

**ST. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**



**ASSESSMENT OF PROCUREMENT PERFORMANCE OF A  
FACTORY: THE CASE OF ADDIS PHARMACEUTICAL FACTORY S.C**

**BY: TEFAY HAILU TEFAY**

**ADVISOR: MOHAMMED MOHAMMEDNUR (Ass. Prof)**

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Addis Ababa, Ethiopia

## **School of Graduate Students**

**Assessment of Procurement Performance of a Factory: The case of Addis  
Pharmaceutical Factory S.C**

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University as Partial Fulfillment of the Requirements for the Degree of Master  
of Business Administration**

**By: Tesfay Hailu Tesfay ((ID. NO. SGS/0068/2006)**

**Advisor: Mohammed MohammedNur (Ass. Prof)**

**St. Mary's University School of Graduate Students**

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**By: Tesfay Hailu**

PPROVED BY BOARD OF EXAMINERS

\_\_\_\_\_  
Dean, Graduate Studies

\_\_\_\_\_  
Signature & Date

\_\_\_\_\_  
Advisor

\_\_\_\_\_  
Signature & Date

\_\_\_\_\_  
Internal Examiner

\_\_\_\_\_  
Signature & Date

\_\_\_\_\_  
External Examiner

\_\_\_\_\_  
Signature & Date

## Declaration

I, the under signed, declare that this thesis entitled ‘Assessment of Procurement Performance of a Factory: The case of Addis Pharmaceutical Factory S.C’ is my original work and prepared under the guidance of Asst. Professor Mohammed Mohammednur. All the sources of material used for this thesis have been duly acknowledged. I further confirm that this thesis has not been submitted to any other higher learning institutions for the purpose of awarding any degree.

Declared by: -

Name: Tesfay Hailu

Signature:



Date: 18<sup>th</sup> June, 2020

Place of Submission: Saint Mary’s University School of Graduate studies, Addis Ababa, Ethiopia

## **Endorsement**

This thesis entitled ‘Assessment of Procurement Performance of a Factory: The case of Addis Pharmaceutical Factory S.C’ has been submitted to St. Mary’s University, School of Graduate Studies for examination with my approval of a University advisor.

Mohammed Mohammednur (Ass. Professor)

Advisor

\_\_\_\_\_  
Signature & Date

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## **List of Acronyms**

AACCSA:	Addis Ababa Chamber of Commerce and Sectorial Association
APF:	Addis Pharmaceutical Factory S.C
EFDA:	Ethiopian Food and Drug Authority
EPHARM:	Ethiopian Pharmaceutical Manufacturing Sh.co
EPA:	Ethiopian Pharmacist Association
EFFORT:	Endowment Fund for the Rehabilitation of Tigray
GTP:	Growth and Transformation Plan of Ethiopia
GDP:	Gross Domestic Product
GTDP:	Good Trade and Distribution Practices for Pharmaceutical Starting Materials
ICT:	Information Communication Technology
IPS:	International Project Service
MOH:	Ministry of Health, Ethiopia
MOI:	Ministry of Industry, Ethiopia
NGO:	Non-Governmental Organizations
NBE:	National Bank of Ethiopia
PSA:	Pharmaceutical Supply Agency
PO:	Purchase Order
SD:	Standard Deviation
S.C:	Share Company
USAID:	United State Agency for International Development
WHO:	World Health Organization

## **Abstract**

*The main purpose of the study was to assess the procurement performance at Addis Pharmaceutical Factory S.C. To achieve the stated objective, the procurement performance was assessed using compliance to procedure, right quantity purchase, right quality purchase, right time purchase and capability of the personnel. A descriptive research design was employed in the study. Primary data was collected by using questionnaires and interviews targeting employees in the selected functions of APF. The target population of interest for the study consists of 93 employee; and being the target population size manageable, a census survey was done and the study achieved 91% response rate; as eighty five (85) out of the 93 distributed questionnaires were filled and returned. The study findings revealed that performance of procurement with regard to 'Right Quality Purchase' and 'Compliance to procedure' were found satisfactory. Whereas, the performance of the function, with respect to 'right time purchase and 'right quantity purchase' were found to be below the desired level; and specifically the practice of planning was rated to be one of the weakest area in the function, and the purchase lead time was also found to be very long. Though the capability of the procurement personnel was rated as average, specifically the focus to training and development was found to be minimal. Generally as per the grand mean value of the indicators, the overall performance of the procurement function were rated as moderate.*

**Key words:** Procurement Performance, Procurement policies and procedures, Right Quantity, Right Quality, Right Time, Staff Competency and APF.

# CHAPTER ONE

## 1 INTRODUCTION

### 1.1 Background of the Study

Procurement is described as the acquisition of goods services and technologies required by an organization from right source, right quality, in the right quantity, at the right time, at the right price and at the right time. (S. Anil Kumer, N. Suresh, 2009)

As it is explained by Tsegaye (2019), procurement is assumed to be one of the core activity that has significant implication on the organization's performance. And when this function is inefficient, every function in the organization are affected. Therefore, procurement personnel's need to be capable enough to procure goods and services at the right time, quality, quantity place and price for the use of all the functions in the company. According to Carolyn(2013), from time to time the role of procurement department in an organization is growing, and is getting better attention from top management. A strategic approach to procurement enables a firm to meet its planned objectives and to obtain better value for money in its expenditure for goods and services.

According to Anna (2017), improving the procurement efficiency is becoming a priority area for the proper functioning of economic activities of a firm. To improve the area it is required to identify efficiency indicators, showing the main aspects of management decisions to the procurement processes.

Andrew (2001), established that it is important to look at the strategic factors that affects the performance of procurement department. Assessment of procurement performance helps organizations to assess the improvement area in the function so as to enhance profitability by reducing or controlling purchasing cost, improve quality and utilize competitive advantage.

Procurement Performance is achieving the set of objectives and responsibilities of the procurement function with minimum costs. There are two main aspects of the procurement performance; efficiency and effectiveness. Procurement efficiency is the relationship between planned and actual resources required to realize the established goals and objectives. While effectiveness is the

extent to which the previously stated goals and objectives are being met (VanWeele, 2010). According to Patrick and Sonny (2019), the failure to establish performance of the procurement function has led to irregular and biased decisions that have costly consequences to every entity.

According to the National Bank of Ethiopia annual report (2018/19), it was revealed that the total industry sector accounts for 28.1% of Ethiopian GDP with nominal value of 526.2 billion birr. The Industrial sector is dominated by construction which accounts around 72.5%. From the industry sector, the manufacturing sector is assumed to be the most important contributor of sustainable development. But the contribution of this sector to GDP was only about 9.6%. A survey conducted by the Addis Ababa Chamber of Commerce and Sectorial Association (AACCSA) (2016) showed that the overall performance of manufacturing sector was low and investors has limited desire to invest in this sector. As per this survey, the causes for under performance are numerous for which some are related to supply such as: high cost of importing raw materials, limited availability of raw material in domestic market, shortage of foreign currency and the competency of work force. From the industry sector, the paper will narrow the scope of the study to manufacturing sub sector and specifically to the pharmaceutical manufacturing industry.

Pharmaceutical Products are one of the basic necessities for human being and producing medicines at home land has a security issue beyond economic aspect. In line to this logic, the Ethiopian government has set different incentive schemes to encourage local production of pharmaceuticals, but still there are only few pharmaceutical plants running in Ethiopia. Since, 2013, Ethiopian government has identified the Pharmaceutical sector as one of the priority sector after textile and leather industries. Accordingly, the government has established an institute with in the MOI named as “Food, Beverage and Pharmaceutical Development Institute” and also developing *Kilinto* Pharmaceutical Park at outskirts of Addis Ababa. (MOH et al, 2015; EIC, 2018).

The global market for pharmaceutical product was estimated to be about US\$ 1.2 trillion in 2018 which has shown significant growth when compared to US\$ 390billion in 2001. About 68% of the global market share is taken by North America and Europe, but the share of Africa is negligible (www. Statista.com, accessed on 31 January 2020).

The pharmaceutical market of Ethiopia was estimated to be US\$450Million in 2015, and it is growing at about 15% per year, for which it is estimated to reach US\$950Million by 2020. In

Ethiopia there are about eleven functional manufacturing companies, who produce human medicine, and the share of the local manufacturing firms from the total domestic market is about 20% and, 80% is covered from import (MOH et al. 2015).

According to Wondwoson (2015), the Pharmaceutical sector in Ethiopia is not attractive to investors, and one of the barrier is the heavy dependency of the sector on imported raw materials and spare parts. Similarly, Wendmiejeneh (2014) has estimated that about 90% of pharmaceutical raw materials in Ethiopia are imported. Hence the procurement department is one of the main function in pharmaceutical manufacturers, which has significant impact on the firm's performance.

Addis Pharmaceutical Factory S.C (APF) is one of the local pharmaceutical manufacturing company in Ethiopia, which is established in 1997 with its head quartered at Adigrat, Tigray Regional State. The factory has second manufacturing plant in Addis Ababa around kality area, and also has four sales outlets and one commercial offices in four cities of the country, (namely in Addis Ababa, Bahrdar, Awasa and Mekelle). Currently the company has 10 (ten) production lines producing more than 91 human drugs. The company is majorly owned by EFFORT group and partly owned by 54Capial, a UK based company. The company is building new additional bigger facility with a capital of USD90 million, and is believed to be the largest local manufacturer in terms of revenue and, its annual sales of last year (2018/19) were around 780million birr. Currently the company has about 1200 employees. About 95% raw material of the company is being imported from multiple of nations ([www.apfethio.com](http://www.apfethio.com), accessed on 10 January 2020; IPS, 2017; PSA tender result, 2018)

According to Solomon (2017), procurement performance of public pharmaceutical distributor is influenced by duration of purchase, ethical standard of personnel, training of personnel and the availability of the ICT infrastructure, but the research did not measure specifically the performance of the procurement function.

