

Inventory Management and Organizational Profitability at Gumutindo Coffee Cooperative Enterprise Limited, Uganda.

Francis Kakeeto¹, Timbirimu Micheal², Kiizah Pastor³, Olutayo K. Osunsan⁴

¹Bank of Uganda, Mbale Branch, Uganda. E-mail: franciskakeeto@yahoo.com

²Lecturer, College of Economics and Management, Kampala International University, Uganda & Uganda Martyrs University- Mbale Branch, Uganda. E-mail: timbirimum@yahoo.co.uk

³Lecturer/Coordinator, Faculty of Business Administration and management, Uganda Martyrs University- Mbale Branch, Uganda. E-mail: kiizapastor@yahoo.com

⁴Lecturer, College of Economics and Management, Kampala International University, Uganda.
E-mail: oosunsan@kiu.ac.ug

ABSTRACT: This study seeks to explore the effect of Inventory management on organizational profitability using Gumutindo Coffee Cooperative Enterprise Limited as a case study. The study test the hypothesis: Inventory Management has a significant positive effect on organizational profitability. The study used a descriptive research design and adopted a case study strategy. Out of a population of 345 staff, a sample size of 181 was derived. However only 168 responded out of the 200 questionnaires sent out. The study revealed that inventory management positively affected profitability of the organization with a Pearson correlation coefficient of 0.455. The adjusted R^2 was 0.202 implying that 20.2% of changes in GCCE profitability are accounted for by inventory management. Thus the hypothesis was accepted. The study concluded that the inventory management as adopted by GCCE was quite effective and recommended further investment in inventory to boost inventory levels.

KEYWORDS: Inventory Management, Organizational Profitability, Profitability, Uganda

Date of Submission: 17-10-2017

Date of acceptance: 04-11-2017

I. INTRODUCTION

Inventory management plays an essential role in every company since ineffective inventory system will result in loss of customers, sales and ultimately profits. An effective inventory management is able to create more sales for the company which directly affects the performance of the company in terms of profitability and other indicators (bin Syed, Mohamad, Rahman & Suhaimi, 2016). In the past, according to Temeng, Eshun & Essey (2010), companies have ignored the possibility of savings from appropriate inventory management, seeing inventory as a compulsory aspect of business and not as an asset that calls for proper management. This has led to many inventory systems being based on subjective rules. Regrettably, it is not abnormal for some organizations to have more finances tied up in inventory than necessary and still not have the capability to meet customer needs because of ineffective allocation of investment among inventory items (Temeng et al, 2010). According to Anichebe & Agu (2013), Inventory represents an important decision variable at all stages of product manufacturing, distribution and sales, in addition to being a major portion of total current assets of many organizations. It many represent 33% of company assets and as much as 90% of working capital.

Contemporary literature (bin Syed, et al 2016; Anichebe & Agu, 2013) has shown that incredible cost savings and possible revenue can be realized through better management of inventory. It is confirmed that a company could cut down on its total expenses by at least two percent through better inventory management and distribution of finished goods (Kimaiyo & Ochiri, 2014). Unless operators in the manufacturing industry understand the true costs associated with inventory management and poor inventory productivity, and can review the benefits of alternative approaches, they will continue to be complacent, accepting average profit instead of better performance (Prempeh, 2016). This study therefore seeks to explore the effect of Inventory management on organizational Profitability using Gumutindo Coffee Cooperative Enterprise Limited as a case study.

II. LITERATURE REVIEW

2.1 Inventory Management

Success of any business organization depends on its ability to provide services to customers or users and remain financially viable. Inventory management enables a company to support the activities of logistics, processing and customer service by holding appropriate levels of inventory. Inventory management has to

contribute to profits by servicing the marketing and financial needs of the company. The purpose is to support the business activities in three major areas: customer service, inventory costs and operating costs (Wild, 2002).

