



**ASSESSMENT OF THE PRACTICES AND CHALLENGES OF
PHARMACEUTICALS FRAMEWORK CONTRACT AGREEMENT
PROCUREMENT: THE CASE OF ETHIOPIAN PHARMACEUTICAL SUPPLY
SERVICES**

**A Thesis Submitted to Addis Ababa University School of Commerce in
partial fulfillment of the requirements for the Degree of Master of Art in
Logistics and Supply Chain Management.**

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Examiner Board Approval



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Declaration

I declare that the work in thesis entitled “Assessment of Practices and Challenges of Pharmaceuticals Framework Contract Agreement Procurement: The Case of Ethiopian Pharmaceuticals Supply Services”, in the Department of Logistics and Supply Chain Management. A comprehensive list of references well has been presented and the list is duly acknowledged.

This work has not been submitted as a degree by any other person in another University in the university degree of Master of Arts in Logistics and Supply Chain Management at Addis Ababa University.

Muluembet Tesfaye

Certificate

This is to certify that the thesis entitled “Assessment of Practices and Challenges of Pharmaceuticals Framework Contract Agreement Procurement: The Case of Ethiopian Pharmaceuticals Supply Services” submitted to Addis Ababa University School of Commerce for the award of degree in Art Degree in Logistics and Supply Chain Management carried out by Mrs. Muluembet Tesfaye, under my guidance and supervision. Therefore, I hereby declare that no part of this thesis has been submitted to any other university or institution for the award of any degree or diploma.

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Acronym

- AAU SOC-----Addis Ababa University School of Commerce
- BSRs----- buyer-supplier relationships
- EDI-----Electronic data interchange
- e-GP -----Electronic Government Procurement of Ethiopia
- ERP -----Enterprise Resource Planning
- EPSS-----Ethiopian Pharmaceutical Supply Service
- EU-----European Union
- FCA-----Framework Contract Agreement
- ICT-----Information Communication Technology
- RFID-----Radio frequency identification (RFID-
- PPA-----Public Procurement and Property Agency
- PFSA-----Pharmaceuticals Fund and Supply Agency
- SBD----- Standard Bidding Document
- SC -----Supplier commitment
- SE -----Supplier engagement
- SI ----- Supplier infrastructure
- SOPs-----Standard Operating Procedures
- SQ ----- Supplier Quality
- SP ----- Supplier performance
- UNDP/CIPS-----United Nations Development Program/Chartered Institute of Procurement and Supply
- US FDA, CDRH-----The United States Food and Drug, Center for Devices and Radiological Health
- WHO-----World Health Organization
- WTO----- World Trade Organization

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Abstract

Public procurement is crucial for financial management and service delivery, especially in countries where acquiring pharmaceuticals through public procurement significantly impacts public health outcomes. A Framework Contract Agreement (FCA) is a long-term contract between a buyer and supplier that sets out terms for delivering goods or services over time, aiming to enhance efficiency and achieve value-for-money gains. Despite the Ethiopian Pharmaceuticals Supply Service (EPSS) adopting FCAs since 2017, there is a lack of empirical data on their implementation and their impact on clinical practices. This study aims to address this gap by examining current operational procedures, identifying challenges, and proposing solutions. Using a mixed-methods approach, it analyzes procurement records quantitatively and conducts qualitative interviews with stakeholders. Key findings indicate that while FCAs have enhanced procurement processes and supplier relationships, challenges persist, including price volatility, limited supplier competition, and regulatory ambiguities. Addressing these issues is crucial to optimizing procurement efficiency and ensuring a reliable supply of high-quality pharmaceuticals. The study's recommendations propose strategies to strengthen the sustainability and performance of FCA procurement across substance supply systems in Ethiopia, thereby safeguarding public health benefits and supporting healthcare resources throughout the country.

Key words; practice of FCA , Challenge of FCA , supplier selection , Supplier relationship management , Contract management

Chapter one

Introduction

1.1 Background of the Study

Public procurement is essential for organizations as it entails obtaining goods, services, or works from external suppliers. In public financial management and service delivery, public procurement is a vital component. Government budgets are frequently allocated to procure goods and services. Nevertheless, the effective implementation of public procurement is a critical element of service delivery systems in developing nations (OECD, 2015).

Arrow smith (2005) states that public procurement has a direct impact on three interest groups: the state, which funds the procurement; the citizens, on whose behalf the procurement is done and who indirectly pay for the procurement through taxes; and the private sector, which participates in the procurement process. Additionally, the African Development Bank, cited in World Bank (2009), recognizes the main economic objective of value for money in procurement policy by referencing economy and efficiency in project implementation and providing equal opportunity for eligible suppliers to enhance competition.

Public procurement plays a critical role in public financial management and service delivery. Often, the public budget is allocated towards the acquisition of goods and services by the government. However, the implementation of public procurement is a crucial aspect of the service delivery system in developing countries. This study specifically examines one procurement mechanism and its importance in achieving efficient public procurement (OECD, 2015)

As per the World Bank (2012), which was referenced by Kifle (2020), governments typically allocate between 5 and 20 percent of their gross domestic product (GDP) towards the government budgets significantly depend on the purchase of products, services, and civil works, as well as the distinction between effective and ineffective procurement procedures that shows savings of even 1% of gross domestic product.

According to Tesfahun (2011, p.4) in Ethiopia, more than 60% of the total public spending goes to procuring public goods and services. Efficiently and effectively handling this size of procurement outlay has been a policy and management concern and it has not been given due attention so far in the country. Until recent years, overseeing public procurement has been a challenge in Ethiopia.

In the healthcare sector, pharmaceuticals hold immense importance as they are essential for disease prevention, diagnosis, and treatment. However, procuring pharmaceuticals often presents numerous challenges, including high costs, low quality, limited availability, and inefficient distribution. These challenges negatively impact the accessibility and affordability of pharmaceuticals, particularly for marginalized and economically disadvantaged populations (Dessalegn Mirkena, 2021)

A framework agreement, as defined by Public Authority (PPA, 2011 pp. 2), is a basic contract that outlines terms and conditions that allow public organizations to place orders for goods or services from suppliers while the agreement is in effect. In accordance with those terms and conditions (that is, it provides a way for public bodies to cancel purchase orders from a catalog of products or services whenever they need to make a purchase). The terms and conditions for follow-up call-off contracts are outlined in a Framework Agreement, which does not impose any obligations on the public body to place future purchase orders or to issue a minimum number or value of purchase orders.

(Ama Eyo, 2020) also define FCAs are enduring agreements between buyers and suppliers that define the terms and conditions for the provision of goods or services over a designated period. This procurement technique is increasingly favored by government agencies, international organizations, and private enterprises as a way to enhance and streamline the procurement process.

Frameworks are often used to buy standard commodities (goods), works or services are needed by a number of contracting authorities where the intention is that the greater volumes lead to better prices and terms. These are also used where contracting authorities identify a need to make repeat purchases over a period of time and use purchase goods immediately when the needs arise (Construction Excellence, 2009).

Once a framework agreement is established, a call-off contract is generated to outline the specific details of the requirements, including quantity, price, delivery schedule, and other pertinent terms and conditions. Typically, this call-off contract adheres to the terms and conditions outlined within the framework agreement. (PPA, 2011)

The call-off process enables buyers to procure goods or services promptly and effectively, by passing the need for a complete tendering process since suppliers or contractors have already undergone evaluation and selection through the framework agreement. This approach offers flexibility and convenience in procuring specific needs while ensuring adherence to the overarching framework agreement (Hudson, 2011)

Overall, the use of framework contract agreements in pharmaceutical procurement holds significant potential for addressing the challenges associated with cost, quality, availability, and distribution. It offers a strategic approach to optimize procurement practices and ultimately improve the availability and affordability of pharmaceuticals, benefiting both organizations and the population at large. FCA procurement aims to achieve economies of scale, reduce transaction costs, improve quality and delivery, and enhance supplier performance and relationship. (Lu, 2017)

The manual on the utilization of framework agreements (PPA, 2011) also emphasizes the benefits of employing the FA manual umbrella agreement. These advantages encompass:

Convenience and flexibility: The framework agreement offers public bodies a convenient and adaptable approach to procure goods and services. Streamlined and efficient procurement: Public bodies can engage in call-off contracts with suppliers under the framework agreement without the need for additional procurement procedures. This reduces the number of steps involved in making a purchase and expedites the procurement process.

Value for money: Despite the accelerated procurement process, the framework agreement still ensures that value for money is achieved.

Better pricing: The framework agreement often presents superior pricing options compared to what public bodies can obtain through regular procurement processes.

Reduced need for warehousing: Suppliers under the framework agreement are responsible for storing the goods, thereby diminishing the necessity for public bodies to maintain their own warehousing facilities.

Central management: The framework agreement facilitates central management of the contract, simplifying the purchasing process for public bodies.

In order to efficiently handle the procurement of pharmaceuticals in the health sector, the government has established the Ethiopian Pharmaceuticals Supply Service (EPSS) through proclamation number 553/2007. In Ethiopia, the public health sector relies on the Ethiopian Pharmaceutical Supply Services (EPSS) as the main source of pharmaceuticals. The mission of EPSS is to provide public health facilities with quality assured pharmaceuticals at an affordable price, ensuring timely and sustainable supply.

EPSS procures, stores, and distributes pharmaceuticals and related services to public health facilities across the country. EPSS has adopted the FCA procurement method since 2017. However, the implementation of FCA procurement in EPSS has not been adequately assessed and evaluated, and there is a lack of empirical evidence on its practices and challenges.

Therefore, this study aims to assess the practices and challenges of FCA procurement in EPSS, and to provide recommendations for its improvement and sustainability

1.2 Statement of the Problem

Pharmaceutical procurement is a complex and critical process that involves thorough planning, effective management, and diligent monitoring. It includes a wide range of stakeholders, including buyers, suppliers, regulators, financiers, and end-users, each with its own set of interests, expectations, and obligations. Furthermore, it is concerned with several issues such as demand, supply, quality, pricing, and logistics, all of which have an impact on the accessibility, affordability, and quality of pharmaceutical products (Arkestro, 2023).

According to Keith et al (2016), procurement is an important component in the management of planning principles aimed at establishing effective performance competency in government organizations. In fact, a well-designed and implemented procurement process can be used to ensure national progress at a low cost (Aduamah, 2014).