Hence, the research topic which is to be conducted in APF, (which is one of the main local pharmaceutical manufacturer), is highly important as it will help to describe the performance of procurement department, in return will help the company to address the improvement area in the function. Moreover the finding of the research can be also source of information for further researches in the area.

## 1.2 Problem Statement

The Ethiopian government has devised incentive mechanisms to improve the local pharmaceutical manufacturer's capacity in line with the GTP targets. These include financial support such as 30% advance payment from PSA, (the main governmental whole sale), bank loan of 70% value of confirmed tender, tax exemption of about 80% of their imported raw material and most packing materials. Despite the aspiration of the government, most pharmaceutical manufacturers have a low level of capacity utilization and productivity, when compared with their foreign counterparts, (Sutton and Kellow, 2010; The African report, 2016).

The market demand for Pharmaceutical products in Ethiopia is estimated to be about UD\$950 million by 2020 and is growing at significant rate, but the total market share of the local manufacturer is still less than 20%. The main reason of the minimal market share is usually reported to be the company's operational inefficiency including intermittent supply flow, (MOH et al. 2015; EPA report, 2012).

Based on the preliminary assessment and interview from APF Personnel, the average annual capacity utilization of the factory was around 70% and one of the main reason reported was procurement related issues such as shortage of raw materials and spare part. Hence it will be helpful to assess the efficiency of procurement with respect to the availing materials at right quantity. In the budget year 2018/19 alone, APF has unable to fulfill the committed market demand, and lost about 10% of confirmed order from PSA. One of the main reasons reported for the underperformance was procurement related issues such as shortage of input materials. As explained by (Frank et al. 2007), Shortage of materials may be a symptom of inefficiency related with the right quantity purchase concept of procurement

As per Solomon (2017) a research performed in PSA, it was find out that the duration time is one of the determinant factor which affects procurement performance. Moreover, delivering materials at right time is one objectives of procurement function, hence assessment of the procurement performance with respect the purchase lead time may add value in addressing the company's procurement problem.

According to Melinda and Johana (2015), Lead time is explained as the time taken from placing of an order to the moment receipt of the material in to inventory. And these authors emphasized



that the manufacturing firms need to work on reducing lead times in order to have an efficient and agile procurement system that better achieve operational excellence.

For companies such as APF, who have large number of line items and big expenditures, it is desirable to have a proper policies and procedures which governs the procurement process, as it will be one of the complex task to import long list of items from multiple countries. As per Solomon (2017), in most large companies there could be ethical issue on procurement staff, for which companies need to have clear procurement procedures. The complexity of the purchase, and the need to have a procedure leads to the question of: how does the existing company policies and procedures are applied.

As per Afshan(2012) the competence of the personnel is one of the determinant factor which affects procurement performance moreover, Tsegaye (2017), find out that quality is also a determinant factor to assess procurement performance.

As it is indicated in number of supply chain books such as (S. Anil Kumer, N. Suresh, 2009), purchasing is assumed to be acquiring materials using the five rights these are: right price/cost, right quality, right time, right quantity and right source.

And the researcher aims to assess the performance of procurement using the opinion of the user functions, and right price or cost is not properly determined by opinion as it is hard fact. Moreover the right source could partly be explained using the quality parameter; hence these two factor are not searched in this paper.

Adane (2017) has conducted a research on the topic “Measuring supply chain performance in Ethiopian pharmaceutical industry using BSC model” and found out that the overall the supply chain performance of APF is found to be satisfactory. But this research was a bit generic which did not elaborate the detail performance of the procurement function.

A number of researchers such as Senait et al.(2016), Tsegaye (2019), Kinuthia et al (2015) have also conducted a research on identifying factors that affects procurement performance. But there was no research performed in Addis Pharmaceutical Factory S.C with similar topic of this research.

Hence the writer has conducted the research on the topic ‘assessment of procurement performance in APF’, and to the study has used the following five performance dimensions:

- Compliance to policies and procedures
- Right quantity purchase
- Right quality purchase
- Right time purchase and,
- Staff competency

### **1.3 Basic Research Questions**

Based on the previous statement of research problem, the following main research questions were formulated:

1. To what extent the company procurement policies and procedures are applied in APF?
2. What is the performance of APF's procurement function with regard to acquiring right quantity materials?
3. How effective is the procurement function of APF in procuring qualified product?
4. What is the performance of APF's procurement function with regard to delivering items at the right time?
5. How competent are the procurement personnel in APF?

### **1.4 Objective of the Study**

#### **1.4.1 General Objective**

The general objective of the study was to assess the performance of procurement function of Addis Pharmaceutical Factory, and to suggest recommendations.

#### **1.4.2 Specific Objective**

In order to achieve the general objective of this study, the following specific objectives were aimed:

- To examine the compliance of procurement policies and procedures of APF
- To assess the procurement performance of APF with respect to acquiring right quality material
- To assess the procurement performance of APF with respect to purchasing right quantity material

- To assess the performance of procurement function of APF with regarding acquiring of material at the right time
- To assess the competency of staffs involved in procurement department of APF

## **1.5 Significance of The study**

The study is expected to assess the procurement performance and indicate the weakness areas. And this information will be helpful to the stockholders mainly to the company management and owners to strengthen their procurement function. Moreover it can also be a reference to other similar local pharmaceuticals and may help them to assess their procurement function accordingly

The researcher also believes that study will contribute a knowledge and awareness of the subject in Ethiopia, which may also trigger further researches by practitioners and academicians. Hence, the study will contribute to local pharmaceuticals as well as to researchers.

## **1.6 Scope of the study**

Procurement have wide areas of managerial practices, it is difficult to conduct the study in the entire discipline due to the need of large resource such as time and finance, and moreover the research couldn't be manageable. Hence, the scope of this study was narrated to the assessment of procurement performance.

The procurement performance could be possible to measure using different dimensions or indicators, but the researcher has bounded to five performance indicators mainly: compliance to procedure, right quality, right quantity, right time and staff competency.

As per the information in company website ([www.Apfethio.com](http://www.Apfethio.com)), APF head office is in Adigrat (Tigary state), and has four branch offices (Addis Ababa, Mekelle Hawasa and Bahrdar); and about 97% of the employee are found in the Head office and Addis Ababa Branch office moreover the purchasing functions are found in these two branches; hence the study's geographic scope is also delimited to these two branches.

## **1.7 Limitation of the study**

One of the limitation of this study may be that the information obtained from the respondent may not be reliable. The study focuses on certain internal process of the procurement, but the

performance may be influenced by external factors such as economic factor (foreign exchange availability), government policy, and the performance of other functions in the company, hence the result of this research may not be adequate to generalize the procurement performance.

## **1.8 Definitions of basic Terms**

**Pharmaceutical products** are drugs derived from organic or inorganic chemicals used to treat a wide range of medical conditions.

**Lead Time** is the time interval between placing an order to supplier and receiving the materials in warehouse.

## **1.9 Organization of the paper**

The research paper is organized in to five chapters. In Chapter One, the study tries in its first sections to familiarize the back ground of the study by skimming the procurement concept followed by analyzing industry sector, then brief description of the Pharmaceutical Industry, followed by back ground of the company in question. Later, after describing the research problems and formulating the research question; the general and specific objective of the study was stated.

In the second chapter of literature review: theoretical background of the study, related concepts about procurement performance, and previous works of related articles are reviewed. At the end of this chapter, a theoretical frame work designed brought out of the reviewed literature is expressed in graphical form.

Chapter three covers research methodology section, which describes the research design and approach, the population size and the instruments of data collection used

Fourth chapter covers the result and discussion part of the research, while Chapter five covers summary of the findings, conclusions and recommendations.

Finally, the instrument as appendix describing the questioners and structured desk review questions are attached after the cited reference list described as Harvard style.

## **CHAPTER TWO**

### **2 LITRATURE REVIEW**

This chapter will have mainly to three parts, the first part will try to review the theories and definition about procurement and related terms; and the second part will be about empirical literature. The last part will be about conceptual framework of the study

#### **2.1 Theoretical review**

##### **2.1.1 Definition, importance and process of procurement**

###### **i Definition**

Many different terms and definitions are used to describe the area of procurement both in reality and in the literature. Unfortunately there exists no agreement about the definitions of terms like procurement, sourcing, purchasing, supply management etc. and therefore these are used interchangeably. Throughout this thesis I have chosen the following definition of procurement: Procurement is obtaining goods, services, capabilities and knowledge from external sources which are necessary for running, maintaining and managing the company's primary and supportive activities at the most favorable conditions (vanWeele, 2010).

Procurement is an activity responsible for obtaining purchased materials and services in the required quantity, at the right time of delivery within desired quality specifications, and at a minimum total cost (EFFORT procurement Manual, 2014).

Procurement deals with the sourcing activities, negotiation and strategic selection of goods and services that are usually of importance to an organization. Purchasing can usually be described as the transactional function of procurement for goods or services. Hence, purchasing can be considered as subset of procurement.

###### **ii Importance of procurement Function**

For sold goods in general, the largest part of the cost is taken up by purchased materials and services. Depending on the business type between 50-80% of a company's expenditure consists of purchased goods and services. This shows that reducing purchasing costs is a powerful way to improve shareholder returns, (vanWeele, 2010).

The importance of the procurement function differs a great deal between companies. Frank et al. (2007) claims that the following three factors mainly decide its significance;

- The purchased amount of money:
- The material costs part of the total costs
- The kind of material being purchased:

### iii **Procurement process**

Even though the procurement process is slightly different from organization to organization, based on the nature of goods and services produced; there are some common purchases processes and steps followed by most organization. Some of the purchasing process and steps, are as follows, (Frank et al, 2007; S. Anil Kumar, N Surash, 2009):

- Receiving of formal purchase request from user functions
- Defining the purchase specification
- Grouping items that can be purchased from same vendor
- Identification of potential Suppliers
- Sending Inquiries and Receipt of the Quotation
- Evaluation of quotation
- Negotiation
- Selection of the preferred Vendor
- Issuance of Purchase Order and contract management
- Follow-up of Shipment and delivery
- Inspection and Goods Receipt
- Maintaining of purchase record for future reference

### iv **The purchasing mixes**

As per (Frank et al. 2007), the procurement manager is responsible for obtaining the best purchasing mix for the organization. To achieve this goal the purchasing personnel should be able to buy all the materials and services needed:

- At the right price,
- In the right quantity,
- With the right quality

- For the right delivery or place
- At the right time.