Inventory management is concerned with how much to keep on hand, how frequently to reorder, and how much to order. It is essential for day-to-day operations with the objective of meeting customer needs while keeping inventory costs at a reasonable level (Mercado, 2007). Inventory control may range from holding no stock and reordering only when customers place an order (Just in Time inventory management) to keeping relative levels of inventory after anticipation of customer needs (Mercado, 2007). Just in Time is another approach in inventory management designed to minimize inventory and eliminate excess inventory by producing, or purchasing parts, subassemblies and final products only when and in exact amounts needed (DuBrin, 2012).

A classic approach to inventory management is the Economic Order Quantity (EOQ) model which determines the order quantity that results in the lowest sum of carrying and ordering costs. The reorder point (ROP) is a point the answers when to place a new order and is mainly based on the lead time (Shim and Siegel, 1999). EOQ minimizes both administrative costs and carrying costs (DuBrin, 2012).

In theory, Pandey (2007) mentioned that decisions to determine or change the level of inventory are investment decisions that need an analysis of profitability of investment in inventory. With the goal of inventory policy being profit maximization, the inventory policy would maximise the firm's profits at a point at which marginal return from the investment in inventory equals the marginal cost of funds used to finance the investment in inventory.

According to Sekeroglu and Altan, (2014) inventory costs include inventory price, ordering costs, inventory carrying costs, and cost of not carrying inventory. They continue to mention that measurement of inventory management can be grouped under five categories including, customer satisfaction, fulfilled request or demand, inventory –sales ratio, inventory turnover ratio, inventory holding time, return – total demand ratio, and customer complaint ratio.

Inventory conversion period is an important concept in inventory management (Pandey, 2007). Inventory conversion period is the sum of raw material conversion period, work in progress conversion period and finished goods conversion period. Raw material conversion period is the average time taken to convert material into work in progress. It is calculated by dividing raw material inventory by the result of dividing raw material consumption by 365 days. Work in progress conversion period is the average time taken to complete the processing of semi-finished goods, calculated by dividing work in progress inventory by the result of dividing cost of production by 365 days. Finished goods conversion period is the average time taken to sell the finished goods, calculated by dividing finished goods inventory by the result of dividing cost of goods sold by 365 days.

Inventory can represent up to 40% of total capital of an organization; up to 33% of company assets, and as much as 90% of working capital. They may consist of raw materials, work-in-progress, spare parts, consumables, and finished goods (Anichebe and Agu, 2013). In their findings, Anichebe and Agu, (2013) noted a significant positive correlation between good inventory management and organizational effectiveness, profitability, and productivity. They cited Banjko, (2004) to have mentioned reasons for holding inventories which included: enhancing uninterrupted flow of production; meeting variations in product demand; allowing flexibility in production scheduling, decoupling successive stages of operation; hedging against future prices and delivery uncertainties, and gain quantity discounts.

Schreibfeder, (2004) likened inventory management to investors buying shares of stock in a company, where they do not earn a profit on their investment until only when they sell the stock for more than what they paid, that a return on their outlay is realized. In the same way, a distributor does not earn profits until purchased material is resold to a customer at a price that is higher than its cost.

Inventory should be available in proper quantity at all times, neither more nor less than what is required. Inadequate inventory adversely affects smooth running of business, whereas excess of it involves extra costs, thus reducing profits. The primary objective of inventory management is to avoid too much and too little of it so that uninterrupted production and sales with minimum holding costs and better customer's services may be possible (Panigrahi 2013).

