



**ASSESSMENT OF INVENTORY MANAGEMENT
PRACTICES IN THE CASE OF AGP POULTRY PLC**

**BY
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**June, 2022
ADDIS ABABA, ETHIOPIA**

**ASSESSMENT OF INVENTORY MANAGEMENT PRACTICES IN
THE CASE OF AGP POULTRY PLC**

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(SGS/0202/2013A)**

**A THESIS SUBMITTED TO SAINT MARY UNIVERSITY
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**SCHOOL OF GRADUATE STUDIES PROGRAM MBA IN
ACCOUNTING & FINANCE**

**June, 2022
ADDIS ABABA, ETHIOPIA**

Declaration

I, **Aklilu Taye Mesay**, the undersigned, declare that this thesis entitled: “**Assessment of Inventory Management Practices in The Case of AGP Poultry PLC**” is my original work. I have undertaken the research work independently with the guidance and support of the research advisor. This study has not been submitted for any degree or diploma program in this or any other institutions and that all sources of materials used for the thesis has been duly acknowledged.

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Endorsement

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as the university's advisor for the investigator.

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St. Mary's University

June 2022

Certificate of Approval of Thesis
School of Graduate Studies
Saint Mary University

This is to certify that the thesis prepared by **Aklilu Taye Mesay**, entitled “**Assessment of Inventory Management Practices in The Case of AGP Poultry PLC**” and submitted in partial fulfillment of the requirements for the Degree of Master of Business Administration (MBA) in Accounting and Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

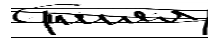
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Acronyms

DOC	Day-old Chickens
EC	EthioChicken Group
EEU	Ethiopian Electric Utility
EOQ	Economic Order Quantity
IFC	International Monetary Fund
IM	Inventory Management
PFSA	Pharmaceuticals Fund and Supply Agency
ROP	Reorder Point
SNNPR	Southern Nations, Nationalities and Peoples Region
ZMH	Zewditu Memorial Hospital

Abstract

The study aims to focus on assessing inventory management practices in AGP Poultry Plc using descriptive research to imply areas of gaps to be studied and lay a foundation for other fellow academic researchers in the area. Both primary and secondary sources of data were used. The primary data was gathered through questionnaire. While the secondary data was obtained from various sources which are relevant for the study through document analysis. The target population of this study was employees of the study company that have different roles and responsibilities in the inventory management and supply chain of the company and have at least stayed for two years in the company. The total population of the target group is 196 employees from which sample have drawn for this study. The sample size for targeted population of the study is 132 using Yamane's (1967) formula but only 106 were able to provide the full questionnaire response. Once the sample size was identified, the sample items in each number of samples distributed to each department at the time of questionnaire distribution, respondents selected using purposive and stratified sampling technique of non-probability sampling technique. Results of study shows the bureaucratic systems of procurement were the main issue that contributes to unacceptable contract delays, increased costs followed by bureaucracy expects conformity in behavior rather than performance, proper documentation ensures that material availability meets its needed stock demand, while clear and error free inventory records is a must in order to provide a satisfactory customer service, an inadequate funds of organization are the other difficulties in running its activities as per the respondents. And finally, qualified staff that is competent and skilled helps the organization to achieve its goals and objectives by being effective when carrying out their various functions as per the respondents. the study concludes that bureaucratic procurement procedures had a positive impact on the practice of inventory management in the study area, documentation is also crucial in ensuring well organized inventory management, stock records provide the management with the information which is used to ensure accountability through stocktaking and stock audit exercise. The study disclosed that in AGP Poultry Plc to achieve a superior performance in the inventory management, funding and necessary to recruit, train and develop personnel with the capacity and motivation to do better job which has positive effect on the practice of inventory management in the study area. The study also recommends enhancing bureaucratic procurement procedures through elimination of overlapping or conflicting jobs or duties and behavior of the system can boast the IM practices with proper documentation that ensures material availability meets projected demand, and accuracy of inventory records is necessary to retain and attract satisfied customers, monitored skill set of the employees are valuable to the company and funding is not the only factor that strengthens the practice of IM practices as well.

Key Words: *Inventory; Inventory management; Procurement Practices; funding; Documentation; skills.*

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

The 21st century business environment is characterized by globalization, free markets, technological improvement, and constant change in customer and investor demands, competition has become vital for the survival of any organization. The market experiences fierce competition and only those who offer better products or services than their competitors will survive and organizations that are keen towards large scale success must at all times sustain its service availability as consumers can very easily divert their interest elsewhere (Sharma, 2004). Therefore, managing inventory effectively has become an essential operational tool for products and service businesses with a goal of sustaining in the competitive pressures.

In the past, inventory management was not one of the main aspects of an organization. Actually, owing surplus inventories were considered as sign of wealth. Due to this perception, over stocking was seen throughout management as valuable. However, these days' companies have accepted that it's necessary to implement an effective inventory management (Susan & Michael, 2000). Inventory Management (IM) plays a decisive role in the enhancement of efficiency and competitiveness of business enterprises. Effective inventory management entails holding an appropriate amount of inventory. Too much inventory consumes physical space, creates a financial burden, and increases the possibility of damage, wastage and loss. On the other hand, too little inventory often disrupts business operations, and increases the likelihood of poor customer service (Dimitrios, 2008). According to Rajeev (2008), there is increased need for business enterprises to embrace effective inventory management practices as a strategy to improve their competitiveness.

According to Kotler (2000), inventory management refers to all the activities involved in developing and managing the inventory levels of raw materials, semi-finished materials (work-in-progress) and finished good so that adequate supplies are available and the costs of over or under stocks are low. Inventories are essential for keeping the production wheels moving, keep the market going and the distribution system intact. They serve as facilitator and launching pad

for the production and distribution systems of organizations. Inventories make possible the smooth and efficient operation of manufacturing organizations by decoupling individual segments of the total operation.

Inventory management is concerned basically with planning and control of materials. It deals with where to buy, when to buy, and how much to buy to ensure uninterrupted supply of inventory at lowest possible cost for ongoing operation of business. The primary goal of inventory management, therefore, is to have adequate quantities of high-quality items available to serve customer needs, while also minimized the costs of carrying inventory (Brigham & Gapenski, 2013).

Inventory management systems are developed with the aim of reducing costs associated with IM. Inventory management systems are however described as complex systems to develop. This is attributed to the fact that inventory management spans through most of the departments within an institution each having its own heterogeneous functions. Moreover, institutions should integrate their inventory management systems with those of their suppliers (Power, 2005). By so doing, the efficiency of the supply chain process will be significantly enhanced. According to Power (2005), developing integrated inventory systems is one of the challenges that organizations face as they develop inventory systems. In addition, complex systems are costly to develop and thus discourage organizations from developing them. According to Cagliano et al., (2011) adoption of inventory management systems has huge initial cost implications for the firm, but the firm stands to benefit in the long run. The benefits of the IM systems include, increased operational efficiency, lower institutional and operational costs, shorter lead-times, and reduced inventory.

Inventory management is a critical management issue for organization regardless of their size and types, as it involves cost and the need to balance between demand and supply. Therefore, efficient inventory management practices are vital in ensuring inventories are enough to satisfy expected demands and customer needs. This study examines the inventory management practices in AGP Poultry Plc.

1.2. Overview of the Company

Ethiochicken Group launched in 2010 with its first breeder farm, hatchery, and Feed Mill plant. The group has three sister companies namely, AGP Poultry Plc, Andasa Poultry and Mekelle Farms Plc with the last one out of operation and sales recently for more than a year ago due to the current crisis in the Northern part of our country. In 2014, after several years of research and development, the company introduced the SASSO T451 breed to Ethiopia. The SASSO T451 is a dual-purpose (eggs and meat), hardy, free-range, scavenging chicken which thrives among rural smallholder farmers. Ethiochicken (EC) has grown rapidly into a nationwide company, employing over nearly 2,000 Ethiopians, and distributing more than 20 million birds each year. The company currently produces day-old chicks (DOCs) at eight breeder farms and four hatcheries located in Oromia, SNNPR, Amhara, and Tigray Regions and out of which six breeder farms, two hatcheries and two feed mill plants are under AGP Poultry Plc (AGP). The rest are owned by Mekelle Farms Plc and Andassa Poultry Plc each having one breeder farm and one hatchery center by themselves. The company's DOCs are distributed throughout Ethiopia to thousands of agents in rural woredas, who raise the birds for four (4) to Six (6) weeks until they are strong enough to sell to the millions of smallholders. Equipped with a high-performing, appropriate breeds supported by commercial vaccines and commercial feed to smallholder farmers who rear the chicks achieve four times increase in productivity compared to local chicks (birds) thereby improving their income, family nutrition, and productivity. The group also has two feed mills producing top quality feed and supplies commercial farmers with layer-type chickens for egg production. The growth of EC was made possible by its partnerships with government, investors such as Finnfund, IFC, and the Bill and Melinda Gates Foundation, and by the commitment and passion of its dedicated team.

