THE EFFECT OF INVENTORY MANAGEMENT ON THE OPERATIONAL PERFORMANCE IN A BUSINESS' STORES

A CASE OF CROWN BEVERAGES LIMITED

RESEARCH DESERTATION PRESENTED TO BUSINESS ADMINISTRATION AND MANAGEMENT DEPARTMENT IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE BACHELOR OF SCIENCE ACCOUNTING AND FINANCE OF UGANDA MARTYRS UNIVERSITY

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2016-B182-2015

August, 2017

Dedication

This book is dedicated to my dear mother for making me the person I am today. I would not have reached this far.

Special thanks go to my beloved father for the moral and financial support through my academic path.

 To my supervisors Mr. Felix Idraku for your immense guidance, assistance, and professional advice.

Thank you!

Acknowledgement

I am most grateful to God, for seeing me through to the completion of my research dissertation.

It has not been easy but by His Grace and favor I have completed.

I thank all my friends more especially my dear mother and my sisters for without their support and encouragement, I would not have maintained the motivation to finish the course.

My sincere gratitude once again goes to my supervisor Mr. Felix Idraku for his guidance, critique and insights to make this work successful. They also challenged me to make it the best.

My Sincere gratitude goes to my sister, friend and Classmate Olive Semwogerere Gertrude for your support God bless you always.

Finally, I thank the Crown Beverages Limited staff and compliance team for granting me the opportunity to conduct the research in their reputable organization. Thank you so much.

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List of Abbreviations

CVI   Content Validity Index

EFA   Exploratory Factor Analysis

HR   Human Resource

HRM   Human Resource Management

US   United States

Abstract

The study examined on the effect of inventory management on operational performance in a business' stores with specific reference Crown Beverages Limited. It was guided by three research objectives which were; the effect of economic order quantity, just in time and vendor managed inventory on operational performance in a business' store.

The study used a case study design with both qualitative and quantitative results. Data was collected using questionnaires and interviews.

In data analysis frequencies, percentages and mean, correlations and regressions to show the magnitude of effect the independent variables have on the dependent variable. Study findings revealed that the study findings showed a positive significant relationship ($r = 0.394^{**}$, $p < 0.01$) between economic order quantity and operational performance in a business' store, the study findings showed a positive significant relationship ($r = 0.294^{**}$, $p < 0.01$) between just in time and operational performance in a business' store, the study findings showed a positive significant relationship ($r = 0.312^{**}$, $p < 0.01$) between vendor managed inventory and operational performance in a business' store.

It can therefore be concluded that that inventory management has a positive and significant relationship on operational performance in a business' store based on the findings of the study is presented according to the objectives of the study with back up of reviewed literature to make the discussion more authentic.

It was therefore recommended that Crown Beverages Limited should ensure that economic order quantity is enhanced through ensuring that the firm orders inventory when current inventory level has reached a certain defined level this will increase operational performance of the company.

CHAPTER ONE

GENERAL INTRODUCTION

1.0   Introduction

According to Miller (2010), inventory management involves all activities put in place to ensure that customer have the needed product or service. It coordinates the purchasing, manufacturing and distribution functions to meet the marketing needs and organizational needs of availing the product to the customers. Inventory management is primarily involved with specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials. The scope of inventory management also involves managing the replenishment lead time, replenishment of goods, returns and defective goods and demand forecasting, carrying costs of inventory, asset management, physical inventory, available physical space, demand forecasting, inventory valuation, inventory visibility, future inventory price forecasting and quality management. With a balanced of these requirements, it is possible to reach an optimal inventory level, which is an on-going process as the business needs shift and react to the wider environment (Ogbo et al, 2014).

This chapter covered the effect of inventory management on the performance in a business store. Considering inventory management as the independent variable with dimensions such as; economic Order Quantity, just in time, and vendor managed inventory and operational performance of a business' stores as the dependent variable.

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In this study the researcher focused on establishing inventory management on operational performance in a business' store and it presented the Background of the Study, Problem Statement, Objectives, Research Questions, Scope of the Study, Significance of the Study, Justification of the study conceptual framework and operational definitions.

1.1 Background of the study

Companies face a dilemma in today's competitive marketplace, where on one hand, customers demand customized products and services and require that their orders are filled quickly, but on the other hand they do not want to pay a premium for this customization and availability (Graman and Magazine, 2006). Therefore, organizations are exploring ways toward postponement strategy in response to constantly changing demands (Yang et al., 2004). Graman and Magazine (2006) argued that today, the cost of holding inventory, extensive product proliferation and the risk of obsolescence, especially in rapidly changing markets, make the expense of holding large inventories of finished goods excessive and that high demand items naturally have safety stock assigned to them, but in many organizations there are so many very-low-demand items that keeping any stock of these items is unreasonably expensive, so they argue that companies must now provide good service while maintaining minimal inventories. Therefore, inventory management approaches are essential aspects of any organisation.

In traditional settings, inventories of raw materials, work-in-progress components and finished goods were kept as a buffer against the possibility of running out of needed items. However, large buffer inventories consume valuable resources and generate hidden costs. Consequently, many companies have changed their approach to production and inventory management. Since at

least the early 1980s, inventory management leading to inventory reduction has become the primary target, as is often the case in just-in-time (JIT) systems, where raw materials and parts are purchased or produced just in time to be used at each stage of the production process. This approach to inventory management brings considerable cost savings from reduced inventory levels. As a result, inventories have been decreasing in many firms (Chen *et al.*, 2005), although evidence of improved firm performance is mixed (Kolias *et al.*, 2011).

The role of inventory management is to ensure faster inventory turnover. It increases inventory turnover by ten (10) and reduce costs by 10% to 40%. The so called inventory turnover is not yet right to sell products on the shelves based on the principle of FIFO cycle (Kenneth lysons and Michael gilligham, 2003).

Inventory is classified basing on the business undertaking from organization to organization. Common criteria used and are nature of inventory for example manufacturing, sale or retail, purpose for which inventory is being held in stock or function and the related usage in the supply chain. Typical classifications are raw materials (items in unprocessed state awaiting conversion e.g. timber, steel and coffee seeds), components and sub-assembles. These are for incorporation into the end product e.g. side mirrors, glasses for car assembling company and monitors or keyboards for a computer assembling company), consumable (all supplies in an undertaking which are classified as indirect and which do not form part of saleable product. (Divided into production, maintenance, office and welfare). Proper classification of inventory and its control improve the financial position of a business (David Jessop and Alex Morrison 1994).

Inventory management is primarily about specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple

locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials or goods for improved performance (Garry, 1997). The scope of inventory management also concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods and demand forecasting (Lau A., and Snell, 2006).

Inventory management involves the planning, ordering and scheduling of the materials used in the manufacturing process. It exercises management over three types of inventories that is raw materials, work in progress and finished goods. Purchasing is primary concerned with management over the raw materials inventory, which includes; raw materials or semi-processed materials, fabricated parts and MRO items (Maintenance, Repair and Operations) (Garry, 1997).

However, Lau and Snell (2006) argued that inventory management is primarily about specifying the size and placement of stocked goods. Inventory management is required at different locations within a facility or within multiple locations of a supply network to protect the regular and planned course of production against the random disturbance of running out of materials or goods for improved performance. The scope of inventory management also concerns the fine lines between replenishment lead time, carrying costs of inventory, asset management, inventory forecasting, inventory valuation, inventory visibility, future inventory price forecasting, physical inventory, available physical space for inventory, quality management, replenishment, returns and defective goods and demand forecasting.

Poor inventory management had become an issue of great concern since performance is regarded as the main stream for development of organizations. A truly effective inventory management system minimizes the complexities involved in planning, executing and controlling a supply chain network which is critical to business success. The opportunities available by improving a company's inventory management can significantly improve bottom line business performance.

According to Jayeff (1998) argued that from a financial perspective, inventory management is no small matter. Oftentimes, inventory is the largest asset item on a manufacturer's or distributor's balance sheet. As a result, there should be a lot of management emphasis on keeping inventories. The objectives of inventory reduction and minimization are more easily accomplished with modern inventory management processes that are working effectively for improved performance.

The inventory management is much more complex than the initiated understood. In fact, in soft drinks industry the inventory control department is perceived as little more than a clerical function as it is probably not very effective. The result of this to inventory management is lots of material shortages, excessive inventories, high costs and poor customer service (Briers, 1995).

Too much inventory and not enough customer service is very common, but unnecessary. There are proven techniques that can help accurately industry customer demand and to calculate the inventory needed to meet defined level of customer service. Using the right techniques for sales forecasting and inventory management help to monitor changes and respond to alerts when action needs to be taken. The right approach to inventory management can produce dramatic benefits in customer service with lower inventory (Kreg, Cristine, 2007).

Modern inventory management in soft drinks industry utilize new and more refined techniques that provide for dynamic performance of inventories to maximize customer service with decreased inventory and lower costs. These improved approaches to inventory management are of major consequence to overall competitiveness where the highest level of customer service and delivered value can favorably impact market share and profits.

Operational performance of essential material in a business' stores alludes to the procedures equipped towards coordination and upgrade of work exercises and results inside an association. Proficient and powerful operational execution is required to augment an organization's competitive edge through improvement of value, cost reduction quality, persistence, time to market, and item development, client lead times, stock levels, and conveyance time (Ngatia, 2013).

Indicators of effective operational performance a business' stores include: enhanced financial performance, lead time performance, enhanced responsiveness, client unwaveringness, advancement, quality items, and decrease in abundance stock levels and upgrades in item/prepare outline (Johnson, 2003). Assessment of operational performance of essential material in a business' stores ought to use both budgetary and non-monetary measures, albeit most associations have not made utilization of an adjusted system for money related and non-monetary indicators (Kaplan & Norton, 1992). Mark (2006) distinguished request lead time as the most vital operational measure. Mark (2006) characterized request lead time as the time that breaches between the receipt of a request and shipment of the item to the client. Mark (2006) distinguished other performance measures as usefulness of request era, arranging, generation booking, inventory management and quality.

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Modern inventory management in beverages industry utilize new and more refined techniques that provide for dynamic performance of inventories to maximize customer service with decreased inventory and lower costs. These improved approaches to inventory management are of major consequence to overall competitiveness where the highest level of customer service and delivered value can favorably impact market share and profits.

However, on the other side Crown beverages (U) Limited uses different kinds of inventory management, what is not brought out is how such kinds affect on the operational performance of the Company. This is therefore prompted the researcher to carry the study on the effect of inventory management on operational performance in a business' stores such as Crown beverages (U) Limited.