2.2 Organizational Profitability

According to Armstrong, (2001) Profitability analysis classifies measures and assesses the performance of the company in terms of the profits it earns either in relation to the shareholders' investment or capital employed in the business, or in relation to sales. Profitability is the primary aim and best measure of efficiency in a competitive business. Similarly, profitability analysis aims to provide data on which action can be taken to improve the company's business performance. According to Esselaar et al., (2008) Profitability is defined as after tax profits divided by the total value of fixed assets. Profit performance must be standardised against the size of the operation or the resources employed (Peck et al, 2006). There are various measurements of

profitability. The indicators used in this study that quantifies the profitability of an organisation are, return on equity (ROE), return on invested capital (ROIC) and operating profit margin (OPM) (Armstrong 2001, Pandey 2007, and Popa & Ciobanu, 2014). Return on invested capital (ROIC) measures the efficiency of resource allocation and also the quality of management of an organisation. ROIC is defined as measuring the efficiency in generating profits from an organisation's assets before the effects of financing. It is an indicator to quantify the effectiveness of the Enterprises' assets. The entrepreneurs and managers measure the total performance of an organisation by dividing total income by total assets. Earnings before interest and taxes (EBIT) are the accounting revenue of all operating activities. Because income is measured as the net profit and interest expense, we can take into account the entire profitability of the company's capital structure function. It is better to use net income, adding interest, as this would show the return on all assets of the company, not just capital investment by the shareholders (Armstrong 2001). Return on Invested Capital according to Dent (2008) is measured by the formula:

$$\frac{\text{Net profit after tax} + \text{Interest} * 100}{\text{Invested capital (shareholders' equity} + \text{borrowing)}}$$

It is intended to find out how productively the company utilizes all of the funds invested in the company. When compared with ROE, it can be used to measure the contribution to business profitability attributed to borrowing. Return on equity (ROE) is one of the major indicators followed by investors and entrepreneurs. With this rate, investors and entrepreneurs can assess whether their investment is profitable or not. This ratio shows the profitability of the company in terms of the capital provided by the owners of the company. Return on equity analyses the profitability on the equity investor's perspective on its net profits (net profit after tax and interest expenses) relative to book value of equity investments (Armstrong 2001). According to Periasamy (2009), return on equity is determined using the formula:

$$\frac{\text{Net Profit after Interest and Tax} * 100}{\text{Shareholders' Equity}}$$

Periasamy (2009) continued to point out that ROE is important because it highlights the success of the business from the owners' point of view. ROE also helps to measure income on the shareholders' investment and the efficiency in handling such investment. Operating Profit Margin (OPM) is a ratio used to measure a company's pricing strategy and operating efficiency. It is a measurement of what proportion of a company's revenue is left over after paying for variable costs of production such as wages and raw materials. A healthy operating margin is required for an enterprise to be able to pay for its fixed costs, such as interest on debt and rent. This measure divides profit by sales revenue (Armstrong 2001).

The study adopted Coles (1997) formula for calculating Operating Profit Margin;

$$\frac{\text{Operating Profit before interest and Tax} * 100}{\text{Sales Revenue}}$$

OPM is measured to help decision makers find out how much profit is generated per 100 shillings of sales revenue. Margins represent the ratio of earning to business volumes. Such changes in OPM can be caused by changes in sales volume; changes in sales price, and/or changes in the cost of production.

2.3 Inventory Management and Organizational Profitability

Panigrahi (2013) underscored the need for adequate and timely flow of inventory as imperative for the success and growth of any company. In his study of Indian cement companies, the results indicated a significant negative linear relationship between inventory conversion period and profitability. When there is poor management of working capital, funds may be unnecessarily tied up in idle inventories, which is an important element of current assets. When inventory conversion period comparatively decreases over a period of time, it enables higher turnover in sales and increase in profitability. Deloof, (2003) studied Belgian firms and found that firms could increase their profitability by reducing the days-in inventory period. Similarly after studying 58 small manufacturing firms, Kesseven, (2006) found that with better inventory management, a firm can reduce the levels of inventories to a considerable degree to increase profitability where inventory days were found to have a negative effect on profitability. Rafuse (1996) proposed that stock reduction generates system-wide financial improvements and other important benefits, and suggested that, to achieve this, companies should focus on stock management strategies based on "lean supply- chain" techniques. After studying sugar manufacturing firms in Kenya, Lwiki et al (2013) concluded that there was generally more than average positive correlation between inventory management practices and financial performance of the sugar companies, and that the implementation of similar inventory management practices responded differently to unique environments of each firm. Raheman and Nasr, (2007) concluded that most Pakistani firms had large amounts of cash invested in inventory and that the way in which inventory was managed had a significant impact on profitability of those

firms. They too found a significant negative effect of inventory turnover in days on net operating profitability. Conversely, in their study of American firms, Gill et al (2010) found no significant effect of average number of days the inventory was held on organizational profitability.