There is a widespread belief that framework agreements can limit competition. A government establishing a framework contract with a single manufacturer may discourage other companies from joining the market during the agreement's term. UNICEF has taken initiatives to help new manufacturers enter the market, especially during multi-year bids. A

new manufacturer must demonstrate a plan to become WHO-prequalified when entering a tender without prequalification for a product or vaccine (UNICEF, 2012).

Henock (2019) underlines the need of forming high-level partnerships with suppliers to guarantee a successful supply chain deployment. Essential steps include raising awareness of the anticipated annual procurement plan and communicating it with suppliers ahead of time. This technique gives suppliers a clear idea of predicted demand, allowing them to manage their resources and capacity accordingly.

According to Mulugeta Getanehe (2023), there has been little research into the impact of adopting Framework Agreements (FWA) in the Essential Medicines Procurement and Supply System in EPSS. FWA's implications on procurement lead time, availability of crucial pharmaceuticals, supplier relationships, and prompt information exchange are particularly important to investigate. Effective procurement strategies, processes, and procedures are critical for guaranteeing a consistent flow of health commodities and adapting to supply chain changes. The EPSS PSTP-II 2020/21 - 2029/30 strategy plan reflects substantial procurement success over the last two years since the implementation of FWA. However, more research is needed to fully understand the precise effects and benefits of FWA application in EPSS.

According to the Public Procurement Authority's (PPA, 2011) framework agreement document, in circumstances where multiple bidders win a tender, the first winner receives 60% of the total quantity. However, the handbook does not provide the prize percentages for the second and third winners. This lack of clarity was recognized as an audit finding in EPSS, particularly for Global Fund procured items. Typically, the second and third winners' quantities are allocated as 25% and 15%, respectively, with no specific rationale.

According to the PPA (2011) criteria, framework agreements can be either fixed or adjustable in price. A fixed price framework agreement is a type of procurement agreement where a seller and a buyer agree on a fixed price for products or services to be provided over a specific period. Whereas a flexible framework agreement is a legally binding agreement that can be modified or adjusted in response to changing requirements or conditions. Flexible framework agreements, in contrast to fixed price agreements, allow for flexibility and customization throughout the duration of the contract.

While EPSS has implemented a fixed price strategy, suppliers have subsequently requested price adjustments following the delivery of the initial purchase order and receipt of additional call-off requests. This has resulted in non-compliance with the legal requirements of the contract, necessitating the organization to issue new tenders to address these modifications.

As a result, this study is critical for examining the procedures and challenges of FCA procurement in EPSS and making recommendations for its improvement and sustainability

1.3 Basic Research Questions

The following main research questions are proposed:

- What are the major challenges of framework agreement implementation in the pharmaceutical procurement in EPSS?
- How are the supplier selection, contract negotiation, and contract management done in FCA procurement in EPSS?
- How framework agreement is being practiced in the pharmaceutical procurement in EPSS?

1.4 Objectives of the Study

1.4.1 General Objective

The general objective of this study is to assess the practices and challenges of FCA procurement in EPSS, and to provide recommendations for its improvement and sustainability.

1.4.2 Specific Objectives

- To identify the major challenges of framework agreement implementation in the Pharmaceutical procurement in EPSS and to propose solution and recommendation
- To assess the supplier selection and contract management in FCA procurement in EPSS
- To assess the framework agreement practices of pharmaceuticals procurement in EPSS.

1.5 Significance of the Study

The study aims to contribute to the existing literature and knowledge on Framework Contract Agreement (FCA) procurement, particularly in the context of pharmaceuticals in Ethiopia. It will provide empirical evidence and insights on the practices and challenges of FCA procurement in EPSS, identifying both strengths and weaknesses of the method. The findings of the research can offer useful information and suggestions to practitioners, elected officials, and other professionals involved in EPSS pharmaceutical procurement. These insights may enhance the efficiency and effectiveness of framework contract agreements, decision-making procedures, and procurement processes.

Moreover, the study will generate recommendations and suggestions for improving and sustaining FCA procurement in EPSS, proposing solutions and strategies for addressing the various challenges and opportunities. Additionally, the study's findings can support the development and implementation of FCA procurement not only within EPSS but also in other countries and organizations.

1.6 Scope of the Study

This study is limited to the (EPSS) in Ethiopia. It focuses on this organization's procurement methods, giving a localized context that represents EPSS's distinct operating and regulatory environment. By focusing on EPSS, the study hopes to provide insights and recommendations that are directly relevant to the organization's procurement procedures and difficulties.

The analysis is conceptually limited to the Framework Contract Agreement (FCA) for pharmaceuticals inside EPSS. It does not apply to other procurement methods or commodities outside of the pharmaceutical industry. The study's conceptual focus is on the implementation, practices, obstacles, and outcomes of FCA procurement. Supplier selection, contract negotiation, contract administration, and the influence of FCA on procurement efficiency, lead time, vital pharmaceutical availability, supplier relationships, and information exchange are all important topics of interest.

The study, which spans from 2017 to 2023, evaluates FCA procurement processes in EPSS using a mixed-methods methodology that integrates quantitative and qualitative methods. The study aims to address the research questions effectively. By conducting a detailed and comprehensive assessment of FCA procurement practices and challenges.

1.7 Limitation of the Study

This study on the Framework Contract Agreement (FCA) procurement of pharmaceuticals in EPSS has several limitations. The geographical focus is limited to the head office, which may not capture the full extent of procurement practices and challenges at regional or local branches.

The temporal scope, covering 2017-2023, may not reflect long-term outcomes or historical practices. The scope of procurement methods is restricted to the Framework Contract Agreement, which may limit the understanding of procurement practices within EPSS as a whole.

Limited engagement with key stakeholders in the pharmaceutical procurement process, such as regulators and healthcare providers, could restrict the comprehensiveness of the study.

Respondent bias may affect the validity of qualitative data and the overall conclusions. Additionally, the study coincides with potential regulatory and policy changes that could impact FCA procurement practices, which could affect the relevance and applicability of the findings.

1.8 Definition of Terms

1.8.1 Conceptual Definition

- ✚ **Pharmaceuticals:** Medicines, vaccines, medical devices, and other health products that are used for the prevention, diagnosis, and treatment of diseases. (Proclamation No 553/2007)
- ✚ **Procurement:** The process of acquiring goods or services from external sources, through tendering or competitive bidding. (Development and Public Procurement and Property Administration Agency, 2019).
- ✚ **Framework contract agreement (FCA):** A long-term arrangement between a buyer and a supplier that establishes the terms and conditions for the supply of goods or services over a specified period of time. (The Ethiopian Federal Government Proclamation No. 649/2009).
- ✚ **Challenge:** is something new and difficult which requires great effort and determination.(Cambridge dictionary)

- ✚ **Supply Chain Management:** is managing supply and demand sourcing raw materials and Parts, manufacturing and assembly, warehousing and inventory tracking, order entry and Order management, distribution across all channels, and delivery to the customer. (Council of Supply Chain)
- ✚ **Contract management** is an integral part of the procurement cycle, a contract management plan assists contract managers to properly manage contracts by addressing transition.(Contract management Guide , 2021)
- ✚ **Supplier Selection Procedure:** It is the process of selecting a supplier to acquire the necessary materials to support the outputs of an organization. (The Chartered Institute of Procurement & Supply (CIPS),2019)

1.9 Organization of the Study

The research proposal is organized into five chapters. Chapter one involves an introduction that comprises the background of the study with a special focus on procurement in general and health commodities procurement management in particular; problem statement, research question, and objective; the significance of the study; the scope of the study; limitations; and definition of terms. The second chapter examines literature about health commodities procurement management, which consists of a theoretical literature review and an empirical literature review to postulate the conceptual framework.

The third chapter present research methodology part used to perform the research activities. This part of the study comprises the type and design of the research, the population and samples of the study, sampling methods and procedures employed, data sources and data collection instruments used, the data collection procedures, the data analysis and presentation methods used. The fourth chapter presents the research findings, the interpretation and discussion parts of the research. Lastly, the fifth chapter presents the summary, conclusion, recommendation, and suggestion for further study.

Chapter two

Related Literature Review

This section reviews the literature on the practices and challenges of Framework Contract pharmaceuticals procurement process. It contains a review of theoretical and empirical literature related to price fluctuation, supplier selection, contract Management, legal framework, information technology and Item categorization. It also presents the conceptual model.

2.2. Theoretical Literature Review

2.2.1 Relational Contract Theory

Relational Contract Theory, published by Macneil in 1980, is a theoretical framework that emphasizes the importance of trust, cooperation, and relational norms in long-term contractual relationships. It focuses on the unique nature of these relationships, recognizing that many business relationships involve ongoing interactions and interdependencies that cannot be fully captured by formal contractual provisions. Key concepts of Relational Contract Theory include relational norms, long-term orientation, adaptability and flexibility, trust and cooperation, and relational governance mechanisms.

The theory has been applied in various fields, including business and supplier relationships, public-private partnerships (PPPs), strategic alliances and joint ventures, and employment relationships. It highlights the importance of trust, mutual obligations, and long-term commitment between employers and employees. By recognizing the significance of trust, cooperation, and relational norms, Relational Contract Theory offers insights into how parties can navigate the complexities of long-term contracts and foster successful and sustainable relationships (Macneil, 1980).

2.2.2 Agency Theory

Agency Theory is a theory that was established by Stephen Ross as well as Barry Mitnick in the 1970s and allows the one party to act on the behalf of another party in an organization. The article recognizes certain conflicts of interests including information asymmetry, risk aversion, or self-interest that can allow for agency costs. These conflicts can be reduced according to the theory, through performance-based incentives, monitoring systems, and contracts. All in the aim of reducing agency costs and organizational performance. The

theory offers a powerful perspective about the principal-agent relationship within organizations. The aim of corporate governance is to decrease agency costs by aligning the interests of the owner to the interest of the manager which in turn will hopefully increase performance within the organization.

Hart and Moore (1988) argue that complete contracts are important in alleviating agency costs. Because FCAs are contracts that by nature are meant for long term, and define the terms and conditions beforehand, therefore making the possibility of being victim of opportunistic behavior by the suppliers less. Such contracts may detail repercussions for noncompliance and benefits for those who exceed expectations, ensuring that these suppliers engaged for your project uphold the values your organization seeks to convey.