1.3. Statement of the Problem

Due to the nature of the sector, in the AGP's balance sheet, inventories cover the majority share current assets i.e., eggs, day-old-chicken, feed and different raw materials. The company operates 6 breeder farms, 2 hatcheries and 2 feed mill plants as a result a significant amount of AGP's budget is used for maintaining a sizable amount inventories. Therefore, to prevent excessive cost and sustain providing quality product to customers, successfully managing these

inventories has become a serious task. However, due to the vastness of the project and type of stock and product, the company often experience shortage of raw materials, unaccounted inventory, and excessive goods. In addition, the due to uncoordinated procurement order and negligence, there was an inconsistency between the data recorded in the stock control ledger and the actual physical stock balance at the central store. Based on these issues that ineffective inventory management affects nearly the organizational objectives demands this type of research work.

However, based on the researcher's observation, previous studies conducted on inventory management practices have been in manufacturing, military, service provider, health center and construction sector. There is not any study that has been done on inventory management of poultry sector such as AGP Poultry Plc. Therefore, the study certainly fulfills the gap by assessing areas of inventory management practices in AGP Poultry PLC through developing up to date conceptual and empirical theories.

1.4. Research Questions

This Study focused on in search of answer to the following research questions to address the stated problem:

1. What type of inventory management practice is implemented in AGP Poultry PLC?
2. Is procurement procedure, documentation and funding have an implication on inventory management practices of AGP Poultry PLC?

1.5. Objectives of the Study

1.5.1. General Objective

The general objective of the study was to assess the inventory management practices in AGP Poultry plc.

1.5.2. Specific Objectives

The specific objectives of the study are:

- To assess procurement procedures and funding on the inventory management practices in AGP Poultry plc.
- To describe documentation and recording implementations and identify the staff level for inventory management practices in AGP Poultry plc.

1.6. Significance of the Study

Inventories represent a sizeable investment and a potential source of waste that needs to be reviewed regularly and closely reviewed. e.g., through perpetual stock taking, periodic reviews also as well as internal and external auditing. Thus, an effective inventory management is vital to ensuring that budget is utilized appropriately. To understand how different factors affect the inventory management system, this study will play a vital role and shows AGP Poultry Plc management their inventory management practices status in relation to the variables the study chooses to assess. The findings of this study could form part of the action plans that would help AGP to gain competitive advantage over their competitors through reviewing their system.

Future and present scholars could use the results of this study as a source of reference. The findings of this study could be compared with inventory management in other sectors to draw conclusions on various ways an organization can overcome issues that impact its inventory management. It could also benefit consultants who endeavor to provide assistance to successful running of organizations in developing and sustaining a competitive edge in their industry.

The information gap on the subject area is one of the major factors that initiated the researcher to conduct this study; hence, this study will fill the information gap for the assessment of inventory management practices in the poultry sector in Ethiopia and adds valuable information on the existing knowledge scenario.

1.7. Scope of the Study

The research attempted to assess the inventory management practices in AGP Poultry plc.

1.7.1. Subject Scope

This study focused on assessing the inventory management practices in AGP Poultry plc to shade light about the study variables in relation to the poultry sector, particularly AGP. In this study,

the inventory management practice has been assessed in reference to funding, procurement practice, documentation and staff skills. The study includes participants in the supply chain and distribution channels, warehouse and departments that have direct influence in the inventory management of the company.

1.7.2. Geographical Scope

Ethiochicken group has three subsidiary companies operating in Ethiopia, namely; (a) AGP Poultry Plc, head office based in Addis Ababa where the researcher is based including other several production and operation sites such as two (2) feed mill production plants found in Burayu and Gelan, Oromia Region near the capital, five (5) breeder sites which hold parent chickens producing fertile eggs for hatchery based at Gubre, Attat and Emdibir in Gurage Zone of SNNPR and the remaining in Warabe, Silte Zone of SNNPR. (b) Mekelle Farms Plc based in Mekelle, Tigray and (c) Andassa Poultry Plc based on the outskirts of Bahir Dar with its head office based in Bahir Dar, Amhara Region. Therefore, due to location and transportation challenges, the time scarcity, lack of funding and budget requirements, challenges in physical and electronic access to data collection and communication, existing safety caution due to the instability crisis in Northern part of Ethiopia, the study was limited to mainly focus on AGP Poultry Plc out of the above three listed affiliate sister companies of Ethiochicken group.

1.7.3. Time Scope

The study was conducted between 00th Month and 00th Month 2022. The researcher considered this period to be reasonable for proper assessment of inventory management practice of AGP Poultry Plc.

1.8. Limitations of the Study

Sample size limitations as the study only considered employees in the supply chain and distribution channels, warehouse and departments that have direct influence in the inventory management of the company, located in the Addis Ababa which impacted the size of the sample population. There are also limitations with the availability of literature in the area of inventory management in the poultry sector especially in the context of Ethiopia.

1.9. Organization of the Study

This study was organized into five chapters. The first chapter comprises introduction which includes background of the study, statement of the problem, objective of the study, basic research questions, significance, scope, limitation of the study and definition of terms. Review of related literatures that includes theoretical review, empirical reviews and conceptual framework was discussed in the second chapter. The third chapter was about the research methodology that was applied in the study. The data analysis, interpretation and discussion of results were presented under chapter four. The fifth chapter presents the major findings, conclusion, recommendation, research limitation and areas of future research.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter aimed at giving insight to the researcher regarding the study. It included literature works from the books, journals and previous studies which are relevant to supply chain management applications in different fields. The literature review is divided into two major parts: theoretical review and empirical review. This chapter will also provide a conceptual framework to show the relationship between the dependent and independent variables.

2.2. Theoretical Review

2.2.1. Inventory Management

The word inventory refers to the goods or resources used by a firm for the purpose of production and sale. It also includes the matter, which are used as helpful materials to ease production. There are three basic types of inventory raw resources, work-in-progress and completed goods. Raw materials are the items purchased by firms for employ in production of finished manufactured goods. Work-in-progress consists of all items currently in the process of production. These are in fact partly man-made products. Finished goods consist of those items, which have already been shaped but not yet sold (Ghosh & Kumar, 2003).

Inventory management is defined as a science-based art of ensuring that just enough inventory stock is held by an organization to meet demand. Inventory is the availability of any stock or resources at right quantity and quality used in an organization. An inventory management system is the set of policies that controls and monitors inventory level and determine what level should be maintained, how large orders should be made and when stock should be replenished so as to support the operation of the business (Miller, 2010).

The availability of materials whenever and wherever required activities were essential for the procurement, storage, sales, disposal, or use of material can be referred to as inventory management. Individual responsible for inventory management have to know the space they

have for storage and provide information when materials reach at their minimum level and utilize available storage space resourcefully, so that available storage space is not exceeded. They have to assist the organization to decide what quantity to order, how to order and when to order so that stock is available on time and at the optimum cost (Bose, 2006).

Inventory management involves planning, organizing, and controlling the flow of materials from their initial purchase unit through internal operations to the service point through distribution. Inventory constitutes one of the largest and most tangible investments of any organization which also decides their success in operation. It refers to the process of managing the stocks of finished products, semi-finished products, and raw materials by a firm. Inventory management, if done properly can bring down costs and increase the revenue of a firm (Saxena, 2009).

Inventory management covers replenishment lead time, carrying costs of inventory, inventory forecasting, inventory valuation, inventory visibility, future inventory pricing, physical inventory, available physical space for inventory, quality management, replenishment, and returns. Balancing these competing requirements leads to good inventory management system, which is an on-going process as the business needs shift and react to the wider environment (Ghosh and Kumar, 2003).

There is need for installation of a proper inventory control technique in any business organization in developing country like Ethiopia. According to Kotler (2002), inventory management refers to all the activities involved in developing and managing the inventory levels of raw materials, semi-finished materials (work-in-progress) and finished good so that adequate supplies are available and the costs of over or under stocks are low. Therefore, the basic goal of managers in one organization must be to maintain a level of inventory that will provide optimum stock at lowest cost.

2.2.2. Objectives of Inventory Management

Managing inventories have significant impact on the productivity of organizations. Keth et al. (1994) stated that the major objective of inventory management and control is to inform managers how much of a good to re-order, when to re-order the good, how frequently orders should be placed and what the appropriate safety stock is, for minimizing stock outs. Thus, the

overall goal of inventory is to have what is needed, and to minimize the number of times one is out of stock.

Additionally, the main aim of inventory management is to ensure that organizations hold inventories at the lowest cost possible while at the same time achieving the objective of ensuring that the company has adequate and uninterrupted supplies to enhance continuity of operations (Mpwanya, 2005). A study carried out by Bhausahab & Routroy, (2010) shows that companies are keen in managing their inventory so as to reduce costs, improve the quality of service, enhance product availability, ultimately ensure customer satisfaction, and has a huge financial implication on both the customer satisfaction and financial performance of an enterprise.

There are reasons to organizations to give emphasis for their inventory management. It is known that inventory is often where the biggest costs are hidden in businesses (Harrington, 1996). According to Goor & Weijers (1998), stocks are responsible for a large part of the total working capital costs: up to about one third. This indicates that inventory costs represent a significant component of total logistics costs consequently the biggest benefits can thus be gained by reducing these costs. From the above perspective this excess capital invested in stocks is thus, from a company-perspective, a ‘useless’ waste of money. The second thing is that stocks are a source for risks. For example, stock may catch fire, can be stolen, damaged or may decay over time. Consequently, these events might influence the production process and could even cause it to stop, and orders are delivered too late accordingly. So having good inventory management system helps the organization in several ways.

