology for the term public procurement, the researcher has tried to accommodate the most related terminologies for this study.

Public procurement is described as the procurement of goods and services on behalf of a public authority which is mostly funded by the taxpayers' money and as a result, there is a need to create the best value for the taxpayers' money (Van Weele, 2014). Monczka, Handfield, Giunipero, Patterson & Waters (2010) and Van Weele (2014) described public procurement as it is the process whereby public-sector entities acquire goods, services, and works from third parties of routine items (e.g. stationery) to complex expenditures (e.g. construction of roads).

Most countries across the world acknowledge that public procurement must be enacted and controlled by the legal framework of a government. As a result, referring to the number of public procurement definitions would be inadequate without reviewing the definitions incited in the laws and regulation of the government of Ethiopia, as this research is conducted in organizations that utilize and applies legal frameworks and legislation by the federal government.

In September 2009, the Ethiopian government released The Ethiopian Federal Government Procurement and Property Administration Proclamation number as 649/2009. According to the proclamation meaning for the terms "Procurement", "Public procurement", "public body" and "public fund" are defined as follows:

Table-2.1: Definition of terms based on Proclamation no. 649/2009

Terms	Definition or terminology as per proclamation no 649/2009
"Procurement"	Obtaining goods, works, consultancy or other services through purchasing, hiring or obtaining by any other contractual means;
"Public procurement"	Procurement by a public body using public fund
"public body"	Any public body, which is partly or wholly financed by the Federal Government budget, higher education institutions and public institutions of like nature;
"public fund"	Any monetary resource appropriated to a public body from the Federal Government treasury or aid grants and credits put at the disposal of the public bodies by foreign donors through the Federal Government or internal revenue of the public body

Source: This table is developed by the researcher using the information sourced from The Ethiopian Federal Government Procurement and Property Administration Proclamation number as 649/2009

In Conclusion, public procurement is a process of acquiring goods and/or services most practically and conveniently while ensuring the best value of the money for the consumption of public entities to achieve their objectives and goals in delivering various services for the public.

2.2.2 Objectives of Public Procurement

Public procurement encompasses numerous objectives that cover social, economic, and financial objectives. These objectives are set as a center establishment of the procurement regulations and organizations to expel boundaries to trade in products and services.

According to Jorge (2015), the goal of public procurement is to award timely and cost-effective contracts to qualified contractors, suppliers, and service providers for the provision of goods, work, and services to support government and public services operations, following principles and procedures established in the public procurement rules.

Komakech (2016) incited in his paper objectives of public procurement in developing countries as promoting transparency and openness; economic efficiency; efficiency in public procurement; public confidence in procurement procedure; equality and fairness in the public procurement process; and elimination of corruption in public procurement.

On the other hand, according to Nijboer et.al, (2017) the primary goal of public procurement is achieving ‘value for money in terms of price and quality, whereas the contribution to other policy goals is referred to as a secondary goal.

As indicated previously, it is well known that various researchers and scholars provided tremendous objectives of public procurement as well as most countries indicating the objectives of their expenditure through public procurements of goods and/or services within their public procurement laws and regulations. As a result, it could be more ideal to assess what are the primary objectives of public procurement in the Ethiopian government context. Accordingly, from The Ethiopian Federal Government Procurement and Property Administration Proclamation number as 649/2009, it is observed that (1) achieving better transparency, efficiency, fairness, and impartiality in public procurement and enabling the utilization of the large sum of public money spent on procurement in a manner that ensures greater economy and efficiency (2) ensuring that an organization enabling the realization of the economic benefit and efficiency flowing from a bulk purchase is in place (3) ensuring that public property in which a significant amount of public money is invested, is utilized in such a manner as to enable the government device maximum benefit therefrom and modernize the administration; are the primary objectives to achieve that necessitated the Ethiopian government to introduce an integrated public property administration.

In general, the primary objective of public procurement is the acquisition of goods and/or services cost-effectively to ensure value for the money while conducting the procurement in better transparency and greater accountability, adequate efficiency, proper fairness, and all-inclusive.

2.2.3 Basic Principles of Public Procurement

In every organization, private or government, it is commonly accepted that there to be a rudimentary principle that is considered as a pathway and guideline to follow in achieving that organizations' pre-established objectives. Likewise, Public procurement also has its principles that could be addressed in the public procurement rules and regulations. These principles are technically followed by any state-owned entity that aims to conduct any procurement.

Lynch (2013), in his book 'Public Procurement: Principles, Categories and Methods' described the principles of public procurement as they are the foundation of public procurement and should be addressed in the public procurement rules. These principles govern the management of public procurement and set the framework for a code of conduct for public procurement practitioners and all other officials directly or indirectly associated with the public procurement process. And he also added that any practitioner must have a clear understanding of public procurement principles and know how to apply them to guide in a day-to-day decision-making process. By integrating these principles into work ethic, the outcome of the decisions will always be in line with the goal and objective of public procurement. Transparency, integrity, economy, openness, fairness, competition, and accountability are some of the fundamental principles of public procurement addressed in his book.

Komakech (2016) in his paper concluded, which supports Lynch's statement, procurement officers should understand all the procurement objectives and principles since they all encompass the concepts of efficiency and effective procurement, transparency, accountability, competitiveness, confidentiality, non-discrimination, and fairness. He also asserted a code of good customer practices should be developed by a government which should be effectively enforced by an independent agency to bring greater accountability in public procurement.

As pointed out in previous sections, once again it could be more practical to assess and include what the Ethiopian government identifies as a basic principle with public procurement. Both The Ethiopian Federal Government Procurement and Property Administration Proclamation number as 649/2009 and the Federal Public Procurement Directive issued by the Ministry of Finance and economic development, state that the following as principles of public procurement and property administration in which any authority and execution of procurement must comply with. These principles are briefly as follows:

- Achieve maximum value for money in procurement – ensuring value for money, economy, efficiency, and effectiveness in the use of public funds for procurement.
- Nondiscrimination among candidates on grounds of nationality or any other reason/criteria not having to with their qualification and/or not relate to the evaluation criteria except in case of preference specially provided for in the 649/2009.
- Transparency and fairness of the criteria based on which decisions are given in public procurement as well as of decision in each procurement. In other words, any criteria applied in the making of procurement decisions and decisions taken on each procurement must be made transparent to all concerned parties.
- Accountability for decisions made and measures taken concerning public procurement execution and property administration.
- Careful handling and proper use of public property
- Support the country's economic development by ensuring economy, efficiency, and effectiveness in the execution of public procurement.
- Encourage local producers, companies, and small and micro-enterprises that support the national economy through the application of preferential treatment granted by the Proclamation and Directive.

Thus, any public entity in Ethiopia involved in the execution of procurement of goods and/or services must comply with these principles.

2.2.4 Public Procurement Process and Procedures

Procurement Process and procedures consist of a set of activities sequenced in a staged manner that are interrelated with each other, after completion of all stages, the required goods or series are provided as a result of awarding a contract to the best offeror. These set of activities are steps ranging from need assessment to awarding a contract. However, every organization may develop its procurement process and procedures as non-state-owned organizations establish their procurement policy, procedures, and process. For instance, Patras and Bănacu (2016), in their case study to analyze critical phases in the process of awarding public procurement contracts in Romania, described more than 20 procurement steps. On the other hand, according to the Public procurement procedure handbook of Belize (2013), which is a guideline for the public sector, the overall procurement process for goods and works consists of 9 stages. Therefore, the public procurement process and procedures may vary from one country to another. Ohene – Addae (2012) believes that the procurement process and its cycle may differ from organization to organization, and a government institution may have a slightly different procurement process compared to a private company.

Nonetheless, the public procurement process can be considered as the “core” of the procurement system in public institutions, as its activities are the main determinants of final performance and can support or hinder policy-level decisions. It is well known that there are a variety of academic descriptions of the purchasing process (e.g., Robinson et al., 1967; Ford, 1980; Johnston &Lewin, 1996; Van Weele, 2005) (Andrea et al., 2017). According to Lynch (2013), he underscores that Public procurement management, requirement identification and budget allocation, procurement planning and strategy development, procurement method selection, solicitation documents preparation and advertisement, bid and proposal submission, evaluation and selection, and contract award to closeout, are all addressed in the procurement rules. In his study, he reinstated that the public procurement process doesn’t include the process after contract award and any process beyond the contract award should be considered as contract administration. Likewise, processes and procedures for each procurement method are indicated in the Federal Public Procurement Directive issued by the Ministry of Finance and economic development. In general, the following figure illustrates the major components of public procurement cycles conducted by the procurement directorate in Federal PPPDS.

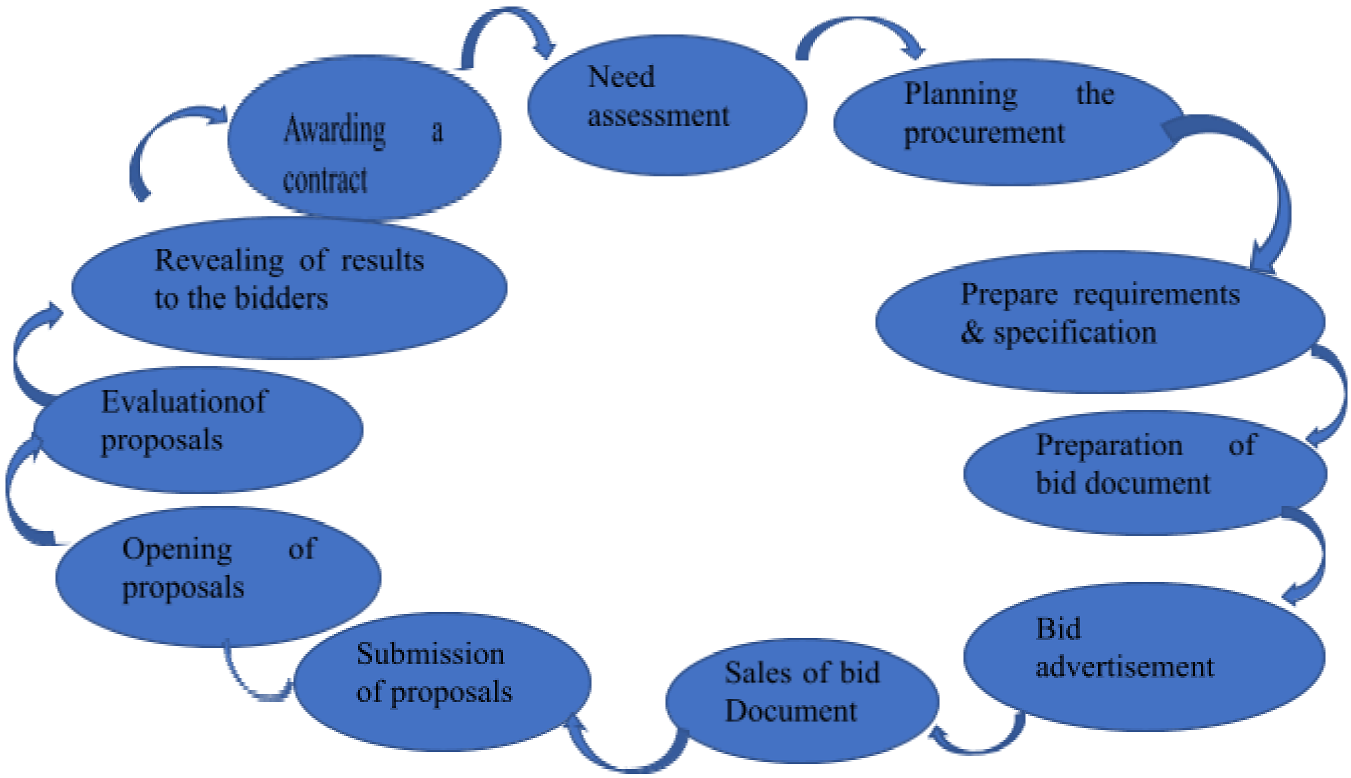

Figure 2.1: Public procurement cycle

Source: Figure incorporated using information gathered from Federal Public Procurement Directive issued by Ministry of Finance and economic development and Federal PPPDS by the researcher.

2.2.5 Centralized Public Procurement

Public procurement can be categorized as Centralized, Decentralized, and mixed procurements. In the case of centralization procurement, one procuring entity will be responsible for the acquisition of goods and services on the behalf of other government entities. It is considered decentralized procurement when public entities are responsible for handling procurements of goods and services for their organizational consumption to achieve their organization's objective and goal. Mixed /Hybrid/ procurement consists of both centralized and decentralized procurements.

The definitions of centralized public procurement vary widely, and they are in some respects very similar. Some define it as "the process by which all public procurement procedures can be controlled in one centralized location" (Islam, 2013). It can also be defined as "the degree to which authority, responsibility, and power are concentrated within an organization or buying unit (Balset. al. 2018). Public procurement has also been defined as: “centralization of public procurement means that all public procurement procedures are concentrated in a centralized procurement unit to procure all goods and services requested from various government entities” (Karolis et al., 2011). Finally, the OECD (2011) defined the centralization of public procurement as “the establishment by the government of a centralized agency with the task of procuring goods and services for the benefit of other government agencies and bodies to reduce the cost of public procurement”.

From these definitions, it is well understood that a centralized procurement system has various facets and these facts observed from various works of literature are briefly discussed in the following section.

2.2.6 Aspects of Centralized Procurement System

Centralized procurement system and structure involve pros and cons viewpoints in its framework as it is the same for the decentralized procurement system and structure. Edgars and Marite (2018) discovered, from their reviewed articles, that procurement centralization creates purchasing synergy benefits and opportunities, which can be divided into three main categories: economies of scale, economies of process, and economies of information and learning; it also helps have a high level of standardization. Weele (2014) and Hyttinen (2013), identified purchasing power (better contract’s terms and conditions); Economies of scale (better price); better visibility over spending cost; more strategic procurement’s focus for resource plan and research; and product and supplier standardization as the benefits of centralized procurement. On the other hand, the authors listed unfulfilled individual requirements; limy autonomy and decision making of business units; distant connection with end-users; and less focus on units’ needs as disadvantages of centralization stem. And for Edgars and Marite (2018) the cons of centralized procurement arise largely from attitude problems, such as maverick buying, and difficulty of controlling processes remotely. The authors also identified other problems which are related to excessive overhead costs and slow response to divisional matters.

One of the paybacks from centralized procurement is it helps to *control public spending*. As the nature of centralized procurement strategy involves a larger volume of procurement, the system handovers a better bargaining power for the purchasing body in terms of the reduced purchase price through competitive pricing and reduced transaction cost of the procurement process. These in turn assists to manage public expenditures. OECD stated that centralization of public procurement and the introduction of one large volume process would result in an abundance of resources and a reduction in the prices of procuring materials (OECD, 2015). The increase in the volume of the procurement process would help increase the bargaining power of the centralized agency for procurement, which, of course, helps to reduce the cost of public spending on public procurement.

Another benefit of a centralized procurement system is *the capacity of centralized public procurement agencies* that they gain from the greater experience in practicing and handling the number of procurements. The capacity of the Centralized Agencies here means the great experience they have in many public procurement practices, making them the only option in preparing and implementing public procurement processes in complex operations in some areas requiring special treatment (OECD, 2016). The more particular public procurement is doled out a single body, as it is more likely to have a positive impact on the well-ordered working of the public procurement process, in differentiate to the truth that local public procurement units have such operations which will, in the long run, come up short due to the non-availability of adequate capacity for such units to carry out such operations.