1.2   Statement of the Problem

Inventory management at Crown Beverages (U) Limited is mostly seen in arrangement of crates at the plant, bottles packing, buying of raw materials, supply of customers, issuing of raw materials for use in the plant departments. This is because the company uses different systems in inventory management including integrated system (System Application and products) responsible for management information system which helps to make serious decisions on stock, material requirement points, and over stock brands for the fast moving products (Supply Chain Manager Crown beverages (U) Limited, 2013).

However these techniques for inventory management at Crown beverages (U) Limited, operational performance of the company in terms of price/cost reduction, quality, delivery dependability , product innovation, customer lead times and inventory levels had reduced from 80% to 60% in the years 2008 and 2009 respectively. Basing on the above information, Crown

Beverages (U) Limited has registered decline in operational performance over time (Arinaitwe, 2009). The study was set to investigate the effect of inventory management on operational performance in a business' stores in Crown beverages (U) Limited

1.3   General Objective

The general objective was to examine the effect of inventory management on operational performance in a business' stores in Crown beverages (U) Limited.

1.4 Specific Objectives

i.   To assess effect of the Economic Order Quantity on operational performance in a business' stores

ii.   To examine the influence of Just in Time on operational performance of a business' stores.

iii.   To assess the influence of the Vendor Managed Inventory on operational in a business' stores

1.5 Research Questions

i.   What is the effect of the Economic Order Quantity on operational performance in a business' stores?

ii.   What is the effect of Just in Time on operational performance in a business' stores?

iii.   What is the effect of the Vendor Managed Inventory on operational performance in a business' stores?

1.6 Scope of the Study

1.6.1 Content scope

The study investigated the effect of inventory management on operational performance in a business' stores. Considering inventory management as the independent variable with dimensions as economic order quantity, just in time and vendor managed inventory and operational performance in a business' stores as the dependent variable with parameters such as delivery times, cost reduction and improved quality.

1.6.2 Geographical Scope

Crown bottler's ltd was in 1993 was privatized to a consortium of local investors. In 1997, International Pepsi-Cola Bottler Investments, a South African firm acquired a 51 percent stake in the company and renamed it Crown Beverages Ltd. In 2001, the 3 local shareholders, Amos Nzeyi, Chris Kayoboke and Dr Margaret Kigozi re-acquired 100 percent control of the company and has existed for 24 years. It is working in making soft drinks such as Mirinda, Mountain Dew, Pepsi Cola and stingy energy drink. It is located on M214 Jinja Road, Nakawa Industrial Area, Kampala, P.O Box 20021, Uganda.

1.6.3 Time Scope

The study covered the period of five years from 2012 to 2017. The researcher considered this period to be adequate to study the trend of inventory management on operational performance of essential materials of a business store at Crown beverages limited given that this is the period during which the company experienced a tremendous decline in operational performance.

1.7 Significance of the Study

The study findings may be significant in the following ways;

It is hoped that study findings may be used as basis for further research and investigations in form of literature.

The findings may provide information to managers in different organizations especially on knowing how to compare actual operational performance and inventory management.

The findings may also be beneficial to other upcoming researchers to investigate further about the impact of inventory management on organizational performance of other organizations other than Crown beverages (U) Limited.

The study may further encourage government to set up educational institutions to provide training on how to manage inventory in organizations.

1.8   Justification of the Study

A number of studies have been done worldwide about inventory management such as; the Management of Business Logistics: A Supply Chain Perspective Coyle J. Bardi J, Langley C. John Jr. (2003). Inventory Management and Purchasing often overlooked as a profit center, Construction Equipment distribution Magazine, James, H. (2008).

In Uganda, there is inadequate research about the effect of inventory management on operational performance in a business' stores especially in Crown beverages Limited, therefore providing a research gap which will be filled by the study after undertaking a study about the effect of inventory management on operational performance in a business' stores.

1.9 Definition of key terms in the study

Inventory management

This refers to Management of the routine ordering process. It includes activities related to ordering, receiving, storing, distributing and issuing, and re-ordering stock of commodities. All of these activities are tracked with appropriate documentation, thus good record-keeping is critical to the success of the all process (Odinga, 2007).

Performance is a measure of the results achieved. Performance efficiency is the ratio between effort extended and results achieved (Business dictionary, 2017)

1.10   Conceptual Framework

Below is a diagrammatic presentation of the relationship between inventory management and operational performance in a business' stores

Figure 1: Conceptual frame work of the study

INDEPENDENT VARIABLE   **DEPENDENT VARIABLE**

Inventory management • Economic Order Quantity • Just in Time • Vendor Managed Inventory.

Operational performance in a business' stores • Delivery times • Cost reduction

Intervening variable • Policy on Inventory management
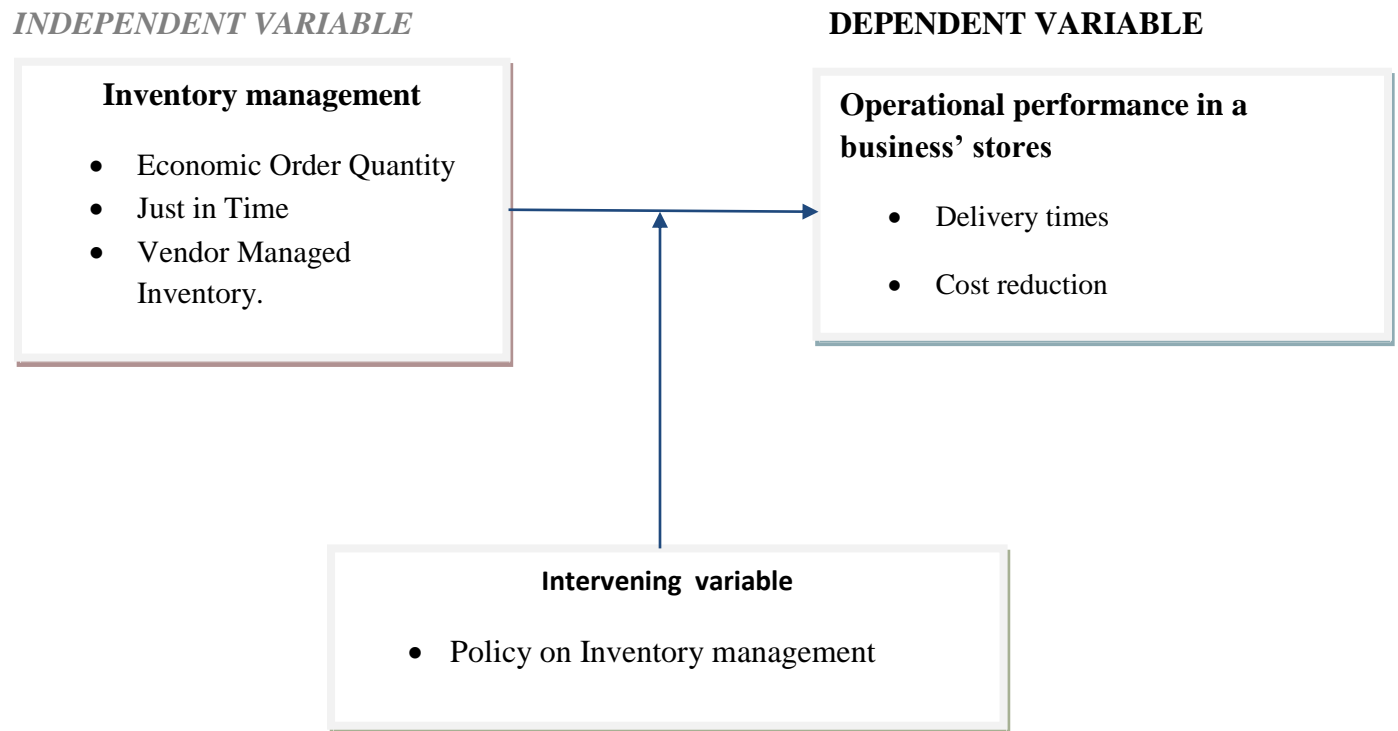
Source: Adopted and modified Wafula (2016). Inventory management and operational performance in the oil marketing companies in Kenya

Description of the model

Figure 1 shows a frame work which illustrates the relationship between the Independent variable (Inventory Management) with dimensions such as economic order quantity and vendor managed inventory and Dependent variable (operational performance in a business' stores) with parameters delivery times and cost reduction. It highlights the independent variables which negatively or positively influence the dependent variable with the moderating variable such as policy on inventory management enhancing the relationship which will be analyzed.

1.11 Conclusion

Chapter one established the fundamental bases on which other chapters this study relied, particularly chapter two on establishing empirical studies and the theoretical framework of the study. It clearly put into light the key concepts and issues of the study as regards the variables to be studied

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presented theoretical framework, the review of literature based on the study objectives and conceptual framework.

The goals of this chapter were to: review current literature in line with the objectives of the study.

2.1 Theoretical Framework

2.1.1   Transaction cost theory (TCT)

Coase, (1937) set out his transaction cost theory of the firm making it one of the first (neo-classical) attempts to define the firm theoretically in relation to the market. Coase says to define a firm in a manner which is both realistic and compatible with the idea of substitution at the margin, so instruments of conventional economic analysis apply. He notes that a firm's interactions with the market may not be under its control (for instance because of sales taxes), If a firm operated internally under the market system, many contracts would-be required (for instance, even for procuring a pen or delivering a presentation).

In contrast, a real firm has very few (though much more complex) contracts, such as defining a manager's power of direction over employees, in exchange for which the employee is paid. These kinds of contracts are drawn 'Up in situations of uncertainty, in particular for relationships which last long periods of time. Such a situation runs counter to neo-classical economic theory. The neo-classical market is instantaneous, forbidding the development of extended agent-principal

(employee-manager) relationships, of planning, and of trust. Coase concludes that "a firm is likely therefore to emerge in those cases where a very short-term contract would be unsatisfactory," and that "it seems improbable that a firm would emerge without the existence of uncertainty."

He notes that government measures relating to the market (sales taxes, rationing, price controls) tend to increase the size of firms, since firms internally would not be subject to such transaction costs. Thus, Coase defines the firm as "the system of relationships which comes into existence when the direction of resources is dependent on the entrepreneur." We can therefore think of a firm as getting larger or smaller based on whether the entrepreneur organizes more or fewer transactions.

2.1.2   Criticisms of Transactional Cost theory

Cognition and Motivation

While often invoked, the role of bounded rationality in Williamson's work is mainly to provide a reason why contracts are incomplete. The theory is taken up with comparative institutional exercises, focusing on transaction cost economising, and hence has no room for the process aspects introduced by more substantive notions of bounded rationality (e.g., Furubotn 2002). However, Dow(1987) argues that it is inconsistent to invoke bounded rationality as a necessary assumption in the analysis of contracts and governance structures, and then assume that substantively rational choices can be made with respect to the contracts and governance structures (that are imperfect because of bounded rationality).