2.2.3 Deming Theory

Deming Theory (Deming System of Profound Knowledge) is about quality and the improvement of resources within an organization. System Appreciation Knowledge of Variation Theory of Knowledge Psychology This theory is created by Dr. W. Edwards Deming, an American engineer, statistician, professor, author and consultant its consist with 4 component: - System Appreciation (understanding the whole system) - knowledge : here understanding how to distinguish Signal from Noise/Knowledge on this topic will also explain about variability in every these issue what we working out.

Deming's theory and principles established over many preceding decades were widely accepted as relevant to development of quality control in the mid-century (1940 - 1953). Although he began developing his thoughts in the 1930s and 1940s, his work became influential during the post-World War II era. Deming was invited to Japan in 1950, and he taught Japanese business leaders statistical process control (SPC) methods for quality management..

Deming is probably most famous for his Fourteen Points, which offer a guidepost to transforming an organization in ways that result in better quality, higher productivity and greater competitive position. In 1982 he published his most influential work, *Out of the Crisis*, summarizing his management philosophy and the 14 Points.

As framework agreement is long term agreement the thesis relay on Relational Contract Theory.

2.2.4 Supplier relationship management

Supplier Relationship Management (SRM) refers to a long-term partnership between a buyer and a supplier characterized by mutual trust, commitment, effective communication, and shared goals. Strategic supplier management as defined by The Chartered Institute of Procurement & Supply (CIPS) It is very important for FCA purchasing due to the advantages that it maintains; cost saving, quality boost, delivery boost, performance monitoring, partnership formation, and creativity and studying. Setting up long-term contracts, keeping the quality standards, efficient delivery, and monitoring the performance could be some of the routes through which strategic supplier relationship management could help flares up the desired procurement performance. Improving sourcing interactions will directly improve end-to-end procurement results.

SRM practices like performance measurement and continuous improvement initiatives in order to improve the performance of suppliers on multiple dimensions including quality, reliability, responsiveness and innovation. These practices enable organizations to achieve cost savings through improved negotiation outcomes, reduced lead times, and optimized inventory levels (Krause, et al., 2016).

2.2.5 Legal framework

The Federal Democratic Republic of Ethiopia (FDRE) Financial Administration manual outlines the specific regulations and procedures to be adhered to when procuring common user items. These include the Public Procurement Directive effective from June 8, 2010, established by a decision of the Minister of Finance and Economic Development; the Ethiopian Federal Government's Procurement and Property Administration No. 649/2009 dated September 9, 2010; the Public Procurement and Property Disposal Service Establishment Councils of Ministers Regulation No. 148/2010; the May 2011 Standard Bidding Documents for FAs; and the May 2011 handbook on using Framework Agreements. While this list is not exhaustive, it highlights the key legal documents essential for the organization overseeing framework procurements. The same principles governing regular FA contracts apply to FA management, with the only difference being a gap between the awarding of the framework and the activation of supplies or services covered by it. Once a framework is granted, the specifications and terms agreed upon remain unchanged and cannot be materially altered.

2.2.6. The role of technology in pharmaceutical supply chain

Technology is the application of scientific knowledge and skills to create or improve the products, processes, or systems that are used for a specific purpose or function. Technology is one of the essential tools that make pharmaceutical inventory control fast and accurate. It supports data collection/analysis for orders, measurement outputs, orders execution, dispatching, inventory, quality tracking and assurance and even full traceability. Some of the technology examples for Pharmaceutical Inventory Control: Barcodes, RFID, EDI, ERP, e-GP, HCMIS/VITAS. A barcode represents the information of goods or materials by using parallel lines or dots, and RFID is a method of transmitting information at a certain frequency above the radio waves. EDI communicates data related to orders, invoices, and payments, and goods delivered, in a standard format, reducing errors and reencode. It combines different work approaches using exactly one system (Chauhan & Mohanty, 2016).

Automation of administrative activities like scheduling an appointment, billing, and managing inventory leads to better operational efficiency, lesser paperwork, and helps in reducing delays in patient care (Abdekhoda and et. al.,2015).

2.2.7 Item Category selection criteria

As per the "Manual on Framework Agreements" published by the OECD in 2014, the category selection criteria are as follows: Common/Standard goods: The goods that are commonly used or have standard specifications are considered for category selection. Repetitive purchases: Goods or services that are frequently purchased or required on a regular basis are given priority in category selection. To categorize historical needs, the following steps are recommended:

- a. Collect requests from all Contracting Authorities (CAs): Gather information on the specific needs and requirements of the CAs.
- b. Conduct a market analysis: Analyze the market to identify potential suppliers, assess their capabilities, and understand market trends and dynamics.
- c. Combine and compile the results: Consolidate the findings from the categorization of historical needs, the collection of CAs' requests, and the market analysis. This will help in developing proposed categories of goods and services.

2.2.8 Supplier Selection

Suppliers are key stakeholders in any corporate organization, as (M.M. Rahman, 2022) emphasizes. In the healthcare industry, a sudden disruption in the supply chain can have serious consequences for patient care. Strategic sourcing must be capable of handling discontinuities and resilient to unanticipated external shocks. Healthcare testing facilities, in particular, require a wide range of critical and frequently costly components, making supplier selection critical. The current COVID-19 pandemic has shown serious flaws in existing healthcare systems, particularly in emerging countries such as Bangladesh. (Islam, 2020) Highlighted notable supply issues such as shortages of surgical masks, gloves, disinfection chemicals, and RT-PCR testing kits.

Addressing these challenges and stabilizing the supply of medical supplies required a long period. Healthcare facilities, on the other hand, can reduce or eliminate stock-outs by selecting sustainable suppliers and cultivating strong collaborative relationships. Supplier selection is critical to corporate operations, influencing the overall efficiency and efficacy of the supply chain (Bohner C, 2017). Manufacturers frequently spend more than 60% of total sales on acquired services and materials (Krajewsl d LJ, 1996), with material prices accounting for up to 70% of completed product expenses. As a result, proper supplier selection can minimize purchasing costs, lower supply risks, and improve product quality (Liu F-HF, 2005).

When selecting suitable suppliers, several criteria must be examined. However, because of the various tactics across businesses regarding supply chain features, it is unrealistic, if not impossible, to account for all parameters in decision-making. Supplier selection typically involves one of two scenarios: single sourcing or multiple sourcing. In single sourcing, a supplier (person or legal organization) meets all of the purchaser's needs, requiring management to select the best source. In contrast, under multiple sourcing, no single provider can meet all needs. Companies that use the multiple sourcing model can overcome supply disruptions or capacity constraints by depending on a network of suppliers. (al., 2020)

Cost, quality, services, delivery, supplier profile, and overall people capabilities are the six characteristics that pharmaceutical businesses use to pick suppliers. (Yadav, 2015) These basic factors are then broken down into sub-criteria that affect the supplier selection process. Organizations can improve supply chain resilience and operational efficiency by carefully assessing these elements.

2.2.9 Price Fluctuation

The supply chain environment, particularly in the manufacturing and operations sectors, is heavily influenced by technological innovations. Big data and predictive analytics (BDPA) block chain technology (BT) ((Dubey, 2019) and artificial intelligence and machine learning are important enablers. Empirical research and theoretical frameworks have revealed the growing importance of data analytics in improving information processing capacities and strengthening supply chain resilience across various enterprises (Dubey, 2019)

The pharmaceutical supply chain faces particular constraints, including growing transportation costs, longer lead times, and higher inventory (Arikan, 2014). In developing countries, infrastructure deficits compound these issues by influencing transportation, telecommunications, worker skills, and supplier availability and quality. Furthermore, global supply chain management (GSCM) is laden with special hazards, such as currency exchange rate volatility, economic and political instability, and regulatory changes (Msimangira, 2014), These factors are major contributors to price fluctuations and supply chain disruptions.

Challenges in the pharmaceutical supply chain can be divided into two stages: supply chain design (capacity) and operational (responsiveness) (Shah, 2004). These problems frequently impede the attainment of the benefits associated with internationalization. As supply networks become more global, it is critical to recognize these difficulties and offer solutions.

The Food, Medicine, and Health Care Administration and Control Authority (EFMHACA) regulates Ethiopia's pharmaceutical sector in accordance with Proclamation No. 661/2009, which was constituted under Council of Ministers Regulation No. 189/2010. The Ethiopian pharmaceuticals business is expanding, with 75% of medications sourced from worldwide sources and 25% produced domestically (PFSA 2016). This dynamic emphasizes the necessity for good supply chain management in navigating both local and global difficulties

2.3 Empirical Review

The utilization of framework contract agreements in the procurement of pharmaceuticals is a multifaceted process that entails various considerations and challenges. Framework agreements offer several advantages such as enhancing administrative efficiency, process efficiency, and improving performance in urgent procurement situations (Junior, 2022). These agreements streamline the procurement process by reducing time and administrative costs through centralized negotiations and standardized procedures. Additionally, they ensure that registered suppliers are readily available to provide products or services during emergencies, thus averting poor outcomes in urgent procurement scenarios.

Nevertheless, challenges exist within the framework contract agreement process. These challenges include difficulties in identifying procurement opportunities, decision-making processes related to contract awards, and subsequent contract management (Loader, 2015). Moreover, issues such as political interference in contract awards can have a detrimental impact on procurement performance (Masoud, 2023). It is imperative for organizations to address these challenges to ensure the effectiveness of framework agreements in pharmaceutical procurement.

Measures such as anticorruption, transparency and accountability mechanisms are essential to mitigate the risks associated with pharmaceutical procurement, (Khler & Dimances,2020).The risk of corruption in the procurement process can be reduced if open bidding and integrity agreements are implemented. In addition, the adoption of volume pricing contracts for specialised medicinal products can contribute to cost savings and effective procurement practices, Li et al. Price, 2021

Supplier selection is considered crucial for successful purchasing and supply management, as it helps maintain and improve a competitive advantage (Abdollahi et al., 2015). Various articles on supplier selection highlight quality as the most important factor, followed by delivery, price, manufacturing capability, service, management, research and development, finance, flexibility, reputation, relationship, risk, and safety and environment (Thakur and Anbanandam, 2015). Identifying obstacles to the integration of supplier relationship management (SRM) is the main focus of Oghazi et al. (2016), who also provide suggestions to overcome these barriers. They suggest that integrating different sub-processes of SRM into strategic and operational characteristics can facilitate the integration process. Lack of

goal congruence, commitment, and trust between manufacturers and suppliers are identified as potential barriers to SRM integration. Trust is considered essential in buyer-supplier relationships (BSRs) and is influenced by factors such as commitments, communication effectiveness, cooperation, and transparency (Soh et al., 2016). The significant relationships between supplier quality (SQ) and supplier commitment (SC) with supplier performance (SP), while there are no mediating effects of BSR on the relationships between supplier engagement (SE) and supplier infrastructure (SI) with supplier performance (SP)

An agency's supply chain performance is significantly and favorably impacted by the deployment of information and communication technology (ICT), per BMC Health Services Research issue 23, Article number: 634 (2023). It is crucial to remember, though, that supply chain procedures have a greater impact on performance outcome prediction than does ICT deployment alone. Moreover, supply chain practices and operational performance are somewhat mediated by ICT implementation.