The right application of these purchasing objectives is expected to indicate better procurement performance.

### **2.1.2 Procurement Performance**

For any organization to become more competitive, performance is a key driver to improving quality of products or services. Performance measurement provides the basis for an organization to assess how well it is progressing towards its predetermined objectives. It helps to identify areas of strengths and weaknesses, and enables to decide on future initiatives with the goal of attaining performance improvements. Procurement Performance is achieving the set of objectives and responsibilities of the procurement function with minimum costs. There are two main aspects of the procurement performance; efficiency and effectiveness. Procurement efficiency is the relationship between planned and actual resources required to realize the established goals, objectives and their related activities. While effectiveness is the extent to which the previously stated goals and objectives are being met (VanWeele, 2010).

As stated by (Derek, 2006), procurement performance is the extent to which operational procurement outcomes demonstrate high levels of improved performance in the lead time, cost, labor-productivity and capital utilization. Assessment of procurement performance helps organizations to identify the improvement area in the function so as to enhance profitability by reducing or controlling purchasing cost, improve quality and utilize competitive advantage. Procurement Performance is measured based on the criteria or indicators related to the function. Hence, in order to measure performance, it is required to identify indicators related to the activities of procurement function.

Measuring procurement outcomes is an essential step to understand the impact on the overall performance of the company. Meanwhile, performance measurement in procurement is considered increasingly challenging as procurement requirements become more complex. (Paul and He-Boong, 2012)

The effectiveness of the performance measurement may vary based on the selected indicators or perspectives used as a measurement. Procurement performance indicators are factors which are used to evaluate performance of procurement. Different writers have tried to identify number of factors used for measurement of performance. Out of which a USAID guide line prepared in 2013, has set a very detail and practicable criteria's for measuring procurement performance of different projects.

According to USAID (2013), the following performance indicators were used for measuring of performance:

- Effective Contract Utilization,
- Expiration Management,
- Supplier Performance,
- Procurement Cycle Time,
- Procurement Cost,
- Staff Training and competency
- Transparent Tendering or integrity

The researcher has selected the indicators namely: compliance to policies and procedures, right quality purchase, right quantity purchase, right time purchase and staff competency of procurement personnel, for which their brief explanation in respect to APF context will be followed

#### **2.1.2.1 Procurement policies and Procedures**

Organizations need to establish procurement procedures which cover the whole process of the procurement activates, including supplier selection, contract negotiations, order placement and payment. Established procedures are used to control spending activity, ensure appropriate approvals are in place and reduce the risk of overpayment. An appropriate approval process involves a separation of tasks and the involvement of senior managers for transactions that cost more than a specific price for enhanced procurement performance (CIPS, 2007).

**Policies** are broad, overall guidelines that assist a manager in decision-making by delineating a span of consideration. They are guides to thinking as well as to action. Policies are derived from principles.

**Procedures** are step-by-step guides to actions or tasks that must be performed in order to accomplish an objective. Procedures are derived from policies. The use of policies and procedures



ensures uniform approaches to decision making and accomplishing an objective. Another advantage is, written policies and procedures can establish defined responsibilities and authorities (S. Anil Kumar, N Surash, 2009)

As stated above, procedures are developed after policies are established. They are designed to improve the performance of personnel and minimize red-tape. Although personnel may feel too constrained by them, procedures are meant to limit the ways that work is performed in order to optimize results. Employees should be encouraged to develop innovative method, as true improvements can be used to revise procedures. If procedures are not kept up to date, their effectiveness could be negated (USAID, 2013)

### **2.1.2.2 Right Quantity Purchase**

The right quantity is the quantity that may be procured at a time with the minimum total acquisition cost and which avoids shortage of materials. The right quantity is the most important parameter in buying, as ensuring and maintaining a regular flow of materials for carrying the production activity is the vital objective of any purchase function. Concepts, such as, economic order quantity (EOQ), economic purchase quantity, fixed period and fixed quantity systems will serve as broad guidelines. But the procurement personnel has to use his knowledge, experience and commonsense to determine the quantity after considering factors such as price structure, discounts, availability of the item, favorable reciprocal relations, and make or buy consideration. The procurement personnel need to ensure for delivery of the exact required quantity, as shortage may impact the continuity of the production. Similarly, excess purchases should be avoided, as it results in overstocking and capital tied up, moreover inventory carrying cost may goes up (Frank et al, 2007; S. Anil Kumar, N Surash, 2009 ).

As stated above, the important parameters which helps to acquire right quantity could be:

- The consideration of ordering cost
- The concept of economies of scale
- The use of statistical tools for estimation of the optimum quantity such as EOQ
- The practice of accurate planning such as, estimation of annual consumption
- The incidence of overage shortage need to be minimized

### **2.1.2.3 Right Quality Purchase**

Procuring goods and services at the right quality will improve operation's efficiency and reliability. And there is no doubt that purchasing poor quality material can increase operational cost. To provide an operation with a quality material, procurement personnel need to consult with user departments, in particular with the production department about the quality of goods required for the manufacturing process and with the marketing department about the quality of goods acceptable to customers (Frank et al., 2007).

According to WHO (2016), Quality management system should be in place which guides the acquisition of pharmaceutical materials. Pharmaceutical companies need to have clear documented procedure for selecting, approving, disqualifying and re-approving suppliers of pharmaceutical starting materials and services. Moreover, pharmaceutical starting materials should be purchased from approved suppliers in accordance with mutually agreed formal specifications. Before purchasing from new source, it is vital to collect sample from three consecutive batches and perform physicochemical tests. Moreover it may be advisable to perform stability study to confirm the consistency of the source. Generally, in pharmaceutical manufacturing, through analysis and consideration need to be taken before switching to new source.

As stated above, the important considerations which helps to procure right quality materials could be:

- The description of full specification in the purchase order and communicating to vendors
- The prequalification of new vendors through series of samples
- Controlling of item delivery to meet the implied and specified requirements
- The establishment of written procedures to manage quality discrepancies

### **2.1.2.4 Right Time Purchases**

The time at which the purchases are to be made is of vital importance. In case of items used regularly, right time means the time when the stock reaches the minimum level. The right time sometimes referred as desired purchases lead time. The purchase lead time is the time between placing an order and receiving the materials in store; and it can be critical to efficient stock management and to the overall performance of an organization. The reliability of lead time depends the reliability of the supplier's delivery performance and also on the competency of the procurement personnel who is managing the purchase. If the materials are to be purchased from

the overseas market (global sourcing), then more time should be allowed for delivery to their required destinations (Frank et al., 2007).

For determining the right time, the procurement personnel should have lead time information for all items and analyze its components for reducing the same. Lead time covers the entire duration of the purchasing cycle and consists of pre-contractual administrative lead time, manufacturing and transporting lead time and inspection lead time. Since the inventory increases with higher lead time, it is desirable to analyze each component of the lead time so as to reduce the first and third components which are controllable (S. Anil Kumar, N Surash, 2009)

According to Melinda and Johana (2015), Lead time is explained as the time taken from placing of an order to the moment receipt of the material in to inventory. And these authors emphasized the importance of reducing lead times in order to have an efficient and agile procurement system that better achieve operational excellence. More specifically manufacturing companies need to focus on supply chain and need to encourage their work force toward this goal.

Purchase Lead time may be divided in to internal lead time and external lead time. Internal lead time is the time required for the company to select supplier and to formalize the internal process in order to place an order. The external lead time is the time between placing of an order and receipt of the material (Anand et al., 2016)

As stated above the important parameters of right time purchase may be expressed as follows:

- The procurement personnel need to continually measure the lead time for each category of purchase
- Effort need to be exerted to minimize the leads time both for the internal and external
- The accuracy of planned lead time is affected by the reliability of the supplier, hence it would be helpful to rate supplier based on former lead-time reliability

#### **2.1.2.5 Staff Competency**

According to Gupta (2011), Competency is defined as capability, ability or an underlying feature of an individual that's casually associated to superior performance. Similarly Armstrong and Baron (1995) explain competency as the application of knowledge and skills, performance delivery, and the behavior required to do things very well.

Senait et al. (2016) explains, absence of adequate knowledge and skill in procurement matters, may end up with serious consequences including breaches of codes of conduct. Many organizations lacks adequate competent staffs with the proper knowledge for good procurement process management, and he emphasizes the need to develop staff competency. Hence, considerable and continuous investment is need to be incurred in training and development (Afshan, 2012)

According to WHO (2016), Personnel who involved in pharmaceutical materials procurement should be suitably qualified, trained and authorized to undertake their duties and responsibilities. All personnel should be aware of the principles of Good Trade and Distribution Practice for Pharmaceutical Starting Materials (GTDP); and this principles includes the good procurement practices of pharmaceutical input materials. Personnel should receive initial and continuing training relevant to their tasks, and the effectiveness of training should be verified where appropriate.

As stated above, the main parameters of competency could be summarized as follows:

- Work Experience of the personnel
- The strength of the employed staffs
- The training and development policy of the company
- The awareness of Good procurement practice (in case of pharmaceutical purchase)
- The knowledge of rules and regulations of the countries involved in the purchase

## **2.2 Empirical review**

In order to formulate a research framework, the author would like to summarize the analyzed works of previous researchers which will assist to arrive in logical synthesized theoretical framework of the study. The researcher will also get some insight from the works of theoretical framework and research model.

Different scholars has identified different factors to assess the performance of the procurement. Some of the criteria's along with the name of the author are listed below in Table 2.1.