Echoing behaviourist organisation theory, argue that a key characteristic of firms is that they tend to shape employee cognition (Kogut and Zander 1996; Hodgson 1998).

While the role of bounded rationality in the theory of the firm has given rise to a fair amount of debate, it is nothing compared to the enormous amount of critical writings on the motivational assumptions in the theory. In particular, opportunism has been a favourite *bête-noire*.

The critique of opportunism takes various forms. Empirically, the relevance of opportunism is dismissed by pointing to the low frequency with which opportunistic action can be observed, for example, in industrial networks or in long-term associations between firms and their suppliers (see, e.g., Håkansson and Snehota 1990). The obvious problem with such arguments is that they are based on a misunderstanding of the counterfactual nature of reasoning in the theory of the firm: Opportunistic behaviour is seldom observed because governance structures are chosen to mitigate opportunism. Another argument asserts that opportunism is not a necessary assumption in the theory of the firm (e.g., Kogut and Zander 1992), but this line of reasoning fails to provide convincing alternative accounts.

Firm Heterogeneity, Capabilities, and Production Costs

Many writers within heterodox economics (particularly evolutionary economics) and strategic management embrace 'capabilities,' 'dynamic capabilities,' or 'competence' approaches (e.g. Dosi and Marengo 1994). These writers have often been fiercely critical of TCE. The critique concerns the reliance on opportunism and the neglect of differential capabilities (i.e., firm heterogeneity) and dynamics (e.g. Kogut and Zander 1992) in TCE. Knowledge-based writers

often argue that differential capabilities give rise to different production costs, and that such cost differentials may crucially influence the make or buy decision.

They argue that firms can build capabilities and engage in learning efforts that markets cannot.

However, this is postulated rather than shown. One may also argue that to the extent that firms indeed cultivate capabilities to a larger extent than firms do, this is so for TCE reasons: Capabilities are firm-specific assets that give rise to an appropriable quasi-rent, and, hence, should be organized under unified governance.

2.1.3   Relevancy of the theory to the Study

Coase says to define a firm in a manner which is both realistic and compatible with the idea of substitution at the margin, so instruments of conventional economic analysis apply. He notes that a firm's interactions with the market may not be under its control (for instance because of sales taxes), If a firm operated internally under the market system, many contracts would-be required (for instance, even for procuring a pen or delivering a presentation) as a way to reduce the inventory management costs and necessitate operational performance in a business' stores.

In contrast, a real firm has very few (though much more complex) contracts, such as defining a manager's power of direction over employees, in exchange for which the employee is paid. These kinds of contracts are drawn 'Up in situations of uncertainty, in particular for relationships which last long periods of time so as to ensure that the inventory management cost are reduced in an organization and eventually necessitate operational performance in a business' stores.

2.2 Review of the study objectives

2.2.1 Inventory management and operational performance operational performance in a business' stores

Inventory plays an imperative part in the development and survival of an organization as in inability to adequately and effectively oversee inventory, will prompt loss of clients because of poor services delivery subsequently sales will decrease.

Coyle, Bardi and Langley (2003) express that stock is an advantage on the asset report of associations has taken an extended centrality as an aftereffect of the system of various associations to diminish their enthusiasm for settled assets, that is; plants, stockrooms, office structures, rigging and device, and so forth. In every practical sense every wander feels that its vital to hold stocks (or stock) of various items. That is because of it would be in every practical sense hard to work with one and just of everything to be sold or used as a piece of creation or used as a piece of office work. A store or a benefit or load of everything or material used or sold a significant part of the time is along these lines kept up, so that goods are sold or used they can be displaced or recovered from the stocks held for imaginable later utilize. In light of unsteadiness in future intrigue, and because of the unwarranted availability of provisions, stock is along these lines believed to ensure an openness of items to reduce the general associated costs in the management of organizational stock (Drury, 2000).

Lucay (2003) posits that there are undesirable levels of irrational stock which intensifies the threats of stock getting the chance to be old, stock mishap through mischief and thievery, extended limit costs like lease, assurance and pointless tie up of the affiliation's advantages. He encourage states that a firm would relinquish profits when it keeps sustaining extreme levels of stock since resources are not being placed assets into other profitable attempts.

2.2.2 Operational Performance in a business' stores

Operational performance alludes to the procedures equipped towards coordination and upgrade of work exercises and results inside an association. Proficient and powerful operational execution is required to augment an organization's competitive edge through improvement of value, cost reduction quality, persistence, time to market, and item development, client lead times, stock levels, and conveyance time (Ngatia, 2013).

Indicators of effective operational performance include: enhanced financial performance, lead time performance, enhanced responsiveness, client unwaveringness, advancement, quality items, and decrease in abundance stock levels and upgrades in item/prepare outline (Johnson, 2003). Assessment of operational performance of associations ought to use both budgetary and non-monetary measures, albeit most associations have not made utilization of an adjusted system for money related and non-monetary indicators (Kaplan & Norton, 1992). Mark (2006) distinguished request lead time as the most vital operational measure. Mark (2006) characterized request lead time as the time that breaches between the receipt of a request and shipment of the item to the client. Mark (2006) distinguished other performance measures as usefulness of request era, arranging, generation booking, inventory management and quality.

2.2.3 Economic Order Quantity and operational performance in a business' stores

Bachetti et al. (2010) argue that inventory management needs to be organized in a logical way so that the organization can be able to know when to order and how much to order. This must be attained through calculating the Economic Order Quantity (EOQ). Monetary request amount engages correlation to arrange their stock re-establishment on an ideal premise. For instance, the arrangement can be scheduled to happen from month to month, quarterly, half yearly or yearly. By so doing, it enables firms to have insignificant limit costs or zero inside their circulation

focuses. Along these lines, as associations attempt to enhance the stock administration, the Economic Order Quantity (EOQ) and Re-Order Point (ROP) are necessary instruments that associations can utilize.

He also mentions how Ford W. Harris contribution to the EOQ formula was significant. Harris was always a self taught individual that only received formal schooling that extended throughout high school. He managed to write and publish the economic order quantity formula in 1915 as an undergraduate student (Roach 2005)

The Economic Order Quantity (EOQ) formula has been used in both engineering and business disciplines. Engineers study the EOQ formula in engineering economics and industrial engineering courses. On the other hand, business disciplines study the EOQ in both operational and financial courses. In both disciplines, EOQ formulas have practical and specific applications in illustrating concepts of cost tradeoffs; as well as specific application in inventory (Roach 2005) business disciplines study the EOQ in both operational and financial courses

Piasecki mentions that in today's leading technology, many companies are not taking advantage of the fundamental inventory models. There are various software packages in aiding companies with inventory control, but if the data inputted are inaccurate, it may lead to poor results. (Piasecki 2001) In order to have suitable results for any inventory model, accurate product costs, activity costs, forecasts, history, and lead times need to be in place. (Piasecki 2001) As a result of bad data, companies have had bad experience with some inventory models, and that is one of the reasons they do not take advantage of the EOQ model.

Piasecki also explains that another reason why a company does not take advantage of the

EOQ model is because management does not know how it works. (Piasecki 2001) Even if a company has implemented a leading software package to help them, if they do not know how the

system works it could cost more harm than good. Many times the users do not understand how the data is calculated and how the system is set up. They simply rely on the system built-in default software calculations, which in most cases, the system is "out of whack". (Piasecki 2001) In order to prevent the system from going "out of whack," management as well as the user, need to obtain proper knowledge of the EOQ concepts and how they are derived. The software is only design to aid and not replace the traditional way of running a business.

2.2.4 Just in Time and operational performance in a business' stores

The Just In Time Technique is a Japanese philosophy, rationality associated with assembling which comprises having the right things in the right quality and amount in the correct place and at the opportune time. Utilization of Just In time Technique brings about the increment in quality, profitability, and effectiveness, enhanced correspondence and abatements in expenses and squanders. Hutchins (1999) characterizes (JIT) as a process that is prepared for moment response to the request without the necessity for any overstocking, either in the desire of the application being approaching or as a concern of improvident characteristics all the while.

Hutchins, (1999) additionally concentrated on that the prime objective of Just In time Technique is the accomplishment of zero stock, not simply inside the bounds of a single association at the end of the day all through the whole production network. It can be connected to the assembling procedure inside any organization as it is additionally being adjusted inside administration associations (Hay, 1998).

The components of Just In time Technique incorporate consistent change, taking out the seven sorts of squanders among others. The fundamental reason of JIT is to have as of late the proper measure of stock, whether rough materials or finished stock, open to meet the solicitations of

your creation strategy and the solicitations of the enterprise's end customers. The less a firm spend to store and pass on the stock, the less obsolete quality it has to markdown. Finally, this all culminates into saving the company's honest to goodness money.

It is generally recognized that the implementation of JIT will result in significant reduction in inventory. Inventory levels are a key measurement of the JIT process. The JIT philosophy on inventory management is simple. It includes: strive for a level of zero inventories, produce items at a rate required by the customer, eliminate all unnecessary lead times, reduce setup costs to achieve the smallest economical lot size, optimize material flow from suppliers through the production process to the point of sale of the finished product, so that inventories are minimized, ensure high quality just-in-time delivery from suppliers, minimize safety stocks, implement a total quality control program which will minimize scrap, rework, and resultant delays in production (Dorling, Scott & Deakins, 2005) It JIT the raw materials and other purchased items should be delivered by the supplier when they are needed. A blanket purchase order or other form of a basic agreement should cover the terms and conditions for procurement. Communications between the customer and supplier should be clear to ensure that supplies are delivered on time. Several techniques exist for controlling the flow of material from supplier to customer. Automatic inventory replenishment by a vendor is a technique by which the supplier determines the need for required materials based on frequent deliveries to the plant. Also, the methods of written order for vendor delivery and verbal order for vendor delivery can be utilized. Inventory records can be posted by backflushing. This is a method for automatic calculation of component usage by bill-of-material explosion of the end item for the quantity completed. It can be applied to a flow process as well as a batch process manufacturing operation. For low-unit-

cost items the inventory records posting requirement can be eliminated altogether. Such items can be expensed when delivered and invoiced by the vendor. Visual controls usually suffice for reordering.