Another positive aspect of centralized procurement is *its requirement for a high level of professionalism.* According to OECD, the public procurement process involves a large number of risks in several key aspects (legal, economic, and technical aspects), requiring specialized and highly professional staff to be able to manage these risks (OECD, 2011). This is in divergence to local purchasing units where specialized staff may not be available to oversee the risks that will result from public procurement, which may, in turn, result in failure of the procurement process, squander of public funds, and disturbance of plans and programs based on such operations. This advantage in this manner enables the task of public procurement to specialize central agencies.

Assisting in achieving the objectives of the State's public policies is also another advantage of centralized procurements. OECD in its report states that centralized public procurement helps government organizations in achieving public policy objectives by focusing only on carrying out their duties and responsibilities while one centralized body focuses on the public procurement process efficiently and effectively. Public procurement is one of the most important means of government to meet its needs of goods and services so that it can carry out its duties toward achieving the objectives of this state's public policies. On the other hand, by focusing the public procurement processes on implementing them through one agency, it will achieve the objectives of the state's public policies (OECD, 2011).

A centralized procurement system helps in i*ncreasing transparency and control over public procurement.* The existence of a single agency responsible for public procurement helps regulatory bodies to control the procurement process, in addition to making it easier to control them. In addition, public procurement through one agency will increase transparency in this field where it is easy to publish and provide the information and data on procurement as well as the ease of access to them for being subject to the pressure of public opinion (OECD, 2000).

According to OECD, on the other hand, governments will have to trade off the following disadvantages of a centralized procurement system for those benefits acquired for adopting the system.

Market concentration and the likelihood of monopolistic practices in public procurement. The centralized approach of procurement may result in monopolistic practices in those operations, as well as the concentration of the market by a limited number of companies, which is one of the most serious adverse effects not only on procurements but also on the economy of the country as a whole. Large amounts of centralized public procurement often go to large companies without leaving any share to the small firms in these operations (OECD, 2011).

Limited opportunities for small- and medium-sized enterprises (SMEs) to participate in public procurement. Regarding the main objective of public procurement in the centralized approach, it is clear that it lies in reducing public spending through the collection of requests from all government agencies and offering a single procurement through a centralized agency. Hence, the size of this process is very large in a way affecting the possibility of entry of small and medium enterprises in the process. This is mainly due to the qualification criteria and entry requirements enforced in the procurement process, which far outweigh the potential of these companies, both technically and financially (OECD, 2016).

Waste of resources in the absence of coordination between different government departments. The centralized system of public procurement may pose a major threat to state resources, which may lead to the destruction of the public procurement system as a whole if it fails to take into account some of the following situations.

In addition to these and others indicated previously, Islam (2013) pointed out that delay in meeting the needs and requirements of user organizations by the centralized purchasing body may pose a significant threat to the user organization in achieving goals and objectives in terms of public service provision and deliverance. He asserted that there may be a delay on the part of the centralized public procurement body in meeting the needs and requirements of all government agencies, which may result in significant damage to some government agencies that may be in urgent need of certain goods and services ordered before. In addition, he also revealed that the costs of transporting goods and services may also pose a significant financial burden if the applicant is located far from the centralized procuring entity, which is further impaired if this cost is not taken into consideration when planning the procurement process (Islam, 2013).

While assessing various pieces of literature, it is also important to investigate the rationales of Ethiopian Government expectations in endorsing and establishment of a centralized purchasing body as the Federal Public Procurement and Property Disposal Service (PPPDS). According to regulation number 184/2010 by the Council of Ministers, the rationale behind the establishment of the organization are enabling the timely supply of goods and services, which are commonly used by public bodies as well as goods and services that have national strategic significance in the desired quality and at prices attributable to economies of scale resulting from bulk purchases and assisting public enterprises in the procurement of goods and services.

2.2.7 Measurement of public procurement performance

Performance is the act of measuring productivity and adequacy of an employee's productive hours or performance measurement can be respected as an orderly way of crediting numbers to entities. Even though few definitions have been provided to performance management, they all appear to have one common characteristic which is attempting to assess the performance of companies or organizations. According to Giese (2011), performance measurement is the process of quantifying the efficiency and effectiveness of an employee's productive hours.

Procurement performance covers various quality and quantity-enhancing benchmarks, which narrows down transaction costs, time spent, and the quality and quantity of goods delivered. Based on their analysis, Odhiambo & Kamau, on the performance of public procurement officers, procurement performance entails high returns on investment, reduced transaction costs, faster delivery of services and supplies, delivery of high-quality purchases, and streamlined supply chains. (Odhiambo & Kamau, 2003).

Batenburg and Versendaal (2006) noted that the use of unfitting means can be a blockade to change and transformation which may lead to worsening of procurement operations. Organizations that do not have performance means to evaluate and monitor their operations in their processes, procedures, and plans may incur lower performance and higher customer dissatisfaction, and employee turnover. Measuring procurement performance provides benefits to organizations such as cost reduction, enhanced profitability, assured supplies, quality improvements, and competitive advantage.

Furthermore, procurement performance has to do with the proper management of procurement activities. The management of procurement activities narrows down to the basic functions of the human resource departments of hiring the best procurement management talent, subjecting this top talent to on-the-job training and development, rewarding and motivating this top talent through competitive salaries, benefits, and career progression (Bianchi, Tiziana, and Valentina. Guidi, eds. (2010).

2.2.7.1 The Five Key Procurement Performance Indicators

The Right Quality View: It can be defined in many ways but for material purchasing. Specifications where the buying organization lays down clear and ambiguous requirements that must be met. The specification of the product, not the application (Bail p. et al, 1998). This implies reducing unnecessary varieties and standardizing to the most economic sizes, grades, shapes, colors, types of parts, and so on (Gopalakshan P. and Sundaresan. M.,2002). **The Right Quantity**: Regular requirements are brought either for stock or else for direct use in operations or production. Requirement quantity can be aggregated or sub-divided in various ways, and the quantity notified to the purchasing department as required is not necessarily the same as the quantity the department orders from the supplier. Ordering policies used by purchasing include: Blanket order which group many small requirements together for contracted purposes; Period contracts stating an estimated total quantity for the period and agreed price in conjunction with call-off order which states delivery date and quantity; Period contracts which specify a series of delivery dates and quantities; and the economic order quantity (EOQ) etc (Bail p. et al, 1998). Other methods in stock control Reorder level methods of stock control are procedures in which, whenever the stock of an individual item is down to a quantity called reorder level (order point) an order is initiated to obtain more stock. The order level is the average quantity required in the lead time plus buffer stock (Bail p. et al, 1998).

The Right Time: The recognition of "time" as a key variable and the need to minimize time as waste in the supply chain has led to an increased degree of concern with time and responsiveness in recent years. The achievement of delivery on time is a standard purchasing objective. If goods and materials arrive late, work is not completed at the right time, sales may be less, production halted, and damage clauses may be involved by dissatisfying customers. To improve this problem:

- The first step is to decide firmly and precisely what is required and when it is required the requirement dates notified to the purchasing department are achievable, purchasing can properly be expected to go out and achieve them.

- The vital step in achieving on-time delivery is to ensure that suppliers know and are fully aware that on-time delivery is an important element in their marketing max (Gopalakshan p. and Sundaresan. M., 2002).

The Right Supplier/Source: The supplier has a strong enough financial base/financial capacity. Competency (the supplier, its people, or its process competent and has adequate manpower to handle the order). The supplier is in a position to honor the commitment without much follow-up (Bail P. et al, 1998).

The Right Price: The product or service offered at a competitive and reasonable price i.e. Market Price. (Bail p. et al, 1998)

2.2.8 Factors affecting procurement performance in the public sector

Public sector procurement is influenced by several aspects and conditions which has a direct relation with influencing its performance in terms of efficiency and effectiveness. Any public entity involved in procurement using public funds is affected by various factors which may arise from internal and external environments. Various studies have been conducted by different researchers, scholars, and institutions concerning this subject matter.

Hamza, S. B., Gerbi, A., & Ali, S. H. (2017) in their research suggested an identification of success factors that bears influence on procurement to achieve the best value for money. He identified seven key success factors which influence procurement, namely; a clear procurement strategy, effective management information and control systems, development of expertise, a role in corporate management, an entrepreneurial and proactive approach, coordination, and focused efforts. Communication among others is fundamental, communicating the key success factors to all levels of the organization and setting out a procurement strategy to achieve continuous improvement in value for money. This should be based on total cost, quality, and enhancement of competitiveness of suppliers using the best procurement practices.

As mentioned previously, many pieces of research have been conducted in the identification of factors that influence the performance of public procurement at the local and international levels. The following are major factors affecting procurement performance. These factors may arise from internal and external environments and the degree to which these factors impose influence on public procurement varies. Based on a review of several kinds of research published internationally and locally, the summaries of major factors that influence the public procurement performance are discussed in the following subsections:

2.2.8.1 Procurement Planning

According to Hamza et al. (2017), procurement planning is important due to the following reasons: it helps to decide what to buy, when and from what sources; it allows planners to determine if expectations are realistic; particularly the expectations of the requesting entities, which usually expect their requirements met on short notice and over a shorter period than the application of the corresponding procurement method allows; it is an opportunity for all stakeholders involved in the processes to meet to discuss particular procurement requirements.

Thus, procurement planning as a process and activity play a vigorous role in any organization to achieve an effective and efficient procurement of goods and services. For this reason, any organization not being able to establish a clear and detailed procurement plan could entail the ineffective and inefficient acquisition of goods and services at the end which leads to, in return, improper management of public funds. In addition, it leads to overall organization fails to achieve its objectives in terms of public service delivery and provision.

2.2.8.2 Organizational Structure and Staff Competency

Organizational structure may be very simple or very complicated, depending on the size of the government organization. Most state and large local governments have procurement divisions either within their finance or administrative services departments; and very few departments, except perhaps transportation or public works departments, have a procurement function or officer. In the federal government, there are different procurement sub-agencies within each executive agency, depending on each agency's missions.

Any professional personnel needs to have adequate know-how, knowledge, and skills coupled with valuable educational background, training, and work experiences.

Armstrong & Baron (1995) explained that competency is the application of knowledge and skills, performance delivery, and the behavior required to get things done very well. Besides, competency indicates the adequacy of knowledge and skills that enable someone to act in various situations (Aketch & Karanja, 2013). Sultana, Irum, Ahmed & Mehmood (2012) and Appiah,

(2010) asserts that considerable and continuous asset is incurred in training and development and there is a need for extensive external training for human resources to be able to improve and contribute to the efficiency of organizations.

Moreover, Roberta, Christopher & Lago Da Silva (2014) advise that multi-skilling offers employees a variety of skills and should be developed extensively. Hence, all employees need a broad and continuous education background and training to execute tasks they are assigned and improve processes while contributing to a better organizational decision-making process. The same is true for procurement professionals. Any procurement staff without adequate educational background about procurement; skills; and training may backfire on the organizational procurement performance. It may lead to the inefficient and ineffective acquisition of goods and services while affecting overall organizational performance. In addition, the lack of competent procurement staff in an organization entails a poor and unethical code of conduct. Therefore, staff competency is one of the factors that affect public procurement performance.

2.2.8.3 Performance Measurement

Technology is the change or integration of means of processing a product or service from what is perceived not to be a good version to a better one. It can also be said to be a change of system or way of operation from inefficient or manual to automatic operations (Barsemoi, 2014). Roberta et al. (2014) reckoned that personnel in procurement are, in a sense, information processors. They receive, analyze, make decisions and distribute information to numerous needs pieces of evidence benefits are resulting manage the flow of goods and services in the supply chain. ICT is an enabler for information sharing which organizations in the procurement system can use for eliminating bloated inventory levels caused by the cumulative effect of poor information cascading up through a supply chain.

Barsemoi (2014) notes that, unless one remembers that technology is a tool and that one needs to know how to use it, for it to be productive, the money that spends on technology will never appear to be wasted. According to various studies, the emergence of internet technologies has changed the way that governments and organizations operate. These studies point out that it is important to note regarding technology is that it is a tool to assist in getting sourcing and procurement-related activities done in the organization. For these reasons, ICT is one of the factors that influence the procurement performance of any organization.

2.2.8.4 Contract Administration and Suppliers Management

Sourcing is the process of identifying suppliers that can meet procurement requirements of the public entity for goods and services, Hinson and McCue (2004). The process of sourcing will differ from circumstance to circumstance on the time available to carry out sourcing. The steps in the sourcing process will include market inquiry which is the process of inviting and evaluating tenders or quotations depending upon an entity‟s own internal procedures, and evaluation and awarding with the process of determining the actual quality, reliability, delivery, of the goods and services. The procurement department coordinates activities of analyzing and evaluating the bids against set criteria, specification requirements and presenting the analysis to a procurement appointed committee, verification of supplier capability and quality control, reviewing product inspection results, verification of technical evaluation reports, negotiating with vendors, placing orders and expediting the delivery. After evaluating and awarding a tender, orders are placed for the goods or services with the supplier and the approval processes may be more detailed. The orders establish contractual relationships between the organization and the supplier Shaw, (2010). Once the order is placed and the supplier has confirmed receipt and agreed to the contract terms and conditions, the role and the amount of work that staff in procurement have to undertake will be affected by the performance of the suppliers Bovis, (2007). It is necessary, therefore, for the procurement staff to monitor the progress of orders and the performance of the suppliers. Continuous monitoring enables the organization to pick out break-down points in the system and quickly identify solutions Shaw, (2010). Hinson and McCue (2004) say that sourcing is the process of identifying sources of supply that can meet the organization’s immediate and future requirements for goods and services. The sourcing process adopted will depend on the situation and on the time available to carry out sourcing. For instance, in a sudden on-set emergency the need to respond quickly to the emergency will mean there will be limited time to gather sourcing information and approve suppliers; therefore, an organization may make use of existing suppliers.

2.2.8.5 Performance Measurement

Performance is the act of quantifying the efficiency and effectiveness of an employee's productive hours or performance measurement can be regarded as the systematic means of attributing numbers to entities. Although several definitions have been offered to performance management, they all seem to have one common identity and that is trying to evaluate the performance of companies or organizations. According to Giese (2011), performance measurement is the process of quantifying the efficiency and effectiveness of an employee's productive hours. From a procurement perspective, Van Weele (2006) asserts that there is a link between procurement process, efficiency, effectiveness, and performance.

Rendon, &Rendon, (2015) research findings suggest that public organizations are not emphasizing procurement internal controls in their workforce competencies, which may be contributing to an increased vulnerability for procurement fraud. Therefore, the ought to put measures in place to guarantee that public procurement yields greater benefits to the public cannot be overstated. According to Rendon, &Rendon (2015), public procurement organizations are charged with ensuring that their contracts are satisfying customers' needs in terms of value for money and that their procurement activities are conducted with the highest levels of integrity, accountability, and transparency. Internal control of public procurement activities may be identified as one of the means of making public procurement attain wanted desires.