Table 2.1 List of selected articles related to procurement performance

S/N	Identified Factors affecting Procurement Performance	Author	Remark
1	Procurement planning, staff competency, procurement policies & resource allocation	Senait et al. (2016)	The research is a published article, which was performed in Awassa textile factory
2	Procurement planning, staff competency, procurement policies and procedures, supply integration, fund allocation, ICT, top management commitment & Political, Economic, Social, Technological and Legal environment	Tsegaye (2019)	The unpublished research was conducted in NGO, named IOM
3	Purchase lead time, Ethical Practice, employee training, Record management & ICT	Solomon (2017)	Unpublished research conducted on public company, named PFSA
4	Five Rights of purchasing (Right price, Right quality, Right quantity, right time and right source	Selemawit (2014)	The unpublished research is conducted in NGO, named Goal Ethiopia
5	procurement portfolio, logistics management and adherence to procurement plans	Kibet and Agnes (2014)	A research performed in Agricultural sector in Kenya
6	Procurement planning, resource allocation, staff competency, Contract management	Japheth(2013)	A research performed in mining Energy (in Kenya)
7	Cost, Time, Quality, Flexibility, Innovation and Sustainability	Federico et al. (2012)	An empirical investigation on procurement performance of selected organizations
8	Competitive bidding, aggregate procurement and legal frame work	Kinuthia et al (2015)	The published research is conducted on Kenyan public secondary school
9	Non-financial measures, ( Such as quality of employee, Cycle time and Quality of goods and services), and financial measures, (such as cost accounting, profit center and budgetary control)	Patrick (2019)	The published research is conducted on Sonny Nyoko. Uganda

The paper of Senait et al. (2016), tries to correlate the effect of four selected variables on procurement performance namely: procurement planning, staff competency, procurement policies and resource allocation. The study revealed that staff competence and resource allocation were the most factors who significantly affecting procurement performance. According to Tsegaye(2019), who has conducted a research on procurement performance of NGO using internal and external factors, has found out that organizational structure of the organization and economic environment factors has major effect on procurement performance. On the other side, Staff competency and political environment have least effect on procurement performance.

The finding of Tsegaye (2019) is not in line with that of the Senait et al. (2016) on the effect of staff competency.

According to Solomon (2017), the purchase duration (lead time) is the most important factor which affects procurement performance. On the other side the researcher has found out ethical practice has least influencing factor on procurement performance. Selemawit (2014) has opted to assess the purchasing practice of Goal Ethiopia, using five rights. Out of the five rights, the researcher found out that more focus was given to right price (least price), and the remaining parameters (right quality, quantity; sourcing and timing of purchases) were not considered as required.

A research performed in Agricultural sector in Kenya by Kibet and Agnes (2014), correlates procurement performance with three factors namely, procurement portfolio, logistics management and procurement planning. The paper found that that procurement planning, is the most influencing factor in the procurement performance, and in fact the other factors are also found to have positive influence on performance. Similarly a research performed by Japheth(2013) which was conducted on mining sector, in Kenya, has shown that the procurement planning has the most effect on procurement performance.

Federico et al. (2012), interestingly empirically studied the application of procurement performance system in selected nine giant companies of Europe, and also found out six performance indicators (KPIs), namely: Procurement planning, resource allocation, staff competency, and Contract management. As per the paper, most companies still try to measure the performance of suppliers, and measurement of internal process is ignored.

Number of other researches such as Kinuthia et al. (2015) and Patrick (2019) has also conducted a research in procurement area, using different perspectives.

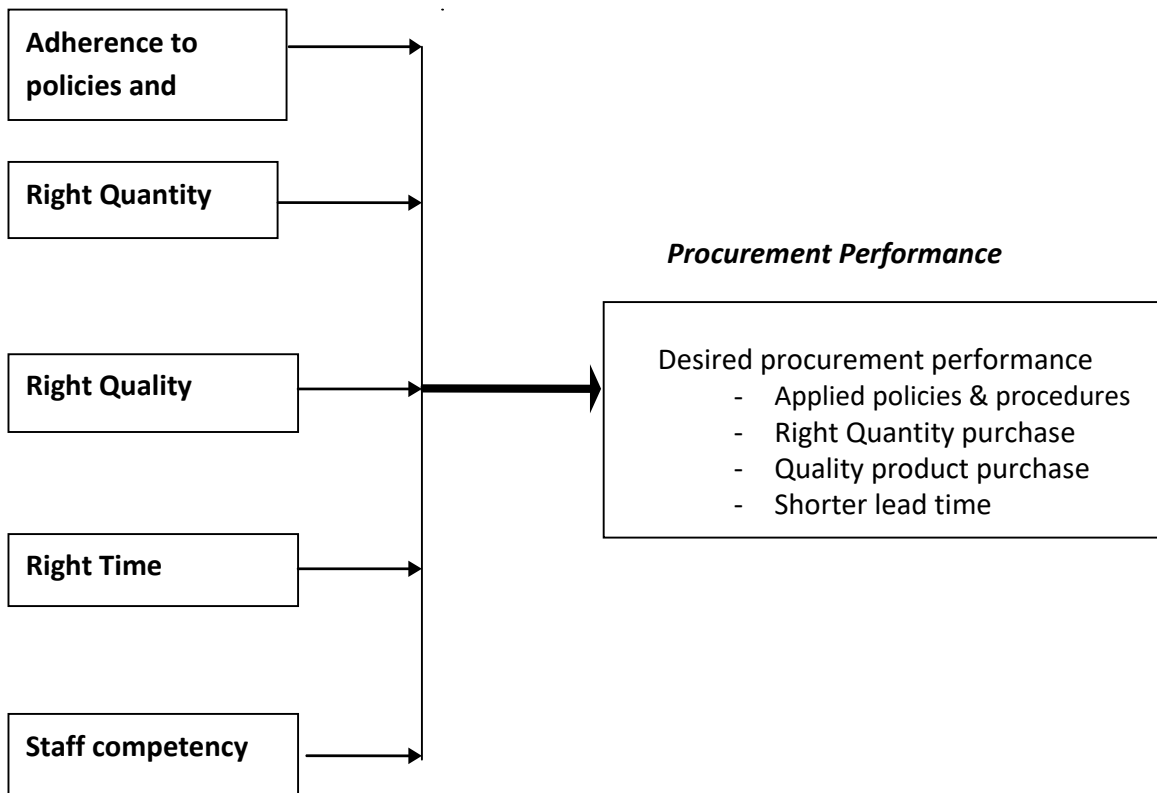
The researcher will try to base the above stated works in general but most importantly, the two research's namely Senait et al. (2016) and Tsegaye (2019) will be taken as a model.

### 2.3 Conceptual Framework

The researcher conceptual framework looks likes as per following, and diagram is adopted from Solomon (2017)

Figure: 2.1 Conceptual Framework

#### *Performance Indicators*



## **CHAPTER THREE**

### **3. RESEARCH DESIGN AND METHODOLOGY**

As defined by Creswall (2009), methodology is strategy or plan of action that links methods to outcomes-governs our choice and use of methods.

#### **3.1. Research Design and Approach**

##### **3.1.1. Research Design**

“Research designs are planned procedures for reason that spans the decisions from broad assumption to detail methods of data collection and analysis.” (John W. Creswell, 2009)

According to Creswell (2009), there are different type of research types such as descriptive, explanatory and exploratory. Since the objective of the research was to assess the performance of procurement, the used research design was descriptive.

##### **3.1.2. Research Approach**

There are three common research approaches namely: qualitative, quantitative and mixed research. As compared to qualitative research, quantitative research, approach uses mathematical and statistical methods. Mixed research approach combines both qualitative and quantitative research approach, and most of the research falls in between of the two ends (Creswell, 2009).

Since, the aim of the research was to assess the procurement performance of the company by surveying the perception of related user departments using questioners, it could be understood that the approach is more of quantitative. On the other side few open-ended questions and secondary data were used as additional information which is of qualitative nature. Hence the type of research used was mixed research approach.

#### **3.2. Population and Sample Size**

##### **3.2.1. Population**

Addis Pharmaceutical Factory S.C has head office and five branch offices; and the firm has total of about 1200 employees. Most of the work office are low skill employee, and thus employee will not have similar understanding about the area under study. Hence the researcher from his prier scheming, believed that out of total company employee those who have knowhow about



purchasing were found in the departments of procurement, material planning, and finance marketing and quality management. Moreover management members and supervisors were also believed to have knowledge on procurement. Excluding the procurement personnel to minimize bias, the number of employee found in the selected functions were 93 as indicated in the table 3.1 below, and those employee are considered as target population size.

*Table 3.1: Target Population size*

<b>S/N<sup>o</sup></b>	<b>Office /Department</b>	<b>Total</b>
1	General Manager & Deputy General Managers	2
2	Department managers and service heads	16
3	Quality Control Department(excluding messenger)	25
4	Finance Department (excluding messenger)	25
5	Material planning and warehouse (excluding laborer and clerks)	11
6	Sales and marketing Department (excluding laborer)	15
<b>Total</b>		93

### **3.2.2. Sampling Technique and Sampling size**

According to Hamid (2017), sampling is the procedure of drawing a portion of the population. If the population size is too large to manage, it is recommended to estimate smaller sample size using different techniques. If the population size is smaller or manageable census method is recommended. Census is an investigation of all the individual elements that make up a population.

The researcher had collected information from the whole target population, and hence the data survey approach used was census method.

### **3.3.Source and Tools for Data Collection**

The study was mainly based on primary data, by questionnaires and interviews. The designed questioners were mainly closed ended, but to grasp any other suggestions of the respondent, an open ended questions were also included. Partly, the researcher had also used the second data, which were recorded in various company files and reports. Moreover, standing reference materials such as manuals and procedures were also reviewed to gain more insight about the company.

### **3.4.Method of data analysis**

The collected questionnaires were systematically organized in a manner that facilitated analysis, then they were checked for completeness before entry in to computer. The data was summarized in Excel spread sheet and then, it was analyzed using Statistical Package for Social Sciences (SPSS) version 23 and the result were further presented in the form tables. As a part of descriptive analysis the data was explained using mean, standard deviations and frequency percentage. The items with in the dimension were ranked sequentially based on the mean value result from most to least compliance.