To improve overall supply chain effectiveness, it is advised that businesses prioritize and invest in their supply chain operations. This can be accomplished in a number of ways, including fostering strong customer connections, utilizing efficient communication and information exchange, and streamlining warehouse and inventory management.

In conclusion, the assessment of the practice and challenges of framework contract agreements in pharmaceutical procurement necessitates a comprehensive approach that considers the benefits, challenges, and risk mitigation strategies associated with such agreements. By leveraging the advantages of framework agreements, addressing procurement challenges, and implementing anti-corruption measures, organizations can enhance the efficiency and effectiveness of pharmaceutical procurement processes

2.4. Research Gap

While the title suggests a focus on assessing the practices and challenges of pharmaceuticals framework contract agreement procurement, it is important to identify the potential research gaps within this domain. Implementation and Effectiveness: There may be a lack of research studies that specifically evaluate the implementation and effectiveness of pharmaceuticals framework contract agreement procurement. This research gap could involve studying how well the framework contract agreements are implemented in practice and assessing their effectiveness in achieving the desired outcomes, such as cost savings, quality assurance, and timely availability of pharmaceutical products.

2.5. Conceptual framework

The conceptual framework of the study is a diagram or model that illustrates the main concepts, variables, and relationships that are relevant and important for the study. The conceptual or theoretical framework of the study helps to guide the research design and methodology, and to explain and interpret the research findings and conclusions. Conceptual framework is a set of interconnected ideas (concepts) regarding how a phenomenon works and how it is related to its individual elements. It also provides a comprehensive understanding of a phenomenon.

The figure below shows the practice and challenges of pharmaceuticals procurement by FCA associating with specific objectives of this research and factors related to the Price fluctuation, supplier selection, category selection criteria, Legal framework, Information system practices and supplier relationship management.

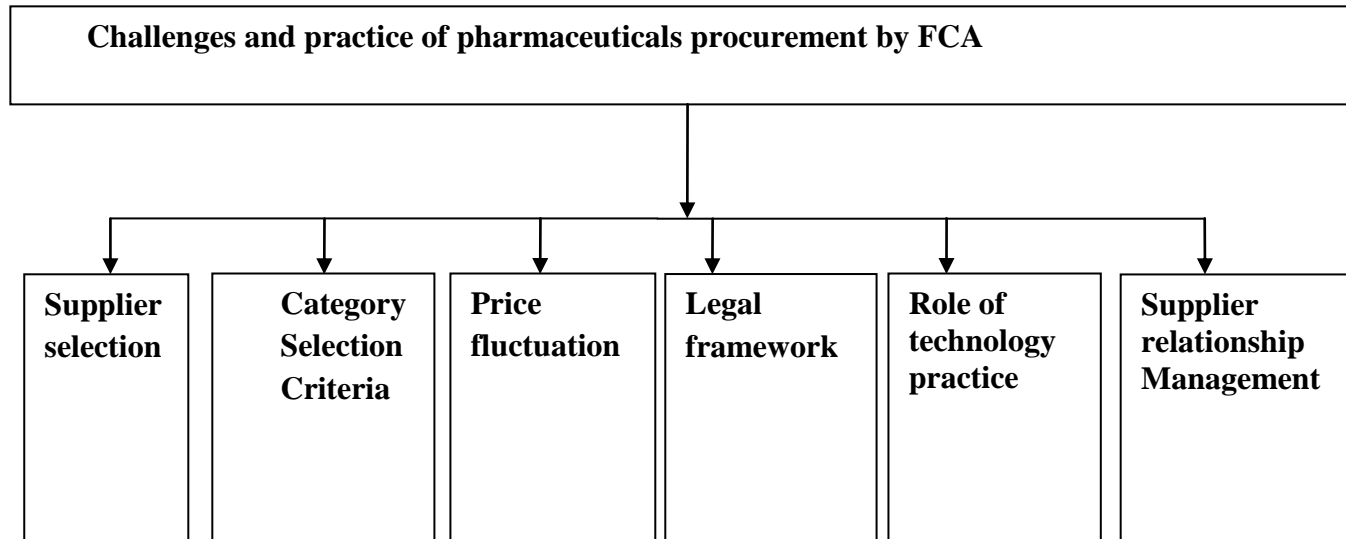


Figure 2: Conceptual Framework

Source: _ adapted from Dessalegn Mirkena, 2021 and modified by the researcher.

Chapter three

Research Methodology

Research desires to answer both open-ended and closed-ended questions through scientific methods. Researches are done to explore and reveal the hidden realities which are unknown for Research workers. This chapter is devoted to describing the research methodology used to carry out the research. This is going to be an extensive discussion of the research design and the identification of different variables.

Moreover, this chapter also characterizes the definition of types of data and its sources employed in the study. It also outlines the study population, the sampling technique used and how to calculate sample size. The chapter also provides description of the data collection instruments, indicators of measurements for the variables and methodology of data analysis. The methodological approaches mentioned and collected substantiations must be of sound quality, reason for considering validity and reliability tests that appear outline inside this chapter.

3.1. Description of the Study Area

The Ethiopian Pharmaceuticals Supply Service is a government institution in charge of overseeing the supply chain for public health commodities in Ethiopia that procures different types of medicines, medical equipment, medical supplies, laboratory reagents, and chemicals from national and international manufacturers and suppliers and distributes them to government health facilities. It manages a network of 19 branch warehouses that distribute pharmaceuticals and medical supplies to approximately 3,800 health facilities in nine regional states and two administrative states. This enormous network supports a population of around 105 million people across an area of 1.1 million square kilometers.

It is a legal body formed by the government of the Federal Democratic Republic of Ethiopia (FDRE) to provide an uninterrupted supply of health sector goods to the public at a reasonable price. The headquarter is located on Arbegnoch Street, in front of St. Paul's Hospital, in Addis Ababa's Addis Ketema Sub-City, around 2.8 kilometers west of the Piassa (the center of Addis).

The outbound logistics directorate (warehousing and inventory management unit, distribution and fleet management unit), the inbound logistics directorate (quantification and market-shaping unit, Procurement Management unit, contract management unit), and

the quality management unit are the three major sub-processes of the organization. Human resources management, finance management (RDF & Program), information system management, planning, monitoring, evaluation, and general service are also supported organizational functional units. EPSA confronts significant challenges in improving its pharmaceutical procurement operations. Key difficulties include managing supplier relationships, ensuring compliance with procurement requirements, and overcoming logistical challenges.

EPSS uses framework Contract Agreements (FCAs) as a strategic procurement method to streamline processes, increase cost-effectiveness, and improve pharmaceutical supply timeliness. However, the adoption of FCAs faces a number of problems, including bureaucratic inefficiencies, a lack of supplier compliance, and logistical barriers that frequently impede their efficacy. Addressing these problems is critical for improving the FA's implementation and overall procurement efficiency.

The purpose of the research is to assess the challenge and practice of Framework Contract agreement procurement of pharmaceuticals at the Ethiopian Pharmaceutical Supply Service.

3.2. Research Approach

Both qualitative along with qualitative research were combined together. The main goal of the methodology was to improve understanding of how research questions should be formulated to solve the problems inherent in practice and challenge of pharmaceuticals procurement in EPSS.

A combination of methods was pursued to ensure that the findings would not be biased by the quantitative process, due to the problem to be addressed, the construction of the question that allows the researcher to elicit certain answers.

On the other hand, using qualitative methods can further our understanding of the phenomenon, allowing studies to be more open as well as more exploratory so that it can detect issues that would be influenced by the human behavior.

3.3. Research Design

A well-thought-out research design guides how data are gathered, measured, and analyzed. It includes several important steps: determining the relevant data, selecting measurement and scaling, questionnaire construction, sampling process and sample size; and plan for data analysis. Sustainable construction-associated risks were identified after a critical examination of relevant literature.

There are three main types of research purposes, (explanatory, descriptive and exploratory) often used in research methodologies (Saunders, 2016). Therefore, this study used the descriptive and exploratory research designs. The purpose of descriptive research is to provide an accurate description of a situation, problem, phenomenon, service, or initiative.

Accordingly, the researcher chose this research design to describe the challenge and practice of FCA pharmaceuticals procurement in EPSS.

3.4 Population and Sampling

3.4.1 Target Population

The population of the study will be 100 target population grouped into strata by stratified sampling techniques. These are EPSS employees and supplier. The EPSS population of the study is 700 (all head office employee (EPSS 2015 E.C annual report).

EPSS staff: These are the employees of EPSS who are involved and responsible for FCA procurement, from the EPSS head office that operates in three directorates: the quantification and market shaping directorate, the tender management directorate, the contract management directorate, and the tender endorsing committee to be 85.

Suppliers: These are the local and international companies or organizations that supply pharmaceuticals and related services to EPSS, under the FCA contracts. The total number of suppliers who have FCA contracts with EPSS is estimated to be 15 . So census techniques will be implemented.

3.4.2 Sampling Technique

According to Dubey & Kothari (2022), sampling is the method to obtain information about an entire population by observing only a part of it. The authors also reported that, in most of studies and surveys, the typical strategy is to generalize or infer population attributes from the samples from them.

Initially stratified sampling techniques were employed in this study to select samples from two strata (EPSS, and suppliers) to come up with valid outcomes. The reasons behind selecting these sampling techniques were that the study decides whom to include as a respondent for the questions that was prepared to collect data and get a better chance to select right respondents from each stratum. The researcher also used purposive to select respondents from EPSS, and 15 actual suppliers who have contract award by 2015 are selected by census sampling techniques) to offer the required and relevant information on the quantitative data.

Table 3. 1: Sample size determination

Organization	Population	sample	Sampling technique	Reason
EPSS	700	85	Purposive sampling	To get frontline participant
Suppliers	70	15	census sample	To include all actual suppliers
TOTAL	770	100		

3.5. Sources of Data

The data were collected from both Primary and secondary source.