Each item should also be identified by an inventory policy code. This code is used to designate the specific method of inventory management to be applied to the item, such as automatic inventory replenishment by the vendor, vendor delivery based or verbal delivery based or written order. The inventory policy code identifies the methods that are used for each technique. The code must also define the requirement for transaction reporting and the degree of inventory record keeping. These may include one or more of the following options: transaction reporting of receipts, transaction reporting of issues, transaction reporting of serial number items, transaction reporting of scrap and rework, transaction reporting of returns to vendor, receipt and issue calculation based on backflushing, no transaction reporting nor perpetual balance in the inventory record (MSH, 2012)

In the JIT manufacturing environment, inventory is "demand" pulled into and through the process on a part-by-part basis in small quantities. The movement of inventories is no longer from the storeroom to a work center, to a storeroom, to another work center and so on. JIT accounting systems are similar to process costing; the vehicle for collecting costs is the time in the system, not a work order. Direct labor does not have to be discretely tracked, and is often simply applied in total to overhead. This is referred to as "charging labor" to the process. This can be done because the labor portion of the product in a JIT manufacturing operation is small relative to the total manufacturing cost (Raja & Mohammad, 2005)

Manufacturing inventory flows in JIT are compared to pipelines, but they are often referred to as "four wall systems." Once raw materials enter the four walls, they are not recorded again until

they leave as finished goods. There are three reasons for this. First, the product does not spend enough time in the plant to make several inventory recordings necessary. Second, the higher quality in JIT systems reduces rework and minimizes abnormal flow paths and times, lessening recordings needs. Third, in a JIT system product flows are disciplined and flow distances are short, lending a visual aspect to work-in-process inventory control. Obstacles to JIT accounting success can arise. Suppliers whose quality and delivery are inconsistent are incompatible with JIT systems. In addition, if long processes within the four walls exist, intermediate stock points for discrete measurement of items coming in and leaving may be set (Clark & Barraclough, 2010) With the modified process costing being used in JIT, the cost accountants have much less information to track. Accountants can be redeployed to aid in financial analysis for production and materials management in decisions such as, make-or-buy, cost reduction, and process improvements.

One barrier to cost-accounting implementation for JIT is the required financial reporting to external entities such as the government and stockholder. Financial and cost-accounting standards are not always compatible with JIT costing systems, and some companies may have to maintain parallel accounting systems and records for several years until JIT accounting methods are accepted. A company may find that their outside auditors may be the biggest barrier to JIT accounting implementation (Clark & Barraclough, 2010)

2.2.5 Vendor Managed Inventory and operational performance in a business' stores

Vendor Managed Inventory is a streamlined way to deal with inventory management and request satisfaction whereby the merchant is completely in charge of the recharging of stock in light of

opportune POS data to the purchasers (retailer). This idea builds the client responsiveness by lessening the free market activity hole consequently giving the fulfillment to end client by benefiting the coveted item when required. Store network accomplices must share their vision of interest, necessity, and requirement to set the regular destinations.

According to Guillaume et al. (2008) the quality of purchaser-supplier relationship and trust, nature of the Information Communication Technology framework and force of data sharing has a positive effect on VMI execution. Marloes et al. (2008) preceding executing VMI, it is essential to examine the level of instability of client interest because a high vulnerability sought after adversely impacts the execution accomplished through VMI. Kazim Sari (2007) identifies that upstream information exchanged to supplier's such as the current stock level and precise deals conjecture is the most vital element for the effective usage of VMI.

VMI has been described as an inventory and supply chain management tool in which the supplier has taken the responsibility for making decisions on the timing and amounts of inventory replenishment. This tool has also been called a continuous replenishment process, continual replenishment or automatic replenishment (Blatherwick, 1998).

The advantages of using VMI to the downstream member, usually a large retailer, have well been documented (Cahon and Fisher, 1997). Waller (1999) noted that the main advantages of VMI were reduced costs, and increased customer service levels to one or both of the participating members. Centinkaya and Lee (2000) found that VMI greatly reduced inventory-carrying costs and stock-out problems while, at the same time, it offered the ability to synchronize both inventory and transportation decisions. Fox (1996) noted that VMI's

advantages included improved customer service, reduced demand uncertainty, reduced inventory requirements and reduced cost based on a case study at Johnson and Johnson.

With the reduced stock-outs, suppliers not only saved, but they also received more information on the customers' demand patterns that aided the supplier in planning better on their own inventories. The ability to plan better on inventories and deliveries are often cited as major advantages to the upstream member using VMI (Jain, 1994). Chaouch (2001) developed an analytical model to calculate inventory levels and delivery rates to minimize costs for small suppliers forced to use VMI by larger clients. One important finding of the study was that reducing variability in the amount and timing of the demand increased the benefits of lowered prices. In addition,

Blatherwick (1998) noted that VMI was an excellent tool when ordering the policies of the downstream supply chain members were less sophisticated and erratic, or when the distributor was selling to a large number of buyers with erratic buying patterns.

Armstrong (1997) defines effectiveness as the extent to which actual performance compares with targeted performance.

However, Tarrulli (2004) defines VMI effectiveness as the ability of the system to enhance competitive advantages through cost savings, relationships and information quality.

Dorling, Scott & Deakins (2005) looked at VMI in oligopolies and its determinants of success. Using literature reviews and case studies, Dorling *et al* (2006) proposed seven theoretical factors or steps, impacting the success in the food chain oligopoly of New Zealand namely industry structure, rivalry within the industry, buyer's power, industry profitability, ability to develop long-term relationships, supply chain technology and adoption of Supply Chain Management best practices.

2.3 Summary of Literature Review

Inventory management is concerned with every aspect of the movement or flow of commodities in an organization. This is to be done by: Eliminating handling wherever possible, Minimizing travel distance and providing uniform flow free of bottlenecks and Minimizing losses from waste, breakage, spoilage, and theft. An organization incurs costs every time an item is handled. Since handling generally adds no value to a product or service, it should be kept to a lowest minimum. By carefully analyzing items supplies flows, inventory management can save an organization significant amount of money and improve client satisfaction in Uganda. Inventory is a major use of capital and for this reason; efficient inventory management is to increase organizational profitability, to predict the impact of organizational policies on inventory levels, and to minimize the total cost of logistics activities. Stock and Lambert (2001), explained that, corporate profitability can be improved by cutting inventory costs. Inventory management are often possible if high levels of inventory lead to better in-stock availability and more consistent service levels. Low inventory levels can reduce fill rates on customer orders and result in low patient satisfaction.

Stock and Lambert, further explained that, better inventory management can increase the ability to control and predict the reaction of inventory investment to changes in management policy. Therefore, inventory managers must determine how much inventory to order and when to place the order.

Chopra and Meindl (2003) explained that inventory exists in an organizational operation because of the mismatch between supply and demand. Therefore, inventory's role is to increase the

amount of demand that can be satisfied by having the product or service ready and available when the customer wants it.

Another important role inventory plays is to reduce cost by exploiting economies of scale that may exist during production and distribution, but managers should use actions that lower the amount of inventory needed without increasing cost.

Chopra and Meindl (2003), suggests that since inventory plays a significant role in a supply chain's ability to support a firm's competitive strategy and that the firm's competitive strategy requires very high level of responsiveness, a company can achieve this responsiveness by locating large amounts of inventory close to the customer.

Another very important role that inventory plays in an organization is to avoid stock-out costs (the costs of being out of inventory). This is very important to all organizations. Therefore, it is for this reason that this study should be carried out.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0   Introduction

This chapter presented the research methodologies that were used to carry out the study. Also in this chapter were the research design, data collection and instruments for data analysis.

3.1   Research Design

The study employed a cross sectional study research design with both qualitative and quantitative aspects. The qualitative supplemented the quantitative. Case study research design was selected because it enables the researcher, among other things to focus attention on a particular group of people within a specific context. The unit of analysis was the individual, i.e. staff of Crown Beverages (U) Limited.

3.2   Area of Study

The study was carried out in Crown Beverages (U) Limited and established the relationship between inventory management and operational performance in a business' stores.

3.3   Study Population

The total population was a total of 150 respondents at the time. The study population comprised of employees Crown Beverages (U) Limited. The study involved various types of products that the company produces such as Pepsi, seven up, mirinda, mountain dew, and stingy energy drink considering the production department, stores department, and marketing department.

3.4   Sampling Procedures

Sampling as described by Sarantakos (1997) is the process of choosing the units of the target population which are to be included in the study in such a way that the sample of selected elements represent the population.

3.4.1   Sample Size

To arrive at the sample size for the quantitative data, the researcher will use Krejcie and Morgan (1970)'s table of sampling for guidance. Under this table, it is noted that a population of 150 calls for 108 sample size. Of these 100 were primary respondents for the self-administered questionnaires and 8 will be key informants.

3.4.2   Sampling Techniques

The study adopted stratified random sampling because it the field teams are separated in groups called clusters depending on the regions that they come from. Purposive sampling was employed in case of key informants because they were knowledgeable about project management and project performance issues.

3.5   Data Collection Methods and Instruments

The researcher collected data using both primary and secondary data collection methods. Structured interviews, key informant interviews and document review were the key methods.

3.5.1   Questionnaire Survey Method

Questionnaire survey method was used among employees of Crown Beverages (U) Limited. It has an advantage of covering large number of respondents and it is less expensive. This method provides good quantitative data. Data can be collected relatively quickly because researcher

would not need to be present when the questionnaires will be completed. Milne (1999) argues that surveys can be useful in some cases when the questions asked are specific and if the questions asked affect them.

In terms of instrument, primary data was collected through a structured questionnaire. The questionnaire was pre-tested to remove ambiguities. Survey questionnaires were prepared and pre-tested for each processor randomly selected in the study area. It helped gather data on demographic characteristics and issues raised among the study objectives.

3.5.2 Interview Method

Kvale (1983) defined interview as a method used with a purpose of gathering descriptions of the life-world of interviewee with respect to interpretation of meaning of described phenomena. Collecting these descriptions can be done in several ways, of which face-to-face interviews are the most common.

A key informant interview guide was the instrument used for collecting data from interviews. Data were collected by interviewing to ensure qualitative data is gathered. Interviewing was used among the key informants to collect qualitative data. Interview guide was used because it plays an important role in gathering case study information as they enable the researcher to record opinions, feelings and emotions of participants regarding the studied phenomena (Yin 2003). Thus, data obtained from this source comprise narratives from interviewees about their knowledge, opinions, emotions and experiences. Questions were designed according to the organizational positions of interviewees by considering their personal knowledge and experience. Interviews were conducted by using a face-to-face approach.

3.6   Quality Control Methods

3.6.1   Validity

In scientific research, validity refers to the extent to which the instruments are relevant in measuring what they are supposed to measure (Amin, 2005).