### **3.5.Validity & Reliability**

Reliability is defined as the extent to which results of a study are consistent over time and there is an accurate representation of the total population under study, whilst validity relates to the appropriateness of the measure to assess the construct it significances to measure (Bajpai SR and Bajpai RC, 2014).

#### **A) Validity**

To make the study valid the researcher used different techniques such as preliminary survey to ensure the measurement and assessment of the real situation. The content of the items were also reviewed with the help of experienced procurement experts, and the researcher has referred literatures related to procurement management and procurement performance. Moreover, to make valid and predictive the outcome of the study, the researcher will distribute personally each questionnaire by communicating and convincing all respondents the purpose of the study.

#### **B) Reliability**

The questioner was designed by the researcher, and it was checked using the Chronbach Alpha Statistics, which is the most common literature tool to check the scale of reliability of the questionnaires. Chronbach Alpha result of with above 0.70 is assumed to produce a reliable scale (Sekaran ,2005, cited in Adane, 2017).

The filled questionnaires were tested for reliability using SPSS version 23 and, were found to be reliable and respective Cronbach's alpha is shown the following Table 3.2.

Table 3.2: Cronbach's Alpha Result

S/N	Research Dimension	Cronbach's Alpha	Number of items
1	Compliance to procurement policies and procedures of APF	0.780	7
2	Right Quantity purchase in APF	0.718	5
3	Quality of items purchased in APF	0.724	5
4	Right time purchase in APF	0.739	5
5	Competency of APF Procurement Personnel	0.734	5

Source: Own Survey Data, May 2020

### 3.6. Ethical consideration

The research was conducted after getting permission from management of APF SC. Moreover, the research topic was accepted by Saint Mary's University

The researcher had exerted effort to clarify the respondent about the objective of the study and verbal consent were obtained from the participants. The name of the respondents were kept confidential, and during the data collection, the rights of the respondents were respected.

## **CHAPTER FOUR**

### **4. RESULT AND DESCUSSION**

#### **4.1.Introduction**

This chapter presents and discusses findings deduced from the questionnaires, interviews and secondary data with regard to the stated research objectives and questions. The data collected using questionnaires was analyzed using the Statistical Package for Social Sciences (SPSS version 23) and presented by the use of frequency tables and percentages.

#### **4.2.Response Rate**

Response rate in survey research is calculated as the number of people who answered the survey divided by the number of people in the sample. Hence, the response rate of the study was found to be 95% (88/93), and out of which 3 questionnaires were discarded for they were incomplete. 91% (85/93) of questionnaires from the total targeted population were found complete and treated in the study. According to Mugenda and Mugenda (2003) as cited in Tsegaye (2019), a response rate of 70% and over is assumed to be very good, hence, the response rate of 91% could be considered to be very good for the study.

#### **4.3.Demographics Characteristics of the Respondents**

The demographic characteristics of the respondent were summarized as shown in the table 4.1 below.

**Table 4.1:** General profile of Respondent

<b>General profile of the respondents</b>			
		<b>Frequency</b>	<b>Percent</b>
<b>Gender</b>	Male	61	72%
	Female	24	28%
	<b>Total</b>	<b>85</b>	<b>100%</b>
<b>Educational Level</b>	Diploma	25	29%
	1 <sup>st</sup> Degree	51	60%
	2 <sup>nd</sup> Degree and above	9	11%
	<b>Total</b>	<b>85</b>	<b>100%</b>
<b>Profession</b>	Finance and Accounting	24	28%
	Management	17	20%
	Pharmacist and chemist	21	25%
	Supply Chain	11	13%
	Engineering	3	3%
	Others	9	11%
	<b>Total</b>	<b>85</b>	<b>100%</b>
<b>Years of experience at APF</b>	less than 2 Years	8	9%
	2-5 Years	37	44%
	6-10Years	21	25%
	Above 10 Years	19	22%
	<b>Total</b>	<b>85</b>	<b>100%</b>

*Source: Own Survey Data, May 2020*

As per indicated in the above table 4.1, 72% of respondents were male and the remaining 28% of respondents were female this indicates that the majority of the target population in APF are males. Regarding the educational background, majority of the respondent were 1<sup>st</sup> degree holder with the

percentages of 60% followed by college diploma and 2<sup>nd</sup> degree with the percentages of 29% and 11 % respectively. This shows that most of the respondents (about 70%) are degree holders, who can understand and reply the questioners properly.

With regarding to profession of the respondents: 20% of respondents were from Management, 28% from finance and account, 13% from supply chain, 25% pharmacy and chemistry, 3% from Engineering, and the remaining 11% from other discipline. This shows the professional assignment of the target respondent is from multiple discipline which may help to grasp rational response.

Concerning the respondents work experience, it is dominated by 2-5 and 6-10 years of experiences with the percentages of 44% and 25% respectively, followed by above 10 years with 22% and the remaining 9% are with less than 2 years experience at APF. This indicates that 91% of the respondent have above 2 years experience with the company; hence they can better understand the practice and can give credible information.

#### **4.4. Assessment of Procurement Performance at APF**

The objective of the study was to assess the performance of procurement function using the indicators of: compliance to procedure, right quantity, right quality, right time and staff competency. Primarily, the data was collected by questioners, which were designed based on Likert 5-scale. Accordingly, the findings are presented using descriptive statistics, (Mean and Standard Deviation). The mean is used to measure for central tendency of the items, whereas standard deviation is used to assess the variability from the average.

##### **4.4.1. Compliance to procurement policies and procedures of APF**

The performance of APF procurement were studied with respect to compliance to sated procedures using seven items, and the reply of the respondents are described below in table 4.2

**Table 4.2:** Statement related to procurement compliance to policies and procedures at APF

Items	Mean	SD	Frequency Percentage		
			DA/SDA	N	A/SA
APF Procurement department exhausts local sourcing before going to foreign purchase	4.21	0.656	0%	13%	87%
APF department usually forms contracts for every purchase of different items as per manual	4.02	0.740	3%	15%	82%
APF procurement function collects offers as per the procurement methods stated in the manual	3.84	0.924	8%	27%	65%
APF procurement function has shortlisted vendors, and winner supplier is selected based on pre-stated selection criteria	3.81	0.906	9%	27%	64%
The procurement personnel of APF respects the ethical standard to select the best vendor	3.67	0.993	14%	28%	58%
APF's Purchase related information's are properly recorded, files are traceable and stored safe	3.52	1.109	20%	16%	64%
APF procurement function have proper order follow; and sends regular status reports to users	3.52	1.007	15%	37%	48%
<b>Grand Mean</b>	<b>3.80</b>	<b>0.905</b>	<b>10%</b>	<b>23%</b>	<b>67%</b>

Source: Own Survey Data, May 2020;

Where: **DA/SDA:** Number of respondents who rate Dis-Agree (2) & Strongly Dis-Agree (1)

**N:** Total Number of respondents who rate Neutral (3);

**A/SA:** Total Number of respondents who rate Agree (4) & Strongly Agree (5)

With respect to the 1<sup>st</sup> research dimension of compliance to procedure, the data is stipulated in table 4.2 above, and the items are ranked sequentially from the most to least compliance in terms of their mean value. As per the respondents, the most practicable procedure was found to be ‘the practice of local sourcing before going to foreign purchase’, which is rated with mean value of 4.21 (87% of respondent rate with agreement level) and this practice may be helpful for the company, as it minimizes the hard currency requirement. ‘The contract management of the procurement function’ was also rated as commendable with mean value of 4.02 and 82% of

respondents' rate with agreement level. Relatively the respondents' perception on 'order follow up' and 'record management' were found at lower side scoring with mean value of 3.52 each.

The grand-mean value of the study for 'compliance to procedure' shows 3.80 and also the aggregate respondent rates with agreement level shows 67%; which can be assumed as satisfactory performance.

#### 4.4.2. Right Quantity purchase at APF

The performance of procurement were assessed with respect to purchase of 'right quantity' using five items, and the reply of the respondents are described below in table 4.3

**Table 4.3:** Statement related to Procurement performance with respect to Right Quantity purchase at APF

Items	Mean	SD	Frequency Percentage		
			DA/SDA	N	A/SA
APF procurement personnel considers economy of scale to get the best rate and to minimize logistics costs.	3.61	0.832	9%	33%	58%
The shortage/ overage of procured items at APF are very minimal or less than 1%	3.60	0.805	11%	28%	61%
The average ordering costs of APF is reasonable	3.31	0.835	14%	44%	42%
APF procurement has practice of estimating optimum economic order quantity (EOQ)	3.13	0.813	19%	51%	30%
APF procurement function have regular time bounded procurement planning practice.	2.92	0.991	35%	34%	31%
<b>Grand Mean</b>	<b>3.31</b>	<b>0.855</b>	<b>18%</b>	<b>38%</b>	<b>44%</b>

*Source: Own Survey Data, May 2020*

From the study finding as stated in the above table 4.3, the respondent rate for 'economy of scale purchase' was slightly better from the other items with mean value of 3.61 and 58% of respondent rating as agreed. On the other side, the item 'procurement planning' was rated the least with mean value of 2.92 and 35% of respondents rating a disagree; and this indicates the procurement function may be weak in planning.



The overall performance of APF procurement with respect to “right quantity purchase” with grand-mean value of 3.32 and only 44% of average respondents’ rating with ‘agree’ may indicate user’s dissatisfaction on getting the required quantity materials.