3.5.1. Primary Source

These are the original and first-hand data that are collected directly from the stakeholders of FCA procurement, such as EPSS staff, suppliers, health facilities, and end-users, using the data collection tools, such as questionnaire survey, semi-structured interview, and direct observation. The primary data sources are used to obtain the quantitative and qualitative data that are needed to answer the research questions of the study.

3.5.2. Secondary Source

These are the existing and second-hand data that are obtained indirectly from the documents and reports that are related to FCA procurement, such as EPSS annual reports, FCA contracts and invoices, FCA procurement guidelines and manuals, and FCA procurement evaluation and audit reports. The secondary data sources are used to supplement and validate the primary data sources, and to provide the background and context for the study.

3.6 Data Collection Procedures

For this study, data were obtained by using both primary and secondary data as the sources of data. Researchers employed two types of research methodologies secondary data to establish research topics, research questions, and new areas to verify by the primary research.

Secondary data is also used to measure how reliable and accurate the source data actually is. For example, other sources of secondary data may come from articles, websites, trade associations, journals, and books. Secondary data are mostly available on the internet but the time also used to gather primary data directly from respondent through survey research method like interview, questionnaires', this is in order to be examined exhaustively and also to avoid data scarcity.

In this study, both quantitative and qualitative data were collected It is based on the research methods like Quantitative surveys are employed when researchers want to know how many of the consumers have a particular characteristic, attitude or behavior for which close ended/multiple choice questions are used. Recall, qualitative surveys involve open-ended interview questions that a respondent answers verbally. This combination informs parallel quantitative and qualitative methodologies to provide both comprehensive and converging findings.

Questionnaires and interviews were used as the data collection instruments. Creating instruments for data collecting that are clear is already hard enough in which we saw that it was virtually impossible to have instruments that extracted the same data in the same way.

The questionnaire was administered to the participants via Google forms; this made it possible for all questions to be answered given how one could not submit without answering all questions. Moreover, in order to make sure the response to each question is filled out correctly (i.e., each rating scale item is rated exactly once for a single item)

The questionnaire is presented in Appendix I.

3.7 Data Analysis

The data analysis methods utilized in this study encompass the techniques and procedures employed to process, organize, and interpret the data collected from various sources through data gathering tools. The study employs quantitative data analysis, utilizing statistical and mathematical tools like Statistical Package for Social Science (SPSS) software version 26 and Excel to analyze numerical data obtained from the questionnaire survey and direct observation. The quantitative data analysis process includes steps such as data cleaning and coding, which involves checking and correcting errors, inconsistencies, and missing values in the data, as well as assigning numerical codes or values to prepare the data for analysis. Additionally, data description and summarization are carried out to present the basic and general features and patterns of the data using descriptive statistics like mean, median, mode, standard deviation, frequency, and percentage, along with graphical representations such as tables, charts, and graphs

3.8 Validity and Reliability of the Study,

The validity and reliability of this study are the measures and indicators of the quality and trustworthiness of the research design and methodology, and the research findings and conclusions, of the study. The validity and reliability of this study are ensured and enhanced by the following strategies and techniques.

3.8.1 Validity

The most crucial requirement in research, according to Kothari (2004), is validity, which demonstrates how well an instrument measures what it proposes to measure. The selection of appropriate measurements is critical for establishing construct validity. In this study, content validity was used to measure the extent to which data obtained from specific instruments reflects the domain of indicators or the content of a particular concept. To ensure content validity, the researcher included all items that measure the study variables in the instruments. The primary data source, a questionnaire, was developed from various literary sources and was reviewed and modified as needed to enhance its content validity.

3.8.2. Reliability

Debey and Kothari, 2022) defined reliability and how it can be measured. The Consistency attribute was comprehensively and relatively consensually defined as the degree to which a measure or scale exhibits stability or dependability. The test result came the same after several attempts to measure the reliability of the measuring instrument. It is also related to accuracy in readings and accountability in results.

The authors use Cronbach's Alpha (α) to assess the reliability of their instrument. Cronbach's Alpha is the average of all possible split half coefficients.

Reliability is the trend toward consistency exhibited in repeated measurements of the same phenomenon. The amount to which all of the items on a scale measure distinct a facet of the same property is referred to as internal consistency. Cronbach's alpha standard ranges from 0 to 1, and with = 0.7 or higher is considered internally consistent or sufficiently reliable data (Alsaffar et al. 2013).

The instrument applied (questionnaires) is derived from related subject matter literatures, (Damtew, 2023), (Mulugeta 2022) and (Taye ,2022) which their paper shows the result is within the standard.

Table 3. 2: Instrumentation

Variable	Sources	Cronbach's Alpha
Price fluctuation	Taye ,2022	0.898
Supplier selection	Mulugeta ,2022	0.843
Item Category selection criteria	Taye ,2022	0.864
Legal framework	Damtew,2023	0.821
Information system practices	Damtew,2023	0.821
supplier relationship management	Mulugeta ,2022	0.843

Source: _Literature review 2024

3.9 Ethical Consideration

The researcher made certain to respect and honor all participants- They were told that taking part was completely up to them and that they would not be disadvantaged in any way if not taking part. The identity of the participants was kept completely confidential. Respondents submitted their completed survey under an identification code and not by name so both the identity of the respondent and provider remained anonymous.

The researcher gave participants enough time to fill out and send back electronically the survey with consideration of their extra activities. All respondents were clearly informed of the purpose, objectives, and research questions of the study and expectations for their participation. All data would be anonymous; no individual/respondent was identified in any reports or any publication based on this study.

Chapter four

Data presentation, Analysis, and Interpretation

The data presentation and analysis, as well as the interpretation of the study's conclusions, are the main topics of this chapter. The aim of this research was to assess the practices and challenges related to framework contract agreements in EPSS's pharmaceutical procurement process.

The descriptively discovered study results are presented, examined, and interpreted using various statistical and judgmental techniques in the subsequent sections of the chapter. With the aid of measurement instruments like percentages, means, and standard deviations, quantitative results are presented and discussed. The results of the quantitative analysis and interpretation of the demographic survey are presented in accordance with the conclusions drawn from the literature review and interview.

4.1. Data Presentation

4.1.1. Questionnaire Response Rate

Study show that 100 questionnaires were distributed to the respondents. As presented in Table 4-1, Out of the total respondents 84 responses were obtained, accounting to 84 % response rate, a response of 70% and above is adequate according to (Fincham, 2008) hence 84 % response rate was satisfactory for data analysis. This response rate was good enough to make a comprehensive and in depth analysis of the research objective.

Table 4.1: Response Rate

Response	Total
No. of questionnaires distributed	100
No. of returned questionnaires	84
Response Rate	84%

Source; Researcher's Survey

4.1.2. Demographic Characteristics of Respondents

By including demographic questions in surveys, researchers can gain additional insight into the backgrounds of their subjects. These questions provide context for the survey data collected, allowing researchers to better define their participants and analyze the data. Gender, age, education level, years of work experience, and role within the organization was evaluated among the survey participants for this study. Table 4.2 below shows the outcome of the demographic data analysis.

Table 4. 2: Demographic data of respondents

Demographic Variable	Variable Category	Frequency	Percentage (%)
Gender	Male	64	76.2
	Female	20	23.8
	Total	84	100.0
Age	Below 30 years	37	44.0
	30-45 Years	45	53.6
	Above 45 Years	2	2.4
	Total	84	100.0
Total years of experience in EPSS	Below 5years	33	39.3
	5-15 years	47	56.0
	Above 15 years	4	4.8
	Total	84	100.0
Educational Qualification	Bachelor's Degree	53	63.1
	Master's Degree	31	36.9
	Total	84	100.0
Profession	Laboratory Technologist	17	20.2
	Pharmacist	46	54.8
	Biomedical engineers	15	17.9
	Other	6	7.1
	Total	84	100.0
Position in the organization	Officer	51	60.7
	Team Leader	24	28.6
	Advisor	8	9.5
	Director	1	1.2
	Total	84	100.0
Department or directorate working at EPSS	Tender management	17	20.2
	Quantification & market shaping	20	23.8
	Contract management	38	45.2
	Other	9	10.7
	Total	84	100.0

Source: SPSS Version 26 Output, 2024

4.1.2.1 Sex Distribution, age and work experience of Respondents

The demographic distribution of research study participants within a particular organization is displayed in the table. A total 84 in the study were having their genders recorded and examined.

Of the participants, 64 individuals (or 76.2% of the total sample) self-identified as male. This suggests that there are more men in the organization that is being investigated. In contrast, twenty people, or 23.8% of the sample, identified as female. As a result, women make up a smaller share of participants overall.

Comprehending the gender distribution in an organization is essential for a number of research endeavors, especially when examining workplace dynamics, organizational behavior, or gender-specific concerns. These results imply that in equalities between genders is evident, as there is a greater representation of men than women.

Of the 84 participants in total, 44.0% were under 30, 53.6% were between the ages of 30 and 45, and 2.4% were over 45. The above table displays the responses of the respondents corresponding with their age. The results show that the participants' ages varied widely, with most of them falling into the 30- to 45-year-old age range. It is necessary to understand the age distribution of the participants in order to investigate the ways in which varying age groups view and interact with pharmaceutical procurement framework contract agreements.

The respondents were also asked about their total years of experience 33 people, or 39.3% of the participants, had less than five years of EPSS experience. This implies that a sizeable fraction of the sample was made up of people who were not very experienced in the field. In addition, 47 individuals (56.0%) reported having five to fifteen years of EPSS experience. The fact that this category makes up the largest percentage of the sample suggests that a sizable portion of participants had enough EPSS experience. On the other hand, only 4 people (4.8%) stated that they had more than 15 years of EPSS experience. Given that this group makes up a smaller percentage of the sample, this indicates that the company has sufficient experienced staff members for the procurement process.

4.1.2.2 Level of Education of Respondents, Profession, the department in the organization and their Role in the Organization

The study also requested the respondents to indicate their highest level of education and from the findings it was recognized 53 (63.1%) had completed a bachelor's degree as their highest level of education from a total of 84 participants . This suggests that most study participants had finished their undergraduate degrees. , 31 individuals (36.9%) held a Master's degree, indicating a significant proportion of participants who had pursued higher education beyond the undergraduate level.