Applying appropriate mechanisms to monitor and control the whole public procurement process will reduce opportunities for integrity breaches. These include clear chains of responsibility in the procurement process, segregation of duties, and authorization, systematic recording, internal controls, reporting tools, and checks. Progress and costs of procurement should be monitored and published, independent oversight, evaluation, and audit should be conducted (including real-time controls) and identified irregularities should be sanctioned. Mechanisms and protection to whistleblowers should also be established (INTOSAI, 2016). In pursuing audit ability in their procurement operations, public organizations should incorporate training on internal controls and fraud awareness in their procurement competencies. This training should include an understanding of internal control components and how they should be implemented in each procurement process area (Rendon & Rendon 2015).

2.2.8.6 Resource Allocation

Resource allocation is the process of determining the best way to use available assets or resources in the execution of a given project. Companies attempt to allocate resources by minimizing costs and maximizing profits using strategic planning methods, operational guidelines and implement policies and procedures that move the business toward the achievement of its goals (Shantanu et al, 2012). Resource allocation begins at strategic planning when a company formulates its vision and goals for the future. Most of the public entities lack clear accountability on how the resources provided impact their performance, therefore, going against the fundamental principles of public procurement, Ouma Danis et al, (2014). Tangible resources are assets that can be seen and quantified such as production equipment, manufacturing plants, and formal reporting structures. Intangible resources include assets that typically are rooted deeply in the firm's history and have accumulated over time (Michael and Hoskisson, 2007).

2.2.8.7 Centralized Procurement Bodies Strategy

Numerous benefits are resulting from centralized purchasing activities, including better prices through economies of scale, lower transaction costs, and improved capacity and expertise. OECD countries reap the benefits of aggregation of demands and outputs of procurement activities through the establishment of central purchasing bodies (CPBs), which are defined as contracting authorities providing centralized purchasing activities and, possibly, ancillary purchasing activities. (OECD, 2016). The CPBs included in the study award and manage centralized framework agreements in product and service areas of common interest within the public administration, but there are both similarities and differences in the way in which this main function is carried out. The CPBs consider that a natural and necessary function is to provide guidance and advice to users on how to plan and conduct the call-off procedures under the framework agreements. A more complicated function discussed with the CPBs was the provision to procuring entities of procurement consultancy services in general, i.e. not linked to the use of framework agreements. There is generally a strong reluctance to add such services to the CPBs' operations, for two reasons: (i) the risk of a negative market impact on private procurement consultancy firms; and (ii) the risk that such contracts with procuring entities may be subject to the public procurement legislation and that the CPB may become a contracting party for such services. Whatever the reason, it should be noted that even where such services exist, this activity is very small with the CPB's main function. As part of its core business, the operational functions of a CPB normally include the following main activities– acting as manager of the national system awarding framework agreements or other consolidated instruments; act as a contracting authority aggregating demand and purchasing; establish policies for contracting authorities; coordinate training for public officials in a change of public procurement. (OECD, 2016)

2.2.9 Challenges in public procurement

Procurement processes encounter challenges all over the world. Countries that are socially, economically, politically, and technologically advanced may also face many challenges in their public procurement process and practices and some of the challenges could be related to internal and external factors as well as poor communication between departments. Arora (2014) emphasizes that global sourcing has been more of an economic as well as a political agenda to many large corporations in the past few years. Eventually, an increasing number of companies discover that the supply chain issues linked with outsourcing have often been miscalculated. He further asserts that the crux of the problem is that many seemingly smart outsourcing decisions were based on low acquisition or procurement cost, rather than total supply chain cost.

Thai (2011) identified the following seven challenges facing the public sector procurement: (i) setting of clear objectives at the outset of all projects and for all strategic procurement units; (ii) developing a procurement strategy for every public sector organization; (iii) focusing strategic procurement on outcomes, not processes; (iv) embracing collaboration as a strategic tool; (v) recognizing that sustainability has become a strategic driver for professional procurement; (vi) positioning the public sector as a customer of choice, and (vii) resolving the talent scarcity problem. For Handfield (2011), the main challenges in public procurement include factors such as the fear for negative publicity that has led to a growing emphasis on the legal aspects of the tendering process; the fact that the procurement department acts reactively and is often not involved until the specifications have been defined; the fact that procurement is seen as an operational department and not perceived as an advisor or partner of the organization; the fact that procurement is organized around contracts rather than commodities; the fact that there can be peak moments when contracts are about to expire, but no continuous process to manage internal and supply market developments and opportunities; and the fact that there is no focus on managing the end-to-end process and closing the procurement loop (Handfield, 2011).

Public procurement practitioners have always walked on a tightrope. Their ability to accomplish procurement objectives and policies are influenced very much by internal forces including interactions between various users from different departments demanding different goods and in most cases are not predictable (Arora, 2014). Staffing levels and budget resources are some of the possible challenges because funds are not available at the time of planning. Procurement planning enables departments to anticipate recurring contract requirements and be in a better position to take anticipatory actions aimed at ensuring compliance, but in most cases, the plan is not achieved due to lack of sufficient funds (Arora, 2014, Handfield, 2011; Thai, 2011; Neals 2011).

Another challenge that public procurement raises from relationship management of suppliers. Thai (2011) underlines that relationships with suppliers can be strained as a result of poor communication. He stresses that suppliers often complain that they are kept at arm's length and not informed about projected needs but are still expected to deliver on time no matter what the level of demand. Another aspect discussed by Thai (2011) is the legal framework. He underlines that apart from public procurement regulations and rules, the procurement function needs to consider a range of legal aspects including research and development (regulations dealing with safety and health of new products), manufacturing (safety and health regulations at workplace and pollution control), finance (regulations dealing with disclosure of information), marketing (regulations dealing with deceptive advertising, disclosure of product characteristics), personnel (regulations dealing with equal opportunity for women and minorities) and contracts (Thai, 2011).

It is imperative that management recognizes weaknesses in the procurement function and adjust to the dynamic global environment and socio-economic changes. Effective buying involves six "*rights*": buying goods and services at the right price, from the right source, in the right quantity, at the right time, at the right specifications that meet users' needs, and to the right internal customer (Handfield, 2011). Researchers (such as Thai, 2011; Neals 2011) noted that the performance of the procurement function is influenced by the interactions between various elements including professionalism, staffing levels, and budget resources, procurement organizational structure, procurement regulations, rules and guidance, and internal control policies.

2.2.10 Public procurement effectiveness and efficiency

The effectiveness of public procurement is assessed by organizational performance in procurement, which refers to a set of financial and non-financial indicators which offer information on the degree of achievement of procurement objectives and results (Jenatabadi, 2015). This means the organization's effectiveness and efficiency in (i) setting procurement standards, specifications, objectives, and goals and achieving them; (ii) ensuring the satisfaction of all relevant stakeholders; and (iii) enforcing applicable procurement policies and regulations. Historically, purchasing has been perceived as a clerical or low-level managerial activity charged with the responsibility to execute and process orders initiated elsewhere in the organization. The role of purchasing was to obtain the desired resource at the lowest possible purchase price from a supplier. This traditional view of purchasing has changed substantially in the past several decades. As a result, procurement has been elevated to a strategic activity (Brown, S., Bessant, J., & Lamming, R. (2013)).

Public procurement means an acquisition, whether under formal contract or otherwise, of works, supplies, and services by public bodies using publicly sourced finances. It involves the purchasing, hiring, or obtaining by any contractual means of publicly needed goods, construction works, and services by the public sector. It also includes situations in which public funds are mobilized to procure works, goods, and services even if the government does not get directly involved (De Mariz, Ménard, and Abeillé, 2014). Public procurement must be transacted with other considerations in mind, besides the economy. These considerations include accountability, non-discrimination among potential suppliers, and respect for international obligations. Lack of public confidence and trust in the governments' ability to effectively and efficiently procure their goods and services has been often the subject of headlines (Handfield, 2011). It is asserted that each time a new case of fraud and abuse has occurred, new legislation and regulation have been implemented to address the particular problem. As a result, over the years a specialized way of doing business has built up based on volumes of legislation, regulations, and practice. The resulting unique government system has unfortunately not achieved the desired objectives of effectiveness and efficiency (Arora, 2014).

For these reasons, the effectiveness of public procurement is imperative in all countries to protect public interests. Unlike private procurement, public procurement is a business process within a political system and has significant consideration of integrity, accountability, national interest, and effectiveness (Handfield, 2011). Procurement as one of the components of the overall organizations' Supply Chain (SC) needs to be effective as well as efficient.

2.3 Review of Empirical Evidence

Various studies have been conducted on what influences the performance of public procurement and well documented on different organizations and at different times (Aberu, 2017; Asante, 2017; Hamza et.al, 2017; Okinyi & Muturi, 2016; Nyambura & Mwangi, 2015; Kioko & Were, 2014; Shiundu & Rotich, 2014; Amayi & Ngugi, 2013; Kiage, 2013). However, for this research report, the review of empirical literature was done in line with the specific research objectives and the hypothesis. The review emphasizes the methodologies adopted, variables used to assess the procurement performance, major findings, and recommendations made. The review of empirical evidence is presented in two sections. The first section explores and presents related studies conducted in Ethiopia and similar studies conducted in other countries presented in the second section.

2.3.1 Related Studies in Ethiopia

Many academicians in Ethiopia researched factors that influence public procurement performance in different organizations. The following paragraphs present recent research published in Ethiopia which has a direct relation with the topic of this thesis report.

Bekele (2015) conducted a study on procurement performance in public higher institutions a case of Jimma University intending to give a better insight into the factors i.e. procurement planning, resource allocations, staff competency, information technology, and procurement process that hinder public procurement performance in Jimma University. The study was conducted through a descriptive research design. To analyze, the data the researcher uses descriptive statistics and narrative summary analyses.

His findings indicate that: Firstly, the culture of preparing an annual procurement plan among users of the University was very poor. This directly affects the performance of the procurement. The results further revealed that the department's prepared annual procurement plans and that the procurement plans were prepared, and the goals set participatory. Secondly, staff competencies at the procurement unit greatly affect the efficiency of the procurement function. The main problem of having unskilled and inexperienced staff is that the turnover rate of skilled and experienced staff is high in a public institution due to low salaries and benefits. Thirdly, the level of ICT skills among staff influences procurement performance to a very high extent. Fourthly, there is no way for procurement to follow up mechanisms. As a result, delays in the delivery of items and will yield customer dissatisfaction or users of the procurement unit.

Bekele (2015) recommends that public organizations should strive to strengthen their procurement plan and make a good culture to ensure successful implementation of their organizational plan and to achieve their organizational goals and objectives. Thus, a procurement plan must be fully integrated with the strategic plan and budget of the public administration. ICT should embrace Information Communication Technology to enhance efficiency, effectiveness, and transparency. Regarding employee competency, the top management should develop a retention mechanism of existing qualified and to attract qualified employees.

Hamza et al. (2017) conducted a study on factors affecting procurement performance in Awassa Textile Share Company. The main objective of the study was to examine the impacts of staff competency, procurement procedure, and resource allocation on procurement performance. Descriptive research design and quantitative and qualitative data analysis were used in executing the study. The study revealed that staff competence and resource allocation were the most related factors affecting procurement performance. Staff competence factor was measured in terms of training, motivation, procurement negotiation skills, creativity, interpersonal and analytical skills, and deployment of staff based on their skills. In comparison, procurement planning was the least related factor affecting procurement performance. As a result, the researcher recommended that relevant staff to procurement be involved in the process of plan preparation. To put it (more) simply, the preparation of annual procurement plans is participatory, frequently reviewed to improve the company's performance. Correspondingly, it is worthwhile that staff be adequately trained and sensitized to boost the skills and competency levels required by staff involved in the procurement process. So, the company supports the procurement department by allocating more resources and encourages training to improve the skills and knowledge of the procurement staff.

Similarly, Aberu (2017) researched examining the factors that affect public procurement performance in public procurement and property disposal services. The study used a descriptive research design including descriptive and inferential data analysis techniques. The main problems identified in the organization were procurement planning, staff qualification; procurement procedures and utilization of ICT positively affect procurement performance at PPPDS. Aberu (2017) recommends that procurement plans shall be prepared on time with complete information by end-users. Federal organizations shall also minimize urgent/unplanned requisitions as well as should strengthen and ensure successful implementation of their organizational plan to achieve their organizational goals and objectives. In addition, the company should enhance its employee's competence as a way of achieving service delivery as a means of improving procurement performance. This can be achieved by creating awareness through training on the following aspects of procurement; state of the order up to date and also those employees had superior knowledge in the entire procurement process. Likewise, the company should enhance the utilization of ICT in the entire business process which is inter-linked to procurement.

Furthermore, Mesele (2019) researched assessing the factors that affect public procurement performance in Addis Ababa City, Gulele Sub-City Administration. Descriptive and explanatory research designs were employed for the research while adopting the qualitative and quantitative approaches. In his research, it was evident that procurement planning, staff competency, ICT utilization, and internal control were major factors that affected the procurement performance of the administration. This implies that lack of procurement plans, staff competency, ICT utilization, and internal control in the administration of public procurement negatively affects the whole procurement performance of the administration and leads to mismanagement of public resources and corruption. Similarly, inadequate linking of demand to the budget, non-compliance with procurement policy and regulations, delay of dispute resolution in procurement processes, fraud and corruption, and unplanned purchasing in the procurement processes are additional factors that affect the procurement performance of the administration. Therefore, results further suggest that all officials involved in the procurement process must pay more attention to those factors, and for improved procurement performance. Mesele (2019) recommended that Gulele Sub-City administration public procurement and property administration support processes should focus on enforcement of the established rules and regulations with a view of enhancing compliance and punitively deal with entities found violating the rule and regulations. He also recommended that public procurement support processes and user departments should comply with the existing procurement law and regulations during preparing the procurement plan to discourage impulse buying and unplanned procurements. Adequately staffing of professionally qualified employees; adoption of automated procurement systems and ICT systems such as; Enterprise Resource Planning System (ERPS); ensuring internal control and establishment of adequate monitoring and evaluation of procurement performance were also recommendations by the researcher.

Berhanu (2019) researched *assessing the* effectiveness of the centralized public procurement at PPPDS' through exploratory research and descriptive analysis and interpretation. Berhanu used a threefold methodology that reviewed cost savings from federal and regional (A.A.) PPPDS along with CSA data for comparison, questionnaire responses to 10 user public bodies, and interview and questionnaire to 20 PPPDS staff. His findings were purchases of common user goods have generally witnessed economic efficiency with different rates of cost savings. Inadequacy of staffing, untimely procurement need submission, lack of enforcement of internal control procedures, non-existence of legal framework has been learned from his survey as mainly impeding the effectiveness of the entity. In addition to that, he also included that PPPDS is short of the required technology and consultancy service on procurement as one of his findings. Berhanu recommended that PPPDS needs to improve cost savings on items that yielded low-cost savings, upgrade its staffing in quantity and quality, initiate the setup of a legal framework and enforce internal control procedures to preempt corruptive moves to boost its effectiveness. He also recommended the entity needs to make necessary arrangements to deliver consultancy and generate income, scale up technology use for greater effectiveness, and ought to regularly assess its performance against regional and Eastern African counterparts.

2.3.8 Similar Studies in Other Countries

In this section of the empirical evidence, various researches conducted in other countries are presented mainly researches carried out in African countries which have more or less the same status quo as Ethiopia.