#### 4.4.3. Right Quality purchase at APF

The performance of procurement were studied with respect to procuring the right quality material using five items, and the reply of the respondents are described below in table 4.4

**Table 4.4:** Statement related to Procurement performance with respect to Right Quality Purchase at APF

Items	Mean	SD	Frequency Percentage		
			DA/ SDA	N	A/ SA
APF procurement function arranges sample for testing, before placement of commercial order.	4.34	0.700	1%	10%	89%
The Procurement functions usually describes full specification on the Purchase Order	3.94	0.713	3%	21%	76%
The procured items meet the specification defined in the purchase order and/ or implied user requirements	3.87	0.828	5%	27%	68%
Procurement function has written procedure in place for rectifying any quality non-conformance	3.79	1.025	13%	26%	61%
The chance of defects of purchased goods are minimal (less than 1%)	3.40	0.876	14%	44%	42%
<b>Grand Value</b>	<b>3.87</b>	<b>0.828</b>	<b>7%</b>	<b>26%</b>	<b>67%</b>

*Source: Own Survey Data, May 2020*

As observed from the table 4.4 above, the respondents agree that APF procurement has ‘the practice of prier sample testing before ordering’ with a mean value of 4.34 and with 89% of respondent agreement level; and this seems a good practice, as it may minimize the risk of wrong materials purchase. On the other side, the respondents rate relatively smaller point to ‘the chance of defects’ with a rate of 3.40 and 44% of respondents rating neutral level; and this may indicate the respondents’ slight disagreement on this item. Being the risk of rejection may impact the company’s performance, the result seems alarming which may need improvement.

The overall finding of the study for ‘right quality purchase’ shows grand-mean value of 3.87 or 67% of respondents’ rating with agreement level; hence, the performance of the procurement in this regard seems good.

#### 4.4.4. Right time purchase at APF

The performance of APF procurement were assessed with respect to procuring materials at the right time material using five items, and the reply of the respondents are described in table 4.5

**Table 4.5:** Statement related to Procurement performance with respect to Right Time Purchase at APF

Items	Mean	SD	Frequency Percentage		
			DA/ SDA	N	A/ SA
APF Procurement personnel has practice of measuring purchase lead time and comparing with plan.	3.12	0.892	27%	34%	39%
The total Purchase lead time of APF, ( PR Date to receipt of material at factory), is reasonable time	2.98	1.080	33%	31%	36%
The external Purchase lead time of APF (PO Date to receipt of material at factory), is reasonable time	2.92	1.093	45%	16%	39%
APF Procurement has criteria of rewarding or penalizing suppliers based on their delivery time performance	2.86	0.847	36%	38%	26%
The Internal purchase lead time of APF, ( the time from PR to PO Date), is short or reasonable	2.81	1.052	33%	44%	27%
<b>Grand Value</b>	<b>2.94</b>	<b>0.983</b>	<b>35%</b>	<b>32%</b>	<b>33%</b>

*Source: Own Survey Data, 2020*

The 4<sup>th</sup> research question sought to measure the performance of APF procurement function with respect to availing materials at right time using five items. As per the observation from table 4.5 above, the practice of measuring purchase leads time was relatively rated better with mean value of 3.12 and 39% of respondents’ agreement level; but this value is nearer to the neutral line, which may indicate the availability of intermittent practice. On the other side, the rate for ‘the internal

lead time of APF’ was observed to be the most lower rated item in the study with mean value of 2.81 and 44% of respondents’ rating as neutral; and this indicates the procurement function might be taking unnecessary time for processing a purchase order.

As per the observation in table 4.5, the majority of the respondents slightly disagreed on ‘right time purchase’ with grand-mean value of 2.93 and 35% of respondents’ rating with disagreement level; and the rate for this indicator, was found to be the lowest from the other five dimensions in the study, and this may indicate that in-terms of ‘right time purchase’ APF procurement function might not performing good.

#### 4.4.5. Competency of APF Procurement Personnel

The performance of APF procurement were assessed with respect to competency of procurement personnel using selected items, and the reply of the respondents are described below in table 4.6

**Table 4.6:** Statement related to Competency of Procurement Personnel at APF

Items	Mean	SD	Frequency Percentage		
			DA/ SDA	N	A/ SA
Most procurement staffs of have the required work experience for the position	3.88	0.837	7%	17%	76%
APF Procurement function have adequate number and proper mix of professionals	3.61	0.874	13%	26%	61%
Procurements staff reads and updates themselves with changing rules and regulations of the country and the globe	3.56	1.017	11%	33%	56%
Procurement staffs continually upgrades their skill and knowledge through regular training and education	3.52	0.971	14%	37%	49%
Procurement staffs have basic knowledge about WHO’s Good procurement practice	3.04	1.074	32%	28%	40%
<b>Grand Value</b>	<b>3.52</b>	<b>0.955</b>	<b>16%</b>	<b>28%</b>	<b>56%</b>

*Source: Own Survey Data, May 2020*

The 5<sup>th</sup> research question was to assess the competency of procurement personnel at APF. And the result of the survey is stated in table 4.6 above. As per the finding, the respondents agree that APF procurement personnel has ‘the required work experience’ with mean value of 3.88 and 76% of respondents rating with agreement level. The respondents have moderately agreed on the criteria of ‘staff strength’ and ‘adaptation to changing regulation’ with mean value of 3.61 & 3.56 respectively. Relatively the procurement personnel’s knowledge on ‘WHO’s Good procurement practices’ was found to be the least rated from the other items with mean value of 3.04 and 40% of respondents rating with agreement level. The Grand-mean value result of 3.52 and 56% of respondents’ rating with agreement level shows, the staff competency was moderate.

#### 4.4.6 Summary of the Grand Mean Results

As stipulated above from table 4.2 to table 4.6; the rate for each item with in the research dimension were analyzed and interpreted. And the grand mean and frequency percentage of each indicators is summarized in single table as follows:

**Table 4.7: Summary of the aggregate value results**

Research Dimensions	Grand Mean	SD	Frequency Percentage		
			DA/SDA	N	A/SA
Compliance to procurement policies and procedures of APF	3.80	0.905	10%	23%	67%
Right Quantity purchase at APF	3.31	0.855	18%	38%	44%
Right quality purchase at APF	3.87	0.828	7%	26%	67%
Right Time purchase at APF	2.94	0.983	35%	32%	33%
The competency of APF Procurement Personnel	3.52	0.955	16%	28%	56%
<b>Aggregate of the Grand Values</b>	<b>3.49</b>	<b>0.905</b>	<b>17%</b>	<b>29%</b>	<b>54%</b>

*Source: Own Survey Data, May 2020;*

As it can be seen the result in the above table 4.7, the average of the frequency of respondent and grand mean values for each of the five research dimensions were summarized in single

table. From the five research dimensions, the aggregate result for the right quality purchase is found relatively better with grand mean value of 3.87 and with aggregate 67% of respondent rating either agree or strongly agree. On the other side the performance with regard the right time purchase was found to be lowest with grand mean value of 2.94 and about 35% of respondent rating as dis agree or strongly dis-agree. Hence, from the other indicators APF procurement has weaker performance with regard to ‘right time purchase’.

The aggregate value of the five indicators was found to be 3.49 or 54% of respondent rating agreement level; hence the overall performance of the APF procurement function could be regarded as moderate.

## **4.5. Feedback of respondent for open ended questionaries’**

### **4.5.1. Data collected via Questioner**

The questioner was mainly based on close-ended question of five scales. But under every research question, the respondents were given the following two optional open-ended questions so as to put their additional opinion or suggestions about the dimension. Accordingly, few of the respondents have wrote their remarks & suggestions and were summarized as follows:

1. Remarks about Compliance to procedure: Few of the respondents replied that there is some compromise on the implementation of the procurement procedure. as per the respondent, the non-compliance may be due to the internal commitment of the procurement personnel or it may be due to other reasons such as Repetitive urgent purchase, shortage of materials at market, and availability of limited vendors (monopoly, and duopoly nature of some supplier). The organization of the procurement department being in Addis Ababa, which very far from the main factory could also impacting the central purchasing policy of the company. Couple of the respondent commented that it is challenging to fully comply with the existing generic procurement manual as it is old and lacks room for flexibility.
2. Remarks about Right Quantity purchase: some respondents suggested that most of the time, the required input materials are not availed for production. And the reason for under performance may be caused from internal competency of the procurement or from external factors, such as forex availability. Moreover, it seems there is a problem in material requirement planning, and record management

3. Remarks on Right Quality Purchase: The respondents who put their remark, has generally replied, the overall performance of the procurement with respect to quality is good. Couple of the respondent suggested that procuring from manufacturers instead of trading company, and concentrating on few dependable supplier can better ascertain consistent quality supply.
4. Remarks on right time purchase; the respondents believe that the purchase lead time of APF is too long, and usually imported materials reaches factory after four month from request. In fact the long lead time may be related to the weak follow-up and order tracking, and the underperformance might be aggravated by low IT infrastructure of the company. Moreover the timing of the hard currency availability is also impacts the performance of procurement.
5. Remarks on Stuff competency: As per the opinion of the respondent, the capability of the procurement stuff is moderate, and suggested that it could better improved by successive training and development. Moreover, some of them suggested that improving the existing appraisal system could help to improve the performance of the stuff

#### **4.5.2. Data collected via Interview**

In addition to the open-ended written question; two selected senior staffs of procurement. (One from local purchase and the other from foreign purchase), were interviewed using three open-ended questions and their response were summarized as follows:

The first question was asked to about the need to evaluate procurement performance and the interviewee agree on the importance of measuring performance, but highlighted that it will not easy to measure procurement functions separately, as most of the activities are interlinked with different internal function, and also affected by external factors.

The next question was how do you rate the performance of procurement with respect the five rights of purchasing (quantity, quality, price, time, and place our source). The interviewee replied that with respect the right quantity, there was gab in fulfilling's user requirement especially for imported goods, and as per the last year data, about 60% of demanded input materials were delivered, and the main reason for the gap was the access to hard currency. As per the foreign purchases head, relatively APF has import performance was better when compared to other local pharmaceutical manufacturers due to the reason that the company has partly used its own foreign currency generated from equity financing. Moreover, APF had the chance to import goods on supplier credit option, the credit purchase option is only allowed to companies who are fully or

partly owned by foreign investor. As per the interviewee, local purchase performance is relatively better and can be rated as moderate. Both interviewee said that there was little practice of the systematic order estimation, and most of the order quantity is estimated based on the user requests and availability of funds (mainly hard currency).