2.2.3. Inventory Management Model

Inventory management is a systematic approach to sourcing, storing, and selling inventory—both raw materials (components) and finished goods (products). In business terms, inventory management means the right stock, at the right levels, in the right place, at the right time, and at the right cost as well as price. The stock might be kept “in-house”, which means in the vicinity or close by for sure-fire use; or it could be held in a removed stockroom or dispersion place for some time later. Except for firms using in the nick of time strategies, usually, the expression “stock” infers a put-away amount of merchandise that surpasses what is required for the firm to work at the current time.

The significance of inventory management models is in the exactness it gives. You can discover which items are selling and which ones are not, which things you need to have available and explicitly what amount is required. Also, when you know these subtleties, you can lessen operational costs, lower stockpiling expenses and set aside your business cash.

The different inventory management models. Three of the most popular inventory management models are Economic Order Quantity (EOQ), Inventory Production Quantity and ABC Analysis.

Each of the inventory management models has an alternate way to deal with assisting you to know how much stock you ought to have available. Things you choose to utilize relies upon your business.

2.2.3.1. Economic Order Quantity (EOQ)

Best eCommerce traders and retail operators are driven by a prudent rationale to keep away from stockouts. Utilizing deterministic inventory management models – like the Economic Order Quantity (EOQ) model – will assist you with processing an ideal request amount that limits stock expenses (and keep away from the most dreaded part of eCommerce). The EOQ is a recipe that figures the most prudent number of things a business should request to limit costs and boost esteem when reloading stock.

$EOQ = 2DS/C$, D = Annual Demand, C = Carrying Cost, S = Ordering Cost

In any case, the EOQ model expects a (consistent) request of an item and prompts accessibility of things to be restocked. It does not represent occasional or economic fluctuations. It expects fixed expenses of inventory units, requesting charges and holding charges. No stockouts are allowed. This inventory model requires nonstop checking of inventory levels. The viability of the essential EOQ model is generally restricted by the presumption of a one-item business, and the recipe does not permit communication between items. Also, EOQ accepts a boundless arranging skyline and that there is no restriction on capital availability.

2.2.3.2. Inventory Production Quantity

Also called Economic Production Quantity, or EPQ, this kind of inventory management models discloses to you the number of items your business should arrange in a solitary cluster, in order

to diminish holding expenses and arrangement costs. It expects that each request is conveyed by your provider in parts to your business, instead of in one full item.

This model is an augmentation of the EOQ model. The distinction between the two models is the EOQ model expects providers are conveying stock in full to your client or business.

Here is how to calculate your Inventory Production Quantity:

$$2KDh(1-x)$$

K = Setup (order) costs, D = Demand Rate., h = Yearly Holding Cost Per Product, P = Yearly Production Rate, $x = D/P$

* Take the square root of $(2SD)/\text{Production Cost} (1 - x)$

* S is your setup (order) costs- * D is your demand rate (units) - * X is your Demand Rate/Production Rate

This model could be the best choice for your business if:

- Your business will generally request inventory from providers in parts as opposed to one full request, for example, for an automotive organization.
- Interest for items is consistent over various periods of time

2.2.3.3. ABC Analysis

The more cash explicit inventory presents to you, the more significant it is to you. ABC examination arranges your inventory dependent on degrees of significance. By realizing which stock is the main, you realize where to concentrate. To be best, ABC Analysis is often utilized with other inventory management models, like the Just in Time (JIT) technique.

Stock is sorted into either bunch A, B, or C. So how would you know which class to put inventory under? It depends on the 80/20 guideline, otherwise called the Pareto Principle:

Category A: Inventory under this classification gets the most cash and is just a modest quantity of your all-out stock. It accounts for just 20% of your stock however gets 70% of complete income. Category A stock is given the most measure of consideration and has tight requesting controls set up.

Category B: Unlike Category A stock, this Category B stock is not fundamental for your business to endure, however, it actually matters. It is 30% of your stock with 25% income.

Category C: Inventory arranged under Category C is 50% of your items with 5% income. This stock does not get as much benefit as A and B, however, it is steady. Inventory management is quite free here since it gets a modest quantity of pay. If your organization offers administrations or items that all shift significantly in cost, for example, an arranging organization, this will be a viable model for you.

A genuine model is Amazon, whose items cover an enormous scope of costs. Few out of every odd thing you see recorded on their site is available. That would prompt extraordinarily high holding costs, making it hard to make money. So, all things being equal they request stock dependent on what they see with their ABC classification rules.

The drawback to this kind of inventory management models is that you need to classify the correct stock accurately with the goal for it to work. Or else you will be putting all your inventory management models consideration into an item that is not presenting to you the most cash.

There are various ways to manage inventory. This is largely due to different business models with different types of inventory management models, and types of goods and services that are sold across the world. No two businesses are by and large something similar thus they need to discover arrangements that are custom fitted to their particular requirements. Given that every business has a unique location, infrastructure, and logistical layout; it can be difficult to find some inventory management models to align your business processes with.

Inventory management models are methods of optimizing the flow of goods in and out of an organization. Each business is special; thus, they should be adaptable with how they approach

their stock administration. They ought to ask themselves a progression of inquiries and afterward pick the suitable stock arrangement that best meets their requirements.

2.2.4. Inventory Control

According to Eni (2001), defines inventory control as the problems of verifying the quantity, the value, and the balance of the entire range of materials held in the stock, so that it would be easy and possible to give the exact quantities of materials in the store at any given time. It helps the storekeeper (or the inventory controller, as the case may be) to tell how much was ordered (requested for), how many have been used, what is remaining and when to place the next order so that the enterprises would not lack materials to work with at any point in time. Similarly, Sharma (2004), views inventory control as the means by which materials of the correct quantity and quality is made available as at when required with due regard to economy in terms of storage and costs (both ordering and working capital). He also said that inventory control is the systematic ways of locating; storing and recording of goods in such a way that desired degree of service can be made to the operation shops at minimum ultimate cost.

Kumar and Suresh (2008), argue that effective control in inventory is a must for smooth and efficient running of the production cycle with least interruption. They proceed with their argument that this is warranted by varying intervals between receiving the purchased parts and transforming them into final products. They further argue that inventory control would ensure adequate supply of products to consumers and avoid shortages and ensure timely action for replenishment. Inventory control systems may ensure smooth production and hence no stock-out.

According to Arora (2000), the factors to be considered in inventory control include procurement costs, inventory carrying costs, cost of spoilage and obsolescence, cost of running- out of stock and set-up cost. A good inventory control system minimizes the possibility of delays in production that are caused by lack of materials, permits a company to exercise economics in purchasing, essential for an efficient accounting system is deterrent to people who might steal materials from factory, expedite the production of financial statement, allows for possible increase in output, creates buffer between input and output, insures against scarcity of materials in the market and avoid inventory build-up.

Good inventory control system offers the following benefits (Clodfelter, 2003): the proper relationship between sales and inventory can better be well maintained. Without inventory control procedures in place the store department can become overstocked or under stocked. Inventory control systems provide a business with information needed to take markdowns by identifying slow-selling merchandise. Discovering such items early in the season will allow a business to reduce prices or make a change in marketing strategy before consumer demand completely disappears. Merchandise control systems allow buyers to identify best sellers early enough in the season so that reorders can be placed to increase total sales for the store department. Merchandise shortages and shrinkage can be identified using inventory control systems. Excessive shrinkage will indicate that more effective merchandising controls need to be implemented to reduce employee theft or shoplifting.

Organizations that have poor performance in inventory management faced different problems. And Menon (2006), indicates that, this poor inventory control has the following symptoms: high rate of order cancellation, excessive machine downtime due to material shortage, large scale inventories written down because of price decline, distress sales, widely varying rate of inventory losses, large writing down at the time of physical inventory taking, continuous growing inventory quantities, liabilities to meet delivery schedules and even production rate.

Horngren and Harrison (1992) define internal control as the organization plan and all related measures adopted by an entity to safeguard assets ensure accurate and reliable accounting records promote operational efficiency and encourage adherence to company policies. Internal control includes administrative controls and accounting controls. Administrative controls include the plan of organization methods and the procedures that help managers achieve operational efficiency and adherence to company policies. Accounting controls include the methods and procedures that safeguard assets, authorize transactions, and ensure the accuracy of the financial records. Internal controls are policies and procedures established in an organization to authorize transactions to ensure the accuracy of the financial records and to provide assurance that organizational objectives will be achieved.

Internal controls include all policies and procedures adopted by management of the entity to assist in achieving their objectives as far as practicable. The controls are aimed at aiding

management in carrying on business in an orderly and efficient manner and showing transparency and accountability of any policies in such as stock controls through professional ethics and following routine practices.

Internal control over inventory is important to any business because inventory is the life blood of a merchandiser. Horngren and Harrison (1992), argue that successful companies take great care to protect their inventory. According to them, elements of good internal control over inventory include physical counting inventory at least once each year no matter which system is used, maintaining efficiency purchasing, receiving and shipping procedures, storing inventory to protect it against theft damage and decay, limiting access to inventory to personnel who do not have access to the accounting records, keeping perpetual inventory records for high unit cost merchandise, purchasing inventory in economic quantities, keeping enough inventories on hand to prevent shortage situations, and not keeping to large stock piled, thus to avoid capital tied up.