Kioko & Were (2014) researched factors affecting the efficiency of procurement functions at the Public Institutions in Kenya. The study adopted a descriptive research design with semi-structured questionnaires as the key data collection instrument. The study established that the existing legal framework and organization culture affects the efficiency of the public procurement function. Factors like political influence, fairness in awarding procurement contracts, adherence to procedures, bureaucracy, and corruption affect the efficiency of the public procurement function at the public institution in Kenya. From the findings, the study concludes that staff competencies greatly affect the efficiency of the procurement function. Hence, employees need to acquire core competencies like knowledge, skills, experience, and abilities to enhance public procurement function efficiency in public institutions. The study also concluded that the supply branch did not embrace modern technology in the procurement function.

Similarly, Amemba et al. (2015) researched the determinants of procurement performance at the ministry of education (Kenya). The study focused on problems of the Ministry of Education (MOED) system of Kenya is in a bad state and the heavy investment is not yielding commensurate returns. The study found out that, the performance of procurement in the MOED is largely influenced by the following determinants: stakeholders, resource dependency, leadership style, and technology. Finally, the researcher recommends Managers should be focused on mainly absorbing certain resources or expertise staff within the organization to overcome dependency on external resources. In this study, the research didn't mention the role of procurement planning, organizational structure, procurement follow-up mechanisms, and skilled manpower in facilitating the procurement activity in the study area.

Kiage (2013) researched factors affecting procurement performance to examine the factors that influence procurement performance in public institutions in Kenya. The study aimed to ascertain the determinants of procurement performance in public entities in the case of the Kenyan Ministry of Energy. The study sought to establish the impact of procurement planning on procurement performance; ascertain the influence of resource allocations on procurement performance; discern the impact of staff competency on procurement performance and finally reveal the extent to which contract management in the procurement cycle affects procurement performance. The study was conducted through a descriptive design using a cross-sectional survey within Kenya’s Ministry of Energy workforce at the Nairobi head office. The study employed purposive sampling to select the sample and sample elements. Based on Kiage’s findings first, the model depicts that Planning accounts for 26.9% of variations in procurement performance, second resource allocation accounts for 17.2%, third, staff competency accounts for 20.1 %, and lastly contract management accounts for 23.3% of variations in procurement performance. Accordingly, Kiage concludes that Planning, resource allocation, staff competency, and contract management positively affected procurement performance at the Ministry of Energy. The purpose of planning is to be able to utilize the available resources to achieve the overall objective.

Shiundu & Rotich (2014) conducted a study on the factors influencing the efficiency of procurement systems at the City Council of Nairobi focusing on procurement employees. A descriptive survey was adopted and since the population was not very large, a census approach was adopted of all 63 procurement officers, and data was collected using a questionnaire. Findings indicated that employee competence, information technology, records management, and management style influenced procurement efficiency at the council. The study recommended, among other things, enhancing procurement staff skills; the adoption of an e-procurement system, and maintaining a good record-keeping culture to ensure comprehensive statistics on the value of goods, services and works procured.

Nzitunga (2019) researched strengthening the Effectiveness of procurement function in the public sector. Despite heightened interest by both scholars and practitioners in studying and better understanding the importance of effective public procurement and its determinants, limited research has so far been conducted in this regard in the Namibian context. A review of the literature in this regard revealed a research gap that culminated in the following research question: *what is the impact of organizational processes, employee skills development, organizational resources, and information technology (IT) on public procurement effectiveness in Namibia?* To address this research question, the researcher employed a questionnaire survey based on the Likert scale which was administered to procurement employees from Namibian Government ministries in Windhoek. Nzitunga (2019) stated, in his findings, organizational processes; the influence of skills development; the influence of organizational resources; and the influence of information technology are positively associated with public procurement effectiveness in Namibia. Accordingly, Nzitunga concludes that organizational performance is positively influenced by organizational processes, employee skills development, organizational resources, and information technology.

2.4 Conceptual Framework

The conceptual framework is a set of broad ideas and principles taken from relevant fields of inquiry and used to structure a subsequent presentation. It is formed patterns of concepts and their interconnections (Colin, 2010). According to Chimwani et al. (2014), a conceptual framework is a research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate this. Given the foregoing literature and the theories, the following conceptual framework was developed to examine the effect of some variables on the performance of the public procurement function at Federal PPPDS. The study attempts to establish factors that influence procurement performance at PPPDS. The aspects of procurement planning, organizational structure, contract management and administration, performance measurement in procurement, resources allocation, and Centralized purchasing body strategies are the independent variables while procurement performance is the dependent variable. The conceptual framework is illustrated as follows in figure 2.2

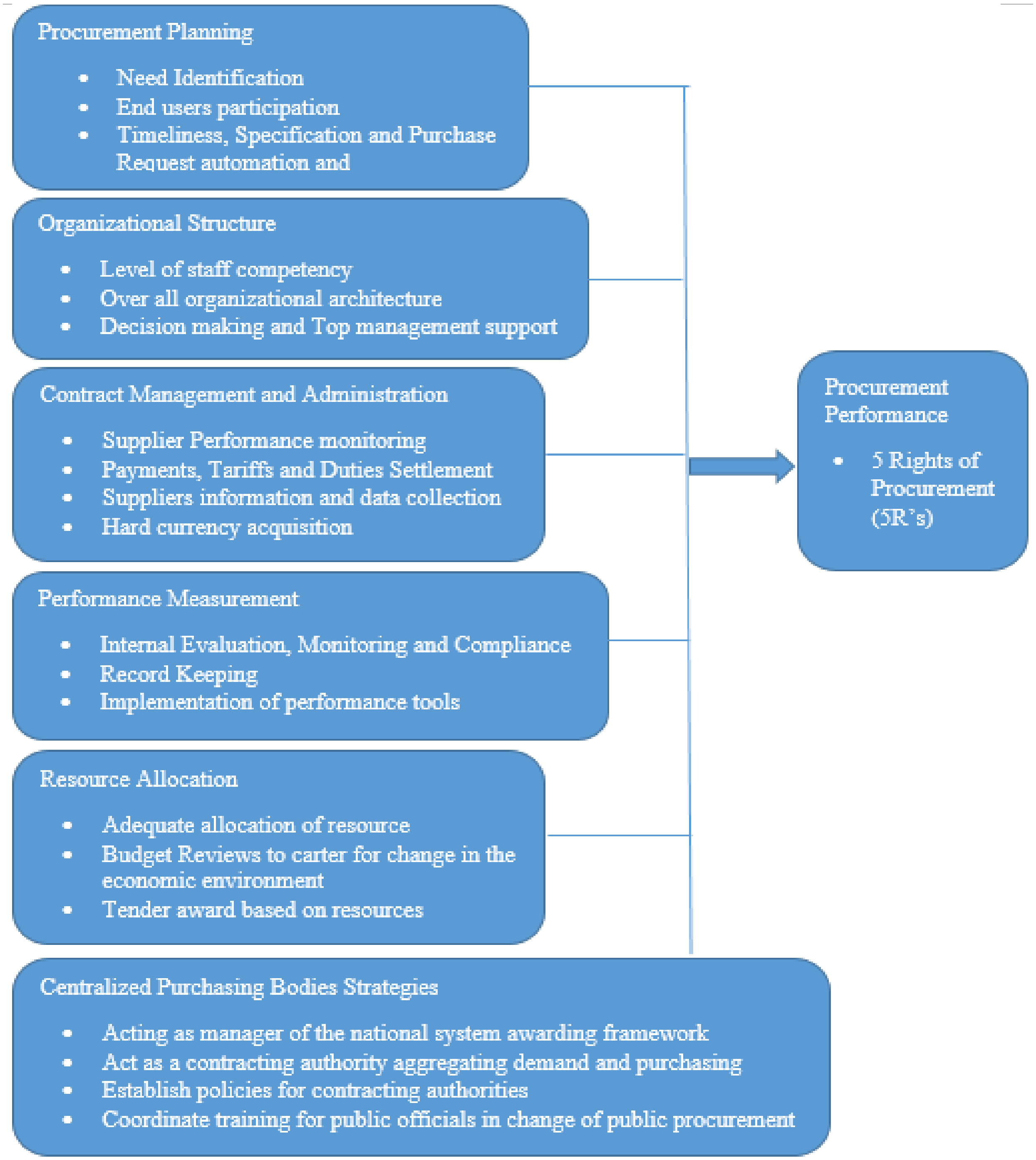

Figure 2.2 Conceptual Framework

Source: This model of a conceptual framework is adopted and modified from Kiage, J. O (2013)

2.5 Research Hypothesis

This study was guided by the following null hypotheses that were subjected to statistical tests to determine their validity and therefore alignment to the research objectives. These were: -

1. H01: Procurement planning implementation has no significant effect on procurement performance.
2. H02: Institutional authority and organizational structure have no significant effect on procurement performance.
3. H03: Contract management has no significant effect on the effectiveness and efficiency of procurement performance.
4. H04: Performance measurement has no significant effect on the effectiveness and efficiency of procurement performance.
5. H05: Resource allocation has no significant effect on the effectiveness and efficiency of procurement performance.
6. H06: Centralized purchasing bodies' strategies have no significant effect on the effectiveness and efficiency of procurement performance.
7. H07: The factors such as procurement planning, organizational structure, contract management and administration, performance measurement, resource allocation, centralized purchasing body strategies do not predict procurement performance.

Chapter Three Research Methodologies

3.1 Introduction

This chapter of the proposal discusses the research methodology applied to conduct the thesis work. Specifically, it briefly describes the area of the study the research, research design, and approach followed by discussions on population and sample of the study, data types and sources of, data collection procedures and data analysis techniques, reliability and validity, and ethical issues considered in their respective order.

3.2 Research Design

The research design utilized in this study is descriptive and explanatory. Descriptive research design is a scientific method of investigation in which data is collected and analyzed to describe the current conditions, terms, or relationships concerning certain specific field Problems, (Adams, J, Khan, Hafiz T.A., Rae (2007)). Descriptive research helps to describe the situation as it exists at present. It is used to describe the characteristics of the independent variables. This helps to obtain information concerning the current status of the phenomenon to describe what the current situation is concerning the variable of the study. On the other hand, explanatory research describes the phenomena as well as explains why certain behavior the way is it is. This research applies an explanatory type of research since it attempts to describe the relationship between independent (factors affecting centralized procurement system) and dependent variables (effectiveness and efficiency of Procurement performance).

A close-ended structured questionnaire has been used to describe the respondents' view about the issue i.e. their view about the effectiveness of the public procurement system and test the results using the simple regression method.

3.3 Research Approach

Researchers contend that the finest method to apply for a study be contingent on the purpose of the research, research data, and the associated research questions. According to (Kothari, 2004), the quantitative approach involves the generation of data in a quantitative form which can be subjected to rigorous quantitative analysis formally and rigidly. Creswell and Creswell (2018) argue that quantitative research is an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures. In the quantitative approach, researchers have an inquiry that has assumptions about testing theories deductively, building in protections against bias, controlling for alternative or counterfactual explanations, and being able to generalize and replicate the findings (Creswell & Creswell, 2018). As the objective of the current study is to identify and examine several factors/variables that affect centralized public/government procurement and huge data has been retained from many beneficiary organizations. This study employs the quantitative research approach in gathering, analyzing, and interpreting the data to fulfill the objective of the study.

3.4 Description of the study area and target population

The study was conducted in Addis Ababa, where the Federal public procurement and property disposal service (PPPDS) is situated. The organization is located in front of Sidist Kilo Square. PPPDS was established on July 19th, 2010 by Council of Misters Regulation number 184/2010 to conduct consolidated and bulk procurements for 187 federal budgetary organizations situated in Addis Ababa and public higher education institutions and universities situated all over the country. The current study used organizations directly linked with PPPDS located at Addis Ababa City.

3.5 Population and Sample

The population of this research is employees from PPPDS and beneficiary public organizations directly or indirectly involved in the procurement process and contract administration. PPPDS employees are those staff directly provide purchasing and procurement of goods and services to other federal budgetary organizations. Beneficiary public organization employees are those recruits of federal budgetary organizations which depend on PPPDS' purchasing and procurement of goods and services. Therefore, the sample frame of this study comprises employees of procurement and contract management professionals from PPPDS (procurement and contract management directorate; finance directorate; and law directorate of PPPDS) and procurement/purchasing department employees of federal budgetary organizations found only in Addis Ababa.

The sampling technique used for this research is the purposive sampling technique. Though the researcher planned to collect data using the simple random technique, it was difficult to access the sample frame due to the bureaucracy secrecy of data in the public offices. According to Walliman (2005), Saunders et al. (2007) purposive sampling is a useful sampling method that allows a researcher to get information from a sample of the population that one thinks knows most about the subject matter. The researcher has employed a purposive or judgmental sampling method consist of the staff members of managements in procurement and contract management directorate; finance directorate; and law directorate of PPPDS. similarly, the researcher also utilized purposive sampling techniques to select respondents from staff who are directly involved with PPPDS in the procurement/purchasing department of federal budgetary organizations found only in Addis Ababa.

The researcher took the sampling technique by determining the sample proportion success and not a success based on the experience from previous survey research response rate. According to Patrick (2003), the return or success rate of 50% is adequate, 60% response rate is good and 70% rate or higher is very good. The actual response rate in this study was 82.6% lower than the planned response rate, and the sample size was determined at confidence level using the formula displayed below.

The sample size was calculated based on the below formula (Kothari, 2004);

$$n = \frac{z^2 \cdot p \cdot q \cdot N}{e^2\ (N-1) + z^2 \cdot p \cdot q}$$

$$n = \frac{1.96^2(0.75)(0.25)*191}{0.05^2(191-1)+1.96^2*(0.75)(0.25)}$$

n = 115 Respondents

Where, p is proportion of success = 75% q is proportion of fail = 25% n is sample size, z is confidence level = 1.96 e is standard error = 5% N is total population = 191

3.6 Data Sources and Types

There were two kinds of data for the research undertaken, primary and secondary data. Primary data is collected using quantitative data collection methods from semi-structured questionnaires; while the secondary data was gathered from government procurement proclamation, procurement directives and manuals, website, procurement bidding documents, and public procurement agency reports, article journals, and books. For this research primary data were collected from staff members of managements in procurement and contract management directorate; finance directorate; and law directorate of PPPDS and staffs who are directly involved with PPPDS in procurement/purchasing department of federal budgetary organizations found only in Addis Ababa.

3.7 Data Collection Procedures

Primary data was collected using a semi-structured questionnaire. The semi-structured questionnaires were distributed to procurement and supply chain professionals and other management staff of the selected government organizations for self-administration to acquire information relevant to the research topic. Before the distribution of the semi-structured questionnaire, the researcher has handed each respondent a consent form that explains willingness, confidentiality, and protection of their identity. The researcher distributed questionnaires after receiving signed consent forms to the target respondents and collected back the filled questionnaires thereafter. The filled questionnaires were coded and cleaned and transferred to a Statistical Package for Social Sciences (SPSS) statistical software for data analysis.

3.8 Data Analysis

Data analyses depend on both the objectives of the study and the nature of the variables in the data collected. In this study, the hypotheses formulated were tested using the SPSS software (version 23). Based on SPSS, both descriptive and inferential statistics were used. Descriptive statistics involve summarizing and describing quantitative information in meaningful ways. For example, frequency distribution, measures of central tendency, and data variability experiences, the resent quantitative descriptions and describe the basic features of the survey data. Inferential statistics were also used to make conclusions beyond the description of data collected. Hypotheses were tested by using Pearson's correlation coefficient and Multiple Regression analysis. Pearson's bivariate correlation is a technique that measures the direction and strength, either positive or negative, of the relationship between two variables involved; are (Leedy et al., 2005). Multiple Regression was used to determine whether the independent variables (factors affecting centralized procurement system) influence dependent variables (effectiveness and efficiency of Procurement performance).