In terms of professions, 17 individuals (20.2%) identified as Laboratory Technologists, suggesting a minority representation of professionals in the field of laboratory technology. The largest proportion of participants, 46 individuals (54.8%), identified as Pharmacists, indicating a substantial number of participants engaged in the pharmaceutical field. Additionally, 15 participants (17.9%) identified as Biomedical Engineers, representing a notable presence of professionals with expertise in biomedical engineering. These findings provide insights into the educational qualifications and professional backgrounds of the participants. Lastly, 6 individuals (7.1%) were categorized as "Other," implying that a small portion of the sample comprised professionals from various other professions not specifically mentioned in the table.

Understanding the distribution of professions within a research study is important for obtaining insights into the expertise and background of the participants. It allows researchers to consider the specific perspectives and knowledge that participants from different professional backgrounds bring to the study.

Out of the individuals who took part in the research study, the majority, 51 individuals (60.7%), held the position of Officers, indicating that they were primarily in operational or entry-level roles within the company. Additionally, 24 participants (28.6%) were identified as Team Leaders, signifying a significant proportion of participants in managerial or supervisory positions with the responsibility of guiding a team or department. Furthermore, 8 individuals (9.5%) were classified as Advisors, representing a smaller percentage of the sample involved in providing professional counsel or guidance within the organization. These findings highlight the distribution of positions within the company and provide insights into the organizational hierarchy and responsibilities of the participants in the study.

Of the participants in the research study, a significant portion of 38 individuals (45.2%) were employed in the Contract Management department, 17 individuals (20.2%) were employed in the Contract Management department. These departments play a crucial role in ensuring the smooth execution of procurement activities within the organization. Furthermore, 20 participants (23.8%) were employed in the Quantification and Market Shaping department.

4.2 Data Analysis and Interpretation

After the questionnaires were returned, the collected data was checked for mistakes, omissions, and invalid inputs. After that, the data was cleaned up, consistently entered, and organized to facilitate tabulation and coding. In order to classify the questionnaire into a limited number of categories or classes, it was then coded or labeled into constructs using numbers and letters. In order to facilitate additional analysis and present the data in an understandable manner, the raw data was finally reduced (i.e., in the form of statistical tables). The outcome of the three data editing steps, which involved weighing the frequency, minimum and maximum values, and range of variables, is displayed in Annex 4.

It is generally accepted that studying problems are better understood when quantitative and qualitative methodologies are used in tandem rather than separately. A hybrid methodology called methodology triangulation seeks to close any gaps and strengthen any weak areas between the qualitative and quantitative research. The use of a range of methodologies demonstrates an attempt to understand and investigate the phenomenon in order to increase the methodological approaches' breadth, depth, and coherence. The following is a triangulated interpretation of the findings in accordance with the research questions, along with a descriptive analysis.

4.2.1 Descriptive Analysis of Variables

The mean and standard deviation of the various study variables are displayed through descriptive analysis. In order to help visualize the highest and lowest values a variable can reach, it also displays the variables' maximum and minimum values as well.

The average and standard deviation of respondents' perceptions and levels of agreement are displayed in the tables below. The variables for the general expectations from the assessment of the practices and challenges of pharmaceuticals framework contract agreement procurement: the case of Ethiopian pharmaceutical supply services is the subject

of the study are represented by the higher and lower mean scores, respectively. Additionally, the respondents' attention to the general expectations from the assessment of the practices and challenges of pharmaceuticals framework contract agreement procurement: the case of Ethiopian pharmaceutical supply services is indicated by the least and highest standard deviations.

4.2.1.1 Descriptive Analysis of challenge on Price fluctuation

Table 4. 3: Challenge of price fluctuation

	N	Mean	Std. Deviation
Price fluctuation is a challenge for the implementation of Framework Contract Agreement (FCA) during the contract period	84	4.1429	.69669
Lack of price index for pharmaceuticals has negatively affect FCA of pharmaceuticals procurement	84	4.3571	.50641
Suppliers are questioning for price amendment during the FCA period	84	3.8095	.76798
Fixed price contract agreement has positive effect on FCA	84	3.3214	1.09941
Grand Mean and Std Deviation of Price Fluctuation		3.91	0.7676

Source: SPSS Version 26 Output, 2024

As table 4.3 presented above show, Price fluctuation is measured by four aspects. With a standard deviation of 0.7676 and a grand mean of 3.91 for price variation across the identified dimensions, it is clear how difficult it is to control price dynamics within FCA frameworks. A significant issue is the lack of a pharmaceutical price index, which is indicated by a high mean score of 4.3571 and a comparatively low standard deviation of 0.50641. These data highlight the negative effects on FCA procurement practices and highlight the urgent need for intervention. A mean score of 3.8095 and a standard deviation of 0.76798 also demonstrate suppliers' tendency to challenge price adjustments during the FCA period, highlighting the need for strong communication and negotiation techniques to maintain contract integrity.

A more varied perspective is demonstrated by the fixed price contract agreements' ability to positively influence FCA practices, as evidenced by their mean score of 3.3214 and higher standard deviation of 1.09941.

In addition, responses on main challenge of FCA through interviews was Price volatility can make it challenging to stay within financial constraints and plan for upcoming expenses, which calls for forecasting and dynamic budget adjustments and also price fluctuation and fixed price contract is considered as the main challenge of FCA.

4.2.1.2 Descriptive Analysis of Supplier selection practice

Table 4. 4: Supplier selection practice

	N	Mean	Std. Deviation
Regular supplier's performance evaluation is conducted	84	3.1071	1.01812
Appropriate suppliers' selection is implemented	84	3.4762	.81368
Past performance is considered while selecting suppliers' in Framework agreement	84	3.1667	.91616
Transparent and competitive suppliers' selection is applied	84	3.7857	.62230
Geographical location is considered during evaluation of suppliers in framework agreement.	84	2.8214	.92046
Grand mean of supplier selection practice		3.21	0.8581

Source: SPSS Version 26 Output, 2024

As table 4.4 presented above show, an analysis of supplier selection practices within the framework agreement (FCA) is measured by four aspects, comprising various criteria such as regular supplier performance evaluation, appropriate supplier selection, consideration of past performance, transparent and competitive supplier selection, and evaluation based on geographical location. The grand mean of supplier selection practice across these dimensions is calculated at 3.21, with a standard deviation of 0.8581, indicating the overall assessment of supplier selection practices within the FCA context. The highest mean score is observed for transparent and competitive supplier selection, with a mean of 3.7857, suggesting a strong adherence to principles of transparency and competitiveness in supplier

selection processes. Conversely, the lowest mean score pertains to the consideration of geographical location during supplier evaluation in the framework agreement, with a mean of 2.8214, indicating a comparatively lesser emphasis on geographical factors in supplier selection decisions.

In addition, responses on supplier selection of FCA through interviews was to evaluating suppliers based on their historical performance, which provides valuable insights into their reliability, quality, and overall suitability for pharmaceutical FCA procurement.

4.2.1.3 Descriptive Analysis of Legal Framework practice

Table 4. 5: Legal Framework Practice

	N	Mean	Std. Deviation
General terms and conditions of framework agreements positively affects the reliability to deliver goods as per the order placed	84	3.7619	.84481
Public Procurement and Disposal Act (PPAD) is not considering the special product and market behavior of pharmaceuticals	84	3.1310	.90220
Payment terms and conditions positively affects the reliability to deliver goods as per the order placed	84	4.0238	.63958
Payment terms and conditions positively affects the responsiveness/speed to deliver goods as per the order	84	3.8929	.60156
The directive has clearly stated the share of procured quantity in the case of awarding multiple suppliers for a single item	84	3.7143	.75365
Grand mean and Std deviation of Legal Framework		3.70	0.7484

Source: SPSS Version 26 Output, 2024

As stated on table: 4.5 above, the grand mean of 3.70 indicates an overall positive perception of how the legal framework impacts pharmaceutical FCA procurement. This suggests that, on average, respondents view the legal framework favorably in terms of its influence on

procurement processes and outcomes. The grand standard deviation of 0.7484 indicates moderate variability in responses, reflecting differing opinions among participants regarding specific aspects of the legal framework. The highest mean score of 4.0238 is attributed to payment terms and conditions positively affecting the reliability to deliver goods as per the order placed. This indicates strong agreement among respondents that favorable payment terms enhance the reliability of procurement processes. The relatively low standard deviation of 0.63958 suggests a high level of consensus among respondents regarding the reliability aspect of payment terms.

Conversely, the lowest mean score of 3.1310 pertains to the Public Procurement and Disposal Act (PPAD) not adequately considering the special product and market behavior of pharmaceuticals. This suggests a more neutral to slightly negative perception among respondents regarding how well the PPAD aligns with the unique needs of the pharmaceutical industry. The higher standard deviation of 0.90220 indicates greater variability in opinions on this aspect, highlighting divergent views among participants.

Table 4. 6: Information Technology Practice

	N	Mean	Std. Deviation
Through information systems, both suppliers and firm can share product or service (e.g. specification, design, quality, etc.) related information	84	3.4881	.84303
My interaction with the VITAS system is clear and understandable	84	3.7976	.87509
The VITAS computer systems I use are convenient and Easy to use.	84	3.7619	.88657
Using the VITAS system increases my productivity	84	3.9048	.77021
Using the VITAS system enhances my effectiveness on the job.	84	3.8929	.69452
Grand Mean and Std deviation of Information Technology Practice		3.77	0.8138

Source: SPSS Version 26 Output, 2024

As table 4.6 above shows, the grand mean of 3.77 and standard deviation 0.8138 suggests an overall positive perception of the VITAS system and its integration into daily operations. On average, respondents view the system favorably in terms of usability, productivity enhancement, and job effectiveness. The highest mean score of 3.9048 indicates strong agreement among respondents that using the VITAS system increases productivity. This suggests that users perceive the system as effective in streamlining tasks and improving workflow efficiency. The standard deviation of 0.77021 suggests a relatively consistent opinion among respondents regarding the productivity benefits of the VITAS system. Conversely, the lowest mean score of 3.4881 pertains to the ability of information systems to facilitate sharing of product or service-related information between suppliers and the firm. This indicates a slightly less positive perception among respondents regarding the effectiveness of current information systems in promoting collaborative information sharing. The standard deviation of 0.84303 suggests variability in opinions, with some respondents possibly experiencing challenges or limitations in this area.