According to Vrat (2014), there are three types of inventory policies in inventory management. These are described as follows:

Economic Order Quantity (EOQ) - Reorder Point (ROP) Policy: - Under this policy, the inventory status is continuously monitored. Whenever the inventory level falls to a predetermined level called as reorder point (ROP), a replenishment order of fixed quantity called economic order quantity (EOQ) is placed. Thus EOQ (Q) and ROP (R) are the two-decision variable involved in solving the problem of how much to buy and when to buy.

Periodic Review Inventory Policy: - under this policy the stock status is periodically reviewed after a fixed time interval. When the review period is reached, the order is placed which is determined by the predetermined formula.

Optional Replenishment Policy: - This is a variant of periodic review inventory policy wherein there are two levels of inventory identified as the maximum level and the minimum level. The stock levels are periodically examined at fixed time interval. However, if the stock levels are more than the minimum level (s) at the time of review, the replenishment decision is deferred to the next review cycle, and no order is placed because the current stock is deemed to be adequate for the time being until the next review cycle.

2.2.5. Documentation

According to National Council of Social Service (2007), documentation and store records are important to ensure accountability, facilitate coordination between providers and for service improvement. Good records and documentation ensure continuity of care to long-standing customers whereby the records provide the history that gives more holistic information on each unique customer's needs. Secondly, with good documentation and recording systems, the organization fulfils its responsibilities. In providing service, inventory management practices such as documentation and records will provide relevant client information and client records at any given time based on their needs.

Maintaining good records and documentation will also lead to improved services to the customers by helping staff organize their thoughts. The most important documentation and store records in relation to inventory management practices are the ones to keep track of the inventory. It allows the staff to be aware of every movement in stocks, physically. According to Atyam (2010), failure to keep proper inventory records may result in failure to control the inventory. Birkinshaw & Heywood (2010) stated that use of a tracking system helps in reducing human errors thus benefiting the organizations.

According to Muturi (2016), among the factors affecting the competence of stock administration within organizations includes documentation procedures, from the study it was noted that, documentation is one of the crucial factors for efficient inventory management (Rashid & Amirah, 2017). The inventory reporting process within the organization usually provides management with all the details needed to ensure complete accountability and compliance by stocktaking and stock auditing, and thus the study findings recommended that, tracking procedures of documentation in inventory management positively affect the quality of the inventory control system within the organization (Muturi, 2016).

Furthermore, Chan et al (2017) in his study titled the factors that influencing effectiveness of inventory management in manufacturing SMEs of Batu Pahat Johor, he strongly agreed that one of the problem that is faced by manufacturing organization concerning inventory management was documentation/store records procedures, also order processing of the inventories in the organization of which it was revealed that, documentation procedures in the organization has

significantly influenced effectiveness of the inventory management in most of manufacturing industries mostly small and medium firm.

According to Susan & Michael, (2000) accuracy of inventory records is necessary to provide satisfactory customer service, determine replenishment of individual items; ensure that material availability meets repair or project demand, analyze inventory levels and dispose of excess inventory. Bailey and Farmer (2002) state that stock recording are expected to maintain particulars of receipt, issues and balances remaining in stock for each individual item held in the storehouse daily. According to Susan & Michael (2000), Stock records provide the management with the information which is used to ensure accountability through stocktaking and stock audit exercise. Jessop and Morrison (2004) states that records can be posted manually but, where the volume and complexity of the documents handled is of major proportion mechanical methods are often to be more effective. Manual posting is comparatively slow, there is high risk of filling the wrong detail, and it can be easily misplaced or lost due to multiple handling as compared to computer posting system.

2.2.6. Funding

Diana (2011) conducted a study on correlation between inventory management and its impact on the performance of construction companies in Uganda, one of her specific objectives was basically to examine costs of inventory incurred in the procurement process in Kavuma investment in term of the way they fund the inventory (Diana, 2011).

From the study, findings indicated that, goods that are procured by the Kavuma Company are not inspected on receipt, this literary means that, the staff members of Kavuma mostly the procurement department do not pay as maximum attention to those inventories whose value are highest (Diana, 2011). The study also revealed that, staff members of that particular company are not highly skilled, the company most the time experience under stocking situation and gets most of the damaged goods from its store, Consequently the research results finally indicated that there is a strong positive relationship between the approaches or method of inventory control and financial performance at Pearson correlation coefficient $r= 0.794$.

Also, the study conducted by Aro-Gordon and Gupte (2016) on the Review of Modern Inventory Management Techniques. The research concluded that, following a suitable and

desirable combinations of modern and up to date inventory management approaches can help the staff members within the organization (Aro-Gordon & Gupte, 2016). This will in turn improve the corporate service delivery in the manner that ensure steady flow of materials, while at the same time minimizing the funds allocated in inventories or attendant carrying cost.

2.2.7. Staff Knowledge and Skills

According to Susan and Michael (2000), people in warehouse are responsible for the distribution of inventory materials to all storage or using locations. They are also responsible for the physical security and safekeeping of materials at all stores locations and for all storekeeping activities, including material receiving, put-away, and material picking and shipping. Other responsibilities include: maintaining accurate inventory records, managing the physical layout of storehouses, including bin location assignments, determining the physical movement and distribution of material throughout the organization, receiving and storing materials, issuing stock material in response to a material request from customers, conducting cycle counts, annual physical, or both, reconciling discrepancies between cycle count and annual physical inventory, developing and operating truck and route schedules for distribution of material, and working with purchasing departments to resolve vendor-related problems with timing, quality, quantity, and delivery.

Stock Control is no longer considered a clerical function performed independently by untrained individuals within a governmental agency (NIGP, 2007). Qualified staff that is competent and skilled will help the organization to achieve its goals and objectives by being efficient and effective when carrying out their various functions. For an organization to succeed, qualification is therefore a pre-requisite and must be matched with job requirement, hence the need to hire and develop ambitious personnel.

According to Lyson and Gillingham (2003), define training as a planned process to modify attitudes, knowledge, and skill through learning experience to achieve effective performance in an activity or range of activities. Its purpose in the work situation is to develop the abilities of the individual and to satisfy the current and future human resource needs of the organization. The author further says that employees may be trained internally on the job or externally in a college offering supply chain management courses.

According to Baily and Farmer (1982), argue that for the supplies function to achieve a superior supply performance, it is necessary to recruit, train and develop personnel with the capacity and motivation to do better work. Qualified staff that is competent and skilled will help the organization to achieve its goals and objectives by being efficient and effective when carrying out various functions. For an organization to succeed, qualification of the staff is a pre-requisite and must be matched with job requirement.

If staff involved in stock control is not qualified and competent, then there will be ineffectiveness in inventory control. Bailey and Farmer (2002) say that for Stock control function to achieve a superior performance, it's necessary to recruit, train and develop personnel with the capacity and motivation to do better job. Carter and Price (2003) indicate that training of staff is vital if full use is to be made of their abilities and talents. Coe (2009) says that it's important to ensure that enough of the appropriate caliber is available to the organization in pursuit of its objectives. Incompetent employees can render stock control virtually ineffective.

2.2.8. Procurement Procedures

Procurement encompasses the whole process of acquiring property and/or services. It begins when an agency has identified a need and decided on its procurement requirement. Procurement continues through the processes of risk assessment, seeking and evaluating alternative solutions, contract award, delivery of and payment for the property and/or services and, where relevant, the ongoing management of a contract and consideration of options related to the contract. Procurement also extends to the ultimate disposal of property at the end of its useful life (Waters, 2004).

As organization become large and more complex, the bureaucratic approach gave way to increased functional specialization with many layers of middle and lower management for coordinating organization effort (Kenneth & Kenneth, 2005). According to Osborne and Plastrik (2007), the advantages of bureaucracy are many folds. Apart from consistent employee's behavior, it eliminates overlapping or conflicting jobs or duties and behavior of the system is predicable. Too much red tapes and paperwork not only lead to unpleasant experiences but also to inefficient operations (Osborne et al., 2007). Since employees are treated impersonality and they are expected to rely on rules and policies, they are unwilling to experience individual

judgment and avoid risks. Bureaucracy expects conformity in behavior rather than performance (Kenneth & Kenneth, 2005).

2.3. Empirical Literature

Many organizations in the current business environment are compelled to increase their market share both locally and globally to stay alive and continuously operate to meet their growth objectives. The obstacle is how to keep tremendous level of inventory to meet the needs of its customers and manage it to prevent both overstocking and stock outs. Therefore, in relation to the study, appropriate budget fund and cash and cash equivalent existence, proper procurement and supply chain channels, appropriate stock data control and document record and relevant skill set application are the necessity for sustainable growth and business maturity in the firm's life cycle.

Inventory refers to the raw materials, work-in-process goods, and finished goods that are thought to be a part of a business asset and are prepared readily for sale. Inventory denotes the most essential assets that most businesses own, because the turnover of inventory implies one of the primary sources of revenue earning for business firm's shareholders.

Annet and Anthony (2020) conducted a study to establish the Determinants of Inventory Management on Service Delivery in Trans Nzoia County Level Four Hospital, Kenya. The target population was 200 respondents who comprised of employees from the following departments in Tran Nzoia Level four hospital: procurement, finance, pharmacist and administration department resource respectively. Service delivery significantly influences effort of respondents, most notably through the JIT shortening of lead time, staff competence, record management practices and the up-take of information and communication technology in all level four hospital in Kenya.