From the previous studies, a conclusion was drawn that good inventory management and improved inventory turnover has a positive effect on organizational profitability. Thus the hypothesis:

H₁: Inventory Management has a significant positive effect on organizational profitability.

III. METHODOLOGY

The study used a descriptive research design and adopted a case study strategy. With a descriptive research design, respondents explained and described key issues about the important variables of the study. Descriptive research was deemed appropriate because the design determines and reports the way things (Mugenda & Mugenda, 2003). In addition, the strength of the case study strategy is its ability to examine in-depth a case within its real-life context and it is pertinent when the research addresses descriptive questions of what happened and how it happened or when a researcher wants to illuminate a particular situation, to get an in-depth understanding of the situation (Yin, 2004).

The study population comprised employees of Gumutindo Coffee Cooperative Enterprise (GCCE) who were drawn from various departments categorized into top management, section heads, unit heads, and clerks & office assistants: As per GCCE staff list of December 2015, the company had 345 staff. Out of a population of 345 staff, a sample size of 181 was derived using the Krejcie and Morgan (1970). However only 168 responded out of the 200 questionnaires sent out. The study adopted both probability and non-probability sampling techniques. Stratified Random Sampling was used on unit heads, clerks, and office assistants, while all the top management and section heads were included (census). Likert type scale questionnaires were used to collect data from the respondents in terms of the two variables. Secondary data was also used through document review.

Using Cronbach's Alpha test of reliability (Cronbach, 1951), scores for the questionnaire were above the adopted 0.7 alpha as the adequate reliability as recommended by Cronbach, (1951). The researcher used content validity index (CVI) attributed to Martuza (1977) cited by Polit & Bech (2006) to calculate content validity. The content validity index was 0.808, which exceeds 0.7 as recommendation by Liu (2012). The data was presented using frequency distribution tables summarizing the frequency and percentage of occurrences of values under study. Tables used gave a clear and a more understandable presentation of the obtained data. The mean was used in further statistical analysis using Statistical Package for the Social Sciences (SPSS) for determination of correlation and regression to determine the strength and direction of the effect of the independent variable on the dependent variable and thus test the hypothesis.

IV. RESULTS AND DISCUSSIONS

4.1 Demographics of respondents

Majority of the respondents are 35 years old and below (54%), 57% of the respondents are Male, 67% of the respondents hold at least a diploma, most of the respondents have been in the organization for more than 1 year (95%).

4.2 Inventory Management

Table 4.1: Responses about Inventory Management at GCCE (n= 168)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
Inventory management at Gumutindo is satisfactorily practiced	69 (41.1%)	84 (50%)	11 (6.5%)	4 (2.4%)	-	4.30	0.697
I am knowledgeable about guidelines on inventory management	23 (13.7%)	84 (50%)	29 (17.3%)	19 (11.3%)	13 (7.7%)	3.51	1.105
Inventory takes three months to restock	11 (6.5%)	64 (38.1%)	19 (11.3%)	67 (39.9%)	7 (4.2%)	3.03	1.102
More inventory is kept than actually required	2 (1.2%)	12 (7.1%)	30 (17.9%)	88 (52.4%)	36 (21.4%)	2.14	0.877
Stock taking is carried out every after 3 months	9 (5.3%)	92 (54.8%)	10 (6%)	40 (23.8%)	17 (10.1%)	3.21	1.169
Inventory is sold within 90 days	51 (30.4%)	81 (48.2%)	17 (10.1%)	19 (11.3%)	-	3.98	0.928
Inventory management has reduced costs of ordering and holding stock	44 (26.2%)	92 (54.8%)	13 (7.7%)	14 (8.3%)	5 (3%)	3.93	0.970
Gumutindo's inventory management positively affects profitability	44 (26.2%)	103 (61.3%)	16 (9.5%)	5 (3%)	-	4.11	0.684