The researcher requested the supervisor to score the content with the questionnaire and the average percentage of the score was used to determine the Content Validity Index (CVI). In cases where the average percentage was above 50%, the content and was considered valid. The formula below was used to check for validity of the research questions:

$$CVI = \frac{R}{R+N+IR} \quad = 34/34+0+1= 0.971*100=97.1\%$$

Where;

R is Relevant, **N** is Neutral, and **IR** is irrelevant. The closer the value is to 1, the more valid the instrument (Amin, 2005)

3.6.2   Reliability

Reliability is to be used to measure the degree to which the instrument would be the same when put under the same conditions. Data collection instrument is presumed reliable when it produces the same results whenever it is repeatedly used to measure concepts from the same respondents even by other researchers.

Reliability of scales was done with the application of the Cronbach Alpha coefficients to test the internal consistency of the scales. (Carmenes and Zeller, 1979) in their view, reliability concerns the extent to which measurements are consistent or repeatable.

Table 3.6.2:   Cronbach Alpha Value for reliability of the study tools

Variables	Number of items	Cronbach's Alpha
Economic Order Quantity	08	0.810
Just in Time	07	0.798
Vendor Managed Inventory.	07	0.879
Operational performance in a business' stores	09	0.799

Source; Primary Data (2016)

Table 3.8.2 shows that all the dimensions of the independent variable as well as dependent variable gave cronbach's alpha values above 0.6 when reliability test was conducted as attached in the appendix four.

All alpha reliabilities for all the variables were above 0.6, hence meeting acceptable standards of research, (Amin, 2005).

3.7   Data Management and Processing

Marshall and Rossman (2006) described six general phases of data analysis: organising the data, generating categories and themes, coding the data, offering interpretations, searching for an alternative understanding and writing the report. The first stage involved a pre-analysis process of organising the data into a format suitable for further analysis. The qualitative data sources mostly comprised historical and archival documents, and observations and interviews pertaining to the topic. Coding the data is the formal representation of analytical thinking. It involves grouping the previously categorized data into a smaller number of explanatory themes (Marshall & Rossman, 2006). The raw quantitative data was cleaned, sorted and condensed into systematically comparable data. Data analysis was done using the Statistical Package for Social

Scientists (SPSS), which helped to summarize the coded data and this facilitated quick interpretation of the results.

According to Patton (2002), for qualitative data, interpretation is attaching significance to what was found, making sense of the findings, offering explanations, drawing conclusions, extrapolating lessons, making inferences, considering means, and otherwise imposing order on an unruly but surely patterned world.

3.8   Data Analysis and management

3.8.1   Quantitative data

Descriptive statistics included frequency tables. For example, sample size, percentages, means, standard deviation, maximum and minimum values, averages and measures of variation of the data about the average. For the case of inferential statistics, the study adopted correlation analysis, where Correlations were used to establish relationships between two or more variables or sets of variables. Tables, charts, percentages and graphs were used in the case of the quantitative technique, while descriptions were used in the case of the qualitative analysis. Bivariate correlations were used to establish significance, direction, and magnitude of the relationship in the variables. Values of the correlation coefficient are always between -1 and +1. Linear regression analysis was used since it measures linear relationship between a dependent variable and one or more independent variables, it should be noted that regression analysis does more than just describe the strength of a relationship between two variables. The significance of the slope of the regression line is determined from the t-statistic.

3.8.2 Qualitative Data Analysis

The data that were collected from both primary and secondary sources were collated, synthesized and analyzed using both qualitative analytical techniques to draw valid conclusions and inferences. Content analysis was tool for measuring the content of information. Its objective was to obtain a qualitative description of the manifest content of communication (Robison, 2003). It was suitable because of its flexibility and allowed for objectivity (Cooper & Schindler, 2006).

3.9 Ethical Considerations

Examples of ethical issues that may arise are voluntary participation of respondents, deception to participants, anonymity and confidentiality of information given, analysis and reporting, harm or danger to participants and any other professional code of ethics expected.

To ensure that the research was done in an ethical manner according to the expectations of all authorities, the researcher first obtained an introductory letter from UMU to collect data from Crown Beverages (U) Limited and also a letter of acceptance from them.

The researcher had a moral obligation to treat the sensitive information with utmost decorum. He informed respondents that instruments being administered were for research purposes only.

For those respondents who are reluctant to disclose some information, the researcher reassured such respondents that the information was to treated with confidentiality

3.10 Limitations of the Study

The researcher is likely to encounter a difficulty in accessing complete and due information concerning the risk management. However this was solved by thoroughly explaining the relevancy of this research to their work performance and overall organization wellbeing.

Crown Beverages (U) Limited employees were ever busy with company work and meetings, reports. Thus meeting and interviewing some respondents was somehow difficult as they are always working on very tight schedules this was solved by making appointments with them

Some informants provided scanty information especially on qualifications of their staff, in anticipated fear of the work repercussions; however I assured them that the research was for academic purposes only.

3.11 Conclusion

This chapter discussed methods that were used in undertaking the research. It clearly indicated the research design, population, sample size and sampling techniques, data collection, analysis and presentation methods, validation and reliability of the methods that were applied to establish the effect of inventory management on the performance of business' store. Furthermore it indicated ethical considerations, and the limitations that were faced by the researcher in accomplishing the study and how he overcame them to improve the quality of the study

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.0   Introduction

The study examined The Effect of inventory management on operational performance in a business' store. The study adopted four research objectives which looked at assessing effect of the Economic Order Quantity on operational performance in a business' stores , examining the influence of Just in Time on operational performance of a business' stores and assessing the influence of the Vendor Managed Inventory on operational in a business' stores

The study presents descriptive results from questionnaire in form of means and standard deviations. The study also presents correlations and regressions to show the nature of relationship and magnitude effect the independent variable has on the dependent variable.

The chapter also presents the response rate, which shows the number of participants that actually participated in the study. The study also presents the background information of respondents which shows the common demographic characteristics of respondents that participated in the study.

4.1   Sample characteristics

Sample characteristics contain the gender group, age group, education levels, duration of service in the organisation, and the category of the respondents.

4.1.1   Response Rate

The study sample size was 108 but 81 respondents actually participated representing a response rate of 75% in both questionnaires and interviews, others did not participate in study with claims

of being busy. This response rate was well above the recommended 60% response rate as per Guttmacher Institute, (2006) which asserts that for a study to be considered with satisfactory results it should have a response rate above 60% in the overall study. Therefore, the study results can be relied upon for academic and non-academic purposes by readers and users.

4.1.2 Gender of the Respondents

The study sought to establish the gender of respondents which was categorized as male and female. The Respondents were asked about their gender and the findings were analyzed using descriptive statistics as presented below.

Table 4.1: Gender of Respondents

Gender					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Male	33	40.7	59.3	59.3
	Female	48	59.3	40.7	100.0
	Total	**81**	**100.0**	**100.0**	

Source; Primary Data

The study findings in table 4.1 above show that 40.7% of the respondents were male and 59.3% were females. The means that Crown beverages Limited has more male staff than female staffs. The female are always customer oriented than males and tend to be more trust worthy.

4.1. 3 Duration of Employees at Crown Beverages Limited

The study sought to establish the duration in service of respondents at Crown Beverages Limited which was categorized as less than 1 year, 2 - 3 years, 4 – 5 years, 6 – 10 years and 11 years and above. The respondents were requested to indicate the duration in service at Crown Beverages Limited and the findings were analyzed using descriptive statistics and are presented below.

Table 4.2 Duration of Service at Crown Beverages Limited

		Frequency	Percent	Valid Percent	Cumulative Percent
	Duration of Service at Crown Beverages Limited				
Valid	Less than 1 year	11	13.6	13.6	13.6
	2 – 3 yrs	14	17.3	17.3	30.9
	4 – 5 yrs	16	19.8	19.8	50.6
	6 – 10 yrs	28	34.6	34.6	85.2
	Above 11 yrs	12	14.8	14.8	100.0
	Total	**81**	**100.0**	**100.0**	

Source: Primary Data

From table 4.2 above, the highest number of respondents have worked for 6 – 10 years at 34.6%, followed by 4 – 5 years at 19.8%, followed by 2 -3 years at 17.4% and lastly above 11 years had 14.6% and less than 1 year at 13.6%. The findings show that most of the respondents had served the company between 6 - 10 years. This implied that majority of the employees have worked at the company for a good number of years and therefore can be able to use their experience to respond to the instrument.

4.1.4 Position held in Crown Beverages Limited

The study sought to ascertain the Position held in Crown Beverages Limited of respondents which is categorized as Senior Manager, Middle Level Manager, Front Line Supervisor and Junior Officer. The respondents were requested to indicate their position held and the findings were analyzed using descriptive statistics and are presented as below

Table 4.3 Position held in Crown Beverages Limited

<table>
<tr><th colspan="6">Position held in Crown Beverages Limited</th></tr>
<tr><th></th><th></th><th>Frequency</th><th>Percent</th><th>Valid Percent</th><th>Cumulative Percent</th></tr>
<tr><td rowspan="5">Valid</td><td>Senior Manager</td><td>11</td><td>13.6</td><td>13.6</td><td>13.6</td></tr>
<tr><td>Middle Level Manager</td><td>7</td><td>8.6</td><td>8.6</td><td>22.2</td></tr>
<tr><td>Front Line Supervisor</td><td>29</td><td>35.8</td><td>35.8</td><td>58.0</td></tr>
<tr><td>Junior Officer</td><td>34</td><td>42.0</td><td>42.0</td><td>100.0</td></tr>
<tr><td>Total</td><td>81</td><td>100.0</td><td>100.0</td><td></td></tr>
</table>

Source: Primary Data

The results in Table 4.4 indicated that Junior Officer had 42.0%, followed by Front Line Supervisor at 35.8%, Senior Manager with 13.6% and lastly Middle Level Manager with 13.6%. It is clear that responses were acquired from all the different position holders that either affect or are affected by training and employee performance. This further highlights the nature of Crown Beverages Limited organograms with more staff at the junior officer level than the top management level. This provides evidence that the respondents have adequate knowledge about the subject matter which is inventory management and operational performance in a business' store.

4.1.4 Highest level of education attained

The study sought to ascertain the education level of respondents which is categorized as diploma, degree, masters' degree and PHD. The respondents were requested to indicate their education level and the findings were analyzed using descriptive statistics and are presented as below

Table 4.4 Highest level of education attained

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	9	11.1	4.9	4.9
	Degree	36	44.4	44.4	49.4
	Masters	27	33.3	33.3	82.7
	PhD	9	11.1	11.1	100.0
	Total	81	100.0	100.0	

Source: Primary Data

The results in table 4.4 above shows that a big number of respondents are degree holders at 44.4%, followed by masters holders at 33.3%, followed by diploma holders and PHD at 11.1%,. The implication for the above results is that a big number of respondents are degree holders and masters holders meaning they were able to understand the research instrument very well hence giving accurate answers.