Regarding right quality purchase, the respondents said that they try to focus on quality, and usually raw materials are being purchased from pre-qualified by APF quality control. While asked about the rate of rejection, both said that there were rare cases, but it can be assumed minimal when compared to the volume of purchases. Relatively the rate of rejection from local source mainly for printed packaging materials was found more. With regard the right time purchase, both respondents agreed that the purchase lead time was too long, and were unable to satisfy user functions. Some of the reasons stated was, material availability at local market, hard currency problem, source problem for spare parts and miscellaneous items, long transit time, the bureaucracy of regulatory authorities and the likes. In terms of right price purchase, the foreign purchase head stated that, he believe APF is used to getting the right price for major raw materials for the reason of economy of scale purchase, and also good due to business relationship with some key vendors. According to the local division head, the local Ethiopian market is seems abnormal and it is also aggravated by the significant ongoing inflation rate in the country; hence the company may not procuring at right price from local market.

The interviewee were requested to comment on the competency of the procurement personnel, and both respondents believe that relatively the function had better quality personnel, and in terms of the staff strength, it is adequate to serve the current purchase volume. As per the interviewee, the staff in procurement are from multi-disciple such as: procurement and logistic, management, banking and insurance, chemist and industrial engineers. While asked to explain the access to training, both replied that almost no training was given in the last year. They were asked to justify why the department was staffed by 65% only, they replied that, the staff plan was studied by consultant named by IPS (Industrial project service), and the plan was based on full capacity of the function, but due to different reasons mainly foreign exchange shortage, the function is not fully occupied, hence the available staff strength are adequate for the time being. Regarding staff motivation, both interview fell that the procurement function is prone to blames, and most of the

procurement personnel work under immense pressure, moreover there was no reward system for the function; hence they feel the motivational level of the staffs may not be up to the required level.

The final question raised to the interviewee was to state the main challenges and problems in the department and also to indicate possible solutions:

Accordingly the following pointers were suggested by the interviewee:

- The hard currency shortage is the most bottleneck for the company, and the management need to work toward generating its own foreign exchange
- The company's data management system and internal communication among functions is poor, and hence it is better to invest in information technology, may be better to look for Enterprise Resource Planning (ERP)
- The focus to staff training and development is minimal , and need to be improved
- The company's heavy dependency on imported input may be risky for the company, hence it is better to work collaborate with local manufacturers to minimize the dependency.

As per the reply for the open ended question, the interviewee generally agree that the compliance level of procurement function to policies and procedures was moderate; which is matching to the mean value of the finding in table 4.2. With regard the right quantity purchase, the interviewee opinion is moderate which is on higher side when compared to the mean value in table 4.3; and this indicates that the purchasing personnel assumption is not matching with the user perception in this regard. On the parameter of quality purchase and staff competency, the interviewee perception is moderate which is matching with the finding of the respondents. With regard the right time purchase performance, the interviewee perception from process owner was moderate which is not matching with the finding of the users as stated in table 4.5



## **4.6. Review of secondary data**

By using the pre-prepared checklist, some related secondary data were reviewed and the findings are summarized as follows.

### **A) Review of related secondary data with regard to compliance to procedures**

The first aim of the data review was to assess the availability of written procedures. Accordingly the researcher has got a permission to access to the manual and procedures of APF, and the original color print of 'Procurement manual prepared by EFFORT in 2014' was in-place with the procurement personnel. The manual have clear policies and procedure, and all purchases are needed to be centralized. Overall the theme of the manual seems the focus for competitive purchase and transparency. And the brief policies and procedures of the manual is summarized as follows:

- The local purchase shall be preferred from foreign purchase
- The procurement method, the vendor selection and approving authority shall be as per the threshold stated manual
- The vendors list shall have to be prepared and vendors has to be evaluated based on pre-stated criteria
- All purchase information should be recorded properly and available for easy reference
- The procurement function should negotiate and form contract for major purchases
- The procurement function shall properly follow the order using logbook and shall generate regular status reports.
- All procurement personnel should adhere to the ethical conducts of procurement

The researcher has used these guidelines to assess the degree of application of policies and procedures in APF.

The second objective of the review was to asses awareness of related employees to written procedures, accordingly proof of written training record was requested from the procurement heads and administration head. There was few assignment letters given to newly recruited personnel which dictates to read different manuals including procurement manual, but there was no proof of awareness training to existing employees. As per Chrispus (2015), training has positive effect on compliance to procedures, hence APF may need to invest in training to improve the degree of compliance to written policies and procedures.

**B) Review of related secondary data with regard to Right quantity purchase**

Two purchase order files of imported raw materials were reviewed with respect the quantity estimation practice, the material name of imported item in both files was “Amoxicillin Trihydrate compact”; and they are shipped in with in two month difference. While clarification was sought from the relevant personnel, it was answered that the base for the quantity estimation was purchase requisition (PR) and availability of foreign exchange. The related Purchase requisition were referred but the required requested quantity was 50,000kg but the ordered quantity from same order was 20,000kg and 10,000kg each. This may indicate that the estimation and procuring of economic order quantity (EOQ) is not systematic and dependent on forex availability and personnel experience of container size.

**C) Review of related secondary data With regard to Right quality purchase**

Upon request, the related procurement personnel was cooperative to allow the access to specification files. As it was reviewed there were well sequentially filed readymade specification for raw and packing materials. Each specification has unique document number and version, which able for users to access it, but there was no readily available specification for other category of items. Interestingly, there was long list of ‘short listed suppliers’ for input materials. In the short list, number of approved supplier per item varies from one (single source) to the extent of six supplier. The company has vendor qualification procedure, which was said to be prepared based on the EFDA guideline. As per the vendor qualification procedure, there is a long process which takes minimum six months’ time to approve new source. And this procedures seems contradicting with the company procurement policy of purchasing goods on bid system.

**D) Review of related secondary data with regard to right time Purchase**

The operational nine month report of APF procurement for the year 2019/20 were accessed, and in the report the performance of the function with respect to the lead time were analyzed. The planned lead time (external lead time only) was three month for sea shipment and one and half Month for air shipment, but the reported actual lead-time, (specially the sea shipment), was found higher than the planned lead time. As per the report there were some purchased consignments which stayed in destination dray port for few weeks waiting clearance; the reason for delay was reported as document discrepancy. The planned lead time of three months by itself seems long, which may impact the company’s agility to accommodate unplanned orders from customer.

**E) Review of related secondary data with regard to competency of personnel**

Upon request, the author has accessed the organizational structure of APF, and the procurement function is one of the 14 department's organized the company. The procurement department has clear structure and staff plan. Out of the planned staff strengths, about 63% were staffed, but if the staff plan was studied and planned properly, 37% vacant seems bigger gab. As per the nine month performance report of the function, there was no external or internal training given to the procurement staff in the period. This finding is in line with the survey result of respondent, and it seem one of the weakest area which may need attention.

## CHAPTER FIVE

### 5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter presents the discussion of key data findings, conclusion drawn from the findings and recommendation.

#### 5.1. Summary

Based on the analysis and interpretation of the data obtained from all categories of the respondents the researcher has summarized the findings as follows:

- ⇒ The majority of respondents moderately agree with mean value of 3.80, that the ‘procurement policies and procedure’ are being practiced at APF. Specifically, the policy to focus on ‘local sourcing’ and ‘contract management’ are being practiced to great extent. Whilst the order follow-up and record management practice were rated relatively lower. Respondent suggests that the existing procurement manual, has little room for flexibility and is not specific to pharmaceutical.
- ⇒ With regard the performance of procurement on availing the ‘right quantity material’, the majority of respondent has rated slightly higher than the neutral (mean value of 3.31), which can be understood as slight dissatisfaction on the performance of the procurement on this regard. Out of the item for right quantity purchase, the planning practice was rated with the least value. Some respondents reaffirm that there exists repetitive urgent and unscheduled purchase in APF, and this might be the right indication for the poor planning practice within the company. The interviewed personnel from procurement also agree that the performance on this regard is not satisfactory, and believe that data automation could improve the planning practice as well as the overall performance of procurement.
- ⇒ The study revealed that, the performance of procurement on availing ‘right quality material’ was rated relatively better with mean value of 3.87, which can be assumed as satisfactory performance in this regard. As per the respondent, the practice of ‘prier testing input materials’ is agreed to the great extent and, this was suggested as good practice which could minimizes risk of procuring wrong materials. Some respondents suggests building strong business relationship with few reliable vendor could enable to get consistent quality

product. Though such proposal of focusing on few vendors may need shift in existing company policy.

⇒ Generally, the respondents slightly disagreed on the procurement performance with regard availing material ‘at right time’ with mean value of 2.94. Specifically the internal lead time, (the time required to bidding, selecting, approving and awarding supplier), was rated at lowest value. This may indicate that unnecessary time delay with in the pre-ordering process may be elongating the total lead time. Some respondents’ suggest that the main reason for the long purchase lead time is the scarcity of hard currency. But the company will have little control, as hard currency is national-wise problem, rather improving the subjective problems may add value to the company.

⇒ Though, the general competency of APF’s Procurement personnel was rated as moderate (mean value of 3.52), relatively ‘the knowledge of the personnel on WHO’s Good Procurement Practice’ and ‘the practice of training’ were under-rated. For pharmaceutical company, it is compulsory to familiarize all the personnel with WHO’ good procurement practice, moreover regular training could improve the competency of the personnel. Similarly, from the interview of procurement personnel, one of the suggested area of improvement was focus on training and capacity building of personnel’s. Some respondent suggests that the existing performance appraisal system of the personnel was not effective. Moreover in order to uplift the motivation of personnel, it was suggested that appraisal system need to be supported by incentive mechanism.

## **5.2. Conclusion**

Procurement department plays a key operational role, in pharmaceutical manufacturing. In Addis pharmaceutical Company SC, procurement was organized as a department and is one of the key function across the supply chain line. The purchasing process of APF, is centralized and majority of the company’s revenues is allocated for purchase of inputs via this function. Therefore the performance of the procurement department will likely have significant impact on the entire company performance.

The main objective of the study was to assess the procurement performance at Addis Pharmaceutical Factory SC. To achieve the stated objective, the procurement performance was

assessed using compliance to procedure, right quantity purchase, right quality purchase, right time purchase and overall capability of the personnel.