Table 4. 7: Supplier relationship Management

	N	Mean	Std. Deviation
Quick response to suppliers' request is implemented at EPSS	84	3.3571	.95240
Appropriate response to suppliers' request is implemented at EPSS	84	3.6905	.77578
Suppliers' complaints are responded appropriately in Framework agreement at EPSS	84	3.6310	.75697
Suppliers' complaints are responded timely in Framework agreement at EPSS	84	3.7024	.65454
Feedback from supplier is gathered and an improvement action is implemented during FWA period	84	3.1786	.94628
Grand Mean of Supplier relationship Management		3.51	0.8172

Source: SPSS Version 26 Output, 2024

As table: 4. 7 above shows, the grand mean of 3.51 indicates a generally positive perception of how EPSS handles interactions with suppliers. The highest mean scores highlight strengths in implementing appropriate responses to suppliers' requests (mean = 3.6905) and responding timely to suppliers' complaints within framework agreements (mean = 3.7024). These findings suggest that EPSS generally performs well in addressing immediate supplier needs and managing complaints effectively. However, areas such as gathering feedback from suppliers and implementing improvement actions during framework agreement periods (mean = 3.1786) indicate room for enhancement. Addressing these aspects could further strengthen supplier relationships and operational efficiencies at EPSS, ensuring consistent and proactive engagement with suppliers to support organizational goals and procurement objectives.

In addition, responses on supplier relationship management of FCA through interviews Maintaining effective communication and coordination with suppliers under FCA terms can be challenging due to the decentralized nature of responsibilities and logistics. Ensuring clear and timely communication regarding order specifications, delivery schedules, and compliance requirements is crucial but can be hindered by geographical distances and differing operational priorities

Table 4. 8: Item Categorization

	N	Mean	Std. Deviation
There is a criteria to categorize pharmaceuticals to procure by FCA method	84	3.00	.79116
All pharmaceuticals shall be procured by FCA	84	2.00	.98759
All items are imported at equal speed	84	2.00	.87582
Items procured by FCA are categorized based on the budgetary	84	3.00	.79685
Grand Mean of Item Categorization		2.50	0.8629

Source: SPSS Version 26 Output, 202

As table: 4.8 above shows, the grand mean of 2.50 indicates a moderate overall perception regarding how items are categorized for FCA procurement. This suggests that, on average, there is acknowledgment of efforts to categorize items, but also room for improvement in consistency and effectiveness. The grand standard deviation of 0.8629 reveals variability in respondents' opinions, indicating differing perspectives on the efficacy and uniformity of categorization practices.

The mean score of 3.00, with a standard deviation of 0.79116, indicates a moderate consensus that criteria exist for categorizing pharmaceuticals for FCA procurement. This implies a structured approach in place for pharmaceutical categorization, potentially aiding in strategic alignment with procurement goals. Conversely, the lowest mean score of 2.00, with a higher standard deviation of 0.98759, suggests less agreement that all pharmaceuticals should be procured through FCA.

In addition, a response on challenge of FCA through interviews identified is the categorization of items for FCA purchases. This inconsistency has led to instances where pharmaceuticals procured under FCA do not meet expected quantities due to not being ordered in bulk. This discrepancy has resulted in a loss of trust between suppliers and

purchasers. The situation is further compounded when call-off orders are not communicated promptly to suppliers, exacerbating the challenge and adversely affecting supplier relations.

Table 4.9: Contract agreement Management

	N	Mean	Std. Deviation
Supplier evaluation is periodically undertaken to ensure quality of the Health commodity goods	84	3.4643	.98722
Corrective actions are implemented when discrepancies are identified in the contract processes.	84	3.9167	.69782
Payment for supplier paid timely	84	2.7619	1.00143
EPSS has successfully utilized contract audits to identify both areas of weakness and strength within various contracts	84	2.8214	1.07726
Grand Mean of Contract Management		3.24	0.9409

Source: SPSS Version 26 Output, 2024

As table 4.9 above, the grand mean of 3.24 indicates a moderate perception of contract management effectiveness. Supplier evaluation (mean = 3.4643) and corrective actions for contract discrepancies (mean = 3.9167) are viewed more positively, suggesting robust practices in ensuring quality and addressing issues promptly. However, payment timeliness (mean = 2.7619) and utilization of contract audits (mean = 2.8214) score lower, indicating areas needing improvement.

The higher standard deviations across these measures (ranging from 0.69782 to 1.07726) reflect varied opinions among respondents, highlighting the need for consistency and improvement in contract management practices.

In addition, responses on contract agreement management of FCA through interviews was the complexity of managing agreements with multiple suppliers, including ensuring consistent adherence to terms, balancing flexibility with stability, monitoring supplier performance, providing equitable opportunities for all suppliers, navigating legal and regulatory compliance, and fostering continuous improvement.

Discussion of Results

The goal of this study was to evaluate the difficulties and procedures relating to FCA pharmaceutical procurement at the Ethiopian Pharmaceuticals Supply Service (EPSS), as were previously mentioned. Chapter one presents a methodical breakdown of this overarching goal into particular study topics. A summary based on information acquired from various sources is presented in this section.

According to Taye (2022), price fluctuation affects the FA negatively during contact period and unstable supply as the result of increasing material and energy cost, which causes suppliers questioning for additional price than awarding price. In lined with this idea a standard deviation of 0.7676 and a grand mean of 3.91 imply that, price variation across the identified dimensions.it is difficult to control price dynamics within FCA period.

According to Kumella (2016) Increase variety of common user items as it increases gains from framework agreement. In lined with this idea grand mean of 2.50 indicates that not all pharmaceuticals should be procured through FCA.

According to Mulugeta (2022) the win-win supplier and vendor relationships in the long run to have effective FWA procurement. In lined with this idea the grand mean of 3.5 indicates that gathering feedback from suppliers and implementing improvement actions during framework agreement periods indicate room for enhancement.

According to Taye (2022) correct supplier selection criteria when working with numerous suppliers by establishing requirements such as financial capability, historical performance, and availability of high-quality goods. In lined with this idea the grand mean of 3.5 indicates that a strong adherence to principles of transparency and competitiveness in supplier selection processes.

According to Tadesse (2014), special concern should be given to contract management because it is a crucial component of procurement, addressing fundamental issues raised by both public bodies and suppliers. In line with this idea, the grand mean of 3.24 indicates a moderate perception of contract management effectiveness.

According to Tariku (2017) ICT infrastructures minimize paperwork, delay and very long transaction processes and to increase effectiveness and to communicate easily with public bodies and suppliers in the framework agreement. In line with this idea the grand mean of 3.77 indicates ICT system favorably in terms of usability, productivity enhancement, and job effectiveness.

According to Damtew (2023) identifies specific regulatory policies as detrimental to organizational performance. Despite this caution, the grand mean score of 3.77 indicates a positive perception of the legal framework's overall impact on procurement processes and outcomes.

Chapter five

Summary of Key findings, Conclusion and Recommendation

This chapter offers a thorough summary of the study's findings, conclusions, and suggestions with the goal of improving the difficulties and procedures related to framework agreement procurement in EPSS. In keeping with the goals of the study, this chapter provides guidance on how to make procurement procedures within the EPSS framework better. The chapter also makes suggestions for possible directions for future studies in order to deepen our understanding of framework agreement procurement practices in EPSS.

5.1. Summary of Major findings

According to the respondents' demographics, men made up the majority of the sample (76.2%), with women making up the remaining 23.8%. In addition, every respondent who took part in the study survey came from one of the three departments that actively participate in procurement: suppliers, tender management, contract management and quantification and market shaping. Suppliers were also incorporated into the study. The majority of respondents, in terms of their degree level, had at least a first degree, which suggests that the company employs a highly educated workforce with superior subject-matter knowledge. In conclusion, regarding the respondents' work experience, they were sufficiently exposed to the field and had the ability to make a contribution, were sufficiently exposed to the workplace, and had the potential to transform the company, all of which contributed to the research's overall validity and quality.

The first research question that was analyzed is the major challenges of framework agreement implementation in the pharmaceutical procurement in EPSS. The finding shows that with a high mean score of 3.91 and a standard deviation of 0.7676, the results demonstrate that price fluctuation is a critical challenge and highlight the difficulty of controlling price dynamics. A mean score of 4.3571 and a low standard deviation of 0.50641 highlight how this problem is made worse by the lack of a pharmaceutical price index and highlight the urgent need for intervention to stabilize procurement practices. In order to preserve contract integrity, suppliers' resistance to price adjustments during FCA periods (mean = 3.8095, standard deviation = 0.76798) highlights the need for effective communication and negotiation techniques. On the other hand, despite differing viewpoints, fixed price contract agreements appear to have potential for favorably impacting FCA practices (mean = 3.3214, standard deviation = 1.09941).

The other challenge of FCA is Item Categorization. The grand mean of 2.50 indicates a moderate overall perception regarding how items are categorized for FCA procurement. This suggests that, on average, there is acknowledgment of efforts to categorize items, but also room for improvement in consistency and effectiveness. The grand standard deviation of 0.8629 reveals variability in respondents' opinions, indicating differing perspectives on the efficacy and uniformity of categorization practices

The second research question that was analyzed is the supplier selection, contract negotiation, and contract management practice. With a standard deviation of 0.8581 and a moderate grand mean score of 3.21, supplier selection procedures in FCA contexts are evaluated in a mixed manner. The highest mean score of 3.7857 indicates that supplier selection processes that are competitive and transparent are preferred, highlighting the importance of fairness and transparency. On the other hand, as a result of differing stakeholder opinions, geographical considerations are given less weight in supplier evaluations (mean = 2.8214).

Contract management at EPSS shows strengths in supplier evaluation and corrective actions (means of 3.4643 and 3.9167, respectively) but reveals gaps in payment timeliness and contract audit utilization (means of 2.7619 and 2.8214, respectively), suggesting areas needing improvement to enhance consistency and effectiveness

Supplier relationship management under FCA is perceived as moderately challenging due to decentralized responsibilities and logistical complexities. The categorization of items for FCA procurement also presents a mixed outlook (grand mean = 2.50, standard deviation = 0.8629), with efforts to categorize pharmaceuticals receiving moderate consensus (mean = 3.00) but variability in agreeing on universal FCA suitability

The third question that was analyzed is the practice of FCA in EPSS. The VITAS system integration garners a generally positive reception (grand mean = 3.77, standard deviation = 0.8138), particularly in enhancing productivity (mean = 3.9048) despite challenges in information sharing (mean = 3.4881), reflecting varied experiences and perceptions among users.

