

***Factors Affecting Inventory Management Practice (case of Bedele
Brewery Factory, BunoBedele, Ethiopia)***

***A thesis submitted to the School Graduate Studies of Jimma University
Partial Fulfillment of the Award of the Degree of Masters of business
Administration (MBA)***

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**JIMMA UNIVERSITY
COLLEGE OF BUSINESS & ECONOMICS
DEPARTMENT OF MANAGEMENT**

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JIMMA, ETHIOPIA

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brewery factory, Buno Bedele, Ethiopia)***

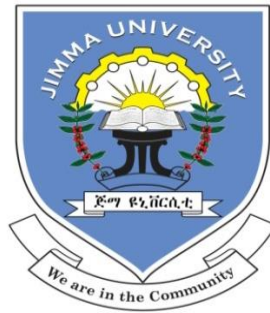
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Fulfillment of the Award of the Degree of Masters of business Administration
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MBA PROGRAM

JULY, 2020

JIMMA, ETHIOPIA

DECLARATION

I declare that this thesis entitled “Factors affecting inventory management practice case of Bedele brewery factory” Buno Bedele, Ethiopia has been carried out by me under the guidance and supervision of Mr. Wondosen Siyum (Professor Assistance) and Miss. Rejebut Mohamed. The thesis is original and has not been submitted for the award of any degree or diploma to any university or institution.

Researcher's Name

Date

Signature

CERTIFICATE

This is to certify that the thesis entitled “Factors affecting inventory management practice case of Bedele brewery factory” BunoBedele, Ethiopia Submitted to Jimma University for the award of the Degree of Master of Business Administration (MBA) and is a record of Valuable research work carried out by, Miss. MahletHailu under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma to any university.

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Approval sheet of thesis

As members of the Examining Board of the Final Open Defense, we certify that we have read and evaluated the thesis prepared by Miss.MahletHailu, entitled “Factors affecting inventory management practice case of Bedele brewery factory”’BunoBedele, Ethiopia, and recommend that it be accepted as fulfilling the thesis requirements for the award of the degree in Master of Business Administration.

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ABSTRACT

This study conducted to assess factors affecting inventory management practice, in case of Bedele Brewery Factory. A lot of resources have been devoted into research in the inventory management practices of organizations. It represents one of the most important assets that most businesses possess. In the manufacturing companies, nearly 60% to 70% of the total funds employed are tied up in current assets, of which inventory is the most significant component. The brewery sector is a growing sector which is gaining its importance in recent past. Not much amount of work has been done on this area of managing inventories in brewery sector. The objective of the study was to find out the factors those affect inventory management practice in Bedelle brewery factory. The study had its own significance for brewery factories. The study was carried out through descriptive survey design and data was collected through questionnaires. The study was used census/total enumeration method since the study population limited in number, 134, so no need of sampling. Descriptive and inferential statistical tools: mean, percentage, frequency, correlation and multiple regressions were used to analyze collected data. Multiple linear regression analysis was used to show the relationship between the dependent variable (inventory management practice) and the independent variables (staff competency, bureaucratic procurement practice, budget & documentation/stock record) and recommendation was provided based on the findings of the study. Thus, this study find out that all the independent variables (staff competency, bureaucratic procurement practice, budget and documentation) had a positive significant interference with inventory management practices of the brewery (with $p < 0.05$, and positive regression coefficients). Therefore, the brewery should have to pay a great concern for the indicated inventory management functions in order to maintain and improve the inventory management practices of the brewery.

Key words: inventory management, staff proficiency, bureaucratic procurement, documentation, funding

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CHAPTER ONE

INTRODUCTION

This chapter deals with different sub topics. First the researcher discusses background of inventory management and Bedelle brewery factory. Statement of the problem was discussed in this chapter. The general and specific objective of the study was put on a clear and understandable way. Significance of the study, scope of the study and structure of the thesis was put step by step.

1.1 Back ground of the study

Inventory is a significant constituent of a firm and ought to be managed prudently considering that it ties up a substantial percentage of an organizational capital. The main objectives of firms are to boost productivity with fewer resources while also enhancing quality (Nsikan E, 2015). There are a number of methods that enable a firm to accomplish these objectives; however, the key and usually “hidden” technique is to trim down firm inventory. The Inventory Management' implies supervision and control of the ordering, storage, as well as use of components that a firm used in the process of producing items it sold over and above supervision and control of quantities of the finished products. As opined by Muhayimana(2015), the inventory of a firm is one of its chief resources and embodies a venture that is tied up till the article is sold or used in producing the final merchandise. Furthermore, it costs finances to store, track as well as to insure inventory. Inventories, which are mismanaged, are likely to create considerable financial problems for a firm, whether the mismanagement leads to an inventory surplus or shortage (Luthubua D, 2014). Flourishing inventory management is associated with the creation of a purchase plan that guarantees items are available the moment they are in need in addition to keeping the track of existing inventories and their use.

Managing assets of all kinds can be viewed as an inventory problem; for the same principles apply to cash and fixed assets. Inventory Management 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, spoilage and loss. On Inventory is denoted as the sum of goods or materials held in a store or any other place at a specific time. The

owners of stores should understand the exact number of items that are held in their stores for the purpose of placing orders or controlling losses. According to Baror et al, (2010), the managers of manufacturing firms should understand the number of units of their products available for various customers' orders. In this regard, all types of businesses rely on an inventory count to offer answers. There are diverse ways that organizations can handle their inventory, but it all depends on what kind of business enterprise it is. For instance, a manufacturer of food that produce canned fruit may take into consideration every single piece of that canned fruit in its inventory. The materials utilized to make the can, the labels, the fruit, as well as the sugary filling might all be part of the general examination of inventory (Ogoye J, 2014). Keeping track of inventory might be an intricate process. The word for watching inventory is known as logistics. Logistics is a comprehensive process by which the entire inventory is tracked and logged (Wegner M, 2010). A number of different persons are involved in logistics. This can comprise everything from the owner of the business to the transportation firm that distributes the goods to the manufacturing plant using complex systems, including barcode integration.

After learning the diverse forms of inventory and the significance of ensuring it is logged appropriately, Lysons K, and Farrington,B(2012) inform that the process of tracking such inventory should be reasonably modernized and simple, giving a firm a cost-effective and competitive advantage. In this respect, the purpose of inventory management is to reduce the sum costs linked with investment in inventory. Since inventory is a reversible investment, which continually oscillates in size, the inventory decisions usually deliberate on formative of the optimal level of inventory. An effective inventory management is one that embodies high inventory turnover, as well as minimizing the overall costs associated with inventory management.

Therefore, the researcher was finding out the practice of inventory management and its determinants in brewery sectors. After analyzing the factors affecting inventory management the researcher was find out the impact of inventory management on the firm operational performance especially on bedele brewery factory.

1.2 Research Gap

Taking these benefits in mind in contrast to developed contents most of Asia and African countries due to poor skills of professionals and inefficient products inventory management practice in their health facilities, frequent stock out of life saving products, unnecessary tide up of budgets as a consequence of overstocking of products than the designed inventory maximum quantity (Goldeliver A, 2012) . Inefficient Inventory control system of pharmaceuticals resulted poor health outcomes, wastage of scare resources in most of low and middle-incomecountries (JSI, 2011). Studies in Indonesia showed the inventory management of pharmaceuticals found non-efficient and due to this higher inventory costs, stock out of essential medicines resulted (IlmaNuru R, 2013).There is no study that have been comprehensively been done on factors influencing efficiency inventory management in Bedele Brewery and hence the study intended to fill those gaps.

Most of the studies reviewed identify and prioritize inventory management practices through empirical research in order to suggest inventory control measures. Although they are important to clients for future projects, the studies fail to provide any framework for inventory management from factories' perspective and also on identified interferences of inventory management practices. Although a few studies introduced framework of inventory management in SCM business project development, most of them are presented from clients' perspectives and very little effort has been made to integrate this with the business development cycle. Literature reviewed on effects of inventory management strategies on project performance indicates that effective inventory management strategies impact positively on business project performance.

Studies have been done in relation to inventory management practices and challenges. (Akintonye, 2014)Found that inventory management led to improved performance of German Service firms (Akintonye, 2014). (Mehra, 2014) and (Lapide, 2010) also concluded that use of technology in

inventory management improved efficiency of manufacturing firms and service firms (Lapide, 2010; Mehra, 2014). (Gakuru, 2012) Found that the major factor hindering the application of inventory model is frustrations by the ordering system. Lack of computers to keep track of inventory levels and lack of awareness on how best to implement the models were also cited as constraining factors (Gakuru, 2012).

Kitheka (2012) indicated that inventory management automation affected the performance of the supermarkets. The findings revealed that there was a positive linear relationship between inventory management automation and the performance of the supermarkets. Problems is likely to raise on the organization when inventory is not tracked properly, inefficiency and additional costs mount. Supplies get lost, shrinkage can go unchecked, stock-outs occur, critical equipment locations are uncertain, billing is inefficient since supplies are used without being associated to stock's record, and on-hand inventory can balloon unnecessarily. All of this leads to inefficiency and additional costs. This study will focus on the factors affecting inventory management practices, on cases of Bedele brewery and its fills the gap of organizational gap, variable gap, time & scope gap and research design gaps which identified on the previous studies.

1.2.1 Back ground of Bedele brewery

Bedele is the headquarters for the Bedele Brewery. Founded in 1993, Bedele is a formerly government-owned corporation, producing about 75 million bottles of beer each year for domestic and export customers; it was bought by Heineken in August 2011. (www.bedelebrewery.com) Located in the South Western Ethiopia, Oromia Region, Illubabor Zone Bedele City, and 483 km from Addis Ababa.

Vision:-

Being the first among the domestic breweries by producing a competent product with its quality, price, customer service and satisfaction.

Mission:-

- Producing and supplying a quality product that is able to satisfy customer's wants to the market

- By being a strong competitor, achieve high market share with profitability and keep benefits of the stakeholders including domestic and abroad customers.

Values:-

- Having modern and automated production process.
- Having high skilled & experienced employees.
- Having the commitment of producing and supplying high quality products to the market.
- Having a good co-ordination between the management and the employees to achieve the stated company's missions.
- Having an ability to supply products at any quantity at the right time for both domestic and external markets.
- By having the motto called "customer is a king" trying as much as possible to give a good service for customers and agents.
- Making a move by believing that everything can be improved & so on (<https://www.economist.com/blogs/baobab/2011/08/heineken-and-famine>)

1.3. Statement of the problem

Inventory constitutes the most significant part of current assets in many manufacturing companies. Because of the relative largeness of inventories maintained by the Manufacturing firm considerable sum of an organization's fund is being committed to them. It thus becomes absolutely imperative to manage inventories efficiently so as to avoid unnecessary cost and ensure high quality product to customers (Thai, 2009). Many business organizations the world over do not give inventory management the prominence it deserves in spite of its varied importance. The problem of inventory management has existing for too long. This problem is still with us to date and is a universal rather than a peculiar problem. Thus, it is not limited to a single organization but all business for a. it is not only limited to the private sector with its background motive of profit maximization's, such as Bedele Brewery.

Inventory management represents an important development for the purchasing process. In order for organizations to be competitive and stay updated, there is need to have a paradigm shift in the way procurement is carried out so as to solve numerous procurement problems evident in the

business world especially in developing economies which include increased corruption, high costs of doing businesses, a lot of non-value adding paper work procedures, long time elapse to respond to tenders and non-competitiveness (Chartered Institute, 2011).

In most organization, it is increasingly difficult to management of inventories effectively. Many scholars have established that lack of good inventory management had adversely affected the enterprise. Poor inventory management had resulted over or under stock of inventory and this signs to interruption of operation and increasing cost(Yitayew A.,2014).For many organizations, there is no doubt that inventory management enhances their operations. Organizations with high levels of finished goods inventory can offer a wide range of products and make quick delivery from their backyards to the customers (Guta S, 2010).

There has been a question for management about the efficiency of inventory management procedures in place resulting from inconsistencies of inventory levels leading to various weaknesses like losses that come as a result of over, under-stocking, expiry inventory, failure to meet targets and low morale of the company members. As a result, the company's stores are overcrowded making the work of a store-keeper difficult, late issue of materials to the department and these in turn result into poor inventory service delivery (Gakuru, 2012).