4.2 Presentation and analysis of findings from the study objectives

Descriptive statistics were used to examine and establish the effect of inventory management on operational performance in a business' store. The findings were analyzed and interpreted basing on the attached Likert Scale such that a mean close to 5 represents strong agreement, 4- agreement, 3- Not sure, 2- disagreement and 1-strong disagreement.

4.2.1 Economic Order Quantity as a measure of inventory management at Crown Beverages Limited

The study sought to establish the respondent's opinion on the Economic Order Quantity as a measure of inventory management at Crown Beverages Limited. The following were the findings;

Table 4.5 Respondents Opinion on Economic Order Quantity as a measure of inventory management at Crown Beverages Limited

Descriptive Statistics					
Item	N	Minimum	Maximum	Mean	Std. Deviation
The firm orders inventory when current inventory level has reached a certain defined level.	81	2	5	4.36	.841
The firm replenishes inventory on a timely basis i.e. weekly, monthly, quarterly, semiannually or annually	81	3	5	4.22	.632
The firm orders a specific amount of inventory at a time.	81	2	5	4.20	.749
The firm maintains that level of inventory that minimizes the total inventory holding costs	81	3	5	4.51	.594
The firm orders amounts of inventory that minimizes the total ordering costs	81	3	5	4.68	.566

The organization gives inventory information to suppliers of different products	81	4	5	4.64	.482
Inventory is procured throughout the year					
Overall Mean =4.45					

Source: Primary Data

Findings in table 4.5 revealed that the firm orders inventory when current inventory level has reached a certain defined level at Crown Beverages Limited. The respondents agreed with the mean of 4.36 and the standard deviation of 0.841 indicating dispersion in the responses. This implies the firm orders inventory when current inventory level has reached a certain defined level. This is in agreement with

The respondents were requested to state whether the firm replenishes inventory on a timely basis i.e. weekly, monthly, quarterly, semi-annually or annually in table 4.5. The findings indicated a mean of 4.22 which implied that the majority of the respondents agreed with the statement and a standard deviation of .632 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that the firm replenishes inventory on a timely basis i.e. weekly, monthly, quarterly, semiannually or annually. However there were some respondents that disagreed to the statement.

The respondents were requested to state whether the firm orders a specific amount of inventory at a time in table 4.5. The findings indicated a mean of 4.20 which implied that the majority of the respondents agreed with the statement and a standard deviation of .749 which implied that there were varying views among the respondents. This means that the majority of the

respondents agreed that the firm orders a specific amount of inventory at a time. However there were some respondents that disagreed to the statement. This relates with Bachetti et al. (2010) Economic Order Quantity (EOQ) and Re-Order Point (ROP) are necessary instruments that associations can utilize and the firm ordered a specific amount of inventory at a time.

The respondents were requested to state whether the firm maintains that level of inventory that minimizes the total inventory holding costs in table 4.5. The findings indicated a mean of 4.51 which implied that the majority of the respondents agreed with the statement and a standard deviation of .591 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that the firm maintains that level of inventory that minimizes the total inventory holding costs. However there were some respondents that disagreed to the statement. This is in line with Roach (2005) business disciplines study the EOQ in both operational and financial courses and the firm maintains that level of inventory that minimizes the total inventory holding costs.

The respondents were requested to state whether the firm orders amounts of inventory that minimizes the total ordering costs in table 4.5. The findings indicated a mean of 4.68 which implied that the majority of the respondents agreed with the statement and a standard deviation of .556 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed the firm orders amounts of inventory that minimizes the total ordering costs. However there were some respondents that disagreed to the statement. This is in agreement with Piasecki (2001) even if a company has implemented a leading software package to help them and the firm had to order amounts of inventory that minimizes the total ordering costs

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The respondents were requested to state whether the organization gives inventory information to suppliers of different products in table 4.5. The findings indicated a mean of 4.64 which implied that the majority of the respondents agreed with the statement and a standard deviation of .482 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that the organization gives inventory information to suppliers of different products. However there were some respondents that disagreed to the statement

The respondents were requested to state whether Inventory is procured throughout the year in table 4.5. The findings indicated a mean of 4.64 which implied that the majority of the respondents agreed with the statement and a standard deviation of .482 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that Inventory is procured throughout the year. However there were some respondents that disagreed to the statement

The transcribed interview revealed that the respondents said the effect of the Economic Order Quantity on operational performance in a business' stores include; the firm maintains that level of inventory that minimizes the total inventory holding costs, gives inventory information to suppliers of different products, and stock is procured throughout the year.

Table 4.6 Correlation analysis of the relationship between economic order quantity and Employees' performance

Correlations		Economic Order Quantity	Operational performance in a business' store
Economic Order Quantity	Pearson Correlation	1	.394[**]
	Sig. (2-tailed)		.000
	N	81	81
Operational performance in a business' store	Pearson Correlation	.394[**]	1
	Sig. (2-tailed)	.000	
	N	81	81
**. Correlation is significant at the 0.01 level (2-tailed).			

Primary Data

Correlation analysis showed a positive significant relationship between economic order quantity and Operational performance in a business' store (r = 0.394[**], $p < 0.01$). This means that Operational performance in a business' store is positively affected by economic order quantity for example the firm orders inventory when current inventory level has reached a certain defined level. This means that the economic order quantity is important because it determine how the operational performance of business' store. This is in line with Bachetti et al. (2010) argue that inventory management needs to be organized in a logical way so that the organization can be able to know when to order and how much to order in order to determine how the operational performance of business' store.

4.3.2   Just in Time as a measure of inventory management at Crown beverages Limited

The study sought to establish Just in Time as a measure of inventory management at Crown Beverages Limited. Findings from questionnaires were computed to obtain means, standard deviations, correlations and regressions. Also findings from interviews were obtained and are presented in thematic statements or quotations and results are presented below. Respondents were required to respond to a number of statements on Just in Time as a measure of inventory management at Crown beverages Limited. The following were the results;

Table 4.7 Just in Time as a measure of inventory management at Crown beverages Limited

Descriptive Statistics					
Item	N	Minimum	Maximum	Mean	Std. Deviation
The firm has only the required inventory when needed	81	4	5	4.21	.410
Inventory is delivered at the right time by the suppliers	81	3	5	4.25	.623
Inventory is delivered at the right place by the suppliers	81	4	5	4.60	.492
Exact amount of inventory ordered is delivered by the suppliers	81	4	5	4.57	.498
The firm replenishes inventory just when needed	81	4	5	4.58	.497
Just in time affects operational performance of business store	81	4	5	4.78	.628

Source: Primary Data

The research wanted to ascertain whether the firm has only the required inventory when needed and the findings indicated a mean of 4.21 which implied that the majority agreed to the statement. Standard deviation was 0.410 which implied that respondents had varying views on the statement. This means that much as the majority agreed to the statement, some employees disagreed that the firm has only the required inventory when needed. This in line with Clark & Barraclough (2010) with the modified process costing being used in JIT and the firm could only be with the required inventory

The study sought to find out whether Inventory is delivered at the right time by the suppliers. The findings indicated a mean of 4.25 which implied that a big number agreed to the statement. Standard deviation was 0.623 which implied that respondents had wide varying views on the statement. This means that Inventory is delivered at the right time by the suppliers, though some respondents disagreed with the statement. This is in line with Hay (1998) the assembling procedure inside any organization as it is additionally being adjusted inside administration associations and Inventory is delivered at the right time by the suppliers.

The respondents were requested to state whether Inventory is delivered at the right place by the suppliers in table 4.7. The findings indicated a mean of 4.60 which implied that the majority of the respondents agreed with the statement and a standard deviation of .492 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that Inventory is delivered at the right place by the suppliers. However there were some respondents that disagreed to the statement. This is in line with Hutchins, (1999) additionally concentrated on that the prime objective of Just In time Technique is the accomplishment of zero stock and Inventory being delivered at the right place by the suppliers.

The study sought to find out whether exact amount of inventory ordered is delivered by the suppliers. The findings in table 4.7 indicated a mean of 4.57 which implied that a big number agreed to the statement. Standard deviation was .498 which implied that respondents had low varying views on the statement. This possibly means that Exact amount of inventory ordered is delivered by the suppliers.

This is concurs with Dorling, Scott & Deakins, (2005) total quality control program which will minimizes scrap, rework, and resultant delays in production plus the exact amount of inventory ordered is delivered by the suppliers.

The study sought to find out whether the firm replenishes inventory just when needed. The findings in table 4.7 indicated a mean of 4.58 which implied that a big number agreed to the statement. Standard deviation was .497 which implied that respondents had low varying views on the statement. This possibly means that the firm replenishes inventory just when needed.

This is in agreement with MSH (2012) no transaction reporting nor perpetual balance in the inventory record as the firm replenishes inventory just when needed.

The study sought to find out whether Just in time affects operational performance of business store. The findings in table 4.7 indicated a mean of 4.78 which implied that a big number agreed to the statement. Standard deviation was .628 which implied that respondents had low varying views on the statement. This possibly means that the firm replenishes inventory just when needed.

This concurs with Raja & Mohammad, (2005) JIT manufacturing operation is small relative to the total manufacturing cost hence Just in time affects operational performance of business store

During the transcribed interview, the respondents said the effect of Just in Time on operational performance in a business' stores among others include; stock is delivered at the right time by the suppliers and at the right place by the suppliers, Exact amount of inventory ordered is delivered by the suppliers and firm has only the required inventory when needed.

Table 4.8: Correlation analysis of the relationship between Just in Time and Operational performance in business' store

Correlations			
		Just in Time	Operational performance in business' store
Just in Time	Pearson Correlation	1	.294[**]
	Sig. (2-tailed)		.008
	N	81	81
Operational performance in business' store	Pearson Correlation	.294[**]	1
	Sig. (2-tailed)	.008	
	N	81	81
**. Correlation is significant at the 0.01 level (2-tailed).			

Primary Data

Correlation analysis showed a positive significant relationship (r = 0.294[**], p < 0.01) between Just in Time and Operational performance in business' store. This means that Operational performance in business' store is positively affected by Just in Time for example concepts, Inventory is delivered at the right time by the suppliers and at the right place by the suppliers. This means that the Just in Time is important because they determine operational performance of a business's store.