Pushpakumara (2018) conducted a study to identify the factors affect to effective inventory management system in government sector organizations in Sri Lanka, as well as to identify the type of inventory control system applied by government sector organizations and to give suggestion to government sector organization to handle proper inventory management system. The study concluded that inventory record system, storage system, wastage system, procurement system, security system and investment in inventory are affected to effective inventory

management system and staff characteristics and method of inventory are not affected to effective inventory management system in government sector organizations in Sri Lanka.

Okwaro et al. (2017) conducted a study to assess factors affecting the effectiveness of inventory management practices in Kenya Seed Company. The target population was 110 management staff working at the Company's procurement departments from which a sample size of 87 respondents was drawn. Staff training, level of technology, stock evaluation and procurement policies had a positive and significant association on the efficiency of inventory management at Kenya Seed Company. The results showed that most of the staff do not have necessary competency to run the procurement function, there is poor stock audit practices, outdated procurement systems and long bureaucratic procedures.

Hari (2017) conducted a study to assess the factors affecting the efficiency of inventory management of Janapriya Multiple Campus, Pokhara. Factors related with proper record keeping of inventory, financial resources, skill possessed by store staff and bureaucratic procurement procedure positively influenced to the effectiveness of inventory management.

Shiau et al. (2017) conducted a study to identify the problem of inventory management faced by the manufacturing small medium enterprise and also to determine the factors that will influence the effectiveness of inventory management. The factors, documentation/store records, planning, knowledge of employees/staff skill have shown to significantly influence the effectiveness of inventory management while the funds have shown slightly significant influence on the inventory management in manufacturing small medium enterprises.

Vibhuti & Priyanka (2016) conducted a study to identify the determinants of effective inventory management of Consumer Durable Retailers among 60 retailers from Allahabad, Lucknow, and New Delhi dealing with consumer durables. Four Factors of Retailer Size, Supplier Relationship, Service Level and Demand Uncertainty emerged as the determinants of effective inventory management. Positive relationship was found between Retailer Size, Supplier Relationship, Demand Uncertainty and Effective Inventory Management through regression analysis.

Bosek, (2016) conducted a study to establish the determinants of effective inventory management in health project in Kenya. To achieve the objective, they adopted a census survey of the 75 respondents. Elema and Karanja (2014) conducted a study to determine the factors

influencing effective inventory management at Kenol Kobil Limited. The study was guided by four objectives (information technology, distribution channels, Staff Competency and material handling equipment's. The target population was procurement managers, stores managers and other stores personnel in the Kenol Kobil. The study found out that information technology reduces lead times on effective inventory management. The study also found that most employees have basic Staff competency (competencies) on inventory management at Kenol Kobil.

Kariuki (2013) conducted a study to make an assessment of the factors influencing effectiveness of inventory control; Ministry of State for Provincial Administration and Internal Security; Nairobi. The study revealed that: delays in procurement of goods, frequent stock-outs and uncertain change of prices were some of the effects of long bureaucratic procurement procedure. The study also revealed that unavailability of stationeries/stores records, lack of specific time or date for both posting stores records, lack of adequate qualified and well-trained staff hinders effective performance.

In the context of Ethiopia, most organizations have implemented some kind of inventory management system. Hence following to this implementation, some researchers have been conducted in order to realize different aspects of inventory management system. For instance, Amare (2003) examined the existing rubber inventory management practice of Addis Tyre Share Company and findings shade light that the proportion of the total capital invested in rubber inventory, the type of inventory control system employed, and the contribution of the system to operation efficiency. Berhane (2015) has investigated the inventory management practices of the Ethiopian Electric Utility Addis Ababa city branch and found that there was a problem of inventory management at all levels and resulted directly on customer dissatisfaction and poor-quality electric service provision. Also, enhancement in the level of effectiveness in inventory management practices would result in increased business performance of Ethiopian Electric Utility (EEU). Gashu (2016) analyzed the inventory management practices in SUR Construction Company and found out that the overall inventory practice was not effective; and the major inventory management challenge was the availability of item on time in complete set. Also, the main contributing factor for this problem was staff capacity having skill gap and awareness in implementing inventory management technique.

Baye (2017) has examined the effects of inventory management practices on organizations operational performances: the case of Ethiopian Airlines and found out that effective inventory management model, inventory record accuracy, stock out management and information technology usage were statistically significant and information technology usage has more impact on operational performance of Ethiopian Airlines relative to other inventory management practices studied. In addition, the research concluded that inventory management practices impact significantly the operational performances of Ethiopian airlines. Necho (2017) investigated factors affecting inventory management practice at the Pharmaceutical Fund and Supply Agency in Ethiopia. The findings of the study revealed that the PFSA managements have failed to facilitate successful deployment of inventory management, staffs' knowledge and skills affects the performance of the inventory management system. Furthermore, the study revealed that management support and staff competency have strong association with inventory management practice and inadequate staff competency, low level of management support and poor inventory management practice at PFSA. The study also showed that the importance of information technology for the improvement of inventory management performance. Melese (2017) assessed the impact of EEU inventory management practices on service delivery and presented that the utility was not effective in practicing modern inventory management techniques instead there is poor inventory management system that results under stocking, overstocking, high cost, high customer complaints and poor service delivery. In addition, poor procurement planning, purchase of unnecessary materials and bulk purchase practices result the availability of excess amount of obsolete and non-moving items. Also revealed that lack of adequate qualified and well-trained staffs (i.e., skill gaps and awareness) impede in implementing effective inventory management techniques.

Azeb (2017) assessed the health commodities inventory management practice of the Zewditu Memorial Hospital. The result showed that ZMH health commodities to be long-term agreements between the hospital and its suppliers, maintain proper store management the majority of the store managers had adequate knowledge how to store and practiced health commodities and they had also a positive attitude towards the importance of appropriate storage of commodities, obsolete, expired, or damaged inventories properly identified and segregated, inventory records reconciled to advantage reports on a regular basis and management have review the reconciliation of physical inventory counts to the inventory records applied at ZMH but ,uses

automatic stock tracking and adequate detailed written inventory instructions and procedures exist, uses Enterprise Resource Planning system, maintains a data base for all suppliers, uses Just In Time stock control system and an integrated information sharing system were not applicable at ZMH. Finally, from the study it can be concluded that the main challenges of the hospital in managing inventory are lack of modern technologies, insufficient funding, lack of inventory management training, the length of bureaucratic processes in the procurement system and stock out of health commodities. Weldeyes (2019) examined the effect of inventory management practice on logistics performance in the case of Ethiopian Defense Force Logistics Main Department. The findings of the study revealed that there is a gap on purchasing department in relation to applying competitive based purchasing practice, lack of information sharing between purchasing and warehouse departments, lack of computerized inventory management system, lack of proper inventory handling and disposal system and lack of on job and of job training programs in relation to inventory management practice. Tilahun (2020) investigated the effect of supply chain integration and inventory management practices on operational performance in F.D.R.E Air Force. Abdissa (2021) examined the influence of inventory management practices on customer satisfaction of Ethio-Nippon Technical Company S.C in Ethiopia, the findings of study shows that there is a poor inventory management practice in the company and lack of good service and product delivery system in the company to fulfill the customer satisfaction. The company also has weak inventory management system and because of this it was not good at delivery product and service on time, and this led to increase customer complaint in the company time to time.

2.4. Summary and Knowledge Gap

Generally, the study aims to focus on assessing inventory management practices in AGP Poultry Plc using descriptive research to imply areas of gaps to be studied and lay a foundation for other researchers in the area. Both primary and secondary sources of data were used for the study. The investigator also used appropriate conceptual and empirical literatures to strengthen the research area, show and close the gaps to be able to find an independent data collection and analysis, interpretations and results and provide proper assessments of IM practices with clear and concise conclusions and recommendations in the area of study for the fulfillment and award of academic

compensation to the investigator and provide sources of information for in the future for aspiring and new fellow academic researchers in the study area.

In addition to the limited and constrained resources, the unavailability of free and proper literatures such as appropriate journals, books and thesis and dissertation titles and researcher is not also directly an academician who also has a full-time job which affected the study somehow.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

The research method is the significant part of a research because it helps researchers to decide how to achieve the specified objective, what data to collect, how to collect and analyze the data in order to solve the problem area. Therefore, it needs much attention on choosing the appropriate methods which can provide the desired outputs.

The primary objective of this study was to assess inventory management practices in AGP Poultry Plc. The purpose of this chapter is to discuss the research methodology for this study. Hereunder are the discussions on the research design and approach, population and data source, sampling techniques, data collection method and instruments, validity and reliability, data analysis and presentation method and the ethical considerations.

3.2. Research Design and Approach

According to Hussey & Hussey (1997), a research methodology is a general approach to studying research topics, which is distinct from a research method. A research method is a tool or a technique that is used to gather data (Bailey, 1994). In contrast, a research methodology determines the important relationship between theory and method. It is associated with specific ontological and epistemological views (theory) which may help researchers to select an appropriate research method (Laughlin, 1995).

3.2.1. Research Design

According to Abiy et al. (2009), research design is essentially a statement of the object of the inquiry and the strategies for collecting the evidence, analyzing the evidence, and reporting the findings. Research for academic purpose is usually undertaken to further enhance knowledge on a topic of interest to the researcher. There are three types of academic research depending on the problem area and the nature of the phenomenon and based on the purpose of the research namely, exploratory, descriptive or explanatory (Saunders, Lewis , & Thornhill , 2019).