The problem of inventory management may be attributable to the failure, on the part of the top management officials, to give a deserved attention to the function of stores as well as their inability to employ the services of as well qualified stores officer to take charge of stores supervision and management. Added to this problem is the issue of the dearth of storage facilities and the habit of stores procedure violation by the top, the middle, and the junior team personnel's in the organization (Nsikan E, 2015).

A research worked by Mohammed (2014) discover that poor inventory management system results that under stocking, over stocking, high cost, high customer compliant and poor service delivery. The studies also discover that poor procurement planning, purchase of unnecessary materials, lack of adequate and skilled staffs impend in implementing effective inventory management.

Literatures indicate that companies are now seeking to integrate their decisions across the inventory management globally as a result of increasing awareness about the financial and non-

financial impact of inventory management on business companies in particular. In Ethiopia, the concept of inventory management is at the infant stage except very few multinational and international companies investing in Ethiopia. According to my literature reviews, most of the researches on assessment of inventory management practices were conducted on manufacturing companies in the developed countries and very few in developing countries, like Ethiopia. Specifically, the researches conducted on inventory management practices on brewery industry were very rare in Ethiopia in particular. As a result, there was little insight about inventory management practices in the brewery companies of Ethiopia. This knowledge gap in the subject of this thesis in this competitive industry caused the researcher to incline for conducting research on the topic.

Bedele brewery neither keeps excess inventories to avoid an unnecessary tying down of funds as well as loss in fund due to pilferage, spoilage and obsolescence nor maintain too low inventories so as to meet users demand as at when needed. Therefore, the mere fact that inefficiency in inventory management affects virtually the organizational objectives necessitates this type of research work. According to Baror et al, (2010) to compete more effectively in a global marketplace, it is important that firms understand the issue of inventory management and align their purchasing to the diverse environments in which they operate.

Therefore, the study would fill the research gap by finding out factors those affect the inventory management practices in brewery factory specific reference to Bedelle Brewery since it has tremendous force in Ethiopian brewery. The study would identify how staff proficiency, bureaucratic procurement, funding and documentation affect the practice of inventory management on this organization.

1.4. Objective of the study

1.4.1 General objective of the study

The general objective of the study was to find out the factors those affect inventory management practices in Bedele brewery factory.

1.4.2 Specific objective of the study

To achieve the overall objective of the study, the following specific objectives were assessed.

- ❖ To examine the effect of staff competency on inventory management practice.
- ❖ To examine how purchasing practice affects inventory management practice.
- ❖ To examine the effect of budgeting on inventory management practice.
- ❖ To examine how documentation or store record affects inventory management practice.

1.5 Research Hypothesis

H01: there is no significance relationship between inventory management practice and Staff competency.

H02: there is no significant relationship between inventory management practice and purchasing practices.

H03: There is no significant relationship between inventory management practice and budgeting.

H04: There is no significant relationship between inventory management practice and documentation or stock record.

1.6 Significance of the study

The study would mainly have its own significance for brewery factories. It would help find out the determinants of inventory management practice. Therefore, the finding of the study would provide beer manufacturers with insight on how to manage their inventory and how it would influence the firm's operational performance. It provides an insight on determinants of inventory management practice, they would able to put their own strategic plan to manage their inventory effectively. Policy makers and planners would also be able to acquire tremendously important information on the issue under consideration for better success in inventory management practice. Additionally, the research would used to establish a framework for subsequent studies those can work with more

comprehensive data sets. Furthermore, it would stimulate further research, thus keeping sustained interest in the area of determinant of inventory management practice.

1.7 Scope of the study

Inventory management practice varies from one organization to another. The study focused on determinants of inventory management practice in Bedelle brewery. Though there are many factors those determine the performance of inventory management practices, the study was emphasized on staff proficiencies, bureaucratic procurement, documentation or storage and funding. In order to identify the factors from professional, procedural, system, financial and technique angles. The study was conducted based on descriptive survey research design. Additionally, the main tool used to collect data from respondents was structured questionnaires. The reason of selecting this study area is that Bedelle brewery is one of the biggest employers in the brewery industry and it keeps millions of dollars to purchase raw materials for the factory production (Annual Report of Bedele Brewery, 2019).The study was conducted starting from October /2019 to May/2020 for around one year. The study was including permanent employees in procurement and supply department, finance, human resource, store keepers, and also employees worked on production department in Bedelle brewery only and were not include any other factory. The employees from the indicated departments more concerned about the subject matter of the study. Thus, focusing on those employees would help us to get logical and reliable data for the study.

1.8. Structure of the Thesis

The study was organized in to five chapters. The first chapter was present introduction part which was contain background of the study, background of Bedelle brewery, statement of the problem, general and specific objective of the study, significance of the study, scope of the study and structure of the thesis. The second chapter was about literature review, which was incorporate: theoretical review, empirical review and conceptual frame work of the study. While the third chapter was contained methodology. The fourth chapter was present the result and discussion part of the study. Eventually, chapter five illustrated the summary of findings, Conclusion and recommendations of the study.

1.9. Operational Definitions

Staff Proficiency: means Knowledge and Skills possessed by qualified employees. According to Bailey and Farmer (1982) study 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.

Bureaucratic

Procurement practice: as reveled by Osborne and Plastrik, (1997) has many advantages; apart from consistent employee's behavior, it eliminates overlapping or conflicting jobs or duties and behavior of the system is predictable. Despite the above advantages, bureaucratic organization has some significant negatives and side effects. Too much red tapes and paper work not only lead to unpleasant experiences but also to inefficient operations.

Funding: According to Dobler and Burt (2006), Funds can be a constraining factor to effective inventory control when funds allocated cannot cater wholly for the organizations material requirements within the budget period.

Documentation and store record: is also independent variable according to Jessop and Morrison (1994). 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.

CHAPTER TWO

REVIEW OF RELATED LITERATURES

This chapter will deal with an extensive review of the available theoretical literatures, empirical literatures and conceptual frameworks of the research that related to the research objectives.

2.1 Theoretical literature Reviews

The theoretical literature review help establish what theories already exist, the relationships between them, to what degree the existing theories have been investigated, and to develop new hypotheses to be tested. The unit of analysis can focus on a theoretical concept or a whole theory or frame work.

2.1.1 Meaning of inventory

Arnorld et al. (2008) define inventory as the materials and supplies that a business or institution carries either for sale or to provide inputs or supplies to the production process. All businesses and institutions require inventories. Often they are a substantial part of total assets. According to Colin D. Lewis (1975) an inventory is any stored resources that are used to satisfy a current or a future need.

Drury (1996) defined Inventory as a stock of goods that is maintained by a business in anticipation of some future demand. Inventory is the supply of raw materials, partially finished goods called work-in-progress and finished goods, an organization maintains to meet its operational needs. It represents a sizeable investment and a potential source of waste that needs to be carefully controlled. If managers keep too much inventory on hand, they will waste money storing it and lose money the inventories are damaged or stolen.

Colin D. Lewis (1975) explain the word inventory means a physical stock of material or goods or commodities or other economic resources that are stored or reserved or kept in stock or in hand

for smooth and efficient running of future affairs of an organization at the minimum cost of funds or capital blocked in the form of materials or goods (Inventories).

Inventory refers to the value or quantity of raw materials, supplies, work in progress (WIP) and finished stock that are kept or stored for use as need arises (Lyons and Gillingham, 1981). Raw materials are commodities such as steel and lumber that go into the final product. Supplies include items such as Maintenance, Repair and Operating (MRO) inventory that do not go into the final product. Work in progress is materials that have been partly fabricated but are not yet completed. Finished goods are completed items ready for shipment (Kothari, 1992).

2.1.2 Inventory management

Inventory management is the continuing process of planning, organizing and controlling inventory that aims at minimizing the investment in inventory while balancing supply and demand. (Guta S, 2010).

Kitheka (2012) describe inventory as the largest and most tangible investments of any organization which also decides their success in operation. 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.

Different inventory items vary in profitability as well as the amount of space they take up. Higher inventory levels result in increased costs for storage, insurance, spoilage and interest on borrowed funds needed to finance inventory acquisition (Shim S, 2008). As successful inventory management minimizes inventory, lowers cost and improves profitability, managers should appraise the adequacy of inventory levels, which depend on many factors, including sales, liquidity, available inventory financing, production, supplier reliability, delay in receiving new orders, and seasonality. An increase in inventory lowers the possibility of lost sales from stock outs and the production slowdowns caused by inadequate inventory. Inventory levels are also affected by short-term interest rates. As short term interest rates increase, the optimum level of holding inventory is reduced (Shim S, 2008).

2.1.3 Classification of Inventories

Inventories can be classified as those which play direct role during manufacture or which can be identified on the product and the second one are those which are required for manufacturing but not as a part of production or cannot be identified on the product. The first type is labeled as direct inventories and the second are labeled as indirect inventories. Further classification of direct and indirect inventories is as follows:

2.1.3.1 Direct inventories

One of direct inventories includes raw material inventories. They are used in the manufacturing of product and can be identified on the product. In inventory control, manager can concentrate on the bulk purchase of materials to save the investment, to meet the changes in production rate and to plan for buffer stock or safety stock to serve against the delay in delivery of inventory against orders placed and also against seasonal fluctuations (Rob W, 2012).

The second direct inventory is Work-in -process inventories or in process inventories which are of semi-finished type, which are accumulated between operations or facilities. As far as possible, holding of materials between operations to be minimized if not avoided this is because; as we process the materials the economic value (added labor cost) and use value are added to the raw material, which is drawn from stores. Hence if we hold these semi-finished materials for a long time, the inventory carrying cost goes on increasing, which is not advisable in inventory control. These inventories serve the following purpose: Provide economical lot production, Cater to the variety of products, replacement of wastages and to maintain uniform production even if a sale varies (Rob W, 2012).

The other inventory includes finished goods inventories. After finishing the production process and packing, the finished products are stocked in stock room. These are known as finished goods inventory. These are maintained to: To ensure the adequate supply to the customers, to allow stabilization of the production level and to help sales promotion program. Spare parts inventories are also include in direct material inventories. Any product sold to the customer, will be subjected to wear and tear due to usage and the customer has to replace the worn-out part. Hence the manufacturers always calculate the life of the various components of his product and try to supply

the spare components to the market to help after sales service. The use of such spare parts inventory is: To provide after sales service to the customer and to utilize the product fully and economically by the customer (Miller, 2010).

The last direct inventory items are Scrap or waste inventory: While processing the materials, we may come across certain wastage and certain bad components (scrap), which are of no use. These may be used by some other industries as raw material. These are to be collected and kept in a place away from main stores and are disposed periodically by auctioning (Miller, 2010).

2.1.3.2 Indirect Inventories

Inventories or materials like oils, grease, lubricants, cotton waste and such other materials are required during the production process. But we cannot identify them on the product. These are known as indirect inventories. (Colin D, 1975).

2.1.4 Objectives of Inventory Management

According to Stevenson (2010) inadequate control of inventories can result in both under and over stocking of items: Under stocking results in missed deliveries, lost sales, dissatisfied customers and production bottlenecks : over stocking unnecessary ties up funds that might be more productive elsewhere although overstocking may appear to be the lesser of the two evils. The price tag for excessive overstocking can be staggering when inventory holding costs are high and matters can easily get out of hand.

Inventory management has two main concerns. One relates to the level of customer service that is to have the right goods, in sufficient quantities, in the right place at the right time. The other relates to the cost of ordering and carrying inventories. There for the overall objectives of inventory management is to achieve satisfactory levels of customer service while keeping inventory costs within reasonable bounds. (Stevenson, 2010)

Data A.K (1997) clarifies the fundamental objective of a good system of inventory management. They are: to be able to place an order at the right time from the right resource to acquire the right quantity and the right quality, to ensure adequate stock and end over is made by inventory control to see that any department will get the commodity or other necessary item as and when required,

to minimize inventory on hand, to maintain continuity in production and to make maximum use of storage capacity available.