Before conducting the statistical analysis, basic assumptions of each analysis technique have been checked. As indicated in Appendix-2, descriptive and Pearson's correlation analyses are considered as having normal distribution if their standard deviation, skewness, and kurtosis statistic value are within acceptable limits and all these values indicate no outliers are observed.

Before conducting any multiple linear regression analysis, certain basic assumptions of multiple linear regressions have been checked. These basic assumptions include a linear relationship between the independent and dependent variables, no significant outliers, independence of observations, non-multi-collinearity, Homoscedasticity, and approximately normal distribution of the graph of residuals (errors) of the regression. To check the assumptions, all independent variables have been entered as one block in the regression and procurement performance as the dependent variable. The outputs of the analysis have been checked for the fulfillment of preconditions of the multiple linear regressions. Homoscedasticity is that regression standardized residuals do not vary systematically with the predicted values by plotting the residuals against the values predicted by the regression model as indicated in Figure-3.1 below, the scatter plot between residuals and predicted values varies randomly, not systematically.

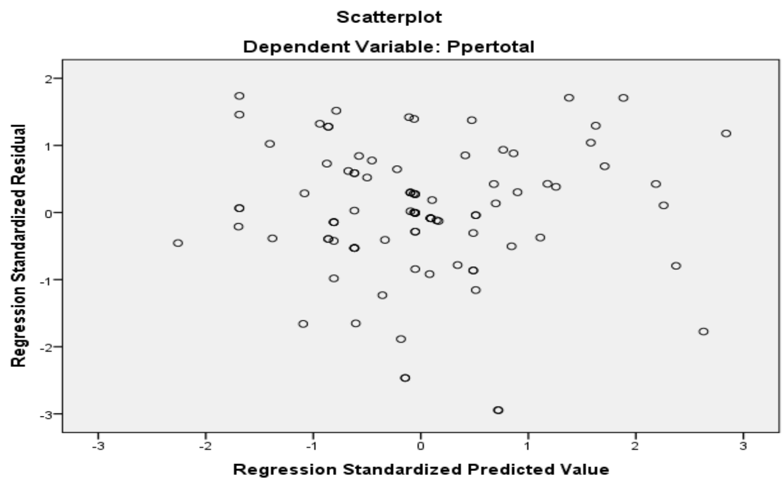

Figure-3.1: Scatter Plot of regression standardized residuals vs. procurement performance

Normality – the residuals should approximately have normal distribution as demonstrated in Figure-3.2, whereas, linearity – the residuals should have a fair straight-line relationship with predicted DV scores–procurement performance in our case as illustrated Figure-3.3 below.

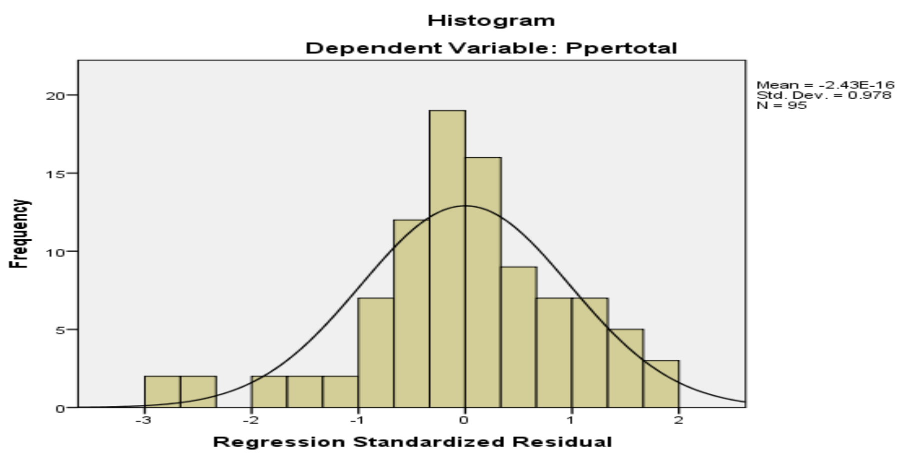

Figure-3.2: Normality check of Regression Standardized Residuals

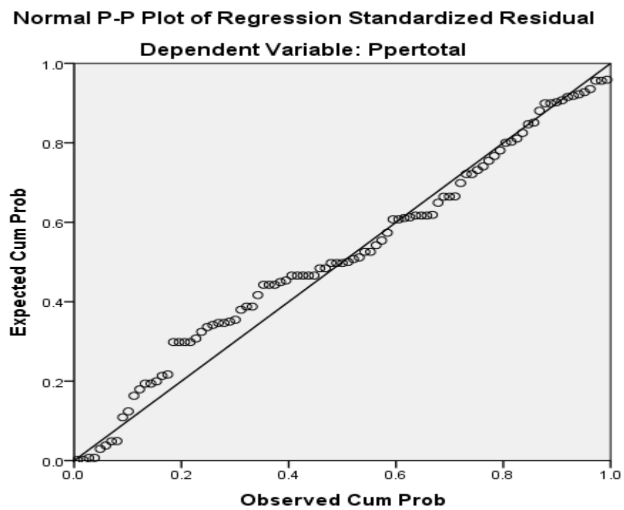

Figure-3.3: Normal P-P Plot of standardized residuals with Procurement Performance

Multiple linear regression analysis is expected mainly to conduct Collinearity diagnostics, which enables to detection of inflated linear relationships that give two values—Tolerance and VIF (variance inflation factor) and both are related to each other in the way that tolerance is just the reciprocal of VIF. Tolerance, which is simply 1 minus that R^2, very low values of tolerance (0.1 or less) indicate a problem. Very high values of VIF (10 or more, although some would say 5) indicate a problem.

According to Gaur and Gaur (2009), once multi-collinearity is detected in the model, the regression coefficients are likely to be meaningless. One may consider removing some independent variables, which are highly correlated to reduce multicollinearity or standardizing/transforming the predictor variables. A value of VIF higher than four (or Tolerance less than 0.2) indicates the presence of multi-collinearity while in social sciences research, a VIF value as high as 10 is considered to be acceptable (Gaur & Gaur, 2009). Therefore, in the current analysis, the test results of collinearity values (refer in the two columns of the right side in (refer the last two columns of Table-4.10) of minimum and maximum of each tolerance and VIF (0.30 to 0.50 and 2.01 to 3.40) respectively, indicate no problem of multi-collinearity. Another simplest way to ascertain whether the explanatory variables are highly correlated with each other or not is to examine a correlation matrix (Table-10). If correlations are $r \geq 0.80$ then we may have a problem, but no such strong relationship among the explanatory variables has been detected.

3.9 Reliability and validity analysis

3.1.1 Reliability

According to Cameron et al (2007), reliability is a measure of the extent to which the result of the research can be repeated with the same result if the research is replicated. Furthermore, Cameron et al (2007) state that to increase reliability, the researcher should use the same template as far as possible and use static methods. Therefore, the researcher checked the reliability of the questionnaire scale items on the first 20 respondents makes sure that the internal consistency of questionnaire items was reliable. Internal consistency of questionnaire items has been measured using the Cronbach Alpha reliability test. As indicated in table-3.1, the internal consistency coefficient r, of all the variables vary from 0.702 to 0.881, and the total internal consistency of all the items ($n = 33$), $r = 0.901$ are within the acceptable correlation strength range.

Table-3.1: Reliability analysis of scale items

Variables	Cronbach Alpha Reliability	No. of Items
Procurement Planning	0.702	5
Organizational Structure	0.845	5
Contract Management Administration	0.827	5
Performance Measurement	0.881	5
Resource Allocation	0.865	4
Centralized Purchasing Body's Strategies	0.828	4
Procurement Performance	0.797	5
Scale Total	0.901	33

3.1.2 Validity

According to Leedy et al (2005), validity is the ability of an instrument used to measure what it is designed to measure. They further explained two basic questions: does the study have sufficient control to ensure that the conclusions the researcher draw are truly warranted by the data? And can the researcher use what he has observed in the research situation to generalize to the population beyond that specific situation? The answers to these two questions address the issues of content validity, internal validity, and external validity.

3.9.1.1 Content validity

To check content validity for the descriptive survey studies, Leedy et al (2005) suggest three tactics: using multiple sources of evidence, establishing chain evidence, and having key informants reviewing the draft of the study report. By taking these tactics into account, the researcher has constructed the main research framework upon published and acknowledged theory.

3.9.1.2 Internal validity

The internal validity of a research study is the extent to which its design and the data it yields to allow the researcher to draw accurate conclusions about the relationships within the data. In this case, there may be a Hawthorne effect since the respondents have different backgrounds, experiences, and knowledge in Public procurement practices in their respective organizations and they may change their behavior simply because they know they are in the research study. In this regard, the respondents were well informed with the covering letter about the ethical issues such as confidentiality of the information they provide and a brief description of research objectives. They were also asked to give their consent, most importantly and the questionnaires were thoroughly revised to avoid ambiguous words/phrases.

3.9.1.3 External validity

External validity is related to the extent to which the findings from one research can be applied to other similar situations. In other words, how the conclusions are drawn can be generalized to other contexts (Leedy et al., 2005). To increase the external validity and the generalizability of the results of the study, the researcher assumed three commonly used techniques that enhance the external validity of the research. These three strategies are a real-life setting, a representative sample, and replication in different settings (Leedy et al, 2005). However, based on one survey questionnaire, it is difficult to generalize the findings to other firms. Therefore, the outcome of the current study is only generalizable to the population of this study.

3.10 Ethical Consideration

The researcher has explained to respondents about the confidentiality of their identity and the information they provide. Moreover, the researcher described all important details of the study, including its aim and purpose, methods, and uses of the research. The researcher also provided a consent form that explains their participation is willing; the information they provide is confidential, their identity is protected and the data is utilized only for academic purposes. After reading the consent form and discussing their concerns, each participant has been asked to sign the consent form, and signed consent forms were collected accordingly. Besides, the researcher has acknowledged all sources of information that were used from other scholars in this study.

Chapter Four Result and Interpretation

4.1 Demographic Information

The total number of respondents is 95 individuals, where 36 participants are PPPDS employees and 60 respondents are Beneficiary public organization employees. The response rate is of respondents was 82.6%, lower than the planned rate. As indicated in figure-4.1 and table-4.1, around 41% (n = 39) of respondents did not wish to report their job positions. The remaining 59% (n = 57) of the participants reported 33 types of job positions and these positions were categorized into three major classes that include officers (junior or senior), experts or specialists, and heads (team leaders, directors, executives, and advisors).

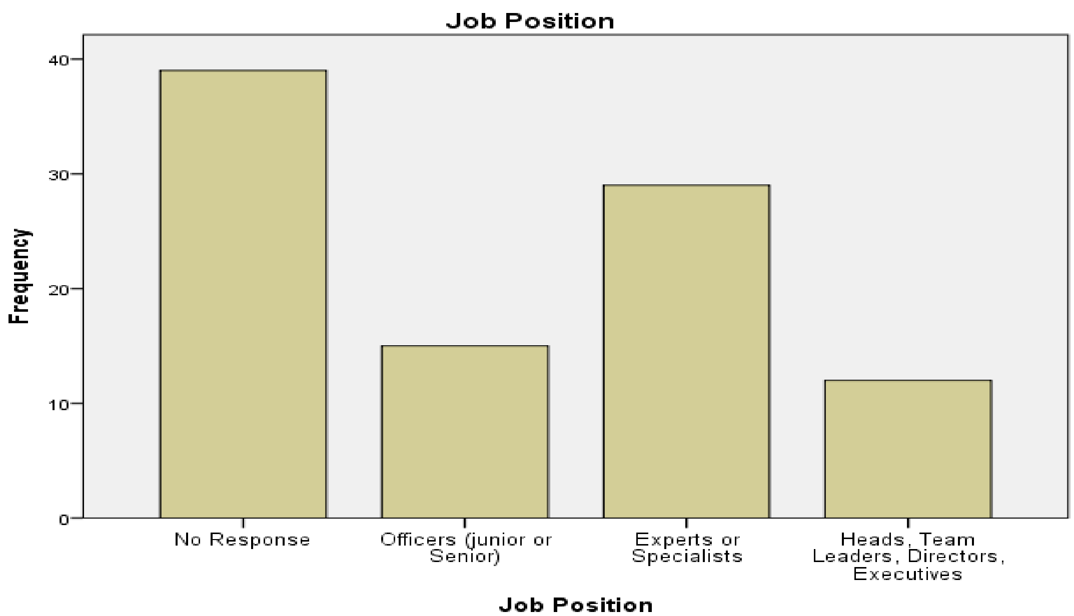

Figure-4.1: Frequency of Job Position of Respondents

The prevalence of these major categories of job positions of respondents are experts or specialists with 30.5% (n = 30), experts (specialists) with 15.8% (n = 15) and heads (team leaders, directors and executives) with 12.6% (n = 12) rates respectively. Despite the researcher has explained have about the confidentiality of participants' identities and the information they provide, more than a third of respondents did not desire to report their job position.

Table-4.1: Demographic Information of Participants

Sex of Respondents	***n***	***%***
Male	46	48.4
Female	47	49.5
No Response	2	2.1
Age of Respondents	***n***	***%***
21 – 25 Years	34	35.8
26 – 35 Years	34	35.8
36 – 45 Years	18	18.9
46 – 55 Years	8	8.4
56 and above	1	1.1
Occupational Experience	***n***	***%***
0 – 2 Years	29	30.5
3 – 5 Years	21	22.1
6 – 10 Years	30	31.6
11 – 15 years	10	10.5
Over 15 Years	5	5.3
Educational Background	***n***	***%***
Diploma	5	5.3
BA/BSc. Degree	65	68.4
Masters	24	25.2
No Response	1	1.1
Job Position	***n***	***%***
No Response	39	41.1
Officers (junior or Senior)	15	15.8
Experts or Specialists	29	30.5
Heads, Team Leaders, Directors, Executives	12	12.6

Regarding the sex of the participants, the number of male 46 (48.4%) and female 47 (49.5%) participants have almost equivalent frequency whereas, 2 individuals did not respond. Of the five age categories reported, the first two age categories (21 – 25 and 26 – 35 years) have similar frequency rate of 35.8% (n = 34) while the third, fourth and fifth age categories (36 – 45, 46 – 55 and 56 and above year old) have 18.9 (n = 18), 8.4% (n = 8) and 1.1% (n = 1) rates respectively. More than two-thirds of respondents (68.4%, n = 65) are BSc. Degree holders, a quarter of the participants (25.2%, n = 24) have a master's degree and five individuals are vocational diploma holders. Frequency rates of occupational experience indicated that 29 participants have from 0 to two years, 21 individuals have from three to five years and 30 employees have from six to ten years of job experience, whereas, 10 respondents have between 11 and 15 years of career experience. While five participants have more than 15 years of occupational experience (refer to table-4.1 above).