There was a grand mean of (3.70, SD = 0.7484), representing an overall positive attitude toward the influence of the legal framework on pharmaceutical FCA procurement. Payment terms (Mean = 4.0238) was recommended for improving the reliability of the supply while challenges with the PPAD not accommodating the behaviors of the pharmaceutical market (Mean = 3.1310) illustrate areas for improvement, since it was perceived differently (SD = 0.90220).

Together, the results, abstracted from various domains, reaffirm the multi-faceted nature of managing FCA procurement practices, and the strategic need to frame legal, technical and operational strategies in accordance to this complexity and variation, to enhance compliance and successful intervention.

5.2. Conclusion

In conclusion, the application of FAs to pharmaceutical procurement at EPSS demonstrated diverse challenges on different implementation aspects from the case analysis. Price fluctuation appears as a major bottleneck, which emphasizes the difficulty of FCA frameworks in managing dynamic pricing (especially due to the lack of a pharmaceutical price index). This is a problem in need of immediate attention to stabilize procurement systems and improve the predictability of funding. Having said this, problems with the item category highlight the requirement for greater cohesion in the way goods are procured (more consistent, more effective).

Concerning supplier Selection and contract management practice, we found a mix of good practices and areas for improvement. Although transparent, competitive supplier selection methods are preferred, the geographical factors in supplier evaluation indicate different stakeholder views. However, deficiencies in payment timeliness and utilization of contract audits indicate that the DRM exercise has failed in EPSS and suggest that increased operational control is a must.

Supplier relationship management under FCA, graded as moderately challenging, as many note decentralized responsibilities and logistical challenges requiring clear communication and coordination. Although information sharing is a common challenge, the successful inclusion of the VITAS system has promise for increasing productivity while highlighting the need for further system modification and optimization to expand user acceptability.

The response to the general legal framework on pharmaceutical FCA procurement is mostly positive; it was applied well to increase reliability via decent payment terms. However, Challenges with the Public Procurement and Disposal Act reveal opportunities to align procurement with market behaviors if procurement objectives are better realized.

In summary, the analysis serves as a case in point, highlighting the complexities of FCA procurement practices at EPSS and shedding light on the need for broader strategic interventions spanning legal, technological, and operational spheres for enhanced efficacy in FCA supply and utilization. Continued focus on the basics by enhancing transparency, removing perceived inconsistency, and increasing stakeholder engagement to deliver sustainable results that align with organizational objectives.

5.3. Recommendations of the study

The recommendations of the researcher based on the results of the study of the implementation of a framework agreement in pharmaceutical procurement at EPSS are:

Develop a Pharmaceutical Price Index: Create a credible pharmaceutical price index to reduce the effects of price volatility and improve financial predictability in procurement.

Enhance Item Categorization—Establish mechanisms for enhancing the consistency and efficiency of categorizing items for procurement by FCA and ensuring that this categorization is aligned with strategic procurement objectives; ·

Strengthen Supplier Selection Criteria: Strengthen transparency and competitiveness and consider geographical factors for supplier selection to reflect more accurately the views of the stakeholders and achieve fairness in this aspect.

Improve Contract Management Practices: Address issues related to prompt payments and the use of contract audits in order to reduce operational risk within Head Start and increase consistency in program operations.

Enhance Supplier Relationship Management: Develop and communicate simplified procedures to drive alignment and collaboration in the face of decentralized responsibilities and logistics challenges, fostering better supplier relationship management FCA-wide.

Refine VITAS System Integration: Enhance productivity and the ability to share information through the continuing optimization of the VITAS system, which will improve user experience and operational efficiency.

Align Legal Framework with Market need: Advocate for changes to the Public Procurement and Disposal Act for pharmaceuticals that are more closely aligned with market behaviors and enable procurement best practices.

Focus on Transparency and Stress on Stakeholder Engagement: Experts stress the need to keep the processes transparent while actively engaging with stakeholders to build trust and assure alignment with the goals of the organization.

The findings yielded insights into areas of vulnerability in the current EPSS framework agreement implementation as well as the inherent strengths in the compliance performance of the model, which aim to improve the effectiveness and sustainability of the procurement processes employed by the pharmaceutical sector.

5.4. Areas for Future Study

To improve the effectiveness and reliability of the procurement process, future research on the practice and challenges of procurement of pharmaceuticals likely would need to focus on several key areas at the Ethiopian Pharmaceuticals Supply Service (EPSS). An investigation could then look at how these regulatory frameworks and policy implementations impact upon procurement practices and how these in turn influence the both the availability and quality of pharmaceuticals. Moreover, future studies should investigate the incorporation of sophisticated supply chain technologies and their ability to decrease time and stock out-related procurement problems. Understanding stakeholder engagement, specifically collaboration among EPSS and healthcare providers, may offer benefit in improving coordination and communication.

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Dear respondent,

I am Muluemebet Tesfaye, carrying out academic research under the title entitled “Assessment of Challenges and Practice of Framework Contract Agreement in Procurement of Pharmaceuticals: the case of Ethiopian Pharmaceutical Supply Service”. is the study is designed as part of the requirements for partial fulfillment of Masters in Logistics and Supply Chain Management at Addis Ababa University, School of Commerce. The purpose of this questionnaire is to gather data for the proposed study, and hence you are kindly requested to assist the successful completion of the study by providing the necessary information. Your participation is entirely voluntary, and the questionnaire is completely anonymous. The information you share will remain confidential and only used for the aforementioned academic purpose, thus not affects you in any way. So, your genuine, frank and timely response is vital for the success of the study. I want to thank you in advance for your kind cooperation and dedication of your precious time to fill this questionnaire.

Thank you for your cooperation in advance!

Muluembet Tesfaye

Addis Ababa University

Instruction to participants Put Tick (√) as appropriate

Section I. Demographic Information

1) Sex:

- a) Male []
- b) Female []

2) Indicate your age as below:-

- a) Less than 30 years []
- b) In between 30-45 years []
- c) Above 45 years []

3) Total years of experience in EPSS

- a) Below 5 years []
- b) From 5 -15 years []
- c) Above 15 years []

4) Educational Qualification

- a) College Diploma []
- b) First degree []
- c) Master degree []
- d) Above Master degree []
- e) Other, specify _____

5) Profession (qualification).

- a) Pharmacist []
- b) Biomedical engineers []
- c) Laboratory Technician []
- d) Other, specify _____

6) What is your position in the organization?

- a) Director []
- b) Team Leader []
- c) Officer []
- d) Advisor []

7) Department or directorate working at EPSS

- a) QMSD []
- b) TMD []
- c) CMD []
- d) Others []

Part II: Framework Contract agreement Practice and Challenge Assessment

This section of the questionnaire is designed to obtain information about your level of agreement with the assessment of health commodities Procurement management practice.

Please indicate ✓ to what extent you agree on the following statements under each category using **Five-point Likert scale** as given below.

A. Price fluctuation						
No.	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	1	2	3	4	5
PF1	Price fluctuation is a challenge for the implementation of FCA during the contract period					
PF 2	Lack of price index for pharmaceuticals has negatively affect FCA of pharmaceuticals procurement					
PF 3	Suppliers are questioning for price amendment during the FCA period					
PF 4	Fixed price contract agreement has positive effect on FCA					
B. Supplier selection practice						
No.	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	1	2	3	4	5
SS1	Regular supplier's performance evaluation and measurement is conducted					
SS 2	Appropriate suppliers' evaluation and selection is implemented					
SS3	Past performance is considered while selecting suppliers' in Framework agreement					
SS4	Transparent and competitive suppliers' selection is applied					
SS5	Geographical location is considered during evaluation of suppliers in framework agreement.					
C. Legal Frame work practice						
No.	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	1	2	3	4	5
LF1	General terms and conditions of framework agreements positively affects the reliability to deliver goods as per the order placed					

LF2	Public Procurement and Disposal Act (PPAD) is not considering the special product and market behavior of pharmaceuticals					
LF3	Payment terms and conditions positively affects the reliability to deliver goods as per the order placed					
LF4	Payment terms and conditions positively affects the responsiveness/speed to deliver goods as per the order					
LF5	The directive has clearly stated the share of procured quantity in the case of awarding multiple suppliers for a single item?					
D. Information Technology Practice						
No.	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	1	2	3	4	5
IT1	Through information systems, both suppliers and firm can share product or service (e.g. specification, design, quality, etc.) related information.					
IT2	My interaction with the VITAS system is clear and understandable.					
IT3	The VITAS computer systems I use are convenient and Easy to use.					
IT4	Using the VITAS system increases my productivity.					
IT5	Using the VITAS system enhances my effectiveness on the job.					
E. Supplier Relationship Management						
No.	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	1	2	3	4	5
SRM1	Quick response to suppliers' request is implemented at EPSS					
SRM2	Appropriate response to suppliers' request is implemented at EPSS					
SRM3	Suppliers' complaints are responded appropriately in Framework agreement at EPSS					
SRM4	Suppliers' complaints are responded timely in Framework agreement at EPSS					

SRM 5	Feedback from supplier is gathered and an improvement action is implemented during FWA period					
F. Item Category Selection						
No.	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	1	2	3	4	5
IC1	There is a criteria to categorize pharmaceuticals to procure by FCA method					
IC 2	All pharmaceuticals shall be procured by FCA					
IC 3	All items are imported at equal speed					
IC 4	Items procured by FCA are categorized based on the budgetary					
Part III: Contract agreement Management						
No.	1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	1	2	3	4	5
CM1	Supplier evaluation is periodically undertaken to ensure quality of the Health commodity goods					
CM 2	Reviews of the contract management system are done at regular intervals.					
CM 3	Payment for supplier paid timely.					
CM 4	EPSS has successfully utilized contract audits to identify both areas of weakness and strength within various contracts					



Appendix II Interview Questionnaires

Dear Interviewee,

The purpose of this interview is to gather data for my thesis on the Assessment of Practices and Challenges in Pharmaceutical Framework Contract Agreement Procurement: The Case of Ethiopian Pharmaceutical Supply Services in Addis Ababa. Your input is crucial for the quality of this research. Please be assured that the information you provide will be used solely for this thesis. I kindly request your genuine and honest responses during the interview process. Your answers will remain anonymous throughout the research report.

1. How do FCA differ from conventional contract agreement?
2. What are the key challenges of implementing FCA?
3. What is your view of FCA's contract management practice?
4. What is your view on supplier selection take place in FCA?
5. What is your view on Supplier relationship Management in FCA?

Thank you for your cooperation