2.1.5 The Benefits of Inventory Management

Inventory management increases profitability- Forecasting, controlling and managing inventory increases productivity, while reducing costs, resulting in greater profitability. Accuracy improvements & time savings, in addition to the reduction of fixing costly mistakes, can result in considerable cost savings across an organization. Inventory management improves decision-making Rapid, accurate data collection enables access to real-time business intelligence across all areas of your company Issue, event and project management tracking integrated with an inventory management system enables all associates to proactively identify & solve business issues. It increases customer satisfaction Responding to trends, seasonality, promotions & changing marketing conditions results in having the right products in stock for customers Properly identified products available to load enables customers to order & receive the correct Commodity quickly Customer service tools integrated within an inventory managements equips the entire company to deliver consistent, personalized care for your customers. (Data A.K (1997)).

Inventory management helps businesses to be successful. It is a crucial part of any business success. The first component is good inventory management helps you to figure out exactly how much inventory you have. This makes it easier to prevent product shortages and keep just enough inventories on hand without having too much. The second one is using smart inventory management; you can stay ahead of the demand curve, keep the right amount of product on hand and plan ahead for seasonal changes. This goes back to keeping your customers happy all year long. The third you can empower your employees to help you manage inventory. Training employees to use barcode scanners, inventory management software and other tools helps them make better use of their time and it helps your business make better use of its resources, both human and technological. And the fourth if you have multiple locations, then inventory management becomes even more important because you need to coordinate your supplies at each location depending on differences in demand and other factors. The last point is it's a great time-saving tool. By keeping track of all the products, you have on hand; you can save yourself the

hassle of doing inventory recounts to make sure your records are accurate. This once again requires inventory management software. (Tung R, 2008).

2.1.7 Determinants of Inventory Management Practice

2.1.7.1 Staff Competency

Bailey and Farmer (1982) says 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. 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. If staff involved in stock control is not qualified and competent, then there will be ineffectiveness in inventory control. Carter and price (1993) indicate that training of staff is vital if full use is to be made of their abilities and talents.

2.1.7.2 Bureaucratic Purchasing practice

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 organizations become large and more complex, the authoritarian- paternalistic patter gave way to increased functional specialization with many layers of middle and lower management for coordinating organization effort (Kenneth & Kenneth, 2005). 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. Despite the above advantages, bureaucratic organization has some significant negative and side effect. Too much red tapes and paper work not only lead to unpleasant experiences but also to inefficient operations. Because employees are

treated impersonality and they are expected to rely on rules and policies, they are unwilling to experience individual judgment and they avoid risks (Osborne &Plastrik, 1997)

2.1.7.3 Budget

With enough funds the organization can run its activities efficiently and effectively while with inadequate funds an organization may have difficulties in running its activities (Carter & Price, 1993). According to Dobler B (2006), Funds can be a constraining factor to effective inventory control when funds allocated cannot cater wholly for the organization's material requirements within the budget period.

According to Burton (1981), other factors that may affect allocated funds include the variability in user demand patterns and frequent price variations. The stature of financial management in the organization can affect adversely its effectiveness and in the finance resource application in various activities.

2.1.7.4 Documentation or store record

According to Susan T & 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 (1982) 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 (1994) 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.

2.1.8 Theories on inventory management

2.1.8.1 Scientific Management Theory

To investigate the influence of staff training on effective stores management, the study will be based on scientific management theory. The theory basically consists of the works of Fredrick Taylor. Fredrick Taylor started the era of modern management in the late nineteenth and early twentieth centuries; Taylor consistently sought to overthrow management by rule of thumb and replace it with actual timed observations leading to the one best practice Adams, J. 2007). International Journal of Economics, Commerce and Management, United Kingdom Licensed under Creative Common advocated for the systematic training of workers in the one best practice rather than allowing them personal discretion in their tasks. He further believed that the workload would be evenly distributed between the workers and management with management performing the science and instruction and the workers performing the labor, each group doing the work for which it was best suited. Taylors'' strongest positive legacy was the concept of breaking a complex task down into a number of subtasks, and optimizing the performance of the subtasks, hence, his stopwatch measured time trials (Osdorne& Rubinstein, 1990).

2.1.8.2 Theory of Inventory and Production

The theory of inventory and production is described as specialty in operations research and is commonly referred to as the mathematical theory of inventory and production (Anthony J. Berry, Jane Broadbent and David Otley, 1995). The theory is concerned with the development and adoption of inventory and production systems that are effective and that will result in the minimization of institutional cost. In this connection, the theory studies the following organizational functions: supply chain, warehousing, manufacturing and production, spare part allocation, and logistics. According to Anthony J. Berry, Jane Broadbent and David Otley, 1995), institutions should follow the following steps in order to have an effective inventory management system:

- 1.** Develop a mathematical model which describes the behavior of inventory;
- 2.** Design and adopt an optimal inventory policy with respect to the firm's mathematical model;

3. Develop a computerized information processing system that will provide information on the current inventory levels;
4. Use the current inventory levels information to apply the optimal inventory policy to replenish existing inventory levels. In addition, the theory of inventory and production considers and uses the following measures: ordering costs, shortage costs, holding costs, salvage costs, discount rates, and revenues.

2.1.8.3 Adaptive Structuration Theory

Based on Structuration theory intends to determine the effects of information technology on effective stores management. Structuration theory was first proposed by Anthony Giddens in his Constitution of Society in 1984, which was an attempt to reconcile social systems and the micro/macro perspectives of organizational structure. De Sanctis and Poole (1994) borrowed from Giddens in order to propose AST (adaptive structuration theory) and the rise of group decision support systems. AST provides the model whereby the interaction between advancing information technologies, social structures, and human interaction is described, and which focuses on the social structures, rules, and resources provided by information technologies as the basis for human activity. AST is a viable approach in studying how information technology affects effective inventory management in an organization because it examines the change from distinct perspectives (De Sanctis and Poole 1994).

2.2 Empirical Literature Reviews

In this section the researcher reviewed the works done by other researchers which are in one way or another related to the topic under discussion. It will aim relating the theoretical literature reviews with the findings of other researchers. Morgan, (2009) conducted a research study in United States of America on inventory management performance to Alien Technology Corporation as his case study which is a leading provider of radio frequency identification products for global customers, the company is also involved with pharmaceutical products where by other companies wins to supply pharmaceutical product to the government of United States of America because of its good customer services well organized and planned. The findings revealed that Alien Technology Corporation is almost 95% efficiency on inventory management practices where by the corporation manufactures products very high volume and at a low cost.

The company provides a family of Radio Frequency Identification product for a variety application including supply chain management, logistics to improve inventory management and reduce operating costs. The researcher added that efficiency inventory management of the Alien Technology Corporation is achieved by applying just in time purchase by assuring smooth and well-maintained relationship with suppliers of materials to ensure constant supply when the corporation is in need of raw materials to facilitate production. The Alien Technology Corporation in the balance sheet shown 20% value of inventory and this is normal to the Company since there are some materials which are available in small quantities and are essential to the company. The researcher concluded that for any company to grow should take greater control on inventory because inventories are heart to the manufacturing companies for the purpose of meeting customer demand without running stock out or over stock situation.

In United Kingdom, Webner and Rick (2008) revealed that organization's goal and satisfaction are achievable within the given time limitations, however control of inventory system which typically represents 45% to 90% of all expenses for an organization, is needed to ensure that it has the right goods on hand to avoid stock outs also to prevent shrinkage and run certain accounting, many organizations have fair enough of their limited resources, capital tied up in their major assets and inventory. Worth than that, they may have their capital tied up in the wrong kind of inventory. Inventory may be old, worn out, shop worn, obsolete, or the wrong size, or colors, or there may be an imbalance among different product lines that reduces the customer appeal and concerns of the total operation.

The study by Yusuf A, (2003) on inventory control and economic order quantity in National Electric Power Authority (NEPA) in Nigeria revealed that some of the problems facing stores control systems were highlighted to include the death of qualified stores personnel, overstocking and sometimes under stocking, pilferages, deterioration, obsolesce and insufficient store materials. Stores control measures started receiving attention in the advanced countries of America and Europe only after the industrial Revolution of the 1930s, which resulted in the death of materials. Also the study observed that the problem of stores control is not unconnected with the failure of the top management of the organization to accord a high degree of attentions to the Stores function as well as their failures to employ a well-qualified stores officer to manage and control stock.

There is also the problem of lack of storage capacity. The National Electric Power Authority (NEPA) also shares in these and many other problems.

Stevenson (2010) revealed that inventory management is a key operations management activity, effective inventory management is critical to the smooth operation of most businesses and their supply chains. Good inventory management has an impact on operations, marketing and finance departments. Poor inventory management hinders operations, reduces customer satisfaction and raises operating costs.

Irvine H, (2006) used U.S. company data to test whether the insights offered by classical inventory theory hold at firm levels. They show that organizations facing uncertain demand, long lead times, and high gross margin tend to hold more inventories, and larger companies hold fewer inventories than smaller ones because of the economies of scale effect.

Akintonye, (2014) Examined inventory management from an incentive and control perspective. They demonstrated that the residual income performance measure based on historical cost accounting provided managers with incentives to make optimal production and inventory depletion decisions. The lower-of-cost-or-market rule is shown to be effective in situations where inventory may become obsolete due to unexpected demand shocks.

In Kenya, Gerald O, (2012) revealed that 23% of the organizations were found to recognize materials management as they had in charge reporting directly to the Chief Executive Officer. However generally Kenyan organizations are not practicing professionalism in materials management and owing to the huge amount of resources they are committing on materials related activities, a lot of emphasis need to be directed towards materials management and it should be recognized as a top management function.

Also revealed that Kenyan organizations spend an average of 56% of their annual sales turnover on materials and materials related costs while the majority of the organizations had not given due recognition to materials function. 64% of the organizations were found to be applying materials management concept, though most were doing so unknowingly, majority of the organizations have material functions performed by general managers and production managers. Most Kenyans have not yet recognized professionalism in materials management as most sensitive positions like

purchasing and supplies are undertaken by non-professionals. This is a great undoing in this globally competitive market and recommended that much emphasis and attention should be given to materials management to enable organizations achieve the best optimal cost structures as such need to create departments dealing with materials function to enable easy control and monitoring costs.

According to Mentzer, J.T. (2001) Inventory control provides method to manage the flow of materials or goods in the supply chain. Since controlling inventory is not the only mechanism to ensure an adequate inventory levels, it is also able to reduce inventory related cost. The manufacturing sector holds large inventories with quite complicated process and policy related to inventory control, especially when involving external party whether they are supplier or customer. The manufacturing companies always confront with issues related to inventory management, which includes bullwhip effect on demand, increase of inventory cost, late delivery, and inventory shortage. Therefore, a key challenge for manufacturing company is to determine how to control the inventory flows effectively as to get the best overall inventory performance. Since inventory control manages to cover a wide range of aspects, it is chosen to focus on specific element such as inventory monitoring and ordering; control limits; and replenishment decisions.

In Uganda, (Namagembe, 2010) her study revealed that a significant positive relationship between information sharing and inventory management means that if chain partners implement information technologies and collaborate among each other, then inventory management could improve, also in her study revealed that a significant positive relationship between inventory management and customer satisfaction means that in order to obtain high levels of customer satisfaction there is need for better inventory management. She further showed that significant positive relationship between information sharing and customer satisfaction which implies that increase levels of information sharing among chains partners lead to improved levels in customer satisfaction.

2.3 Conceptual Framework

A Conceptual framework is a description of a comprehensive conceptual model framework which is relevant to the research problems. It shows the general literature review part by using framework to give clear understanding for theoretical and empirical review it includes independent variables identified as staff proficiency, bureaucratic procurement practice, funding, and documentation or store record experience on one hand and effective inventory management practice on the other hand as dependent variable. Inventory management practice is shown on the right side by taking inventory utilization as a proxy variable while the independent variables are shown on the left-hand side in figure 1.