On whether inventory management at GCCE was satisfactory, results in table 4.1 show that 91.1% of the respondents were satisfied with the inventory management at GCCE. 2.4% were dissatisfied while 6.5% were undecided. The mean score was 4.3 and the standard deviation was 0.697. This implies that GCCE practices adequate inventory management that may lead to profitability. One respondent observed that, GCCE had ready market for its coffee; and that as coffee was received from suppliers, it was processed and shipped to buyers. This implies that GCCE applies activity based inventory management practices that minimize holding of idle inventory which is a positive trait for profitability.

On whether respondents were knowledgeable about guidelines on inventory management, table 4.1 indicates that 63.7% of the respondents were knowledgeable about the guidelines followed in inventory management at GCCE. 19% were not knowledgeable, while 17.3% were neutral. The mean score was 3.51 and the standard deviation was 1.105. This means that majority of the respondents were able to participate in inventory management according to the guidelines of the company intended to achieve efficient management of inventory as needed for better profitability.

Results from table 4.1 concerning whether inventory took three months to restock; 44.6% of the respondents agreed that it took GCCE three months to restock. 44.1% disagreed while 11.3 remained undecided. The mean score was 3.03 and the standard deviation was 1.102. These results showed a mixed reaction where the percentage of respondents agreeing and that disagreeing was almost similar. This implies that GCCE stocks enough inventory to cover three months inventory requirements although from time to time the company restocks as funds become available within the three months' period. Therefore, available resources are used to restock inventory needed to generate sales and gain profitability. This was confirmed by an analysis of interviews which revealed that GCCE restocks as required by customer demand and that coffee being a seasonal product, the company stocked as much coffee dependent on available resources during season. This shows that funds available for investment in inventory were effectively utilized to achieve organizational goals including better profitability.

On whether more inventory was kept than actually required, 8.3% of the respondents agreed. 73.8% disagreed and 17.9% remained neutral. The mean score was 2.14 and the standard deviation was 0.877. This implies that the inventory level maintained was appropriate as required to meet customer demand. This means that inventory levels maintained may boost profitability by minimizing wastage and costs associated with overstocking although the levels may deter profitability by failing to stock enough quantities to meet unplanned increase in customer demand. One respondent had this to say, "GCCE sells coffee under contracts with buyers and sometimes the company fails to meet the contractual obligations of supplying the required quantity of coffee." This implies that the company doesn't overstock but rather in some instances, fails to stock enough inventory needed to meet the demand. In review of related literature, Panigrahi, (2013), and Anichebe & Agu, (2013) mentioned that for inventory management to boost profitability; inventory should always be kept in appropriate quantities and at the least cost possible because inadequate inventory adversely affects business while excess inventory has a cost that reduces profits. An optimum inventory level entails taking decisions with respect to the determination of an appropriate order quantity, when to place the order and how much inventory to carry per unit of time. These decision variables dictate the behavior of any inventory system aimed at maximizing profitability.

On finding out whether stock taking was carried out every after three months; table 4.1 shows that 60.1% of the respondents agreed that the company regularly carries out stock taking. However 33.9% disagreed while 6% were neutral. The mean score was 3.21 and the standard deviation was 1.169. This meant that by majority of respondents agreeing, GCCE regularly carries out stock taking. Stock taking is important in ascertaining the quantity held. In inventory management, ascertainment of inventory held is important in managing carrying costs, determination of ordering level, and minimization of wastage by not holding more inventory than actually required. Therefore by regularly carrying out stock taking, it was presumed that GCCE intended to boost its profitability through effective inventory management for example through error detection and correction, and discouragement of wastage.