Hence based on the finding it can be concluded as follows:

- ✚ The assessment reveal that , the written procedures and manual of APF procurement were mostly applied; but even the rare compromising of some procurement procedures may lead to misuse of resources and may give room to unethical practices. Even if the manuals lacks room for flexibility, it is better to revise it instead of breaching it.
- ✚ It was found out that, APF procurement has weaker practice of delivering the right quantity materials which is associated with poor planning, order estimation and follow-up. Problem in right quantity purchases results in either stock-out or over-stock. Stock-out interrupts production schedule which may untimely affects the company's revenue. And on the other side, over-stock creates financial burden to the company.
- ✚ As per the assessment, relatively the performance of APF with regard procuring quality materials was found to be satisfactory. But satisfactory in quality means still there is minor deviation which needs improvement. The pharmaceutical manufacturer produces medicines for human use and, is expected to produce quality medicine at zero tolerance. Hence, even the rare quality discrepancy in input material purchase could result in defective medicine.
- ✚ The study reveals that, the purchase lead time at APF was found to be very long, which is associated to long order processing time and partly related to hard currency availability. Long lead-time restrained company's agility to accommodate changing customer requirements. Moreover it was found out that purchased items did not arrive at factory as per the planned time and, usually delayed delivery results in stock out, which could affect production schedule.
- ✚ As the survey result portrays, the general capability of the personnel in APF procurement were found to be moderate, but the focus to training and development was said to be minimal. The respondent reveals that the pharmaceutical manufacturing sector in Ethiopia is prone to number of challenges, which demands a very capable personnel. One of the main tool to build capability of the personnel is through training and development; hence the lower focus to training & development is likely to affect the company's performance.

Generally, it can be concluded that overall performance of the procurement function was found to be moderate, this indicates there is more room for improvement.

### **5.3. Recommendation**

Based on the finding and conclusion of study, the following recommendations were suggested:

- ✚ The WHO's Good procurement concept and planning knowhow of the procurement personnel were found unsatisfactory, hence regular staff training and grooming need to be carried out to attain superior knowledge in the entire procurement process of APF.
- ✚ The study shows that the overall purchase lead-time is very long, hence the company shall review the entire procurement process and need to avoid non-value adding processes
- ✚ The procurement department of APF need to exercise proper planning in coordinate with other related function within the supply chain.
- ✚ The company working manual was commented to be relatively rigid, very generic and old; hence it is recommended to revise the manual considering the current scenario and contemporary concept of procurement.
- ✚ The order tracking, record management, and other activities of procurement can be improved through data automation. Hence the company shall consider investing in ICT, such as enterprise resource planning (ERP).

#### **Suggestion for further study**

Due to resource constraints, this study could not use all the five rights, and specifically the right price and right place were not assessed, hence assessing the performance including these parameters could give more accurate result. Linking the procurement performance with company's profitability could be also another suggested further research.

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# APPENDIX I

## QUESTIONNAIRE

**Dear respondents,**

This questionnaire is designed to study the ‘**Assessment of Procurement Performance of a Factory: The case of Addis Pharmaceutical Factory S.C**’.

The objective of this questionnaire is to collect relevant data related with procurement performance of Addis Pharmaceutical Factory S.C. And the information that you will provide has a significant role for academic and related improvements.

As the study will be purely for academic purpose for the completion of Master’s Degree of Business Administration (MBA), your response will be kept confidential and will not be used for any other purpose.

Therefore, you are kindly requested to respond by putting “✓” mark on the box and give additional explanation if required.

I would like to thank you in advance for your kind cooperation.

*Please do not hesitate to contact me by the following address for any inquiry*

Cordially yours,

Tesfay Hailu

+251-929930594

E-mail Address: [tesfayhagosa@gmail.com](mailto:tesfayhagosa@gmail.com)

## SECTION 1: BACKGROUND INFORMATION

*Direction: Kindly respond by putting tick mark (✓) in the front-box from the given alternatives*

1. Gender:         Male             Female
2. Education Back ground:
  - Diploma     1<sup>st</sup> Degree     2<sup>nd</sup> Degree or above
  - Others specify \_\_\_\_\_
3. Professional In charge /coordinator
  - Purchase & Supply Chain     Finance and Accounting     Management
  - Pharmacist and chemist     engineering and maintenance
  - Others, please specify\_\_\_\_\_
4. Year of experience in the company (total year)
  - Less than 2             2-5             6-10             >10

## SECTION IMAIN RESEARCH QUESTIONS

*Direction: Please rate, (from 1 to 5), your degree of agreement for the statement stated in the table under each indicators, and please put tick mark “✓” in your selected points from the five alternatives*

### 1. Compliance to procurement policies and procedures of APF

Please rate the degree of compliance to company policies and procedures at APF

S/N	Indicators/Statement of procurement practices	5- Strongly Agree	4- Agree	3- Neutral	2- Disagree	1- Strongly Disagree
1.1	APF Procurement department exhausts local sourcing before going to foreign purchase					
1.2	APF procurement function collects offers as per the procurement methods stated in the manual					
1.3	APF’s Purchase related information’s are properly recorded, files are traceable and stored safe					
1.4	APF procurement function has shortlisted vendors, and winner supplier is selected based on pre-stated selection criteria					
1.5	APF department usually forms contracts for every purchase of different items as per manual					

1.6	APF procurement function have proper order follow; and sends regular status reports to users					
1.7	The procurement personnel of APF respects the ethical standard to select the best vendor					

1.8 What do you think the main factors which affects policies and procedures implementation at procurement function

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1.9 Please put your remarks (if any) about compliance to policies and procedures

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## 2. Right Quantity purchase

Please rate the degree of your consent with regard the purchasing of the right quantity at APF

S/N	Indicators/Statement of Right Quantity	5- Strongly Agree	4- Agree	3- Neutral	2- Disagree	1- Strongly Disagree
2.1	APF procurement has practice of estimating optimum economic order quantity (EOQ)					
2.2	APF procurement function have regular time bounded procurement planning practice.					
2.3	APF procurement personnel considers economy of scale to get the best rate and to minimize logistics costs.					
2.4	The average ordering costs of APF is reasonable					
2.5	The shortage/ overage of procured items at APF are very minimal or less than 1%					

2.6 What do you think the main factors which affects in procuring of right quantity materials?

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2.7 Please put your remarks (if any) about right quantity purchase

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### 3. Quality of products and services purchased

Please rate the degree of your consent with regard the quality of purchase at APF

S/N	Indicators/Statement of purchase of quality items	5-Strongly Agree	4-Agree	3-Neutral	2-Disagree	1-Strongly Disagree
3.1	The Procurement functions usually describes full specification on the Purchase Order					
3.2	APF procurement function arranges sample for testing, before placement of commercial order.					
3.3	The procured items meet the specification defined in the purchase order and/ or implied user requirements					
3.4	The chance of defects of purchased goods are minimal (less than 1%)					
3.5	Procurement function has written procedure in place for rectifying any quality non-conformance					

3.6 What do you think the main factors which affects quality of purchased goods/services?

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3.7 Please put your remarks (if any) about quality of procured goods/services

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#### 4. Right time purchase

Please rate the performance of APF procurement with respect Right times

S/N	Indicators/Statement of Right time	5-Strongly Agree	4- Agree	3-Neutral	2- Disagree	1- Strongly Disagree
4.1	APF Procurement personnel has practice of measuring purchase lead time and comparing with plan.					
4.2	The <b>Internal purchase lead time of APF</b> , ( the time from PR to PO Date), is short or reasonable					
4.3	The <b>external Purchase lead time of APF</b> (PO Date to receipt of material at factory), is reasonable time					
4.4	The <b>total Purchase lead time of APF</b> , ( PR Date to receipt of material at factory), is reasonable time					
4.5	APF Procurement has criteria of rewarding or penalizing suppliers based on their delivery time performance					

4.6 What do you think the main factors which leads to shortening or elongating lead time?

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4.7 Please put your remarks (if any) about purchase lead-time

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#### 5. Competency of Procurement Personnel

Please rate the knowledge and skill of procurement employee at APF

S/N	Indicator/Statement of Employee Competency	5-Strongly Agree	4- Agree	3- Neutral	2- Disagree	1- Strongly Disagree
5.1	Most procurement staffs of have the required work experience for the position					
5.2	APF Procurement function have adequate number and proper mix of professionals					
5.3	Procurement staffs continually upgrades their skill and knowledge through regular training and education					

5.4	Procurement staffs have basic knowledge about WHO's Good procurement practice					
5.5	Procurements staff reads and updates themselves with changing rules and regulations of the country and the globe					

*5.6 What do you think the main factors which affects the competency of the staff?*

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*5.7 Please put your remarks (if any) about procurement personnel competency*

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Thank you very much for your time

## APPENDIX II

### STRUCTURED DESK TOP REVIEW QUESTIONS

Secondary data will be reviewed using the following check list:

- A. `Structured Desk Top Review Questions Guideline for **Assessment of APF S.C's compliance to policies and procedures policies and procedures**
  - 1. To asses availability of written manuals and procedures in place,
  - 2. To review and note the main procedures, which will be used as a base for the study of the first dimension.
  - 3. To asses awareness of employee on the manual using Training record (if any)
- B. Structured Desk Top Review Questions Guideline to review **right quantity purchase**
  - 1. To review the order estimation process by taking sample files
- C. Structured Desk Top Review Questions Guideline to review the **Quality of products and services purchased**
  - 1. To assess the availability and completeness of specification for frequently purchased items
  - 2. To review the availability of approved venders for regularly purchased items
- D. Structured Desk Top Review Questions Guideline to review the **Purchase Lead time**
  - 1. To review the actual lead time of one year from the company's report
- E. Structured Desk Top Review Questions Guideline to review the **Competency of Procurement Personnel**
  - 1. To review the Organizational structure and staff plan of procurement function
  - 2. To review the practice of training and development of procurement staffs. (referring records, if any)