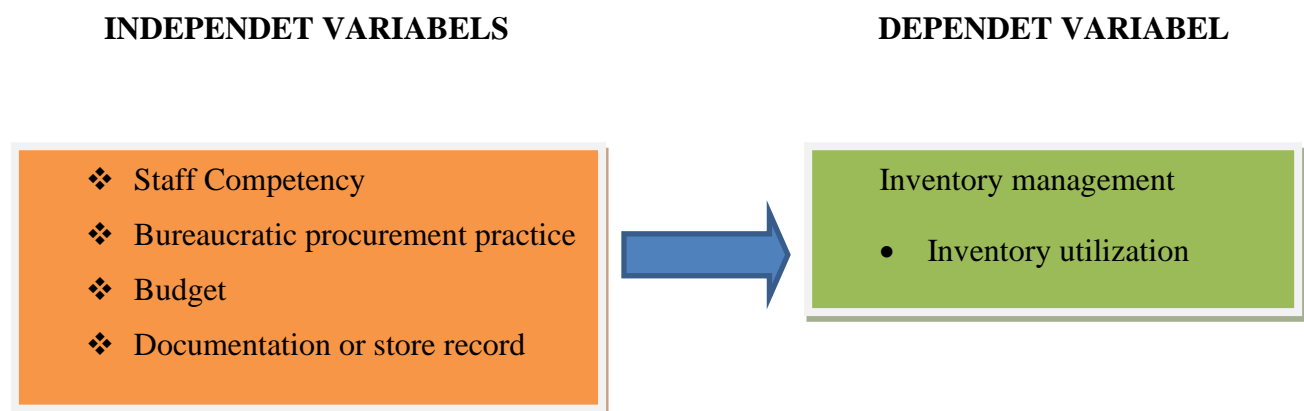


Figure 1. *conceptual frame works on determinants of inventory management practice*

Source: (the researcher, 2019)

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter would give an outline of the research design and methodology that were used in the study. Therefore, research design, target population of the study, sampling technique, and sample size, source of data, methods of data collection, method of data analysis, reliability of the instruments and description of study variable were discussed respectively. These are making clear the design and methods which road map the ways that's the research followed.

3.1 Research Design

Miller and Salkind (2002) define research design as, basically master plan of a research that focuses on how study is to be conducted. The selection of a research design is also based on the nature of the research problem or issue being addressed, the researchers' personal experiences, and the audiences for the study (Creswell, 2009). The study was used descriptive research design. According to Mugenda and Mugenda (2003) descriptive survey design is appropriate because it involves collecting data in order to answer questions concerning the current status of subjects of a study. The study was used descriptive survey design to describe record, analyze and report the conditions that were exist. The study was also used explanatory research design to report inferential findings and different tests of the study.

3.2. Target population

The study was target permanent employees from the operational unit in procurement activity, store keepers, workers in department of finance, and production and Operational Management department in Bedelle brewery. The target of the study was not be all employees in the organization. The target populations of the study were employees in those selected department and managerial position who have relation with the inventory management practice of the organization. Therefore, the researcher enumerated all the employees those were targeted for this study.

3.3 Census

Since the population size for this research was limited in number 134, all target populations were included in the study using census method. Therefore, the study was conducted on 134 employees those were a target population from the study area through total enumeration with a census method.

3.4 Source of data

The researcher used both primary and secondary data source to achieve objective of the study. Secondary source of data was collected from different books, journals, company website, articles and previous researches that are related with inventory management practice.

The primary data was collected from employees of the company who have relationship with determinants of inventory management practice of the company. The researcher was adopting inventory management questionnaires from Daniel Demise (2015) and Godana (2014) with some modifications.

3.5 Method of data collection

Essential data for this study was collected through primary and secondary data collection instruments. The primary data was collected through structured questioners. The questioners were having three parts of twenty-six questions to determine effective inventory management practice of the company. Section one was demographic information of respondents, section two was having stages of effective performance management system and section three was contain the overall opinion of respondents on determinants of effective performance management system of Bedelle brewery.

3.6 Reliability and validity of the instrument

Checking the validity and reliability of data collecting instruments before providing to the actual study subject is the core to assure the quality of the data (Keith, 2006). To ensure validity of instruments, the researcher was developing instruments using simple language for respondents to understand it easily. The researcher was also checking the questionnaires with professionals in academic area to minimize errors due to improper design elements by using content validity. Pretest provides an advance opportunity for the investigator to check the questionnaires and to

minimize errors due to improper design elements, such as question, wording or sequence (Denzin, N. K. & Lincoln, Y. S. (2000).

Reliability analysis was subsequently done using Cronbach’s Alpha which measures the internal consistency by establishing if certain item within a scale measures the same construct. Cronbach’s alpha was calculated by application of SPSS for reliability analysis (see table below). An alpha value of 0.7 or above will be considered reliable.

Table 1: Reliability Statistics

S/No	Variables	N of items	Cronbach's Alpha	Cronbach's Based on Standardized Items	Alpha on
1	STAFF COMPETENCY (SC)	5	.946	.947	
2	BUREUCRATIC PROCUREMENT PRACTICE (BPP)	4	.930	.932	
3	BUDGET	4	.952	.952	
4	DOCUMENTATION/STOCK RECORD (D/SR)	6	.988	.988	
5	INVENTORY MANAGEMENT PRACTICES (IMP)	6	.978	.979	

The results of data analysis showed that the survey indicators, which were adopted from mature measurement scales, have good content validity. The Cronbach’s α used in this study for the dimensions of each construct is higher than the critical value of 0.7, as proposed by (Nunnally, 1978), indicating that the internal consistency of the scale used in this research is good. Since the Sig. (2-tailed) value < 0.05 , then the item is valid and if Sig. > 0.05 alpha, the item is invalid. (Note that the Sig. (2-tailed) value also known as the *p-value*, is in most valid circumstances take the “0.000” value)

3.7 Method of data analysis

Descriptive and inferential statistics (to see the effect of independent variables on dependent Variable) tools were employed to analyze the collected data. According to Stevens (2009),

descriptive statistics is important to have a clear picture of the characteristics of sample units. By applying descriptive statistics one can compare and contrast different situations existing in the sample units with the desired characteristics. In the upcoming study, descriptive statistics tools such as mean, frequency, percentage and standard deviation was applied to data collected from Respondents in Bedelle brewery. According to Shieh (2010), inferential statistics allow inferences to a larger population from the sample. The researcher was used inferential statistical tools such as; correlation and standard multiple linear regressions to determine factors of inventory management practice by applying statistical package for social sciences (SPSS version 20).

3.8 Model specification and description of study variables

The researcher was conducting multiple linear regression analysis by considering form of relationship and the number of independent and dependent variables. Multiple linear regression analysis was used to show the relationship between the dependent and the independent variables (Kothari, 2004).

Model:

Keith (2006) defines a regression function as follows:

$(Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_n X_n \dots + U_i)$ becomes:

Y = inventory turnover

β_0 = constant

β_n = unstandardized coefficient beta

X₁= staff competency

X₂= bureaucratic procurement

X₃=budget

X₄=documentation and store

U_i = error term

3.9 Measurements of study variables

According to Kothari (2004) measurement means the process of assigning numbers to objects and observations. Scale of measurement can be considered in terms of mathematical properties they are nominal, ordinal, interval and ratio. This study will use measurement scale based on variable type and types of questions.

For each independent variables and dependent variable the questionnaires was have five point likert scales and will be filled by employees in the selected department. According to Prayag (2007), five point scales reduces the level of frustration among respondents, and increases the rate and quality of the responses. The benefits of Likert scales are; quick and economical to administer and score, easily quantify (easy to calculate mean) most attitude measurement, provide direct and reliable assessment of attitudes and they lend themselves well to item analysis procedures (Das, 2009). The respondents will be asked to rate each statements based on their opinion with likert scale of (1= strongly disagree, 2= disagree, 3=neutral, 4=agree, 5=strongly agree).

- Dependent Variable of this study will be inventory management practice. .
- Independent Variables in this study are staff proficiency, bureaucratic procurement, funding and documentation or storage.

CHAPTER FOUR

RESULTS AND DISCUSSION

This chapter contains the presentation, analysis and interpretations of data. The statistical techniques that were outlined in chapter three were applied to the data, and the results obtained are

presented in this chapter. The first part describes the demographic characteristics of respondents in terms of sex, age group, and education level and service years.

In the second part the analysis and interpretation of data gathered through questionnaire were discussed descriptions of the variables with different assumption tests, result of goodness of fit test and result of independent variables effect tests.

4.1. Findings of Demographic Characteristics of Respondents

The study sought to collect data from 134 staffs of Bedele brewery, but the researcher managed to collect 123 questionnaires. This represents a response rate of 91.8 percent which is very good for analysis. According to Babbie (2004) a response rate of 60 percent is good and that of 91.8 percent is very good.

Table 1: Demographic Characteristics of Respondents

Variable	Variable categories	Frequency	Percentage (%)
Gender/sex	Male	77	62.6
	Female	46	37.4
	Total	123	100
Age	18-25 Years	11	8.9
	25-30 Years	37	30.1
	31-35 Years	53	43.1
	36-40Years	15	12.2
	>40Years	7	5.7
	Total	123	100.0
Education level	Below Certificate	13	10.6
	Certificate	21	17.1
	Diploma	33	26.8
	First Degree	47	38.2
	Masters degree & above	9	7.3
	Total	123	100.0
Respondents Position Area	Non managerial	110	89.4
	Managerial	13	10.6
	Total	123	100
Service Year	<1Year	13	10.6
	1-5 Years	28	22.8

	6-10 Years	58	47.2
	>10 years	24	19.5
	Total	123	100.0

Source; Own survey, 2020

Regarding gender of the respondents, majority (62.6%) of the respondents were male while 37.4 percent of the respondents were female (figure 4.1). This suggests a good representation of gender thereby the study collected views from both gender. The above figure implies that the staff proportion at Bedele brewery the number of males dominated the number of females. This might due to the task behavior more suited for mens.

According to the information observed above on table 4.1, concerning respondents age category the study shows that, larger proportion 43.1% of the respondents were found under the age group of 31-35Years, followed by 30.1% were 25-30years and least group 5.7% of them were above 40years old. From the above findings the researcher can conclude that as most of the staff of Bedele brewery are found at the age of 18-35which are found at their productive and energized age. Thus, they could have a potential to perform long on the operation of their task unit.

In relation to respondents' academic background status as the information observed above on table 4.1. the findings of this study showed that larger proportion 38.2% of the respondents were first degree holder followed by 26.8% diploma holder, 17.1% had certificate and the least group 7.3% of them had their second degree and above. This implies that most of the staff of Bedele brewery was attained their academic at university and college level. This could suggest the study participants have been potential enough to evaluate the inventory management practice of the factory.

Regarding current position area of respondents according to the information displayed above on the table 4.1, the result showed that larger proportion 89.5% of the study participants were found on non-managerial position and the remaining 10.5% of them were from the managerial position. This implies that the respondents were composed from managerial and managerial position area of the brewery. Thus, this composition of the study participants were potential measure both the operational/practice and managerial practice of inventory management of the factory.

Concerning respondents' service year, based on the data observed above on table 4.1, the result showed that larger proportion 47.2% of respondents were served for 6-10years at the brewery, followed by 22.8% those worked for 1-5years, and 19.5% those served the factory for more than 10 years. The least group 10.6% of the respondents were stayed at the factory for less than 1 year. This implies that most of the study participants were stayed long enough at the brewery. Thus, the participants of the study had been experienced enough to evaluate the inventory management practices of the brewery.

4.2. Information Related with Inventory Management Practices of Bedele Brewery

4.2.1. Staff Competency

Table 2: Staff Competency of Bedele Brewery

<i>Items</i>	<i>SD</i>	<i>Dis</i>	<i>Newt</i>	<i>Agree</i>	<i>SA</i>	<i>Mean</i>
The competency and skill of the qualified staff in your organization is helping the brewery to achieve its goals and objectives efficiently and effectively.	9.8%	17.1%	17.1%	21.1%	35%	3.54
The brewery is taking qualification as pre-requisite and matching it with job requirements for the successful accomplishment of the organization.	14.6%	8.1%	7.3%	26 %	43.9%	3.76
Bedelle brewery is recruiting, training and developing personnel with the capacity and motivation to do better job for inventory management to function effectively and efficiently.	11.4%	5.7%	12.2%	26.8%	43.9%	3.86
Bedelle brewery is giving training for staffs for the full use of their abilities and talents.	13 %	7.3%	16.3%	25.2%	38.2%	3.51
The skills of your staff on inventory management are affecting the inventory management practice of the brewery.	15.4%	1.6%	30.9%	22.8%	29.3%	3.49

Source: Survey, 2020

As indicated above on table 2, the analysis of staff proficiency showed that, larger proportion (56.1%) of respondents were reported that as they were agree or strongly agree for the competency and skill of the qualified staff in their organization is helping the brewery to achieve its goals and objectives efficiently and effectively with the mean value 3.54 which approves average number of the respondents tends to agree. Bailey and Farmer (1982) says 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. 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. Thus, the staff's on the study area which suggest their competence on the operations which the brewery delegate to conduct.