This is concurs with Clark & Barraclough, (2010) long processes within the four walls exist, intermediate stock points for discrete measurement of items coming in and leaving may be set

and the Just in Time is important because they determine operational performance of a business's store

4.3.3 Vendor Managed Inventory as a measure of Inventory management at Crown Beverages Limited

The study sought to establish Vendor Managed Inventory as a measure of inventory management at Crown Beverages Limited. Findings from questionnaires were computed to obtain means, standard deviations, correlations and regressions. Also findings from interviews were obtained and are presented in thematic statements or quotations and results are presented below. Respondents were required to respond to a number of statements on Vendor Managed Inventory as a measure of inventory management at Crown Beverages Limited. The following were the results;

Table 4.9 Respondents Opinion on Vendor Managed Inventory as a measure of inventory management at Crown Beverages Limited.

Descriptive Statistics					
Item	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Vendors are fully tasked with the responsibility of replenishing inventory on time.	81	3	5	4.15	.477
The vendors and the buyers are linked through a POS system	81	4	5	4.48	.503
The vendors replenish inventory based information from the buyers through the POS system	81	4	5	4.57	.498

Once an item of stock has been bought the same information is passed to the vendor through the POS system for replenishment.	81	4	5	4.62	.489
Vendors are fully tasked with the responsibility of replenishing inventory on time.	81	4	5	4.54	.501
Vendor managed inventory affects operational performance of business store	81	4	5	4.63	.486

Source: Primary Data

Findings in table 4.9 revealed that Vendors are fully tasked with the responsibility of replenishing inventory on time. The respondents agreed with the mean of 4.15 and the standard deviation of .477 indicating low dispersion in the responses. This implies that Vendors are fully tasked with the responsibility of replenishing inventory on time. This is in agreement with Guillaume et al. (2008) the quality of purchaser-supplier relationship and trust plus Vendors being fully tasked with the responsibility of replenishing inventory on time.

The respondents were requested to state whether the vendors and the buyers are linked through a POS system as part of the vendor managed inventory skills in table 4.9. The findings indicated a mean of 4.48 which implied that the majority of the respondents agreed with the statement and a standard deviation of .503 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that the vendors and the buyers are linked

through a POS system as part of vendor managed inventory. However there were some respondents that disagreed to the statement. This relates with Chaouch (2001) developed an analytical model to calculate inventory levels and delivery rates to minimize costs the vendors and the buyers are linked through a POS system as part of the vendor managed inventory skills

The respondents were requested to state whether the vendors replenish inventory based information from the buyers through the POS system. The findings in table 4.9 indicated a mean of 4.57 which implied that the majority of the respondents agreed with the statement and a standard deviation of .498 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that the vendors replenish inventory based information from the buyers through the POS system. However there were some respondents that disagreed to the statement.

The respondents were requested to state whether once an item of stock has been bought the same information is passed to the vendor through the POS system for replenishment. The findings in table 4.9 indicated a mean of 4.62 which implied that the majority of the respondents agreed with the statement and a standard deviation of .489 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed once an item of stock has been bought the same information is passed to the vendor through the POS system for replenishment. However there were some respondents that disagreed to the statement.

This concurs with Blatherwick (1998) noted that VMI was an excellent tool when ordering the policies of the downstream supply chain members and once an item of stock has been bought the same information is passed to the vendor through the POS system for replenishment

The respondents were requested to state whether Vendors are fully tasked with the responsibility of replenishing inventory on time. The findings in table 4.9 indicated a mean of 4.68 which implied that the majority of the respondents agreed with the statement and a standard deviation of .556 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that Vendors are fully tasked with the responsibility of replenishing inventory on time. However there were some respondents that disagreed to the statement.

This is concurs with Dorling *et al* (2006) ability to develop long-term relationships, supply chain technology and Vendors are fully tasked with the responsibility of replenishing inventory on time.

The respondents were requested to state whether Vendor managed inventory affects operational performance of business store. The findings in table 4.9 indicated a mean of 4.63 which implied that the majority of the respondents agreed with the statement and a standard deviation of .486 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that Vendor managed inventory affects operational performance of business store. However there were some respondents that disagreed to the statement.

This is in line with Dorling, Scott & Deakins (2005) looked at VMI in oligopolies and its determinants of success and Vendor managed inventory affects operational performance of business store

The transcribed interview, respondents said, the effects of the Vendor Managed Inventory on operational performance in a business' stores include, vendors are fully tasked with the responsibility of replenishing inventory on time and vendors replenish inventory based information from the buyers through the POS system.

Table 4.10 Correlation analysis of the relationship between Vendor Managed Inventory and Operational performance in business' store

<table>
<tr><th colspan="4">Correlations</th></tr>
<tr><th></th><th></th><th>Vendor Managed Inventory</th><th>Operational performance in a business' store</th></tr>
<tr><td rowspan="3">Vendor Managed Inventory</td><td>Pearson Correlation</td><td>1</td><td>.312**</td></tr>
<tr><td>Sig. (2-tailed)</td><td></td><td>.005</td></tr>
<tr><td>N</td><td>81</td><td>81</td></tr>
<tr><td rowspan="3">Operational performance in a business' store</td><td>Pearson Correlation</td><td>.312**</td><td>1</td></tr>
<tr><td>Sig. (2-tailed)</td><td>.005</td><td></td></tr>
<tr><td>N</td><td>81</td><td>81</td></tr>
<tr><td colspan="4">**. Correlation is significant at the 0.01 level (2-tailed).</td></tr>
</table>

Source: Primary Data

Correlation analysis showed a positive significant relationship (r = 0.312**, p < 0.01) between vendor managed inventory and operational performance in a business' store. This means that operational performance in a business' store is positively affected by Vendor managed inventory for example vendors replenish inventory based information from the buyers through the POS system. This means that the vendor managed inventory are important because they determine how the organisational performance in business' store.

This is in agreement with Tarrulli (2004) defines VMI effectiveness as the ability of the system to enhance competitive advantages through cost savings, relationships and information quality to lead to organisational performance in business' store.

4.4.4 Operational performance in a business' stores at Crown Beverages Limited

The study sought to establish Operational performance in a business' stores at Crown Beverages Limited. Findings from questionnaires were computed to obtain means, standard deviations, correlations and regressions. Also findings from interviews were obtained and are presented in thematic statements or quotations and results are presented below. Respondents were required to respond to a number of statements on Operational performance in a business' stores at Crown Beverages Limited. The following were the results;

Table 4.11 Respondents Opinion on Operational performance in a business' stores at Crown Beverages Limited

Descriptive Statistics					
Item	N	Minimum	Maximum	Mean	Std. Deviation
There is Price/cost reduction of producing the products	81	4	5	4.44	.500
Improved quality of goods such as Pepsi, mountain dew	81	4	5	4.26	.441
Delivery dependability on the suppliers	81	4	5	4.60	.492
Improved Customer lead times	81	3	5	4.67	.570
Product innovation by the company	81	4	5	4.30	.459
Improved Inventory levels	81	3	5	4.22	.632
Time for the products to reach to the market	81	4	5	4.49	.503
Improved delivery time by the by the suppliers	81	4	5	4.56	.500

Source: Primary Data

The research wanted to ascertain whether there is Price/cost reduction of producing the products

and the findings in Table 4.11 indicated a mean of 4.44 which implied that the majority agreed to

the statement. Standard deviation was 0.500 which implied that respondents had varying views on the statement. This means that much as the majority agreed to the statement, some employees disagreed because there is Price/cost reduction of producing the products. This is in line with Mark (2006) distinguished other performance measures as usefulness of request era, arranging, generation booking, inventory management and quality and there is Price/cost reduction of producing the products.

The study sought to find out whether there is improved quality of goods such as Pepsi, mountain dew. The findings in Table 4.11 indicated a mean of 4.26 which implied that a big number agreed to the statement. Standard deviation was 0.441 which implied that respondents had wide varying views on the statement. This means that there is improved quality of goods such as Pepsi, mountain dew however some respondents disagreed with the statement

This is agrees with Mark (2006) characterized request lead time as the time that breaches and there is improved quality of goods.

The respondents were requested to state whether there is delivery dependability on the suppliers. The findings in Table 4.11 indicated a mean of 4.62 which implied that the majority of the respondents agreed with the statement and a standard deviation of .492 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that there is delivery dependability on the suppliers. However there were some respondents that disagreed to the statement.

This relates to Johnson (2003) decrease in abundance stock levels and upgrades in item/prepare outline and delivery dependability on the suppliers.

The study sought to find out whether there are improved Customer lead times. The findings in table 4.11 indicated a mean of 4.67 which implied that a big number agreed to the statement. Standard deviation was .570 which implied that respondents had low varying views on the statement. This possibly means that there are improved Customer lead times. This concurs with Ngatia (2013) cost reduction quality, persistence, time to market, and item development, client lead times, stock levels, and conveyance time in addition to improved Customer lead times.

The study sought to find out whether there is product innovation by the company. The findings in table 4.11 indicated a mean of 4.30 which implied that a big number agreed to the statement. Standard deviation was .591 which implied that respondents had low varying views on the statement. This possibly means that there is product innovation by the company.

The study sought to find out whether there are improved Inventory levels. The findings in table 4.11 indicated a mean of 4.22 which implied that a big number agreed to the statement. Standard deviation was .632 which implied that respondents had low varying views on the statement. This possibly means that there are improved Inventory levels, though there are some respondents who disagreed with the statement

The findings in table 4.9 indicated a mean of 4.49 which implied that the majority of the respondents agreed with the statement and a standard deviation of .503 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that Time for the products to reach to the market. However there were some respondents that disagreed to the statement.

The respondents were requested to state whether there is improved delivery time by the by the suppliers. The findings in table 4.9 indicated a mean of 4.56 which implied that the majority of the respondents agreed with the statement and a standard deviation of .500 which implied that there were varying views among the respondents. This means that the majority of the respondents agreed that there is improved delivery time by the by the suppliers. However there were some respondents that disagreed to the statement.

4.3 Regression analysis

It was necessary to determine which of the three dimensions of training (economic order quantity, just in time, vendor managed inventory) predicts operational performance in a business' store more than the other. This was achieved through conducting regression analysis. The following were the results;

Table 4.12: Regression analysis of the three dimensions of training (economic order quantity, just in time, vendor managed inventory) operational performance in a business' store.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.661ᵃ	.437	.408	.07922

a. Predictors: (Constant), Economic order quantity, Just in time, Vendor managed inventory

Coefficientsᵃ

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.484	.453		3.276	.002
	Economic order quantity	.185	.033	.583	5.684	.000
	Just in time	.091	.071	.124	1.292	.003
	Vendor managed inventory	.424	.077	.579	5.538	.000

 a. Dependent Variable: Operational performance in a business' store

Coefficient of determination Model Adjusted R^2= 0.564   (0.564*100) = 56.4%
The model summary in Table 4.12 revealed that correlation coefficient®, using predicator financing strategies, is 0.661 and the adjusted R^2 (0.408).