In regard as to whether inventory was sold within 90 days, finding in table 4.1 show that 78.6% of the respondents agreed, 11.3% disagreed while 10.1% were undecided. The mean score was 3.98 and the standard deviation was 0.928. This implied that GCCE processes and sells its inventory within 90 days after acquisition. This means that the rate of inventory turnover is good, pointing at a positive boost in profitability. One interviewee noted that inventory took on average 60 days to be sold. This is in line with Deloof (2003) and Kesseven (2006), who contended that, the less the days taken to sell inventory the more profitable the organization will be.

On whether inventory management reduced costs of ordering and holding stock, findings in table 4.1 showed that 81% agreed, 11.3% disagreed while 7.7% were neutral. The mean score was 3.93 and the standard deviation was 0.970. This meant that inventory management was efficient enough to help the company reduce both ordering and holding cost. The findings imply that the levels of inventory kept minimized holding costs

while the inventory procurement process minimized ordering/procurement costs. In theory cost reduction directly boosts profitability. This agrees with Sekeroglu and Altan (2014) who underscored the importance of controlling inventory costs including inventory price, ordering cost, carrying cost and cost of not carrying inventory in influencing organizational profitability.

Results from table 4.1 regarding whether inventory management positively affected profitability, 87.5% agreed, 3% disagreed while 9.5% were neutral. The mean score was 4.11 and the standard deviation was 0.684. This meant that inventory management positively affected GCCE profitability. This means that if GCCE had better inventory management that would improve inventory turnover, reduce costs and improve customer satisfaction, profitability would be increased. These findings are in line with the findings of Lwiki et al (2013), and Raheman and Nasr (2007) who reported a positive effect of inventory management on organizational profitability.

4.3 Organizational Profitability

Table 4.2: Responses about Profitability at GCCE (n= 168)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean	Std. Deviation
The company is experiencing an increase in return on shareholders capital.	10 (6%)	58 (34.5%)	41 (24.4%)	50 (29.8%)	9 (5.4%)	3.06	1.048
The company is experiencing improvement in sales revenue	6 (3.6%)	109 (64.9%)	25 (14.9%)	27 (16.1%)	1 (0.6%)	3.55	.825
The company is experiencing an increase in operating profit margin	6 (3.6%)	102 (60.7%)	26 (15.5%)	32 (19%)	2 (1.2%)	3.46	.882
Over the past two years there has been a reduction in operational costs	1 (0.6%)	38 (22.6%)	30 (17.9%)	83 (49.4%)	16 (9.5%)	2.55	.965
The company is experiencing an increase in return on invested capital.	6 (3.6%)	77 (45.8%)	51 (30.4%)	34 (20.2%)	-	3.33	.837
Profitability has influenced working capital management decisions	18 (10.7%)	112 (66.7%)	29 (17.3%)	9 (5.4%)	-	3.83	.683

On finding out whether GCCE was experiencing an increase in return on shareholders' capital, findings in table 4.2 indicate that 40.5% of respondents agreed, 35.1% disagreed, while 24.4% were neutral. The mean score was 3.06 and the standard deviation was 1.048. This implied that GCCE was experiencing an increase in the return to shareholders equity although the increment might have been small because the percentage of those who agreed was only 40.5% which was below half. Documentary review revealed that the return on equity increased in the year 2011 to 17%, then in 2012, to 20%, it was stagnant in 2013 at 20%, but reduce in the 2014 to 19% and in 2015 to 15% (Management reports, 2011-2015). An increase in return on shareholders' equity implies that the residual profits to be shared out to shareholders or to be retained in business have increased. This means an increase in shareholders' wealth. This points to better performance of managers in managing the resources entrusted to them by their shareholders, as stipulated in the goal theory of Etzioni, (1964). Finding are also in agreement with Periasamy (2009) who argued that return on shareholders' equity highlights success of the business from the owners' point of view, measuring income on shareholders' investment and measuring the efficiency of managers in handling owners' investment.