On the other hand majority of the respondents 69.9% of the respondents were reported their agreement and or strongly agreement for the brewery is taking qualification as pre-requisite and matching it with job requirements for the successful accomplishment of the organization with the mean value of 3.76 which approves the agreement of average number of respondents. This implies that the brewery could certify its staff with a qualification for the task which given by the organization. Therefore, the staff's had a potential to provide the intended output.

Whereas, the majority 70.7% of the respondents were agree and or strongly agree on Bedelle brewery is recruiting, training and developing personnel with the capacity and motivation to do better job for inventory management to function effectively and efficiently with the mean value of 3.86. This implies the employees on the study area had a chance of development on their professional career. Thus, staffs of Bedele brewery had been conducted inventory management effectively and efficiently with enriched technical skills. Additionally, larger proportion 63.4% of respondents were agree and or strongly agree on Bedelle brewery is giving training for staffs for the full use of their abilities and talents ($m=3.51$). This implies that Bedele brewery provide training for the staff's on training to utilize the maximum efforts and potential of the staffs with minimized resources and costs. This could ensures effective inventory management practices with positively contribution of staff proficiency.

Regarding the skill of staff on inventory management, larger proportion 52.1% of respondents were reported as they were agreed and or strongly agreed on the skills of your staff on inventory management are affecting the inventory management practice of the brewery ($m=3.49$). This implies that the staff had a skill which made an effect on the inventory management practices of the organizations. This might be due to their skill proficiency, training access from the organization and also the experience which the staffs had on inventory management practices.

4.2.2. Bureaucratic Purchasing practice

Table 3: Bureaucratic purchasing practice of Bedele Brewery

<i>Items</i>	<i>SD</i>	<i>Dis</i>	<i>Neut</i>	<i>Agree</i>	<i>SA</i>	<i>Mean</i>
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Management of the organization is make procurement processes bureaucratic, through procurement reforms	6.5%	13%	27.6%	26.8%	26%	3.46
The organization had followed rigid rules through its procurement practice which make an effective inventory management to follow	34.1%	24.1%	13%	17.9%	13.8%	2.56
Inflexible and bureaucratic systems of procurement within the organization are contributing to unacceptable contract delays and increased costs.	13%	30.1%	8.1%	35.8%	13%	2.37
The inventory management practice of the organization is being affected by long bureaucratic procurement practices.	13 %	7.3%	16.3%	25.2%	38.2%	2.36

Source: Survey, 2020

As indicated above on table 3, the analysis of staff bureaucratic procurement practices showed that, larger proportion (52.8%) of respondents were reported that as they were agree or strongly agree for management of the organization is make procurement processes bureaucratic, through procurement reforms. This implies that there is a bureaucratic procurement practices on the study area. Thus, the procurement in the organization 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.

The largest group 58.2% of respondents were disagree and or strongly disagree on the organization had followed rigid rules through its procurement practice which make an effective inventory management to follow. This implies that the organization had no followed procedural way of procurement areas. This could suggest that it had been susceptible the task is sensitive area for mul-practicing ways.

Whereas the larger proportion 48.8 % of respondents were agreed and or strongly agreed on inflexible and bureaucratic systems of procurement within the organization are contributing to unacceptable contract delays and increased costs. This could suggest in the procurement process of the brewery unacceptable contract delays happened due to the bureaucratic systems which implemented by the organization. This could able to increase cost for the delayed contrasts.

On the other hands larger proportion 63.4% of the respondents were agreed and or strongly agreed on the inventory management practice of the organization is being affected by long bureaucratic procurement practices. This could suggest that the bureaucratic procurement process could make an effect on the inventory management of the organization.

4.2.3. Budgeting

Table 4: Budgeting of Bedele Brewery

<i>Items</i>	<i>SD</i>	<i>Dis</i>	<i>Neut</i>	<i>Agree</i>	<i>SA</i>	<i>Mean</i>
Funding has been a constraining factor to inventory control when funds allocated cannot cater wholly for the organizations material requirements within the budget period	6.5%	8.9%	16.3%	26%	42.3%	3.89
Funding has been affecting effective inventory management practice within Bedelle brewery factory.	8.1%	8.1%	25.2%	17.1%	41.5%	3.76
Bedelle brewery is running its activities efficiently with enough funding	9.8%	5.7%	17.9%	20.3%	46.3%	3.88
The company dispatched funding timely as required to the intervention implemented on effective inventory management practices of the company	8.1 %	7.3%	16.3%	20.3%	48%	3.93

Source: Survey, 2020

In relation to the funding analysis of the brewery, as indicated above on table 4, the result showed that, larger proportion 68.3% of the respondents were agreed or strongly agreed on funding has been a constraining factor to inventory control when funds allocated cannot cater wholly for the

organizations material requirements within the budget period. This implies that the brewery had a budget capacity to allocate for the inventory management. This could suggest the inventory management practices could practice on the planned time.

On the other hand, larger proportion of respondents 58.6% were agreed on strongly agreed on funding has been affecting effective inventory management practice within Bedelle brewery factory. This could suggest the brewery had been allocated sufficient fund for the inventory management practices of the brewery. Thus, the brewery had been conducted effective inventory management practices. According to Dobler and Burt (2006), Funds can be a constraining factor to effective inventory control when funds allocated cannot cater wholly for the organizations material requirements within the budget period. Whereas larger proportion 66.6% of the respondents were agreed and or strongly agreed on Bedelle brewery is running its activities efficiently with enough funding. This implies that the brewery had been run its inventory management with a reasonable cost.

Concerning the timely funding of the brewery, larger population 68.3% of respondents were agreed or strongly agreed on the company dispatched funding timely as required to the intervention implemented on effective inventory management practices of the company This implies that the inventory intervention had been conducted on the schedule to conducted the task. This might be help the brewery on timely decision taking on the stock status of the brewery.

4.2.4: Documentation/Stock Recording

Table 5: Documentation/Stock Keeping of Bedele Brewery

<i>Items</i>	<i>SD</i>	<i>Dis</i>	<i>Neut</i>	<i>Agree</i>	<i>SA</i>	<i>Mean</i>
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The organization has accurate inventory records to provide satisfactory customer service	7.3%	8.1%	17.1%	27.6%	39.8%	3.85
The organization uses accurate inventory records to determine replenishment of individual items.	9.8%	5.7%	13%	25.2%	44.7%	3.90
The organization is using proper documentation to ensure material availability to meet repair or project demand.	8.1 %	8.9%	14.6%	23.6%	44.7%	3.88
The organization is using accurate records to provide the management with the information that is helpful to ensure accountability	8.1 %	8.9%	18.7%	23.6%	44.7%	3.80
During Stock review, inventory management can be told by comparing the actual situation to the company established and documented standards and Regulations	7.3 %	10.6%	14.6%	26%	41.5%	3.84
Information is being used as a critical tool for the efficient inventory management practice within Bedelle brewery.	7.3 %	8.9%	13.8%	30.1%	39.8%	3.86

Source: Survey, 2020

In relation to the documentation/stock keeping analysis of the brewery, as indicated above on table , the result showed that, larger proportion 67.4% of the respondents were agreed or strongly agreed on having the organization accurate inventory records to provide satisfactory customer service. This implies that the brewery could able to generate reliable data on its inventory trends.

On the other hand, larger proportion of respondents 69.9 % were agreed on strongly agreed on the organization uses accurate inventory records to determine replenishment of individual items.

This could suggest the brewery replenishment system had been logical since it depends accurate inventory records. Whereas larger proportion 68.3% of the respondents were agreed and or strongly agreed on the organization is using proper documentation to ensure material availability to meet repair or project demand. This implies that the brewery had been ensured its material availability for the all operational activities.

Similarly, larger proportions 68.3% of respondents were agreed or strongly agreed on the organization is using accurate records to provide the management with the information that is helpful to ensure accountability. This implies that the management had been used accurate records of inventory on the study area. Thus, they could able provide logical decisions on the operations.

Whereas larger proportion 67.6% of the respondents were agreed and or strongly agreed on during Stock review, inventory management can be told by comparing the actual situation to the company established and documented standards and Regulations. Thus, the brewery conducted inventory tasks as per the standards. As a result the quality of the tasks might be maintained or kept,

Additionally, larger proportion 69.9% of the respondents was agreed and or on information is being used as a critical tool for the efficient inventory management practice within Bedelle brewery. This implies that information was considered as a decision tool of inventory management practices.

4.2.5: Inventory Management

Table 6: Inventory management of Bedele Brewery

<i>Items</i>	<i>SD</i>	<i>Dis</i>	<i>Neut</i>	<i>Agree</i>	<i>SA</i>	<i>Mean</i>
The organization is receiving its inventory with in a shorter lead time.	5%	8.3%	16.7%	32.5%	37.5%	3.94

The organization is improving the practice of inventory management using Computerized inventory record system	5.8%	6.7%	10%	25.8%	51.7%	4.11
Bedelle brewery is utilizing its inventory at its optimum level best.	5.8%	6.7%	16.7%	22.5%	48.3%	4.01
Utilization of storage capacity in the factory is getting improved.	6.7%	6.7%	25.8%	23.3%	37.5%	3.78
Location of store is suitable for user department.	6.7%	6.7%	15%	28.3%	43.3%	3.95
Bedelle brewery is minimizing carrying cost of inventories by properly managing inventories.	5.8%	8.3%	10%	35.8%	40%	3.96

Source: Survey, 2020

Regarding the inventory management of Bedele Brewery, according to the information observed above on table 6, the result showed that larger proportion 70% of the respondents were agreed or strongly agreed on the organization is receiving its inventory with in a shorter lead time. This implies that the organization received its within less than the limited period of duration. Thus, the organization procurement practices conducted with in a short period of time.

On the other hand majority 77.5% of the respondents were agreed or strongly agreed on the organization is improving the practice of inventory management using computerized inventory record system. This implies that the inventory management of the brewery has been system based. This might be have a significant effect on the data quality, information accuracy and keeping materials transaction. Similarly majority 70.8 % of respondents were agreed and or strongly agreed on Bedelle brewery is utilizing its inventory at its optimum level best. This implies there is no over accumulated and stock outed items on the stock on hand. This could suggest the practice inventory management was effective.

Whereas larger proportion 60.8% the respondents were agreed and or strongly agreed on utilization of storage capacity in the factory is getting improved. This implies the Brewery utilized its storage capacity effectively. Thus, the materials could organized properly on the storage.

And also, majority 71.6 % of the respondents were agreed or strongly agreed on location of store is suitable for user department. This implies that the store was accessible for all user department of the brewery. Additionally, 75.8% of the respondents were agreed or strongly agreed on Bedelle

brewery is minimizing carrying cost of inventories by properly managing inventories. This implies that costs were minimized by effective inventory management.

4.3. Descriptive Analysis to assess the factors affecting inventory management practices of Bedele brewery

The descriptive statistics utilized are based on frequency tables to provide information on the demographic variables. Through tables, summary statistics such as means, standard deviations, minimum and maximum are computed for each factor of inventory management practices and inventory management practices in this study. The findings which identified on this study presented as follows;

Mesfin (2016) used a kind of rule of thumb to create equal intervals for a range of five points Likert scale (that ranges from strongly disagree to strongly agree in the survey questionnaire). A calculated mean value that ranges from 1 to 1.80 implies strong disagreement, a mean range from 1.81 to 2.6, from 2.61 to 3.4, from 3.41 to 4.2 and from 4.21 to 5.00 represented respondents' perceptions of somewhat disagree, neutral, somewhat agree and strongly agree respectively. The 0.8 served as a boundary for each elements of the measurement in the questionnaire.

Accordingly, the 0.8 was a result found by dividing the difference between the maximum (5) and minimum (1) scores to the maximum score (5) of the questionnaire. In the process of examining of the data, standard deviation was used. Small standard deviations (relative to the value of the mean itself) indicate that data are close to the mean whereas a large standard deviation (relative to the mean) indicates that the data points are distant from the mean. The mean is a poor fit of the data. Standard deviation is a measure of how well the mean represents the data (Field 2009). All of the variables were measured using a five point likert scale where 1 stands for Strongly Disagree and 5 stands of Strongly Agree. Therefore the interpretation made using the mean of each variable, as a matter of fact the mean falls between the two ranges, hence if the mean approaches to 1 the interpretation would be the respondents didn't agree on the raised issue or variable and if it approaches to 5 the reverse would be true.