This implies that 40.8% variations in Operational performance in a business' store are explained by training while the remaining 59.2% is explained by other factors.

This implies that inventory management is a critical factor in explaining Operational performance in a business' store, but there are also other factors which influence Operational performance in a business' store such as company laws and policies.

From the above regression coefficients it is revealed that holding economic order quantity, just in time and vendor managed inventory constant (1.484).The corresponding coefficients for economic order quantity, just in time and vendor managed inventory are 0.583, 0.124, and 0.579. The results from Table 4.12 indicated that economic order quantity (beta = 0.583, sig. =0.000) is the major predictor of operational performance in a business' store. This means is interpreted as a unit increase in economic order quantity would lead to increase in operational performance in a business' store.

The results from 4.12 revealed that Just in time (beta=0.124, sig. =0.003) is a predictor of operational performance in a business' store where a positive change in Just in time would lead to changes in operational performance in a business' store.

The results revealed that vendor managed inventory (beta=0.579, sig. =0.000) is a significant predictor of operational performance in a business' store where a positive change in vendor managed inventory leads change in operational performance in a business' store.

4.4 Conclusion

This chapter presented, discussed and interpreted the findings as collected during the study. Both correlation analysis and regression showed that there was a relationship between the inventory management and operational performance in a business' store.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0   Introduction

The study examined the effect of inventory management on the operational performance in a business' store with specific reference to Crown Beverages Limited. The study adopted three research objectives which looked at establishing the effect of economic order quantity, just in time and vendor managed inventory on operational performance in a business' store. This chapter presents the summary of findings, conclusions and recommendations of the study and these are presented according to the findings in objective in chapter four.

   i.   To assess effect of the Economic Order Quantity on operational performance in a business' stores

   ii. To examine the influence of Just in Time on operational performance of a business' stores.

   iii. To assess the influence of the Vendor Managed Inventory on operational in a business' stores

5.1   Summary of key findings

5.1.1   The effect of the Economic Order Quantity on operational performance in a business' stores

The study findings showed a positive significant relationship between economic order quantity and Operational performance in a business' store ($r = 0.394^{**}$, $p < 0.01$). This means that Operational performance in a business' store is positively affected by economic order quantity

for example the firm orders inventory when current inventory level has reached a certain defined level. This means that the economic order quantity is important because it determine how the operational performance of business' store

The regression analysis results revealed that economic order quantity (beta = 0.583, sig. =0.000) is the major predictor of operational performance in a business' store. This means is interpreted as a unit increase in economic order quantity would lead to increase in operational performance in a business' store.

5.1.2 The influence of Just in Time on operational performance in a business' stores

The study findings showed a positive significant relationship ($r = 0.294^{**}$, $p < 0.01$) between Just in Time and Operational performance in business' store. This means that Operational performance in business' store is positively affected by Just in Time for example concepts, Inventory is delivered at the right time by the suppliers and at the right place by the suppliers. This means that the Just in Time is important because they determine operational performance of a business's store.

The regression analysis results from 4.12 revealed that Just in time (beta=0.124, sig. =0.003) is a predictor of operational performance in a business' store where a positive change in Just in time would lead to changes in operational performance in a business' store.

5.1.3 The influence of the Vendor Managed Inventory on operational in a business' stores

The correlation analysis showed a positive significant relationship ($r = 0.312^{**}$, $p < 0.01$) between vendor managed inventory and operational performance in a business' store. This means that operational performance in a business' store is positively affected by Vendor

managed inventory for example vendors replenish inventory based information from the buyers through the POS system. This means that the vendor managed inventory are important because they determine how the organisational performance in business' store.

The regression analysis results revealed that vendor managed inventory (beta=0.579, sig. =0.000) is a significant predictor of operational performance in a business' store where a positive change in vendor managed inventory leads change in operational performance in a business' store.

5.2 Conclusions

The Since all the dimensions of inventory management (economic order quantity, just in time, and vendor managed inventory) showed a positive and significant relationship with operational performance in a business' store, the study therefore concludes that inventory management has a positive and significant relationship on operational performance in a business' store.

The discussion of the study is presented according to the objectives of the study with back up of reviewed literature to make the discussion more authentic. In regard to inventory management, it was concluded that since the respondents seem to agree that it affects the operations of a business's store, it is therefore important for inventory management to be strengthened so as to be able to achieve the goals and objectives of the Crown Beverages Limited.

On testing the relationship between inventory management and operational performance in a business' store, the study revealed that they have a significant and positive relationship. It is therefore concluded that training has a direct relationship with Crown Beverages Limited.

5.3 Recommendations

Crown Beverages Limited should ensure that economic order quantity is enhanced through ensuring that the firm orders inventory when current inventory level has reached a certain defined level this will increase operational performance of the company.

Crown Beverages Limited should ensure it carries out its purchases are just in time as it will increase its operational performance.

Crown Beverages Limited should ensure that adopt vendor managed inventory in its operations through ensuring vendors and the company are linked through a POS system, and replenish inventory based information from the buyers through the POS system as it will improve its operations.

5.4   Areas for further research

The study was carried out at Crown Beverages Limited and yet other company also carry out inventory management for example Century Bottling Company Limited and Harris International Movit Products Limited . Therefore a similar study may also be needed to be undertaken in these different Banks.

There is also need to conduct a study to examine the effect of the Economic Order Quantity on operational performance in a business' stores since they came out strongly in this research.

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APPENDIX I: QUESTIONNAIRE

Dear respondent,

I am **Nabiryo Rose**, a student at Uganda Martyrs University. I am carrying out a research study on "The effect of inventory management on the operational performance in a business' stores: Case of Crown Beverages Limited)". The study is being conducted in fulfillment of the requirement for the award of a degree of Accounting and finance. This questionnaire is seeking information on the study. Therefore the information provided in this questionnaire will be used for academic purposes only and shall be accorded utmost confidentiality. Therefore, your contribution towards filling in this questionnaire will be a great contribution to my academic endeavor. Thank you.

Section I: GENERAL INFORMATION

Please tick appropriately

1. What is your gender?

Male	
Female	

2. How long have you been an employee of Crown Beverages Limited?

Less than 1 year	
2 – 3 yrs	
4 – 5 yrs	
6 – 10 yrs	
Above 10 yrs	

3. Which position do you hold in Crown Beverages Limited?

……………………………………………………………………………………………

4. What is the highest level of education you have attained?

Diploma	
Degree	
Masters	
PhD	

Please indicate the extent to which you agree with the statements below: SD- Strongly Disagree (1), D- Disagree (2), N- Not Sure (3), A- Agree (4), SA- Strongly Agree (5).

Section II: Economic Order Quantity

No	Items	SD	D	N	A	SA
1	The firm orders inventory when current inventory level has reached a certain defined level, and The firm orders a specific amount of inventory at a time.					
2	The firm replenishes inventory on a timely basis i.e. weekly, monthly, quarterly, semiannually or annually					
3	The firm orders a specific amount of inventory at a time.					
4	The firm maintains that level of inventory that minimizes the total inventory holding costs					
5	The firm orders amounts of inventory that minimizes the total ordering costs					
6	The organization gives inventory information to suppliers of different products					
7	Inventory is procured throughout the year					

8. How you order inventory in the company?

………

……………………………………………………………………………………………………..

Section III: Just in Time

No	Items	SD	D	N	A	SA
1	The firm has only the required inventory when needed					
2	Inventory is delivered at the right time by the suppliers and at the right place by the suppliers					
3	Inventory is delivered at the right place by the suppliers					
4	Exact amount of inventory ordered is delivered by the suppliers					
5	The firm replenishes inventory just when needed					
6	Just in time affects operational performance of business' store					

7. DO you recommend Just in time for Crown beverages?

………
………
………
……………

Section IV: Vendor Managed Inventory.

No	Items	SD	D	N	A	SA
1	Vendors are fully tasked with the responsibility of replenishing inventory on time.					
2	The vendors and the buyers are linked through a POS system, and replenish inventory based information from the buyers through the POS system					
3	The vendors replenish inventory based information from the buyers through the POS system					
4	Once an item of stock has been bought the same information is passed to the vendor through the POS system for replenishment.					
5	Vendors are fully tasked with the responsibility of replenishing inventory on time.					
6	Vendor managed inventory affects operational performance of business store					

7. How does the company use vendor managed inventory in it's operations?

………
………
………
…………..

Section V: Operational performance in a business' stores
Please indicate the extent to which you agree or disagree with the statements below
Key: 1=SD-strongly disagree; 2=D-disagree; 3=NS- not sure; 4=A-agree and 5=SA-strongly agree

No	Items	SD	D	NS	A	SA
1.	There is Price/cost reduction of producing the products					
2.	Improved quality of goods such as Pepsi, mountain dew					
3.	Delivery dependability on the suppliers					
4.	Improved Customer lead times					
5.	Product innovation by the company					
6.	Improved Inventory levels					

7.	Time for the products to reach to the market					
8.	Improved delivery time by the by the suppliers					

9.   How do you evaluate Operational performance of essential material in a business' stores?

……

……

APPENDIX II: Interview Guide

i.   What is the effect of the Economic Order Quantity on operational performance in a business' stores?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

ii.   What is the effect of Just in Time on operational performance in a business' stores?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

iii.   What is the effect of the Vendor Managed Inventory on operational performance in a business' stores?

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

APPENDIX III:TABLE FOR DETERMINING THE SAMPLE SIZE OF THE POPULATION

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size

"S" is sample size.

Krejcie, Robert V., Morgan, Daryle W., "Determining Sample Size for Research Activities",

Educational and Psychological Measurement, 1970.

Appendix IV: RELIABILITY RESULTS

RELIABILITY FOR Economic Order Quantity

Reliability Statistics

Cronbach's Alpha	N of Items
.810	08

RELIABILITY FOR Just in Time

Reliability Statistics

Cronbach's Alpha	N of Items
.798	07

RELIABILITY FOR Vendor Managed Inventory.

Reliability Statistics

Cronbach's Alpha	N of Items
.879	07

RELIABILITY FOR Operational performance in a business' stores

Reliability Statistics

Cronbach's Alpha	N of Items
.799	09

Appendix V: Application letter to conduct Field Research at Crown Beverages Ltd

Appendix VI: Introductory Letter from the University

Appendix VII: Acceptance letter from Crown Beverages Limited