In ascertaining whether GCCE was experiencing improvement in sales revenue, findings in table 4.2 show that 68.4% agreed, 16.7% disagreed, while 14.9% were neutral. The mean score was 3.55 and the standard deviation was 0.825. These results meant that there was an increase in sales revenue which could have resulted from an increase in sales volumes of the company, and/or an increase in coffee prices on the world market. Indeed documentary review of the statements of comprehensive income, (2011 to 2015) confirmed that GCCE was experiencing an increase in sales revenue during the study period. One respondent had this to say: "Sales is the major source of revenue for GCCE and most initiatives undertaken to increase profitability are sales oriented."

In addition, when ascertaining whether GCCE was experiencing increasing operating profit margin, findings in table 4.2 show that 64.3% agreed, 20.2% disagreed, while 15.5% were neutral. The mean score was 3.46 and the standard deviation was 0.882. This meant that there was an increase in operating profit margin; these findings were in line with the increase in sales revenue. This implies that business volume had been increasing over the years under study at GCCE. Documentary review indeed confirmed that the operating profit margin increased from 2011 through to 2015 (Management reports, 2011-2015). One interview respondent said that: "GCCE uses operating profit margin to measure the pricing strategy and operating efficiency by measuring the amount of profit earned per unit of sales revenue made." The findings imply that there has been an improvement in general operation efficiency at GCCE which point at an improvement in profitability.

On finding out whether over the past two years there had been a reduction in operational costs, findings in table 4.2 revealed that 23.2% agreed, 58.9% disagreed, while 17.9% were neutral. The mean score was 2.55 and the standard deviation was 0.965. Findings implied that there was an increase in operating cost in the past

two years. This means that the increase in the volume of business inevitably increased operational expenses in terms of staffing, utilities payments, and the cost of sales.

As to whether GCCE was experiencing an increase in return on invested capital, findings in table 4.2 revealed that 49.4% agreed, 20.2% disagreed, while 30.4% remained neutral. The mean score was 3.33 and the standard deviation was 0.837. These results implied that GCCE was experiencing an increase in return on invested capital. This means that GCCE management was managing well the total invested capital and this pointed to better profitability. Documentary review revealed that the return on invested capital increased in the year 2011 to 12%, then in 2012, to 15%, in 2013 to 18%, but reduced in the year 2014 to 14% and increased in 2015 to 15% (Management reports, 2011-2015). One interview respondent mentioned that: “GCCE uses the difference between return on shareholders’ equity and the return on invested capital to determine the extent shareholders were benefiting in terms of profitability from borrowed funds after payment of interest.”

On whether profitability had influenced working capital management decisions, results in table 4.2 show that 77.4% agreed, 5.3% disagreed, while 17.3 were neutral. The mean score was 3.83 and the standard deviation was 0.683. This implies that profitability motives direct decisions of working capital management. As illustrated under cash management, one interview respondent expressed that profitability was stressed more than liquidity when making cash management decisions. This means that decisions in management of inventory are geared towards improving profitability of GCCE.

4.4 Inventory Management and Organizational Profitability

Table 4.3: Model Summary of Inventory Management and Organizational Profitability

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.455 ^a	0.207	0.202	0.53763

*Significance level: *p<.01*

According to table 4.3, the study revealed that inventory management positively affected profitability of the organization with a Pearson correlation coefficient of 0.455. The adjusted R² was 0.202 implying that 20.2% of changes in GCCE profitability are accounted for by inventory management. The study revealed that GCCE had satisfactory inventory management, and had inventory management guidelines which were communicated to staff to ensure effective inventory management that would minimize wastage, and costs to boost profitability. It was also revealed that GCCE used to restock within three months, and that the inventory kept was within the requirements of the organization, implying that GCCE never kept more inventory than actually required, which was a positive contribution to profitability. Stock taking was often carried out to monitor the levels of inventory, while inventory was normally sold within 90 days which points at a good inventory turnover for the company and that inventory management reduced inventory related costs.