Table 7: Descriptive Statistics factors which affect inventory management practice on the study area			
	N	Mean	Std. Deviation
INVENTORY MANAGEMENT PRACTICES (IMP)	123	3.89	1.209
STAFF Competency (Sc)	123	3.87	1.228
Budgeting	123	3.86	1.203
DOCUMENTATION/STOCK RECORD (D/SR)	123	3.82	1.251
BUREUCRATIC Purchasing PRACTICE (BPP)	123	2.49	1.204

Source; Own survey, 2020

Table 4.4; represents the calculated means and standard deviations for the dependent variable (Inventory Management Practice) and independent variables (staff competency, bureaucratic procurement practice, budget and documentation/stock record,). The mean of staff competency is 3.87 which showed that average employees on the study areas were nearly agree for staff proficiency affect the inventory management practice on the study area. This could imply staff proficiency of Bedele brewery could able to exert an effect on the inventory management practices of the factory. Similarly, the means of funding shows that (3.86) this figure was revealed almost an agreement on average employees on the study area for budgeting could effect of the inventory management practice on the study area. This could suggest the effect of funding slightly lower than staff proficiency on the brewery inventory management practice. To the same fashion the mean of inventory management and documentation/stock record, which are 3.89 and 3.82 respectively showed an agreement by average number of respondents. Whereas the mean value of bureaucratic procurement practice was 2.49 the findings showed that almost disagreement of employees to the effects of bureaucratic procurement practice on the inventory management practice of the brewery at study areas. This could assure as bureaucratic procurement practice advantageous to support the improved inventory management practices of the factory

The mean of budgeting is 3.89 which showed that average employees on the study areas were agree for budgeting affect the inventory management practice on the study area. This could imply funding of Bedele brewery could able to exert an effect on the inventory management practices of

the factory. Finally the study observed that budgeting can be a constraining factor to effective inventory control when funds allocated cannot cater wholly for the organizations material requirements within the budget period as shown by a mean of 3.89 in each case standard deviation of 1.203. This supported by According to Dobler and Burt (2006), Funds can be a constraining factor to effective inventory control when funds allocated cannot cater wholly for the organizations material requirements within the budget period. The study sought to establish the extent to which respondents agreed with the practice of documentation/Stok Recording, from the study findings, majority of the respondents agreed that; documentation/Stok Recording provide the management with the information which is used to ensure accountability as shown by a mean of 3.82 and a standard deviation of 1.251. Bailey and Farmer (1982) 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. So, the documentation/stock recording well practiced at the study area.

The mean for inventory management practice at the study areas 3.89, which respondents were agreed on the function inventory management practice at Bedelle brewery. According to Stevenson (2010) inadequate control of inventories can result in both under and over stocking of items: Under stocking results in missed deliveries, lost sales, dissatisfied customers and production bottlenecks : over stocking unnecessary ties up funds that might be more productive elsewhere although overstocking may appear to be the lesser of the two evils. Thus, the brewery had been worked exerting its effort on balancing under and over stocking through its inventory management practices.

4.4. Results of the Classical Linear Regressions Assumption Tests

(a) *Sample characteristics of normality test*

According to normal Q-Q plots and box plot showed that the data of factors effect, Staff competency, Budgeting, Documentation/Stock record, Bureaucratic PP and Inventory management practices were normally distributed with the value of asymptotic significance (p-value) 0.518 which is higher than alpha ($\alpha = 0.05$). The value of asymptotic significance for SC was 0.418, for D/SR was 0.658, for BPP is 0.462, for budgeting was 0.508 and for IMP was 0.543(See on the table 8 below).

Table 8. Tests of Normality						Asymptotic Significance
Dependent Variable	Variables	Kolmogorov-Smirnov ^a		Shapiro-Wilk		
		Statistic	Sig.	Statistic	Sig.	
INVENTORY MANAGEMENT PRACTICES (IMP)	STAFF Competency (SC)	.360	.007	.664	.001	.418
	Budgeting	.253	.003	.816	.003	.508
	DOCUMENTATION/STOCK RECORD (D/SR)	.324	.000	.752	.000	.658
	BUREAUCRATIC Purchasing PRACTICE (BPP)	.409	.000	.664	.000	.462
	Inventory Management Practices	.404	.000	.682	.000	0.543
	a. Lilliefors Significance Correction					

Source: SPSS Output from Survey Data, 2019

(b) Sample characteristics of Multi co linearity

Table 9: Co linearity statistics

Variables	Tolerance	VIF
Staff competency	.121	8.234
Bureaucratic procurement practice	.361	2.770
Budget	.128	7.822
Documentation/Stock record	.145	6.901

Dependent variable: Inventory Management Practice

Source: 2020 survey

According to the information observed above on table 4.3.1 Output of variance inflation factor (VIF) column in the coefficients table of the regression output shows that VIF for SP (8.234), BPP (2.770), Funding (7.822), and D/SR (6.901), all are smaller than 10. It means that there is no problem of multi co linearity between independent variables and dependent variable. This can be further ascertained from the Tolerance column of the same table in which the tolerance for the four independent variables 0.121, 0.361, 0.128 and 0.145 respectively all > 0.1 indicating that there is no multi co linearity.

(C) Result of Goodness fittest

Table 10: ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	164.253	4	41.063	403.564	.000 ^b
	Residual	12.007	118	.102		
	Total	176.260	122			
a. Dependent Variable: INVENTORY MANAGEMENT PRACTICES (IVP)						
b. Predictors: (Constant), DOCUMENTATION/STOCK RECORD (D/SR) , BUREUCRATIC PROCUREMENT PRACTICE (BPP), BUDGET, STAFF COMPETENCY (SC)						

Source: 2020 survey

Significance of the model (“Did the model explain the deviations in the dependent variable”)

The last column in the above table (ANOVA-table) shows the goodness of fit the model. It is p-value or observed significance of the F. *The lower this number, the better the fit.* Typically, if “Sig” is less than 0.05, we conclude that our model could fit the data. Test of the goodness fit of the model in this research showed negative results. From the result of F-test, it is known that the F-statistic 403.564 is higher than the critical value 4.141 (from t-table) and the probability (p-value or the Sig. value) 0.000 is smaller than alpha (0.05). Therefore, the model is fit. The third confirmatory test is looking at the R² value of the model summary which is .932 > 0. As this value gets approach to +1, the better the model will be.

Table 11: Model Summary ^b					
	R				Change Statistics

Model	R	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df 1	df 2	Sig. F Change
1	.965 ^a	.932	.319	.932	403.564	4	118	.000
a. Predictors: (Constant), DOCUMENTATION/STOCK RECORD (D/SR), BUREUCRATIC PROCUREMENT PRACTICE (BPP), BUDGET, STAFF COMPETENCY (SC)								
b. Dependent Variable: INVENTORY MANAGEMENT PRACTICES (IMP)								

Source: 2020 survey

The results from the regression model summary and analysis of variance above indicate that staff proficiency, bureaucratic procurement practice, funding and documentation/stock record could significantly contribute towards the R² value, which is a statistical measure of how close the data are to the fitted regression line. Based on the R² value of 0.932, these four variables could explain 93.2 % variation in the inventory management practices of the brewery.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.336	.092		3.644	.000
	STAFF COMPETENCY (SC)	.387	.066	.406	5.895	.000
	BUREUCRATIC PROCUREMENT PRACTICE (BPP)	.113	.040	.113	2.817	.006
	BUDGETING	.274	.061	.302	4.498	.000

DOCUMENTATION/STOCK RECORD (D/SR)	.186	.061	.191	3.023	.003
a. Predictors: (Constant), DOCUMENTATION/STOCK RECORD (D/SR) , BUREUCRATIC PROCUREMENT PRACTICE (BPP), BUDGETING, STAFF COMPETENCY (SC) b. Dependent Variable: INVENTORY MANAGEMENT PRACTICES (IMP)					

Source: 2020 survey

The regression coefficients are shown in the above table. The intercept, 0.336, is representing the estimated average value of inventory management practices when staff competency; bureaucratic procurement practices, budgeting and documentation/stock recording are zero. Thus an organization with no staff proficiency; bureaucratic procurement practices, budgeting and documentation/stock recording will have severe impact on the inventory management practices. The slop of independent variables also exhibits useful predictive information about the implication. The slop of staff competency; bureaucratic procurement practices, budgeting and documentation/stock recording which are 0.406, 0.113, 0.302 and 0.191 means that organization inventory management practices changes increased by 0.406, 0.113, 0.302 and 0.191 when staff competency; bureaucratic procurement practices, budgeting and documentation/stock recording increases by 1.

An examination of these four independent variables indicated that staff proficiency represented the strongest positive interference on the organization inventory management practices with the standard beta of 0.406 followed by budgeting with beta of 0.302, documentation/stock recording with β of 0.191 and bureaucratic procurement practices with β of 0,1 13. Thus the statistical results prove that staff competency; bureaucratic procurement practices, budgeting and documentation/stock recording had a positive and linear relationship with inventory management practices from this the researcher can develop can develop the following formula

$$Y = 0.336 + 0.406X_1 + 0.113X_2 + 0.302X_3 + 0.191X_4 + \varepsilon$$

this means:

$$Y = 0.336 + 0.406 \text{ staff competency} + 0.113 \text{bureacuratic procurement} + 0.302 \text{documentation or storage} + 0.191 \text{ budgeting}$$

From the above regression model, holding staff competency, bureaucratic procurement, documentation or storage and budgeting support to a constant zero inventory management practice would be at 0.336. It was established that a unit increase in staff proficiency would cause an increase in inventory management practice by a factor of 0.406. While a unit increase in bureaucratic procurement practice also cause an increase in inventory management practice by a factor of 0.113 and further unit increase in documentation or storage would cause an increase in inventory management practice by a factor of 0.302 and lastly a unit increase in funding would lead to increase in inventory management practice by factors of 0.191.all the significant values were found less than 0.05. This indicates that study were statistically significant to make conclusion.

4.5. Result of hypotheses test

“Hypothesis is a formal statement that presents the expected relationship between an independent and dependent variable.”(Creswell, 1994).The hypothesis provides a simple statement of association between Y and X. Nothing is indicated about the association that would allow the researcher to determine which variable, Y or X, would tend to cause the other variable to change in value. Based the hypothesis drawn for this study the findings which were revealed presented as shown below.

Table 13: Hypothesis test Summary

S/No	Hypothesis	p-value	r-coefficients	tested value
1	H01: there is no significance relationship between inventory management practice and staff competency.	.000 (p<0.05)	.406	rejected the H01 & Accept HA1
2	H02: there is no significance relationship between inventory management practice and staff bureaucratic procurement practice.	.006 (p<0.05)	.113	rejected the H02 & Accept HA2

3	H03: there is no significance relationship between inventory management practice and budget.	.000 (p<0.05)	.302	rejected the H03 & Accept HA3
4	H04: there is no significance relationship between inventory management practice and documentation/stock recording.	.003 (p<0.05)	.191	rejected the H04 & Accept HA4

Source: 2020 survey

4.5.1 Result of first hypothesis testing (Staff competency)

Bailey and Farmer (1982) says 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. 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.

In a summary, multiple regression analysis indicated that, staff proficiency positively predicted inventory management practices of Bedele brewery. This could suggested as staff competency had a positive relationship with significant effect of with inventory management practices (which p-value= 0.000 (< 0.05) and $r=0.406$). Thus, the null hypothesis **H01**: There is no significance relationship between inventory management practice and staff proficiency was rejected and **HA1**: There is significance relationship between inventory management practice and staff proficiency was accepted. The above findings concurs with the findings by (Bailey et al, 2012) according to Bailey et al (2012), 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. Training of staff is vital if full use is to be made of their abilities and talents. For an organization to succeed, qualification is therefore a prerequisite and must be matched with job requirement, hence the need to hire and develop ambitious personnel. If staff involved in inventory management is not qualified and competent, then there will be ineffectiveness in inventory management.