4.2 Effect of Procurement Planning on Procurement Performance in PPPDS

Procurement planning was measured using five items on five-point Likert scale responses that vary from strongly disagree to strongly agree. The mean and standard deviation values of each item have been calculated which indicates that mean value greater than scale average ($M > 3$) indicates that more number of respondents either agree or strongly agree to each statement and for a mean value lower than three indicates more responses were in the disagreement categories. Thus, in the case of procurement planning, the first two items have mean values greater than three ($M_1 = 3.38$ and $M_2 = 3.14$) which indicate more respondents agree on the first two procurement plan items than those who disagree that PPPDS assesses BOs' needs and involves them in the procurement plan. Regarding the next three items: BOs raise their procurement needs on time ($M_3 = 2.11$), BOs provide clear specifications of items to PPPDS ($M_4 = 2.34$), and PPPDS procurement requisition from BOs are scheduled, planned & automated ($M_5 = 2.34$); their mean values are less than the scale average and this shows that greater number of respondents do not agree with the statements than those agree.

In responding to whether PPPDS conducts needs assessment of beneficiary organization (BOs)more than half of (53.7%, n = 51) of the respondents agree that PPPDS conducts needs assessment of BOs in agreement with the mean value greater than three (i.e. M = 3.38). For this statement, 23 individuals disagree that PPPDS conducts BOs' needs assessment during procurement planning and the remaining respondents remained neutral. Similarly, 46.3% (n = 44) of the respondents believe that PPPDS involves BOs in procurement planning and around 14.7% (n = 14) individuals reported either disagree or strongly disagree with the statement. On the statement whether BOs raise their procurement needs on time, 71.6% of the participants do not believe that BOs provide their procurement needs timely, while 7 individuals disagree with the argument (7.4%) and 17.9% (n = 17) participants disapprove of the claim.

Table-4.2: Descriptive analysis of Procurement Planning in PPPDS

Procurement Planning Items	SD		D		Neutral		A		SA		M	STD
	n	%	n	%	n	%	n	%	n	%		
PPPDS conducts need assessment of BOs	3	3.2	20	21.1	20	21.1	40	42.1	11	11.6	3.38	1.05
PPPDS involves BOs in the procurement plan	2	2.1	34	35.8	14	14.7	37	38.9	7	7.4	3.14	1.06
BOs raise their procurement needs on time	22	23.2	46	48.4	17	17.9	6	6.3	1	1.1	2.11	0.88
BOs provide clear specifications of items to PPPDS Procurement	8	8.4	58	61.1	19	20.0	6	6.3	3	3.2	2.34	0.85
PR from BOs are scheduled, planned & automated	18	18.9	41	43.2	23	24.2	9	9.5	3	3.2	2.34	1.00

Note: SD = Strongly Disagree, D = Disagree, A = Agree SA = Strongly Agree, PR = Procurement requisitions, BOs Beneficiary Orgs., M = Mean, STD= Standard Deviation

Concerning the BOs provision of clear specification of items to PPPDS, about 69.5% of participants believe that BOs do not provide item specifications clearly and about 20% remained neutral and the remaining 9.5% (n= 9) respondents agree with the statement with a lower mean value (M = 2.14). Likewise, more than 62.1% (n = 59) of the participants disagree with the statement that BOs' procurement requisitions are scheduled, planned & automated, while a quarter (n = 23) of them remain neutral and only 12 individuals agree with the argument (refer table-4.2 above).

As demonstrated in Table-4.9 in section 4.9, correlation analysis between procurement planning and procurement performance shows that both variables have a statistically significant relationship with r = 0.37 at p = 0.01. This indicates that appropriate planning of procurement results in efficient and effective procurement performance in PPPDS. In general, the result shows that PPPDS' Procurement Planning is below the required standard.

4.3 The Effect of Organizational Structure on Procurement Performance in PPPDS

Like procurement planning, the organizational structure of PPPDS was measured using five items with the same five-point Likert scale. As indicated in table-4.3 below, mean values of the five items are less than three (M < 3.0) that indicates the organizational structure of PPPDS suffers not only with staff qualification but also the organization is not sufficiently staffed, where decision-making processes are not conducted professionally and managers fail to train their supporting staff that blocks the PPPDS from achieving its goals.

Table-4.3: Descriptive analysis Organizational Structure in PPPDS

Organizational Structure	**SD**		**D**		**Neutral**		**A**		**SA**		**M**	**STD**
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**		
Staff in PPPDS are experienced, skilled, and well trained in their occupation	8	8.4	28	29.5	27	28.4	27	28.4	5	5.3	2.93	1.06
Departments in PPPDS OS comprise an adequate number of qualified staff.	13	13.7	42	44.2	19	20.0	17	17.9	4	4.2	2.55	1.07
Overall OS of PPPDS is built in such a way enabling achieving organizational objectives.	12	12.6	30	31.6	24	25.3	26	27.4	3	3.2	2.77	1.09
The Decision-making process involves appropriate staffs	10	10.5	49	51.6	14	14.7	19	20.0	3	3.2	2.54	1.03
Top managements in PPPDS support staff.	13	13.7	34	35.8	28	29.5	17	17.9	3	3.2	2.61	1.03

Note: OS = Organizational Structure**;** SD = Strongly Disagree, D = Disagree, A = Agree SA = Strongly Agree, M = Mean and **STD** = Standard Deviation.

For example, in responding to the qualification of PPPDS employees, more number respondents (n = 36) do not believe that PPPDS has experienced, skilled and well-trained staff than those individuals (n = 32) who believe the organization has qualified staff and comparable number of respondents (n = 27) have remained neutral. About 58% of the respondents believe departments in PPPDS OS do not comprise an adequate number of qualified staff, whereas 19 respondents remained neutral and the remaining 21 respondents believe that the OS of PPPDS adequately staffed with qualified members. Regarding the overall organizational structure of PPPDS, 44.2% (n = 42) of respondents do not agree that the organizational structure of PPPDS is built to achieve its objectives, whereas, only 29 participants believe OS of PPPDS is well built. Similarly, about 62.1% of respondents disagree that the decision making process in PPPDS is conducted with the involvement of appropriate staff, while only 22 individuals agree with the statement. Besides, (n = 47) of the participants reported that senior management staff in PPPDS do not provide support to their subordinate staffs. About, 21.1% (n = 20) individuals believe that their managers provide them professional support and 29.5% (n = 28) of respondents reported as neutral. Moreover, correlation analysis between organizational structure and procurement performance showed that organization structure has statistically significant relationship with PPPDS' procurement performance ($r = 0.48$, $p = 0.01$).

4.4 Effect of Contract Management and Administration on Procurement Performance

Table-4.4 shows the descriptive analysis of contract management and administration (CMA) in PPPDS and the mean values of all the items are less than three ($M < 3.0$). This shows that number of respondents that disagree with each contract management items are greater than the respondents agree. The low mean value indicates that contract management and administration in PPPDS has not only a limited control mechanism but also its payment settlements of imported items, tariffs and taxes are not settled timely. Besides, it also shows that the way PPPDS manages foreign contract shows irregularity and it does not collect data from suppliers regularly.

As indicated in table-4.4 below, around 59% of respondents believe that PPPDS has limited control mechanisms to manage and administer contracts properly; whereas, 26.4% ($n = 25$) of participants do agree that the organization has proper mechanism of contract management. Similarly, almost half (63.1%, $n = 60$) of respondents disagree that PPPDS settles procurements of imported items timely and only 27.4% do agree that the organization settles its payments regularly. In responding to a statement related with payment settlement of tariffs, duties and tax of imported procurements as per approved budget of BOs, participants rating show 42.1%, 29.2% and 27.4% as disagree, neutral and agree respectively. PPPDS' regular data collection from suppliers is disapproved by 64.2% of respondents and only 17.9% individuals approved the statement. More than half (55.8%, $n = 53$) of respondents disagree that PPPDS utilizes convenient methods of acquiring hard currency, whereas, only 15.8% of participants agree and 27.4% remained neutral to take sides. The relationship between contract management and administration with procurement performance demonstrates $r = 0.37$ at $p = 0.01$ (refer table-10). This indicates that the better the procurement contracts is organized and administrated the better will be the procurement performance of PPPDS.

Table-4.4: Descriptive analysis Contract Management and Administration in PPPDS

Contract Management and Administration	SD		D		Neutral		A		SA		M	STD
	n	%	n	%	n	%	n	%	n	%		
PPPDS has proper control mechanisms in contract management	29	30.5	27	28.4	14	14.7	24	25.3	1	1.1	2.38	1.19
Payments for those items procured from abroad/imported settled timely	14	14.7	46	48.4	9	9.5	23	24.2	3	3.2	2.53	1.10
Payment of tariffs, duties and tax of imported procurements settled timely as per BOs approved budget	18	18.9	22	23.2	28	29.5	25	26.3	1	1.1	2.67	1.10
PPPDS collect data from suppliers regularly	13	13.7	48	50.5	17	17.9	14	14.7	3	3.2	2.43	1.01
PPPDS uses convenient ways of acquiring hard currency	8	8.4	45	47.4	26	27.4	9	9.5	6	6.3	2.57	1.00

Note: BOs = Beneficiary Organizations**,** SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree, M = Mean and **STD** = Standard Deviation.

4.5 The effect of performance measurement on procurement performance in PPPDS

PPPDS' performance measurement is assessed using five items five-point Likert scale and apart from one item that measures PPPDS recording, documenting & updating of tasks with timelines (M = 3.07, STD =1.11), the mean values of the four items are less than three (M < 3.0). These low mean values indicate that PPPDS do not have performance measurement protocols to evaluate the efficiency and effectiveness of the organization and its employees.

Table-:4.5 Descriptive analysis of performance measurement in PPPDS

Performance Measurement	SD		D		Neutral		A		SA		M	STD
	n	%	n	%	n	%	n	%	n	%		
PPPDS employs internal evaluation and monitoring of its functions E&E.	17	17.9	33	34.7	27	28.4	15	15.8	3	3.2	2.52	1.06
PPPDS adopts & uses performance measurement tools to improve its E&E.	15	15.8	48	50.5	10	10.5	16	16.8	6	6.3	2.47	1.14
PPPDS records, documents & updates tasks with timelines	9	9.5	24	25.3	17	17.9	41	43.2	4	4.2	3.07	1.11
In PPPDS staff's E&E is measured based on performance tools	14	14.7	28	29.5	29	30.5	20	21.1	3	3.2	2.68	1.07
PPPDS employs continuous improvement in its E&E of overall processes	20	21.1	24	25.3	30	31.6	17	17.9	3	3.2	2.56	1.11

Note: SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree, M = Mean, **STD** = Standard Deviation and E&E = Efficiency and Effectiveness

Accordingly, response of the participants to a statement that measures PPPDS' internal evaluation and monitoring of its functions efficiency and effectiveness, respondents' response shows that 50 (52.6%) individuals disagreed, whereas, 28.4% and 19% of respondents reported as neutral and agreed respectively. Similarly, PPPDS' use and adoption of performance measurement tools to improve its efficiency and effectiveness shows that more than 66% of respondents disagree and only 23.1% agree that the organization utilizes appropriate tools to measure its performance. In relation to the appropriate recording, documenting and updating of its activities with timelines in PPPDS, almost half of the respondents (n = 45) agreed, while 33 individuals disapproved the statement and 17 participants remained undecided. Whereas, in responding to the item that rates PPPDS evaluates staff efficiency and effectiveness using performance tools, the participants' response rates are 44.2% (n = 42), 30.5%(29) and 24.3(n = 23) for disagreement, neutral and agreement respectively. This means more respondents do not believe that staff performance measurements in PPPDS are not conducted based on standard performance tools.

In response to the last item that measures the overall performance of the organization, about half of respondents (n = 44) do not comply with the argument and only 20 respondents agree that PPPDS has adequate internal evaluation and monitoring system to track its efficiency and effectiveness, whereas, considerable number of participants (n = 30) reported as neutral (refer table-4.5 above).

Furthermore, correlation analysis between performance measurement and PPPDS procurement performance indicated that both variables are significantly related to each other ($r = 0.38$, $p = 01$). The significant correlation coefficient indicates that the more PPPDS conducts procurement measurements using performance tools, keeps records and updates its processes timely to improve its efficiency and effectiveness the more its procurement performance improves (refer table 4.9).

4.6 The effect of resource allocation on procurement performance in PPPDS

The resource allocation variable is measured by four items using five-point Likert scale. Because the items were presented in negative statement respondents' scores were reciprocated to comply with other variable scales during analysis. As indicated in Table-4.6, the mean values of all the items are greater than three ($M > 3.00$) the scale average and this shows more respondents believe resource allocation has directly influences procurement performance in PPPDS. For example, in responding appropriate resource allocation leads to adequate procurement performance, more than two third respondents agree with this statement (69.5%), whereas, about 15.8% disagree with the claim. Likewise, reviewing budget allocated in procurement of items in BOs 66.3% (n = 63) of respondents believe that it has directly influence on PPPDS procurement performance and 15.8% of individuals disagree with the statement. The response of participants on awarding tenders based on available resources 62.1% of the participants believe that it directly influences performance, whereas, 19% of them disagree its effect on procurement performance in PPPDS.

Table-4.6: Descriptive analysis of resource allocation in PPPDS

Resource Allocation	SD		D		Neutral		A		SA		M	STD
	n	%	n	%	n	%	n	%	n	%		
Adequate allocation of resources within PPPDS results in adequate performing of PPPDS in terms of effectiveness and efficiency.	4	4.2	11	11.6	13	13.7	63	66.3	3	3.2	3.53	0.90
Reviewing budget allocated for procurement of items in BOs influences PPPDS performance.	2	2.1	13	13.7	17	17.9	54	56.8	9	9.5	3.58	0.92
Existence of tender awarding based on available resources influence PPPDS performance.	3	3.2	15	15.8	17	17.9	53	55.8	6	6.3	3.47	0.95
Systematic and timely collection and management of monetary resources from BOs influences the PPPDS performance.	2	2.1	8	8.4	13	13.7	64	67.4	8	8.4	3.72	0.82

Note: SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree, M = Mean and **STD** = Standard Deviation

Regarding existence of systematic and timely collection and management of monetary resources from BOs, more than three-fourth of participants (75.8%) believe that it influences the PPPDS procurement performance but about 10.5% of the participants reported against the argument as demonstrated in table-4.6. However, correlation analysis between resource allocation and procurement performance, displayed in table 4.9, did not produce statistically significant output of correlation coefficient ($r = 0.09$, $p = 0.38$).

4.7 The effect of Centralized purchasing body strategies on procurement performance in PPPDS

The centralized purchasing body strategies dimension is measured like the resource allocation with four number of items. The mean values of all the items are greater than the overall average of the scale ($M > 3$) and this demonstrates that more respondents do agree presence of centralized purchasing body strategies influences procurement of performance of PPPDS. Thus, more than two-third respondents agree that existence of centralized purchasing body strategies influences PPPDS' procurement performance as indicated in Table-4.7.