According to Saunders, Lewis & Thornhill (2019), exploratory studies are most beneficial if one needs to clarify their understanding of a certain difficulty. They also states that such a study is applied to assist one in finding out “what is happening; to seek new insights; to ask questions and to assess phenomena in a new light”. There are three ways of undertaking exploratory studies, which are studying different literature, interviewing professionals in the topic of choice, and conducting focus group discussions. All lead to the input of gathering information from trusted and qualified sources. Exploratory research is often used when a problem is not well known, or the available knowledge is not absolute. The technique best suited for information gathering when performing exploratory research is interview (Yin, 2009).

According to Sekaran (2003), descriptive studies are concerned with describing the characteristics of a particular individual, or of group and it includes surveys and fact-findings enquire of different kinds. It can be considered as an extension of the exploratory study where it is necessary to begin the research by having a clear picture of the concept proposed.

For this research, a descriptive research design was used to analyze the demographic characteristics of the respondents and their perceptions regarding the assessment of inventory management practices in the company. While explanatory research design was used to explain the magnitude of the factors assessed and their impacts on the inventory management practices. These allow the researcher to make statistical inferences on the broader population and generalize the findings to real life situations and thereby increase the external validity of the study.

3.2.2. Research Approach

Research approach can be divided into a quantitative, qualitative, or mixed approach. The decision of whether to carry out a quantitative or qualitative approach lies in the researcher’s approach.

According to Creswell (2005), qualitative research involves studies that do not attempt to quantify their results through statistical summary or analysis. It seeks to describe various aspects about behavior and other factors studied in the social sciences and humanities. It is characterized by adherence to diverse array of orientations and strategies for maximizing the validity of trustworthiness of study procedures and results. It is thus a type of empirical enquiry that entails purposive sampling for gathering data. It typically involves in-depth interviews, group

discussions, artifact studies, projective techniques, and observations without formal measurement.

On the other hand, quantitative research is a type of research in which the researcher decides what to study, asks specific, narrow questions, collects numeric (numbered) data from participants, analyzes these numbers using statistics, and conducts the inquiry in an unbiased, objective manner (Creswell, 2005). It involves analysis of data and information that are descriptive in nature and qualified. Quantitative approach is one in which the investigator primarily uses postpositive claims for developing knowledge (Sekaran, 2003; Creswell, 2009).

Due to a great variety of variables influencing an inventory management system, different stakeholders involved, this topic is complex. Therefore, to achieve the specific and general objectives of the study, the researcher applied a quantitative approach using questionnaire to understand the complexity and to validate or refine the framework that was derived from existing literature (Creswell, 2003). The use of quantitative method enabled the researcher to understand the assessments that have impact on the IM as well as the perception of situation from a stakeholder perspective in order to describe the gap on research questions.

3.3. Types and Sources of Data

For achieving a complete and meaningful study, both primary and secondary sources of data were used. The primary data was gathered through questionnaire. While the secondary data was obtained from various sources which are relevant for the study, through document analysis. The complete list of the secondary data sources that are used in the study are presented in the reference section of this study.

3.4. Study Population, Sampling Method, and Sample Size

3.4.1. Population of the Study

A population is a group of potential participants to whom one is seeking to generalize the results of a study. It represents the collection of all units of analysis (Abiy et al., 2009). Among several sector organizations which implemented inventory management system, purposive sampling was

used to select company. AGP Poultry Plc was purposely selected among other companies in Addis Ababa as a study area for this research.

The target population of this study was employees of the study company have different roles and responsibilities in the inventory management of the company and has at least part of the company for two years. The total population of the target group is 196 employees from which sample have drawn for this study.

3.4.2. Sampling Method

Creswell (2009) define sampling technique as the process by which individuals are selected for a study. The objective of sampling is to make correct inference about the aggregate and is only justified if the selected part-the sample population is a true representative of the main population. There are two main types of sampling procedures: probability sampling and non-probability sampling. Probability sampling involves selecting elements randomly in that the selection of any one element is independent of the selection of the other elements. Unlike the case of probability sampling, in non-probability sampling the probability that an elementary unit in the population will be included in the sample is unknown. For this research, purposive and stratified sampling technique which is categorized under non-probability sampling is used. According to Creswell (2009), under purposive sampling respondents are chosen based on their convenience and availability.

The sample size of the study was determined by using Yamane's (1967) formula as the target population is finite considering 95% confidence level and 5% margin of error or level of precision.

$$n = \frac{N}{1 + N(e^2)}$$

Where = n is the sample size

N= is the population size, and

e = is the level of precision or sampling error

$$n = \frac{196}{1 + 196(0.05^2)}$$

$n = \frac{196}{1.49}$ $n = 132$

Therefore, the sample size for targeted population of the study is 132. Once the sample size was identified, the sample items in each number of samples distributed to each department at the time of questionnaire distribution, respondents selected using purposive and stratified sampling technique of non-probability sampling technique.

Table : Target Population and Sample Size of the Study For AGP Poultry Plc

Departments	Target Population		Sample
Finance	19	(19/196) * 132	13
Manufacturing	67	(67/196) * 132	46
Sales and Marketing	26	(26/196) * 132	18
Procurement	29	(29/196) * 132	20
Warehouse	43	(43/196) * 132	29
IT	12	(12/196) * 132	8
	196		132

3.5. Data Collection Procedure

The main data collection techniques used for this research was questionnaire. The other technique used was document analysis. The primary data was collected from the selected employees through a questionnaire in order to assess inventory management in AGP. Questionnaire has two main advantages. First, it can be easily distributed to a large number of people, mean that it's less time consuming and less economical. Second, they often allow anonymity, allowing respondents to be anonymous is important in order to collect their honest answers to highly personal question. In addition, it allows greater uniformity in the way questions are asked, ensuring better compatibility in the responses (Mitchell & Jolley, 2010).

For this study the questionnaire generally contains close-ended questions. The questionnaire was prepared after the review of related literatures, the questionnaire items focused on the research problems, objective and questions rose in the statement of the problem. Thus, to ensure content validity of the scales, the items chosen for the constructs were adapted from previous research to ensure content validity. The questionnaire was self-administrated to the participants and they were consisted of scale questions to collect opinions. Questionnaire consisted of scale questions to collect opinions. Five-point Likert-style rating scale (1: strongly disagree, 2: disagree, 3: neutral, 4: agree, 5: strongly agree) used when designing the questionnaire. The questionnaire basically has two parts. The first one is demographic information, and the second part is about the assessments of inventory management practices.

Saunders, Lewis & Thornhill (2019) defines an interview as a purposeful discussion that occurs between people that assists in gathering valid and reliable data of current situations that are relevant to the research question. In this case, the interview technique was used to collect all relevant data from selected participants of the case study organization. According to Creswell (2007), interviews are well appropriate when looking for opinions, experiences and privileged information from respondents in key positions. Unstructured interviews are open discussions and these types of interviews are not appropriate since the scope of the study will not be controlled. Structured interviews on the other hand are closed questions that are associated with short answers. These also cannot be used for this study because it affects getting detailed data or information. Semi-structured interviews are preferable for this study since it allows detail discussions that enable controlling the scope of the study.

3.6. Methods of Data Analysis

According to Yin (2009), data is analyzed to draw empirically based conclusions. There are some techniques of analyzing data; to examine, categorize, tabulate, test etc.

The 132 questionnaires were distributed, however only 106 collected from respondents, then the returned were first checked to identify any damaged questionnaire. Accordingly, none were discarded since the response was reliable. The usable sample size became 106. Then, these questionnaires were sorted. After sorting each questionnaire was coded with unique number.

After the coding process was completed, each questionnaire's 24 items were inserted into computer (SPSS).

After completion of inserting data in the computer, various statistical analysis tools were utilized. Demographic variables and system information were measured using descriptive statistics and frequencies and percentage is used to interpret the data. They are presented using tabulation and the items developed to assess the challenges of the company were also measured using descriptive statistics and frequencies. Percentage mean, and standard deviation are applied to interpret the data. Majority of the data are presented using tabulation.

To determine the level of agreement of respondents to each question, the means were interpreted as follows: Strongly disagree in the point range of 1.00- 1.80, Disagree 1.81 - 2.60, Neutral 2.61 – 3.40, Agree 3.41 - 4.20, and strongly agree 4.21 - 5.00 (Pimentel, 2010).

3.7. Validity and Reliability

3.7.1. Reliability

Reliability is measures of internal consistency that concerned with items 'responses consistent across constructs and indicates scores are stable over time when the instrument is administered (Creswell, 2009). To measure the reliability of the instrument, a 0.70 Cronbach 's coefficient alpha was done. George and Mallery (2003) provide the following rules of thumb:

Table : Reliability Test Rule of Thumb

> .9	Excellent	> .6	Questionable
> .8	Good	> .5	Poor
> .7	Acceptable	< .5	Unacceptable

As it indicated in the table 5, the test result is between 0.746 and 0.891. Therefore, based on the test, the results for the items are reliable and acceptable.