4.5.2 Result of Second hypothesis testing (Bureaucratic procurement practice)

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. Despite the above advantages, bureaucratic organization has some significant negative and side effect. (Osborne &Plastrik, 1997). As indicated the information in a summary of multiple regression analysis which showed that, bureaucratic procurement practice some positively predicted inventory management practices of the brewery. This could suggested as bureaucratic procurement practice had a slight positive relationship with significant effect of with inventory management (which p-value= 0.006, < 0.05, r=0.113). Thus, the null hypothesis **H₀₂**: There is no significance relationship between inventory management practice and bureaucratic procurement practice was rejected and **H_{A1}**: There is some significance relationship between inventory management practice and bureaucratic procurement practice was accepted. The above findings concurs with the findings by(Kenneth, 2005) according to Kenneth (2005), bureaucracy expects conformity in behaviorrather than performance since employees are treated impersonality and they are expected truly on rules and policies, they are unwilling to experience individual judgment and avoid risks.

4.5.3 Result of third hypothesis testing (Budget)

According to Dobler and Burt (2006), Funds can be a constraining factor to effective inventory control when funds allocated cannot cater wholly for the organizations material requirements within the budget period. As indicated the information in a summary of multiple regression analysis which showed that, budget positively predicted inventory management practices of the brewery. This could suggested as budget had positive relationship with significant effect of with inventory management (which p-value= 0.000, < 0.05, r=0.302). Thus, the null hypothesis **H₀₃**: There is no significance relationship between inventory management practice and budget was rejected and **H_{A3}**: There is significance relationship between inventory management practice and budget was accepted. The above findings concurs with the findings by (Dobler et al, 2000) according to Dobler et al (2000), funds can be a constraining factor to effective inventory control when budget funds allocated cannot cater wholly for the organizations material requirements within the budget period. Resources lead to a better organizational commitment and also overcome organizational obstacles. Sufficient resources also lead to organizational implementation success

and project implementation success the stature of financial management in the organization can affect adversely its effectiveness and in the finance resource application in various activities.

4.5.4 Result of fourth hypothesis testing (Documentation/Stock Recording)

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 (1994) 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. As indicated the information in a summary of multiple regression analysis which showed that, documentation/stock recording positively predicted inventory management practices of the brewery. This could suggested as documentation/stock recording had a positive relationship with significant effect of with inventory management (which $p\text{-value} = 0.003, < 0.05, r=0.191$). Thus, the null hypothesis **H₀₄**: There is no significance relationship between inventory management practice and documentation/stock recording was rejected and **H_{A4}**: There is some significance relationship between inventory management practice and documentation/stock recording was accepted. The above findings concurs with the findings by (Susan, 2000) according to Susan (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.

CHAPTER FIVE

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Summary of Major findings

According to the collected data from the study population, after the study was processed and analyzed this raw data in order to present relevant result of the study with full of interpretation and discussion. The findings on the result part of the study were sorted with descriptive and inferential statistics presentation. Therefore, based on the identified result of the study, the researcher could able to summarize the major findings of the study and present as shown below.

- The mean of staff competency is 3.87 which showed that average employees on the study areas were nearly agree for staff proficiency affect the inventory management practice on the study area. This could imply staff proficiency of Bedele brewery could able to exert an effect on the inventory management practices of the factory. Similarly, the means of funding shows that (3.86) this figure was revealed almost an agreement on average employees on the study area for budgeting could effect of the inventory management practice on the study area. To the same fashion the mean of inventory management and documentation/stock record, which are 3.89 and 3.82 respectively showed an agreement by average number of respondents. Whereas the mean value of bureaucratic procurement practice was 2.49 the findings showed that almost disagreement of employees to the effects of bureaucratic procurement practice on the inventory management practice of the brewery at study areas.
- Test of the goodness of fit of the model in this research showed negative results. From the result of F-test, it is known that the F-statistic 403.564 is higher than the critical value 4.141 (from t-table) and the probability (p-value or the Sig. value) 0.000 is smaller than alpha (0.05). Therefore, the model is fit. The third confirmatory test is looking at the R^2 value of the model summary which is $.932 > 0$. As this value gets approach to +1, the better the model will be. The results from the regression model summary and analysis of variance above indicate that staff proficiency, bureaucratic procurement practice, funding and documentation/stock record could significantly contribute towards the R^2 value, which is a

statistical measure of how close the data are to the fitted regression line Based on the R^2 value of 0.932, these four variables could explained 93.2 % variation in the inventory management practices of the brewery.

- Output of variance inflation factor (VIF) column in the coefficients table of the regression output shows that VIF for SC (8.234), BPP (2.770), Budgeting (7.822), and D/SR (6.901), all are smaller than 10. It means that there is no problem of multi co linearity between independent variables and dependent variable. This can be further ascertained from the Tolerance column of the same table in which the tolerance for the four independent variables 0.121, 0.361, 0.128 and 0.145 respectively all > 0.1 indicating that there is no multi co linearity
- The slop of staff competency; bureaucratic procurement practices, Budgeting and documentation/stock recording which are 0.406, 0.113, 0.302 and 0.191 means that organization inventory management practices changes increased by 0.406, 0.113, 0.302 and 0.191 when staff competency; bureaucratic procurement practices, Budgeting and documentation/stock recording increases by 1.
- An examination of these four independent variables indicated that staff competency represented the strongest positive interference on the organization inventory management practices with the standard beta of 0.406 followed by Budgeting with beta of 0.302, documentation/stock recording with β of 0.191 and bureaucratic procurement practices with β of 0,113. Thus the statistical results prove that staff competency; bureaucratic procurement practices, Budgeting and documentation/stock recording had a positive and linear relationship with inventory management practices.
- In a summary, multiple regression analysis indicated that, staff competency positively predicted inventory management practices of Bedele brewery. This could suggested as staff proficiency had a positive relationship with significant effect of with inventory management practices (which $p\text{-value} = 0.000 (< 0.05)$ and $r = 0.406$). Thus, the null hypothesis **H₀₁**: There is no significance relationship between inventory management practice and staff competency was rejected and **H_{A1}**: There is significance relationship between inventory management practice and staff proficiency was accepted.
- As indicated the information in a summary of multiple regression analysis which showed that, bureaucratic procurement practice some positively predicted inventory management

practices of the brewery. This could be suggested as bureaucratic procurement practice had a slight positive relationship with significant effect of with inventory management (which p-value= 0.006, < 0.05, r=0.113). Thus, the null hypothesis **H₀₂**: There is no significance relationship between inventory management practice and bureaucratic procurement practice was rejected and HA1: There is some significance relationship between inventory management practice and bureaucratic procurement practice was accepted.

- As indicated the information in a summary of multiple regression analysis which showed that, budgeting positively predicted inventory management practices of the brewery. This could be suggested as funding had positive relationship with significant effect of with inventory management (which p-value= 0.000, < 0.05, r=0.302). Thus, the null hypothesis **H₀₃**: There is no significance relationship between inventory management practice and funding was rejected and HA3: There is significance relationship between inventory management practice and funding was accepted.
- As indicated the information in a summary of multiple regression analysis which showed that, documentation/stock recording positively predicted inventory management practices of the brewery. This could be suggested as documentation/stock recording had a positive relationship with significant effect of with inventory management (which p-value= 0.003, < 0.05, r=0.191). Thus, the null hypothesis **H₀₄**: There is no significance relationship between inventory management practice and documentation/stock recording was rejected and HA4: There is some significance relationship between inventory management practice and documentation/stock recording was accepted.

5.2 Conclusions

The study revealed that for inventory management practice function to achieve staff competency, 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 efficiency of inventory management among employees of Bedele Brewery.

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 predicable, thus the study concludes that bureaucratic procurement procedures had a positive impact on the efficiency of inventory management of Bedele Brewery.

The study revealed that documentation is crucial in ensuring efficient 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 appositive impact on the efficiency of inventory management of Bedele Brewery.

The study revealed that budgeting positively affect the efficiency of inventory management of Bedele Brewery to a great extent , thus the study concludes that funding positively affect the efficiency of inventory management of Bedele Brewery to a great extent.

Generally, the study find out that staff competency, bureaucratic procurement practice, budgeting and documentation/stock records of Bedele Brewery had a significant relationship with the inventory management practices of the organizations. Thus, the organization should have to pay a great concern for the factors which have investigated on this study.

5.3. RECOMMENDATIONS

Based on the findings of the study the researcher could able to forward the following recommendations as a possible solutions to fill the identified gaps on this study in order to be intervene by the concerned bodies.

- ✓ There is need for organizations 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.
- ✓ The study revealed that funding positively affect efficiency of inventory management of Bedele Brewery to a great extent , thus there is need for organizations to do inventory in management through mobilizing budget as it positively affect their efficiency .
- ✓ The study identified strong effect of staff competency on inventory management practice of Bedelle Brewery. Thus, the brewery could keep to recruit, train and develop personnel with the capacity and motivation to do better job that the skills possessed by staff had a positive effect on the efficiency of inventory management practice of the brewery.
- ✓ The research study recommends that companies should focus on developing competitive skills for inventory management among their employees, via special training programs, so that such employees can manage more successfully inventories within consumer goods manufacturing firms.
- ✓ In addition, consumer goods manufacturing firms should adopt modern technological systems in the management of inventories, including Enterprise Resource Planning (ERP) systems, which are critical in guaranteeing a high level of efficiency in management of high reorder and holding costs faced by firms in the market.

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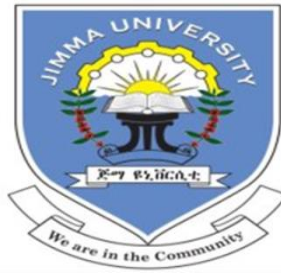
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APPENDIX-I



JIMMA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF MANAGEMENT

Questionnaire for employees in the organization

Dear Participants My name is **MahletHailu**. I am a postgraduate student in the Department of Management: MBA program at Jimma University. Now I am conducting a research in the area of ***“Factors affecting inventory management practice in Bedele Brewery factory”***. Therefore, your answers are very important and valuable for the successful completion of the study. Please fill out all of the questions to the best of your knowledge according to the questions require. The information you provide will be kept confidential and will be used for this research purpose only. I request your cooperation to fill and respond truthfully for the asked Questions. If you have any question, you can contact me through **0917054025**. Finally, I would like to appreciate and thank you in advance for your dedication, time and genuine response to the questions.

Thank you very much for your cooperation in advance!

Part II: Information related with inventory management practice of the company.

This part of the questionnaire consists of twenty five (25) questions. The main purpose of this instrument is to examine “factors affecting the inventory management practices”. Judge how frequently each statement fits the situation of your organization. Use the following rating scale, and put “✓” mark for each rating.

Key: Strongly agree (5), Agree (4), Neutral (3), Disagree (2), and strongly disagree (1).

Statement	Rating				
	5	4	3	2	1
STAFF PROFICIENCY (SP)					
The competency and skill of the qualified staff in your organization is helping the brewery to achieve its goals and objectives efficiently and effectively.					
The brewery is taking qualification as pre-requisite and matching it with job requirements for the successful accomplishment of the organization.					
Bedelle brewery is recruiting, training and developing personnel with the capacity and motivation to do better job for inventory management to function effectively and efficiently.					
Bedelle brewery is giving training for staffs for the full use of their abilities and talents.					
The skills of your staff on inventory management are affecting the inventory management practice of the brewery.					
BUREUCRATIC PROCUREMENT PRACTICE (BPP)					
Management of the organization is make procurement processes bureaucratic, through procurement reforms					

The organization had followed rigid rules through its procurement practice which make un effective inventory management to follow					
Inflexible and bureaucratic systems of procurement within the organization are contributing to unacceptable contract delays and increased costs.					
The inventory management practice of the organization is being affected by long bureaucratic procurement practices.					
FUNDING					
Funding has been a constraining factor to inventory control when funds allocated cannot cater wholly for the organizations material requirements within the budget period					
Funding has been affecting effective inventory management practice within Bedelle brewery factory.					
Bedelle brewery is running its activities efficiently with enough funding					
The company dispatched funding timely as required to the intervention implemented on effective inventory management practices of the company					
DOCUMENTATION/STOCK RECORD (D/SR)					
The organization has accurate inventory records to provide satisfactory customer service					
The organization uses accurate inventory records to determine replenishment of individual items.					