Table-4.7: Descriptive analysis Centralized Purchasing Body Strategies

Centralized Purchasing Body Strategies	SD		D		Neutral		A		SA		M	STD
	n	%	n	%	n	%	n	%	n	%		
Presence of acting as manager of the national system awarding framework agreements or instruments affects PPPDS performance.	2	2.1	18	18.9	9	9.5	60	63.2	5	5.3	3.51	0.94
Acting as contracting authority aggregating demand and purchasing influences PPPDS performance.	1	1.1	10	10.5	11	11.6	65	68.4	7	7.4	3.71	0.80
Participation in establishing policies for public procurements influence PPPDS performance.	1	1.1	9	9.5	21	22.1	53	55.8	10	10.5	3.66	0.84
Participating in coordinating training for public officials in change of public procurement influences PPPDS performance.	2	2.1	16	16.8	6	6.3	55	57.9	15	15.8	3.69	1.01

Note: SD = Strongly Disagree, D = Disagree, A = Agree, SA = Strongly Agree, M = Mean and **STD** = Standard Deviation

For instance, participants' response on the statement "acting as manager of the national system awarding framework agreements affects PPPDS performance" shows rates of 68.5%, 21% and 9.5% agreement, disagreement and neutral successively in their decreasing order. While responding to the second statement (i.e. acting as contracting authority aggregating demand and purchasing influences PPPDS performance), 75.8% 11.6% and 11.6% of respondents reported as agree, disagree and neutral respectively. Similarly, in response to the last two statements of centralized purchasing body strategies related with participation in establishing policies for public procurements and participation in coordinated training of public officials, 66.3% and 73.7% of respondents agree and 10.6% and 18.9% of the participants disagree to the former and the latter statements respectively.

Thus, most respondents believe that centralized purchasing body strategies in PPPDS fulfills the basic requirements (refer table-4.7).Like resource allocation, analysis of the relationship between centralized purchasing body strategies and procurement performance of PPPDS did not give statistically significant output ($r = -0.01$, $p = 0.94$).

4.8 Procurement performance in PPPDS

Table-4.8 demonstrates respondents' attitude towards purchasing procurement performance of PPPDS. PPPDS procurement performance has five items and the items were measured using five-point Likert scale that vary from very poor to very good. Examination of the mean values of the five items of procurement performance, mean values of the first two items (i.e. with Right Quality and at Right Time) were lower (M_1 = 2.27 and M_2 = 1.80) than those the next three times (i.e. at Right Price, from the Right Source and Right Quantity) with mean values of M_3= 3.63, M_4 = 3.12 and M_5 = 3.31 respectively. This shows that in the former two mean values more respondents believe that PPPDS procurement performance was good in terms of quality and time; whereas, in the latter three mean values more respondents believe that the PPPDS procurement performance in terms of price, source and quantity was poor.

In responding to purchasing goods and services of right quality, more than half of respondents (n = 54) believe that PPDDS quality preference is poor and relative equivalent number of participants have reported about quality concerns as undecided (22.1%) and good (21.1%). Regarding appropriate time of purchasing, 74.7% of respondents believe that PPPDS's purchase delivery is poor and 11.6% and 12.7% of respondents have reported as neutral and good respectively. Replying about price appropriateness, two-third (66.3%, n = 63) of the participants believe that PPPDS have good reputation of delivering items at the right price, whereas, 23.2% of individuals reported as neither good nor poor and only 9 respondents reported as poor. In responding to quality of suppliers from where PPPDS purchases items, 41.1% (n = 39) of respondents have no idea about source of items; while 36.9% of them believe the organization purchases from right source. Besides, over half of the study participants (n =52) believe that PPPDS delivers the right quantity and those respondents who reported as undecided and poor on quantity are 22 and 20 persons respectively. According to respondents' response, PPPDS has better procurement performance in providing items with right price, from the right source and quantity, however, it's delivery of appropriate quality and time is below requirement.

Table-4.8: Descriptive analysis Procurement performance in PPPDS

Procurement Performance	VP		P		NPNG		G		VG		M	STD
	n	%	n	%	n	n	%	n	%	n		
With Right Quality	38	40.0	16	16.8	20	21.1	17	17.9	3	3.2	2.27	1.25
At Right Time	57	60.0	14	14.7	11	11.6	9	9.5	3	3.2	1.80	1.17
At Right Price	4	4.2	5	5.3	22	23.2	54	56.8	9	9.5	3.63	0.89
From the Right Source	9	9.5	11	11.6	39	41.1	30	31.6	5	5.3	3.12	1.01
Right Quantity	9	9.5	11	11.6	22	23.2	46	48.4	6	6.3	3.31	1.08

Note: VP = Very poor, P = Poor, NPNG = Neither good nor poor, G = Good, VG = Very good

4.9 Predicting Power of the Factors Procurement Performance

4.9.1 Correlation Analysis Among Variables

Bivariate correlation analysis between the factor variables (such as procurement planning, organizational structure, contract management administration, performance measurement, resource allocation and centralized purchasing body's strategies) and procurement performance in PPPDS shows that organizational structure, contract management administration, performance measurement and procurement planning have positive and statistically significant relationship with procurement performance with correlation coefficients, r 0.467, 0.381, 0.378 and 0.371 at significance value, $p < 0.01$. However, resource allocation and centralized purchasing body's strategies do not have significant relationship with procurement performance.

Table-4.9: Correlation between factor variables and procurement performance

Independent Variables	Procurement performance	M	SSTD
Procurement Planning	0.371**	2.67	0.65
Organizational Structure	0.467**	2.68	0.83
Contract Management Administration	0.381**	2.52	0.83
Performance Measurement	0.378**	2.66	0.90
Resource Allocation	0.092	3.57	0.76
Centralized Purchasing Strategies	-0.008	3.64	0.73

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

4.9.2 Regression Analysis between the Factor Variables and Procurement Performance

Table-4.10 shows regression analysis of the factor variables against outcome variable (i.e. procurement performance). The correlation analysis output in table-4.9 helps understand the relationship among all the variables as well to determine which independent variables to include in the regression model. Accordingly, those variables significantly correlate with the outcome variable (i.e. procurement performance) are included in the regression model. The factor variables with insignificant correlation coefficient are resource allocation and centralized purchasing body's strategies are excluded from the model. Those factor variables with significant correlation coefficient include: procurement planning, organizational structure, contract management administration and performance measurement and are included in the regression model.

Table-4.10: Regression Analysis between factor variables and procurement performance

	Procurement Performance									
Predictor Variables	***F***	***df_1***	***df_2***	***R***	***R^2***	***β***	***t***	***p***	***Tolerance***	***VIF***
(Constant)	7.12	4	89	0.49	.242	1.372	4.2	0.00		
Procurement Planning						0.03	0.20	0.86	0.40	2.48
Organizational Structure						**0.35**	**2.72**	**0.008**	0.50	1.99
CMA						0.16	1.05	0.30	0.42	2.41
Procurement Measurement						0.03	0.2	0.84	0.30	3.40

Note: F = F-ratio, df = degree of freedom, R = correlation coefficient, R^2 = Coefficient of determination, β (Beta) = standardized regression coefficient, t = t-test, p = significance coefficient and VIF = Variance inflation Factor

Once the assumptions and necessary preconditions checked (refer section 3.8), the multiple regression analysis of factor variables as predictor variable and procurement performance as criterion/dependent variable. As indicated on table-4.10above, the multiple regression output of the ANOVA section shows that the F-ratio value of the modelF (4, 89) = 7.22 at p < 0.01, which indicates statistically significant values greater than its respective F-ratio much more less than the standard 0.5 p-values.

Therefore, these statistically significant values of F-ratio give us an assurance that the regression models can be used to predict the procurement performance in PPPDS using the factor variables such as procurement planning, organizational structure, contract management and administration and procurement measurement. However, two factor variables such as resource allocation and centralized purchasing body's strategy were excluded from the regression model because they did not have correlated significantly with the outcome variable.

Consequently, the model demonstrated correlation coefficient value of R =0.49 and coefficient of determination, R^2= 0.242 at significance value of $p <0.001$. This tells us that the collective contribution of the factors - procurement planning, organizational structure, contract management and administration and procurement measurement - to the regression model accounts 24.2%. This means that these factor variables have joint 24.2%contribution to the model, meaning one way or another, predict procurement performance in PPPDS. In order to retain the regression coefficients (β) of each predictor variables we take those coefficients (β) with statistically significant t-test values with $p \leq 0.5$. Accordingly, only organizational structure has statistically significant value with $\beta = 0.35$, at $t = 2.72$, $p = 0.008$. However, the other factors - procurement planning, contract management and administration and procurement measurement - did not produce statistically significant predicting power on procurement performance (refer Table-4.10 above). This means that organizational structure has direct influence on procurement performance and it can be used as predictors of procurement performance in PPPDS (refer appendix-III for full output of the multiple regression).

4.10 Discussions

4.10.1 Effect of Procurement Planning on Procurement Performance in PPPDS

An empirical study by Hamza, Gerbi, and Ali (2017) on factors that affect procurement performance found out that procurement planning is necessary factor because it enables centralized public purchasing firms to decide what and when to buy and identify appropriate sources. Besides, it provides an opportunity for beneficiary organizations to be involved and discuss in the processes of meeting specific procurement requirements (Hamza, et al., 2017). The current study was also conducted based on these similar features. Though, responses of participants show that planning procurement in PPPDS is below expectations, its direct and significant relationship with procurement performance witnessed its association ($r = 0.371$, $p = 0.01$) with procurement performance of the organization. However, further regression analysis showed that procurement planning does not predict procurement performance with $\beta = 0.03$, $p = 0.85$ (i.e. statistically insignificant). This means that their association might be due to that PPPDS planning was poor with M = 2.67and PPDSS' performance was better in some items and poor in other items that cancels out the effect of planning and this might be the participants' data was retained from PPPDS staff and beneficiary organizations. Despite methodological variances, previous empirical studies Aberu, 2017; Asante, 2017; Hamza et.al, 2017; Okinyi & Muturi, 2016; Nyambura & Mwangi, 2015; Kioko& Were, 2014) have also reported similar outcome on the effect of planning on performance of centralized public purchasing organizations. For example, Bekele's (2015) study conducted on procurement performance in public higher institutions (a case of Jimma University) reported that culture of preparing an annual procurement plan among users of the University was very poor and it directly affected the performance of the procurement. He further recommended that public organizations should strive to strengthen their procurement plan and make planning as culture to ensure successful implementation (Bekele (2015).

4.10.2 The Effect of Organizational Structure on Procurement Performance in PPPDS

Participants' rating about organizational structure in PPPDS shows that it has below requirement staff qualification and the organization is not sufficiently staffed. Moreover, decision making process are not conducted professionally and managers fail to train their supporting staff that blocks the PPPDS from achieving its goals. The study also indicated that organizational structure has direct and significant relationship with procurement performance. A study with different objectives indicated that organizational structure is one of the main variables that affects the highly affect the performance of procurement function and resource allocation or budget allocation (Bekele, 2015). Another study titled “the impact of organizational structure on the implementation of Public Procurements Policy” found that administrative structure has significant positive correlation and impact on implementation of policy of public procurement or administrative efficiency (Sofoneyas, 2016). According to Van-Weele (2005), Procurement structure is very much dependent on organization distinctiveness and situational factors. One of the core lessons of the contingency theory is that there is no single optimal way to structure organizations rather it is dependent on some distinctiveness of the organizations situation. Despite the way organizational structure is implemented based on contextual factors, it has effect on procurement performance.

4.10.3 Effect of Contract Management and Administration on Procurement Performance

Kiage’s (2013) study conducted in Kenya’s Ministry of Energy revealed that the extent to which contract management in the procurement cycle affects procurement performance. The study concludes that planning, resource allocation, staff competency and contract management positively affected procurement performance at the Ministry. Despite respondents’ response shows that CMA in PPPDS is below standard, the outcome of this study also shows that contract management and administration have positive relationship with procurement.

4.10.4 The effect of performance measurement on procurement performance in PPPDS

As According to Giese (2011) performance measurement is the process of quantifying the efficiency and effectiveness of employee’s productive hours. Procurement performance covers several quality and quantity-enhancing benchmarks, which narrows down transaction costs, time spent, and the quality and quantity of goods delivered. Based on their analysis, Odhiambo and Kamau, claimed that appropriate evaluation of performance of public procurement officers enhances procurement performance through high returns on investment, reduced transactional costs, faster delivery of services and supplies, delivery of high-quality purchases, and streamlined supply chains. (Odhiambo & Kamau, 2003). Therefore, outcome of this study showed that procurement measurement has positive and significant effect on procurement performance, despite, the procurement measurement and performance in PPPDS were below the beneficiary organization expectations and requirements.

4.10.5 The effect of resource allocation on procurement performance in PPPDS

Hamza et al. (2017) conducted a study on factors affecting procurement performance in Awassa Textile Share Company. The study revealed that staff competence and resource allocation were the most related factors affecting procurement performance. However, response of respondents in the current study showed that resource allocation in PPPDS was better but not significantly related to procurement performance. However, this discrepancy might be due to that the participants of the current study have included both from PPPDS and BOs or it might be due to methodological variations.

4.10.6 The effect of Centralized purchasing body strategies on procurement performance in PPPDS

Results on the effect of centralized purchasing body strategies on procurement performance showed that the former does not have direct influence on latter in PPPDS. However, more respondents reported that centralized purchasing strategies in PPPDS fulfill the basic requirements, whereas, procurement performance processes are below standard in PPPDS. A study by Milanzi and Bond-Barnard (2017) studies show that centralized procurement in a matrix mining organization is not perceived by the research participants to significantly influence procurement performance.

4.10.7 Predicting Power of Factors on Procurement Performance

Despite majority of the factor variables have showed statistically significant relationship with procurement performance, the regression outcome of this study shows that factor variables - procurement planning, organizational structure, contract management and administration and procurement measurement - jointly contribute 24.2% to the model, meaning one way or another, they predict procurement performance in PPPDS. Further examination of the regression coefficients of the factor variables, only organizational structure has statistically significant value of $\beta = 0.35$, at $t = 2.72$, $p = 0.008$, meaning only organizational structure has predicting power on procurement performance in PPPDS. In contrast, Kiage's (2013) empirical study examined the factors that influence procurement performance in public institutions in Kenya. Outcome of the first the model depicted that factor variables jointly contributed 87.5%. Individually, planning, contract management, staff competency and resource allocation contributed 26.9%, 23.3%, 20.1 % and 17.2%of variations in procurement performance successively in their decreasing order. The discrepancy on the factors that predict procurement performance outcome might be due to several reasons. These variations might be due to methodological and contextual differences. Methodological reasons might include differences in sampling techniques, design of the study and nature of the population. For example, most previous case studies collect their sample one type of organization or some beneficiary organizations, whereas, respondents of the current study from employees of several public budgetary beneficiary organizations and PPPDS employees. Furthermore, organizational characteristics of study populations might differ from one another contextually.

Chapter Five Conclusion and Recommendations

5.1 Summary of Findings

Descriptive analysis of the response of study participants (n = 95) on the items utilized to measure the factor variables that influence procurement performance in PPPDS indicated that the mean values of procurement planning, organizational structure, contract management-administration and procurement measurement were less than the scale average ($M < 3.00$). These lower mean values of these four variables shows that more number of the respondents do not believe PPPDS' procurement planning, organizational structure, contract management-administration and procurement measurement practices and procedures are appropriately followed. In contrast, the mean values of the items that measure resource allocation and centralized purchasing body's strategies were slightly greater than the scale average ($M > 3.00$). This indicates that more respondents agree that resource allocation and centralized purchasing body's strategies in PPPDS at least fulfill the minimum requirements. Similarly, examination of mean values the procurement performance, respondents' response showed that PPPDS has better procurement performance in providing items with right price, source and quantity, however, it does not deliver appropriate quality and at the right time ($M = 2.89$).