Table : Reliability test result for the questionnaire

Item	Number of Item	Crobach's Alpha	Result
Procurement	5	0.764	Acceptable
Documentation	6	0.886	Good
Funding	4	0.723	Acceptable
Skill of the Staff	4	0.758	Good
Overall Reliability	19	0.927	Excellent

Source: Own Survey Data, 2022

3.7.2. Validity

According to Kothari (2004), validity is the extent to which differences found with a measuring instrument to reflect true differences among those being tested. Validity can be seen as the core of any form of assessment that is trustworthy and accurate (Bond, 2003). In other words, Validity is the most critical criteria when measuring the quality of research design content and construct validity of the instrument. Kothari (2004) has defined Content validity as the extent to which a measuring instrument provides adequate coverage of the topic under study. Accordingly, to make sure the content validity is good the instrument must contain a representative of the population. Therefore, the instrument was pilot tested with 10% (10) of the sampled respondents to confirm the instrument weren't ambiguous and confusing for the respondents.

3.8. Ethical Considerations

Before starting the actual data collection, the purpose of the study, the rights to participate and refuse were told to the study subjects. Verbal consent from the study participants was obtained. Confidentiality of the information was guaranteed by not writing a name or anything that enable to identify study participants. In addition to that a respondent answer was kept in a confidential place. The researcher acted responsibly according to ethical standards to ensure that the information gathered was not brought to disregard. All respondents have the right to privacy, to safety, to know the true purpose of the research, to obtain research results and to abstain from answering questions. All violated research questionnaires were also ignored for appropriate and unbiased data collection and interpretations as well.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter deals with the data presentation, interpretation, and analysis of the study. The chapter comprised of two sections. The first is background of the respondents showing age group, level of education, work experience, computer proficiency and working department of respondents using cross tabulation and the second part deals with major components on the items of the inventory management system by using tables and consisting of mean and standard deviation, through SPSS version 25.

Response Rate

To achieve the main objectives of the research a total of 132 questionnaires were prepared and distributed to employees of AGP employees. In order to make the collected data suitable for the analysis, all questionnaires were screened for completeness. Regarding the response rate, in order to get the primary data, questionnaires each contained 19 variables or questions were distributed to 132 individuals for quantitative data analysis. Consequently, the given questionnaires have been collected back from 106 respondents out of 132 sample respondents and as a result of different issues questionnaires distributed to 26 respondents were not returned, which represented a response rate of 81%. According to Saunders, Lewis & Thornhill (2019), a research response rate of 60% is reasonable for statistical analysis, while a rate of 70% and over is excellent. Based on this statement, the response rate of 81% was excellent. The respondents answered all the questions and so there were no missing values. Moreover, to make the study more reliable, semi-structure interview questions have been used to interview the management and team leaders of the selected departments.

4.2 Demographic Characteristics of Respondent

The first part of the questionnaire consists of the demographic information of the participants. This part of the questionnaire requested a limited amount of information related to personal and professional demographic characteristics of respondents. The table below shows the

demographic characteristics of the respondents like age, education, work experience, working department and computer proficiency. The data collected from the respondents were analyzed as follows.

Table : Background of Respondents (AGP)

Variable	Variable Categories	Frequency	Percentage
Age	26-30 Years	40	37.74%
	31-40 Years	51	48.11%
	Above 40 Years	15	14.15%
	Total	106	100.00%
Educational Level	Diploma	7	6.60%
	Degree	76	71.70%
	Master	23	21.70%
	Total	106	100.00%
Work Experience	2 -5 Years	35	33.02%
	6-10 Years	60	56.60%
	Above 10 Years	11	10.38%
	Total	106	100.00%
Computer Proficiency	Basic	48	45.28%
	Intermediate	39	36.79%
	Proficient	19	17.92%
	Total	106	100.00%
Department	Finance	11	10.38%
	Manufacturing	38	35.85%
	Sales and Marketing	13	12.26%
	Procurement	15	14.15%
	Warehouse	21	19.81%
	IT	8	7.55%
	Total	106	100.00%

Source: Field Survey (2022)

Age of the respondents shows that 48.11 % of the AGP employees are between the age 31-40 Years and the other 37.74 % are between 26-30 Years. However, the least 14.15 % of the employees are at the age of above 40 years. In other words, most of the employees are belonging in the productive age group whose summation percentage is more than 85%. While there is a touch of maturity from the 40+ age groups.

Education is one of the most important characteristics that might impact employee's ability to implement new system and understanding any particular phenomena. Based on the above table the educational level of employees of AGP, 71.70% of the employees are first degree holders and the other 21.70% of the employees have specialization at a master's degree level and above, whereas 6.60% are diploma holders. From these results, it can be concluded that the respondents had enough education to execute the roles assigned to them effectively and efficiently.

In regarding to year of service, majority (56.60%) of the AGP employees have relatively longer existence in the company, whereas 33.02% of the respondents have an experience 2-5 years. Moreover, the other 10.38% of the respondents have an experience of working with the company for at least 11 years. It can be therefore noted that most respondents have been working for more than 6 years which is a significant length for an employee to understand the company business process and culture.

The ability of using computers was one of the major factors; since inventory management is becoming integrated with information technology the ability to use computers is essential. Most of the respondents or 45.28% have basic computer proficiency, followed by 36.79% intermediate user and the least 17.92% are proficient users. The result shows that both companies need to enhance their employees' computer proficiency.

It has been presented in the research design of this study that the study has limited to six departments that have direct relation with the supply chain and inventory management, and those departments are considered as strata. Accordingly, out of the 106 employees who have participated in the study, 35.85% of are from manufacturing, 19.81% from warehouse, 14.15% from procurement, 12.26% from sales and marketing and 10.38% and 7.55% of respondents belong to finance and IT division respectively.

4.3 Descriptive Statistics

4.3.1 Procurement Procedure

These sections discuss the summary statistics of each variable under the categories of the assessed factors. The researcher applies descriptive statistics particularly frequency, mean and standard deviation for the goal of better understanding and summarization.

Based on questionnaires, the researcher was able to get confirmation about agreement of respondents using Likert rating scale regarding to the items of the inventory management practices in the study company. The scales are 1 = Strongly Disagree, 2 = Disagree; 3 = Uncertain, 4 = Agree, 5 = Strongly Agree.

Table : Procurement Procedure on AGP Inventory Management

Statements	SD	D	N	A	SA	Mean	SDv
Management should try to make procurement processes less bureaucratic	6	7	9	38	46	4.05	3.69
Bureaucracy expects conformity in behavior rather than performance	8	2	12	21	63	4.22	3.87
By understanding the steps involved with procurement, it is possible to get a better understanding of the real cost involved with attaining any good or service	9	8	13	65	11	3.58	3.21
Bureaucratic systems of procurement contribute to unacceptable contract delays, increased costs	0	4	7	16	79	4.60	4.15

Source: Survey data, 2022

According to the response of the participants, as shown in the above table 106 respondents were asked items under the procurement procedure factors affecting the inventory management in their company. Not surprisingly all the items under procurement procedure were agreed by all respondents. The bureaucratic systems of procurement were the main issue that contributes to unacceptable contract delays, increased costs as per the respondents, followed by bureaucracy expects conformity in behavior rather than performance. The respondents believe that the

management should try to make procurement processes less bureaucratic and understanding the steps involved with procurement would be a solution to get a better understanding of the real cost involved with attaining any good or service. The findings were support by Kenneth (2005) bureaucracy expects conformity in behavior rather than performance since employees are treated impersonality and they are expected to rely on rules and policies, they are unwilling to experience individual judgment and avoid risks.

4.3.2 Documentation

Table : Documentation on AGP Inventory Management

Statements	SD	D	N	A	SA	Mean	SD
Information is critical to an effective and efficient inventory management process	0	2	6	75	23	4.12	3.63
Accuracy of inventory records is necessary to provide satisfactory customer service	2	0	8	13	83	4.65	4.19
Accuracy of inventory records is necessary to determine replenishment of individual items	0	1	9	25	71	4.57	4.09
Proper documentation ensures that material availability meets repair or project demand	3	0	0	12	91	4.77	4.30
Accuracy of records provide the management with the information which is used to ensure accountability	0	3	7	14	82	4.65	4.18
Info is critical to an effective procurement process	6	7	6	22	65	4.25	3.90

Source: Survey data, 2022

Based on respondents; proper documentation will ensure that material availability meets repair or project demand, while clear and error free inventory records is a must in order to provide a satisfactory customer service. These inventory records also would be used as information by management to ensure accountability. The respondents also agreed that having accurate inventory records is very essential to regulate the replacement of individual items. The respondents also acknowledge that information is critical for an effective and efficient inventory management process and procurement process.

According to Susan & Michael (2000), accuracy of inventory records is necessary to provide satisfactory customer service, determine replenishment of individual items; ensure that material availability meets repair or project demand, analyze inventory levels, and dispose of excess inventory. Stock records also provide the management with the information which is used to ensure accountability through stocktaking and stock audit exercise.

4.3.3 Funding

Table : Funding on AGP' inventory management

Statements	SD	D	N	A	SA	Mean	St. D
With enough funds the organization can run its activities efficiently	32	17	28	12	17	2.67	2.54
With inadequate funds an organization may have difficulties in running its activities	0	0	0	15	91	4.86	4.34
Funds can be a constraining factor to effective inventory management when funds allocated cannot supply completely for the organization's material requirements within the budget period	0	3	7	14	82	4.65	4.18
The stature of financial management in the organization can affect adversely its effectiveness and in the finance resource application in various activities	13	15	46	16	16	3.07	2.78

Source: Survey data, 2022

The study aimed to establish the level to which respondents agreed with the above statements, from the study findings, majority of the respondents strongly agreed that with inadequate funds an organization have difficulties in running its activities and funds can be a constraining factor to effective inventory control when funds allocated cannot provide completely for the organization's material requirements within the budget period.