The organization is using proper documentation to ensure material availability to meet repair or project demand.					
The organization is using accurate records to provide the management with the information that is helpful to ensure accountability					
During Stock review, inventory management can be told by comparing the actual situation to the company established and documented standards and Regulations					
Information is being used as a critical tool for the efficient inventory management practice within Bedelle brewery.					
INVENTORY MANAGEMENT PRACTICES (IVP)					
The organization is receiving its inventory with in a shorter lead time.					
The organization is improving the practice of inventory management using Computerized inventory record system					
Bedelle brewery is utilizing its inventory at its optimum level best.					
Utilization of storage capacity in the factory is getting improved.					
Location of store is suitable for user department.					
Bedelle brewery is minimizing carrying cost of inventories by properly managing inventories.					

Thank you for your time and Response!!!

Annex-II

Statistical SPSS Output

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.336	.092		3.644	.000	
	STAFF PROFICIENCY (SP)	.387	.066	.406	5.895	.000	.121
	BUREUCRATIC PROCUREMENT PRACTICE (BPP)	.113	.040	.113	2.817	.006	.361
	FUNDING	.274	.061	.302	4.498	.000	.128
	DOCUMENTATION/ STOCK RECORD (D/SR)	.186	.061	.191	3.023	.003	.145

a. Dependent Variable: INVENTORY MANAGEMENT PRACTICES (IVP)

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	164.253	4	41.063	403.564	.000 ^b
	Residual	12.007	118	.102		
	Total	176.260	122			

a. Dependent Variable: INVENTORY MANAGEMENT PRACTICES (IVP)

b. Predictors: (Constant), DOCUMENTATION/STOCK RECORD (D/SR), BUREUCRATIC PROCUREMENT PRACTICE (BPP), FUNDING, STAFF PROFICIENCY (SP)

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.965 ^a	.932	.930	.319	.932	403.564	4	118	.000

a. Predictors: (Constant), DOCUMENTATION/STOCK RECORD (D/SR) , BUREUCRATIC PROCUREMENT PRACTICE (BPP), FUNDING, STAFF PROFICIENCY (SP)

b. Dependent Variable: INVENTORY MANAGEMENT PRACTICES (IVP)

Collinearity Diagnostics^a

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	STAFF PROFICIENCY (SP)	BUREUCRATIC PROCUREMENT PRACTICE (BPP)	FUNDING	DOCUMENTATION/STOCK RECORD (D/SR)
1	1	4.835	1.000	.00	.00	.00	.00	.00
	2	.102	6.873	.63	.00	.21	.00	.00
	3	.042	10.673	.32	.04	.78	.05	.03
	4	.011	20.889	.04	.01	.00	.50	.82
	5	.009	23.336	.00	.95	.00	.44	.15

a. Dependent Variable: INVENTORY MANAGEMENT PRACTICES (IVP)

Reliability Statistics of SP

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.946	.947	5

Reliability Statistics of BPP

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.930	.932	4

Reliability Statistics of funding

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.952	.952	4

Reliability Statistics of Doc/SR

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.988	.988	6

Reliability Statistics of IMP

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.978	.979	6

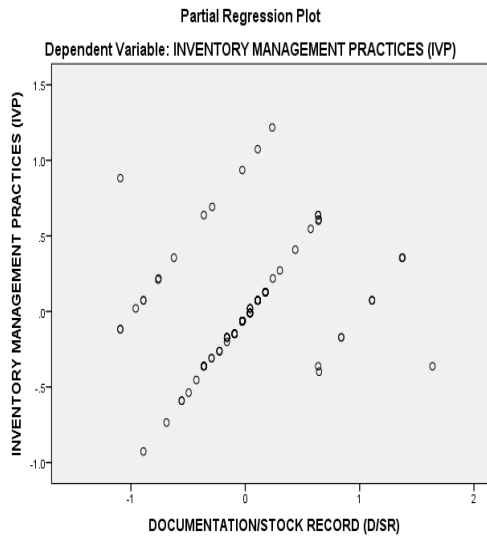
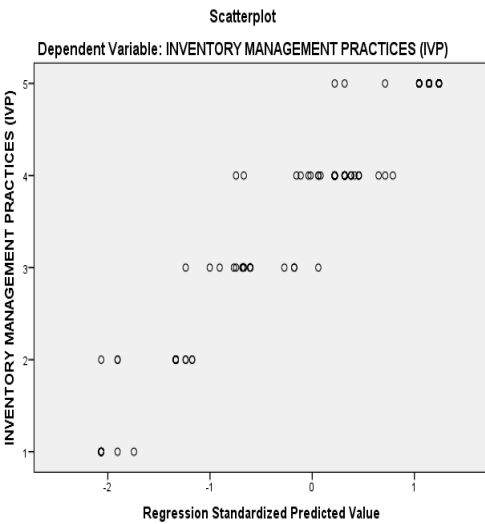
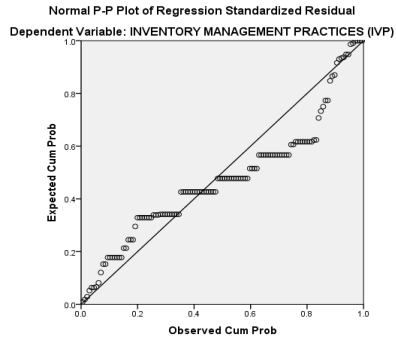
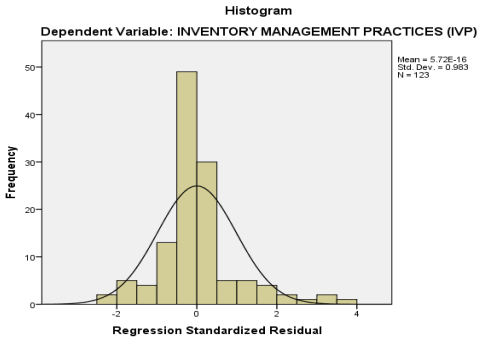


Table A3 The t -distribution

The table gives critical values of t for significance at various levels, in a two-tailed/non-directional or a one-tailed/directional test, for different numbers of degrees of freedom. These critical values are the values beyond which lies that proportion of the area under the curve which corresponds to the significance level.

<i>Degrees of freedom</i>	<i>Significance level: two-tailed/non-directional</i>				
	<i>0.20</i>	<i>0.10</i>	<i>0.05</i>	<i>0.02</i>	<i>0.01</i>
	<i>Significance level: one-tailed/directional</i>				
	<i>0.10</i>	<i>0.05</i>	<i>0.025</i>	<i>0.01</i>	<i>0.005</i>
1	3.078	6.314	12.71	31.82	63.66
2	1.886	2.920	4.303	6.965	9.925
3	1.638	2.353	3.182	4.541	5.841
4	1.533	2.132	2.776	3.747	4.604
5	1.476	2.015	2.571	3.365	4.032
6	1.440	1.943	2.447	3.143	3.707
7	1.415	1.895	2.365	2.998	3.499
8	1.397	1.860	2.306	2.896	3.355
9	1.383	1.833	2.262	2.821	3.250
10	1.372	1.812	2.228	2.764	3.169
11	1.363	1.796	2.201	2.718	3.106
12	1.356	1.782	2.179	2.681	3.055
13	1.350	1.771	2.160	2.650	3.012
14	1.345	1.761	2.145	2.624	2.977
15	1.341	1.753	2.131	2.602	2.947
16	1.337	1.746	2.120	2.583	2.921
17	1.333	1.740	2.110	2.567	2.898
18	1.330	1.734	2.101	2.552	2.878
19	1.328	1.729	2.093	2.539	2.861
20	1.325	1.725	2.086	2.528	2.845
21	1.323	1.721	2.080	2.518	2.831
22	1.321	1.717	2.074	2.508	2.819
23	1.319	1.714	2.069	2.500	2.807
24	1.318	1.711	2.064	2.492	2.797
25	1.316	1.708	2.060	2.485	2.787
26	1.315	1.706	2.056	2.479	2.779
27	1.314	1.703	2.052	2.473	2.771
28	1.313	1.701	2.048	2.467	2.763
29	1.311	1.699	2.045	2.462	2.756
30	1.310	1.697	2.042	2.457	2.750
40	1.303	1.684	2.021	2.423	2.704
60	1.296	1.671	2.000	2.390	2.660
120	1.289	1.658	1.980	2.358	2.617
∞	1.282	1.645	1.960	2.326	2.576

Table A9 The Pearson product-moment correlation coefficient

The table gives the critical values of the Pearson product-moment correlation coefficient, r , for different numbers of pairs of observations, N . For significance, the calculated value of r must be *greater than or equal to* the critical value.

<i>N</i>	<i>Significance level: two-tailed/non-directional</i>			
	<i>0.20</i>	<i>0.10</i>	<i>0.05</i>	<i>0.01</i>
	<i>Significance level: one-tailed/directional</i>			
	<i>0.10</i>	<i>0.05</i>	<i>0.025</i>	<i>0.005</i>
3	0.951	0.988	0.997	1.000
4	0.800	0.900	0.950	0.990
5	0.687	0.805	0.878	0.959
6	0.608	0.729	0.811	0.917
7	0.551	0.669	0.754	0.875
8	0.507	0.621	0.707	0.834
9	0.472	0.582	0.666	0.798
10	0.443	0.549	0.632	0.765
11	0.419	0.521	0.602	0.735
12	0.398	0.497	0.576	0.708
13	0.380	0.476	0.553	0.684
14	0.365	0.458	0.532	0.661
15	0.351	0.441	0.514	0.641
16	0.338	0.426	0.497	0.623
17	0.327	0.412	0.482	0.606
18	0.317	0.400	0.468	0.590
19	0.308	0.389	0.456	0.575
20	0.299	0.378	0.444	0.561
21	0.291	0.369	0.433	0.549
22	0.284	0.360	0.423	0.537
23	0.277	0.352	0.413	0.526
24	0.271	0.344	0.404	0.515
25	0.265	0.337	0.396	0.505
26	0.260	0.330	0.388	0.496
27	0.255	0.323	0.381	0.487
28	0.250	0.317	0.374	0.479
29	0.245	0.311	0.367	0.471
30	0.241	0.306	0.361	0.463
40	0.207	0.264	0.312	0.403
50	0.184	0.235	0.279	0.361
60	0.168	0.214	0.254	0.330
70	0.155	0.198	0.235	0.306
80	0.145	0.185	0.220	0.286
90	0.136	0.174	0.207	0.270
100	0.129	0.165	0.197	0.256
200	0.091	0.117	0.139	0.182

Table A10 The Spearman rank correlation coefficient

The table gives the critical values of the Spearman rank correlation coefficient, ρ , for different numbers of pairs of observations, N .

N	<i>Significance level: two-tailed/non-directional</i>			
	<i>0.20</i>	<i>0.10</i>	<i>0.05</i>	<i>0.01</i>
N	<i>Significance level: one-tailed/directional</i>			
	<i>0.10</i>	<i>0.05</i>	<i>0.025</i>	<i>0.005</i>
5	0.800	0.900	1.000	—
6	0.657	0.829	0.886	1.000
7	0.571	0.714	0.786	0.929
8	0.524	0.643	0.738	0.881
9	0.483	0.600	0.700	0.833
10	0.455	0.564	0.648	0.794
11	0.427	0.536	0.618	0.755
12	0.406	0.503	0.587	0.727
13	0.385	0.484	0.560	0.703
14	0.367	0.464	0.538	0.679
15	0.354	0.446	0.521	0.654
16	0.341	0.429	0.503	0.635
17	0.328	0.414	0.488	0.618
18	0.317	0.401	0.472	0.600
19	0.309	0.391	0.460	0.584
20	0.299	0.380	0.447	0.570
21	0.292	0.370	0.436	0.556
22	0.284	0.361	0.425	0.544
23	0.278	0.353	0.416	0.532
24	0.271	0.344	0.407	0.521
25	0.265	0.337	0.398	0.511
26	0.259	0.331	0.390	0.501
27	0.255	0.324	0.383	0.492
28	0.250	0.318	0.375	0.483
29	0.245	0.312	0.368	0.475
30	0.240	0.306	0.362	0.467
35	0.222	0.283	0.335	0.433
40	0.207	0.264	0.313	0.405
45	0.194	0.248	0.294	0.382
50	0.184	0.235	0.279	0.363
55	0.175	0.224	0.266	0.346
60	0.168	0.214	0.255	0.331