Bivariate correlation analysis between factor variables and procurement performance indicated that procurement planning, organizational structure, contract management-administration and procurement measurement have direct and statistically significant correlation coefficients of 0.371, 0.467, 0.367 and 0.38 with $p < 0.01$ with procurement performance respectively. Contrarily, resource allocation and centralized purchasing body's strategies did not demonstrate significant relationship with procurement performance.

Furthermore, to determine the prediction power of those significantly correlated factor variables on procurement performance, the regression model demonstrated correlation coefficient value of $R = 0.49$ and coefficient of determination, $R^2 = 0.242$ at significance value of $p < 0.001$. This statistically significant coefficient of determination, $R^2 = 0.242$ shows that collective contribution of the factors - procurement planning, organizational structure, contract management and administration and procurement measurement - jointly contribute 24.2% to the model, meaning one way or another, they predict procurement performance in PPPDS. Further examination of the regression coefficients of the factor variables, only organizational structure has statistically significant value of $\beta = 0.35$, at $t = 2.72$, $p = 0.008$, whereas, procurement planning, contract management and administration and procurement measurement did not produce statistically significant predicting power on procurement performance in PPPDS.

5.2 Conclusion

Based on the outcome of the study, the research concludes that procurement performance in PPPDS has better performance in terms of purchasing with right price, from the right source and right quantity, however, its delivery in relation to quality and time is below standard. Moreover, the result of the study shows that procurement performance influenced by factor variables including: procurement planning, organizational structure, contract management-administration and procurement measurement because it has statistically significant and positive relationship with these variables. In contrast, the influence of resource allocation and centralized purchasing strategies on procurement performance is insignificant.

Descriptive assessment of the factor variables indicated that procurement planning in PPPDS is generally poor. Despite PPPDS conducts need assessment and involves BOs in procurement plan, BOs not only they fail to raise their procurement needs on time but also, they do not provide clear specification of items to PPPDs and their PR is not scheduled, planned &automated appropriately. Furthermore, majority of respondents believe that organizational structure, and contract management-administration and procurement measurement in PPPDS is below standard, whereas, respondents believe that PPPDS has good reputation in resource allocation and centralized purchasing strategies.

Finally, regression analysis indicated that procurement planning, organizational structure, contract management-administration and procurement measurement jointly contribute 24.2% to the model, however, it was organizational structure that has statistically significant ($\beta = 0.35$, at $t = 2.72$, $p = 0.008$) prediction power on procurement performance.

5.3 Recommendation

Based on the findings of the study, the researcher forwards the following recommendations as that might help PPPDS and budgetary beneficiary organization to improve the centralized procurement and purchasing processes that might enhance procurement performance in PPPDS.

- As per respondents' report the procurement planning, organizational structure, contract management and procurement measurement in PPPDS is below standards, therefore, PPPDS should comprehensively evaluate and continuously monitor its procurement processes and initiate training programs on its employees as well as employees of budgetary beneficiary organizations.
- PPPDS needs to implement communication channels to facilitate need assessment and involvement of BOs during procurement planning to make sure that BOs provide clear specifications and procurement needs on time. In addition, PPPDS should adopt fully automated procurement requisitions and need collections from BOs.
- PPPDS needs to create and utilize proper monitoring, evaluating and controlling mechanisms in its contract management work process while administering signed contracts. And PPPDS needs to implement the most effective and efficient payment methods and mechanisms to settle the actual cost of imported goods. Also, PPPDS needs to improve its process of collecting monetary funds from the BOs to settle tariffs, duties and taxes for those item's imported from abroad timely and with their approved budget. Furthermore, PPPDS must initiate and convey appropriate and suitable system to collect data about the contracting suppliers regularly and through addressing with potential stakeholders PPPDS needs to search for convenient means of on time hard currency acquirement for those contracts signed other than local currency.
- PPPDS and budgetary beneficiary organizations, with the involvement of potential stakeholders, should jointly upgrade their organizational structures through staffing of job positions with appropriate and qualified personnel and should provide regular on job training and evaluation programs.

- PPPDS should revise and update its procurement measurement procedures considering internal evaluation and monitoring of employees' efficiency and effectiveness using standard performance measurement tools to improve its overall processes.
- PPPDS should also comprehensively improve its procurement performance output based on the five rights because the study shows PPPDS has relatively better delivery on right price, source and quantity than delivering better quality on time.
- Last but not least, PPPDS should strive to improve allocating resources and needs to find a way how integrate centralized purchasing strategies in its work flow to secure efficiency and effectiveness in its performance.

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APPENDIX A: DATA COLLECTION INSTRUMNET

Addis Ababa University School of Commerce

Department of Logistics and Supply Chain Dept.

Dear respondent,

My name is Naod Hailu and I am pursuing my master's degree in Logistics and Supply Chain Management at Addis Ababa university School of Commerce. As part of partial fulfillment of the requirement for the master's degree am required to carry out a research thesis. Accordingly, I am conducting my thesis work entitled "Factors Affecting Centralized Government Procurement Performance: The Case of Public Procurement and Property Disposal Service (PPPDS).

The core process of a research work is data collection and analyzing it. If the collected data are not valid the output of its analysis would be invalid. Thus, this questionnaire is designed consisting of demographic and procurement related inquires that are directly related with the research topic. Accordingly, your genuine, valid and honest response is expected, and the researcher shall use your response for academic purpose only and will be kept strictly confidential. As general rule, please indicate the level of agreement, disagreement and neutrality by using (√ or x) marks on the corresponding space given for each question and it's **NOT** required to write your name in part of the questionnaire.

I would like to genuinely appreciate and thank you for taking few minutes of your time to assist me on this.

Best Regards

Naod Hailu

(Mob: 0911 1096 28; E-mail: nmetiku@gmail,com)

PART I: Demographic Data

Please indicate your appropriate choice by using (√ or x).

1. Gender of the respondent

   Male [ ]   Female [ ]

2. Indicate your age group

   21 – 25 Years [ ]

   26 – 35 Years [ ]

   36 – 45 Years [ ]

   46 – 55 Years [ ]

   56 and above [ ]

3. Your educational level

   Diploma [ ]   Ph D. [ ]

   Degree [ ]   Other [ ]

   Masters [ ]

   If your response for is “other “please specify____________________________

4. What is your current occupational position (Job title)? ____________________________

5. How long have you been in your current occupational position?

   0 – 2 Years [ ]

   3 – 5 Years [ ]

   6 – 10 Years [ ]

   11 – 15 years [ ]

   Over 15 Years [ ]

PART II: Procurement Planning

6. What is your level of agreement with the following statements that relate the effect of Procurement Planning on procurement performance in PPPDS?

S. No	Procurement planning related question	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6.1	PPPDS conducts need identification/ assessment of beneficiary organizations timely to identify items to procure					
6.2	PPPDS involves beneficiary organizations to participate in preparation of procurement plan					
6.3	Beneficiary budgetary organizations raise their procurement needs on time adherence to the procurement plan.					
6.4	Beneficiary budgetary organizations provides clear specification for the items which are going to be procured by PPPDS					
6.5	Procurement requisitions from beneficiary budgetary organizations are scheduled, planned and automated.					

PART III Organizational Structure

7. What is your level of agreement with the following statements that relate the effect of organizational structure on procurement performance in PPPDS?

S. No	Organizational Structure related questions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
7.1	Staffs in PPPDS possess adequate level of knowledge, relevance experience, skills and trainings required by their occupation					
7.2	Departments in PPPDS organizational structure comprise adequate number of qualified staffs.					
7.3	The current over all organizational structure of PPPDS is built in such a way enabling achieving organizational objectives.					
7.4	Decision making process involves appropriate staffs					
7.5	Top managements in PPPDS support staffs.					

PART IV Contract Management and Administration

8. What is your level of agreement with the following statement that relate the effect of Contract management and administration on procurement performance in PPPDS?

S. No	Contract Management and Administration	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
8.1	PPPDS employs proper control mechanisms in management of contract to manage and monitor supplier performance for timely completions of contracts.					
8.2	Payments for those items procured from abroad/imported settled timely					
8.3	Payment of tariffs, duties and taxed for those items' procurement from abroad/imported/ settled timely and within the beneficiary organizations approved budget for the item.					
8.4	PPPDS collect data about the contracting suppliers regularly					
8.5	PPPDS uses convenient ways of acquiring hard currency for those contracts signed in foreign currencies.					

PART V Performance Measurement

9. What is your level of agreement with the following statements that relate the effect of performance measurement on procurement performance in PPPDS?

S. No	Performance Measurement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9.1	PPPDS employs adequate internal evaluation, monitoring and compliance system for functions to measure and track its efficiency and effectiveness.					
9.2	PPPDS adopts and uses any performance measurement tools to improve its efficiency and effectiveness.					
9.3	In PPPDS records are documented with updated information of tasks status and timeliness					
9.4	In PPPDS staff's efficiency and effectiveness is measured based on performance tools.					
9.5	PPPDS employs continuous improvement in its efficiency and effectiveness of processes, functions and procedures.					

PART VI Resource Allocation

10. What is your level of agreement with the following statements that relate the effect of resource allocation on procurement performance effectiveness and efficiency in PPPDS?

S. No	Resource allocation	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10.1	Lack adequate allocation of resources within PPPDS results inadequate performing of PPPDS in terms of effectiveness and efficiency.					
10.2	Lack of reviewing budget allocated for procurement of items in beneficiary budgetary organizations influences PPPDS performance.					
10.3	Lack of awarding tenders based on available resources influence PPPDS performance.					
10.4	Lack of systematic and timely collection and management of monetary resources from beneficiary organizations influences the PPPDS performance.					

PART VII Centralized Purchasing Body Strategies

11. What is your level of agreement with the following statements relate the effect of Centralized purchasing body strategies on procurement performance effectiveness and efficiency in PPPDS?

S. No	Centralized Purchasing Body Strategies	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11.1	Lack of acting as manager of the national system awarding framework agreements or other consolidated instruments affects PPPDS performance.					
11.2	Lack of acting as contracting authority aggregating demand and purchasing influences PPPDS performance.					
11.3	Lack participating in establishing policies for public procurements influence PPPDS performance.					
11.4	Lack of participating in coordinating training for public officials in change of public procurement influences PPPDS performance.					

PART VIII procurement performance evaluation related questions

12. How do you rate (evaluate) the PPPDS **procurement performance** based on five rights of Purchasing?

S. No	Procurement performance Rating with regard to 5 R's	Very poor	Poor	Neither good nor poor	Good	Very good
12.1	With Right Quality					
12.2	At Right Time					
12.3	At Right Price					
12.4	From the Right Source					
12.5	Right Quantity					

Thank you!!!

Appendix-B: Descriptive Analysis of Scales

	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
PP1	3.38	1.04	-0.36	0.25	-0.70	0.49
PP2	3.14	1.06	0.00	0.25	-1.26	0.49
PP3	2.14	0.88	0.68	0.25	0.40	0.49
PP4	2.35	0.85	1.19	0.25	1.83	0.49
PP5	2.35	1.00	0.63	0.25	0.11	0.49
PPmean	2.67	0.65	0.27	0.25	1.35	0.49
OS1	2.93	1.06	-0.01	0.25	-0.81	0.49
OS2	2.55	1.07	0.51	0.25	-0.50	0.49
OS3	2.77	1.09	0.02	0.25	-0.96	0.49
OS4	2.54	1.03	0.62	0.25	-0.49	0.49
OS5	2.61	1.03	0.26	0.25	-0.58	0.49
OSmean	2.68	0.83	0.17	0.25	-0.21	0.49
CMA1	2.38	1.20	0.29	0.25	-1.32	0.49
CMA2	2.53	1.11	0.51	0.25	-0.85	0.49
CMA3	2.67	1.10	-0.16	0.25	-1.11	0.49
CMA4	2.43	1.01	0.70	0.25	-0.08	0.49
CMA5	2.58	1.00	0.80	0.25	0.35	0.49
CMAmean	2.52	0.83	0.48	0.25	-0.33	0.49
PM1	2.52	1.06	0.31	0.25	-0.58	0.49
PM2	2.47	1.14	0.75	0.25	-0.36	0.49
PM3	3.07	1.11	-0.38	0.25	-1.00	0.49
PM4	2.68	1.06	0.07	0.25	-0.76	0.49
PM5	2.57	1.11	0.11	0.25	-0.83	0.49
Pmmean	2.66	0.90	0.26	0.25	-0.45	0.49
RA1	3.53	0.90	-1.34	0.25	1.12	0.49
RA2	3.58	0.92	-0.83	0.25	0.25	0.49
RA3	3.46	0.94	-0.82	0.25	0.02	0.49
RA4	3.72	0.82	-1.31	0.25	1.99	0.49
RAmean	3.57	0.76	-1.12	0.25	1.31	0.49
CPBS1	3.51	0.93	-0.94	0.25	-0.09	0.49
CPBS2	3.71	0.80	-1.22	0.25	1.43	0.49
CPBS3	3.65	0.83	-0.72	0.25	0.50	0.49
CPBS4	3.68	1.00	-0.88	0.25	0.04	0.49
CPBSmean	3.64	0.73	-0.83	0.25	0.79	0.49

PPer1	2.27	1.25	0.43	0.25	-1.14	0.49
PPer2	1.81	1.17	1.23	0.25	0.33	0.49
PPer3	3.62	0.89	-1.12	0.25	1.62	0.49
PPer4	3.12	1.01	-0.49	0.25	-0.05	0.49
PPer5	3.31	1.07	-0.80	0.25	-0.13	0.49
Ppermean	2.83	0.81	-0.06	0.25	0.38	0.49

Note: PP = Procurement Planning, OS = Organizational Structure, CMA = Contract Management and Administration, PM = Procurement Measurement, RA = Resource Allocation, CPBS = Centralized Purchasing Body's Strategies and PPer = Procurement Performance.

Appendix-C: Multiple Regression Output

Model Summary[b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.493[a]	.242	.210	3.58464
a. Predictors: (Constant), Organizational Structure (OS) - procurement planning (PP), contract management and administration (CMA) and procurement measurement (PM).				
b. Dependent Variable: Procurement Performance (Pper)				

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	372.017	4	93.004	7.238	.000[b]
	Residual	1156.467	89	12.850		
	Total	1528.484	94			
a. Dependent Variable: Procurement Performance (Pper)						
b. Predictors: (Constant), Organizational Structure (OS) - procurement planning (PP), contract management and administration (CMA) and procurement measurement (PM).						

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	6.879	1.616		4.2	.000		
	PP	.035	.178	.028	.20	.86	.402	2.480

	OS	.336	.126	.346	2.72	.008	.497	1.981
	CMAtotal	.157	.140	.15	1.05	.30	.403	2.413
	Pmtotal	.024	.151	.03	.2	.84	.295	3.396

a. Dependent Variable: Procurement Performance (Pper)

Correlation

	Independent Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1	Procurement Planning	1						
2	Organizational Structure	0.68**	1					
3	Contract Management Administration	0.54**	.501**	1				
4	Performance Measurement	0.70**	0.60**	0.76**	1			
5	Resource Allocation	-0.07	-0.13	-0.07	-0.18	1		
6	Centralized Purchasing Strategies	-0.07	-0.07	0.10	-0.08	.598**	1	
7	Procurement performance	.371**	.467**	.367**	0.38**	0.09	-0.01	1

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