However, the respondents have a neutral view on the statement that quality and size of financial management in the organization can affect adversely its effectiveness and in the finance resource

application in various activities and with enough funds the organization can run its activities efficiently. On the last item, even though financial strength is essential, without proper management it will not be strong.

4.3.4 Skills Possessed

Table : Skills Possessed on AGP' Inventory Management

Statements	SD	D	N	A	SA	Mean	St. D
Qualified staff that is competent and skilled helps the inventory management organization to achieve its goals and objectives by being effective when carrying out their various functions.	9	4	13	23	57	4.08	3.76
For an Inventory management practice to succeed, qualification is therefore a pre-requisite and must be matched with job requirement.	5	7	3	20	71	4.37	4.00
For inventory management function to achieve a superior performance, it's necessary to recruit, train and develop personnel with the capacity and motivation to do better job.	7	6	10	26	57	4.13	3.76
Training of staff is vital for Inventory management practice	0	0	0	46	60	4.57	4.07

Source: Survey data, 2022

Most of the respondents agreed qualified staff that is competent and skilled helps the organization to achieve its goals and objectives by being efficient and effective when carrying out their various functions. as shown by a mean of 4.08, for an organization to succeed, qualification is therefore a prerequisite and must be matched with job requirement as shown by a mean of 4.37, training of staff is vital if full use is to be made of their abilities and talents as shown by a mean of 4.13, for inventory management function to achieve a superior performance, it's necessary to recruit, train and develop personnel with the capacity and motivation to do better job as shown by a mean of 4.57.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

Age of the respondents shows that 48.11 % of the AGP employees are between the age 31-40 Years and the other 37.74 % are between 26-30 Years. However, the least 14.15 % of the employees are at the age of above 40 years. 71.70% of the employees are first degree holders and the other 21.70% of the employees have specialization at a master's degree level and above, whereas 6.60% are diploma holders. In regarding to year of service, majority (56.60%) of the AGP employees have relatively longer existence in the company, whereas 33.02% of the respondents have an experience 2-5 years. Moreover, the other 10.38% of the respondents have an experience of working with the company for at least 11 years. Out of the 106 employees who have participated in the study, 35.85% of are from manufacturing, 19.81% from warehouse, 14.15% from procurement, 12.26% from sales and marketing and 10.38% and 7.55% of respondents belong to finance and IT division respectively.

The bureaucratic systems of procurement were the main issue that contributes to unacceptable contract delays, increased costs as per the respondents, followed by bureaucracy expects conformity in behavior rather than performance. The management should try to make procurement processes less bureaucratic and understanding the steps involved with procurement would be a solution to get a better understanding of the real cost involved with attaining any good or service. The inventory records also would be used as information by management to ensure accountability. The respondents also agreed that having accurate inventory records is very essential to regulate the replacement of individual items. The respondents also acknowledge that information is critical for an effective and efficient inventory management process and procurement process. Inadequate funds an organization have difficulties in running its activities and funds can be a constraining factor to effective inventory control when funds allocated cannot provide completely for the organization's material requirements within the budget period.

The study established that the advantages of bureaucracy are many folds, apart from consistent employee's behavior, it eliminates overlapping or conflicting jobs or duties, and behavior of the

system is predictable, thus the study concludes that procurement procedures had a positive impact on the inventory management practice in the study area. The study revealed that documentation is crucial in ensuring the well inventory management, stock records provide the management with the information which is used to ensure accountability through stocktaking and stock audit exercise, therefore the study concludes that documentation had a positive impact on the inventory management practice in the study area. The study revealed that funding only could not influence the inventory management practice in AGP Poultry Plc. The study revealed that for inventory management function to achieve a superior performance, it's necessary to recruit, train and develop personnel with the capacity and motivation to do better job, thus the study concluded that the skills possessed by staff had a positive effect on the inventory management practice in the study area.

5.2. Recommendations

The study recommends that there is need for AGP Poultry PLC is to enhance their procurement procedures through elimination of overlapping or conflicting jobs or duties and behavior of the system is predictable as the study revealed that effective bureaucratic procurement procedures had a positive impact on efficiency of inventory management.

There is need for organization to ensure accuracy of records provide the management with the information which is used to ensure accountability thus the study established that proper documentation ensures that material availability meets repair or project demand, and that accuracy of inventory records is necessary to provide satisfactory customer. There is need for organization to monitor the skills the employees possess as the study revealed that skills possessed had a positive effect of on the inventory management practice in the AGP.

5.3. Suggestion for Further Studies

The study suggests that effective bureaucratic procurement procedures had a positive impact on the inventory management practice with proper funding sources or budget availability. Accuracy of the inventory record enables relevant decision making easier and creates accountability for business firms. Proper documentation provides information on the availability and control of stock exercises such as overstocking and stock-out to meet the expected demand of the

customers which in a long run ensures survival, growth, and sustainability of the business firms life cycles. Accessing employee's skill set ends up with positive results on the inventory management practice as well. Therefore, all the above suggesting core statements could be the starting point for further relevant studies for fellow academicians.

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APPENDICES

**SAINT MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
MBA IN ACCOUNTING AND FINANCE**

Questionnaire to be filled by employees of AGP Poultry Plc:

Dear respondents,

This questionnaire is designed to get the relevant information for the current study. The objective of the study is to assess the determinants of inventory managements in AGP Poultry Plc. This study is only for academic purpose. Hence, your responses will be kept confidential. The soundness and the validity of the findings highly depend on your genuine responses. Therefore, I kindly request you to fill the questionnaire carefully and back to me.

Instructions: -

The researcher uses this questionnaire for the genuine information is highly decisive to the success of this study. Therefore, Not need of writing your name.

Put the (√) mark in the box for your answer.

With great excuse, possibly return on time.

For any problem and suggestion contact the researcher through the following addresses:

Email: tayeaklilu9@gmail.com

Phone: +251911307558 or +251924932469

Participation in this research was entirely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. There is no foreseeable risk of harm or discomfort in answering this questionnaire. This is an anonymous questionnaire; as such, it is not able to trace response back to any individual participant. All information collected is treated as strictly confidential and will be used for the purpose of this study only.

I have been informed about the purpose of the study and I give my consent to participate in this survey.

YES ()

NO ()

PART I: Personal information

QA 1: Age

A. 20 – 30 B. 31 to 40 years C. 41 and above

QA 2: Your professional qualification

A. Diploma B. Degree C. Masters and Above D. Other

QA 3: How long have you been working in the company (In years)?

A. 2-5 B. 6– 10 C. 11 and above

QA 4: Level of your Computer Proficiency

A. Basic B. Intermediate C. Proficient

QA5: What is your department?

A. Sales and Marketing B. Finance C, Procurement

D. Manufacturing E. Warehouse F. IT

Part II: Issues Related to Inventory Management Practices

How much do you agree or disagree with the following statements about the determinants of inventory management?

Please read each statement carefully and show the extent of your agreement on the statements by Circling the numbers in the column using the following rating scale (Likert Scale).

Where: 1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree

- Bureaucratic Procurement Procedure on the Practices of Inventory Management

Statements	SD	D	N	A	SA
Management should try to make procurement processes less bureaucratic	1	2	3	4	5
Bureaucracy expects conformity in behavior rather than performance	1	2	3	4	5
By understanding the steps involved with procurement, it is possible to get a better understanding of the real cost involved with attaining any good or service	1	2	3	4	5
Bureaucratic systems of procurement contribute to unacceptable contract delays, increased costs	1	2	3	4	5

- Documentation on the Practices of Inventory Management

Statements	SD	D	N	A	SA
Information is critical to an effective and efficient inventory management process	1	2	3	4	5
Accuracy of inventory records is necessary to provide satisfactory customer service	1	2	3	4	5
Accuracy of inventory records is necessary to determine replenishment of individual items	1	2	3	4	5
Proper documentation ensures that material availability meets repair or project demand	1	2	3	4	5
Accuracy of records provide the management with the information which is used to ensure accountability	1	2	3	4	5

Information is critical to an effective and efficient procurement process	1	2	3	4	5
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- Funding on AGP' inventory management

Statements	SD	D	N	A	SA
With enough funds the organization can run its activities efficiently	1	2	3	4	5
With inadequate funds an organization may have difficulties in running its activities	1	2	3	4	5
Funds can be a constraining factor to effective inventory management when funds allocated cannot supply completely for the organization's material requirements within the budget period	1	2	3	4	5
The stature of financial management in the organization can affect adversely its effectiveness and in the finance resource application in various activities	1	2	3	4	5

- Skills possessed on AGP' inventory management

Statements	SD	D	N	A	SA
Qualified staff that is competent and skilled helps the inventory management organization to achieve its goals and objectives by being effective when carrying out their various functions.	1	2	3	4	5
For an Inventory management practice to succeed, qualification is therefore a pre-requisite and must be matched with job requirement.	1	2	3	4	5
For inventory management function to achieve a superior performance, it's necessary to recruit, train and develop personnel with the capacity and motivation to do better job.	1	2	3	4	5
Training of staff is vital for Inventory management practice	1	2	3	4	5