V. CONCLUSIONS AND RECOMMENDATIONS

The study revealed that inventory management positively affected profitability of the organization with a Pearson correlation coefficient of 0.455. The adjusted R² was 0.202 implying that 20.2% of changes in GCCE profitability are accounted for by inventory management. The study revealed that GCCE had satisfactory inventory management, and had inventory management guidelines which were communicated to staff to ensure effective inventory management that would minimize wastage, and costs to boost profitability. It was also revealed that GCCE used to restock within three months, and that the inventory kept was within the requirements of the organization, implying that GCCE never kept more inventory than actually required, which was a positive contribution to profitability. Stock taking was often carried out to monitor the levels of inventory, while inventory was normally sold within 90 days which points at a good inventory turnover for the company and that inventory management reduced inventory related costs.

The study concludes that the inventory management as adopted by GCCE was quite effective; and that, inventory management positively contributed to GCCE profitability by 20.2%; which was the biggest contribution as compared to other working capital components.

The study recommends further investment in inventory to boost inventory levels. In light of the competition faced, and the limited funds available to acquire inventory, the finance manager can advise management on sell of more shares to coffee farmers to raise more capital. The finance manager may also advise management on accepting supply of coffee against acquisition of shares in GCCE. This will provide long term funds to supplement retained earning so that GCCE develops the capacity to acquire the required quantities of coffee to meet contractual obligations with customers. This will in turn improve the level of business and utilization of other assets like warehouses and consequently will boost profitability.

REFERENCE

- [1]. Anichebe, N. A., & Agu, O. A. (2013). Effect of Inventory Management on Organisational Effectiveness. In *Information and Knowledge Management*, 3(8), 92-100.
- [2]. Armstrong, J. S. (Ed.). (2001). *Principles of forecasting: a handbook for researchers and practitioners* (Vol. 30). Springer Science & Business Media.
- [3]. bin Syed, S. J. A. N., Mohamad, N. N. S., Rahman, N. A. A., & Suhaimi, R. D. S. R. (2016). A Study on Relationship between Inventory Management and Company Performance: A Case Study of Textile Chain Store. *Journal of Advanced Management Science*, 4(4).
- [4]. Cole, M. A., Rayner, A. J., & Bates, J. M. (1997). The environmental Kuznets curve: an empirical analysis. *Environment and development economics*, 2(04), 401-416.
- [5]. Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *psychometrika*, 16(3), 297-334.
- [6]. Deloof, M. (2003). Does working capital management affect profitability of Belgian firms?. *Journal of business finance & Accounting*, 30(3-4), 573-588.
- [7]. DuBrin, A. J. (2012). *Narcissism in the workplace: Research, opinion and practice*. Edward Elgar Publishing.
- [8]. Esselaar, S. S., Ndiwalana, C., & Deen-Swarray, A. M (2008). ICT Usage and Its Impact on Profitability of SMEs in 13 African Countries. *Journal of Information Technologies & International Development*.
- [9]. Foreman-Peck, J., Makepeace, G., & Morgan, B. (2006). Growth and profitability of small and medium-sized enterprises: Some Welsh evidence. *Regional Studies*, 40(4), 307-319.
- [10]. Gill, J., & Johnson, P. (2010). *Research methods for managers*. Sage.
- [11]. Kesseven, P. (2006). Trends in working capital management and its impact on firms performance: An analysis of Mauritius small manufacturing firms. *International Review of business research papers*, 2(2), 45-58.
- [12]. Kimaiyo, K. K., & Ochiri, G. (2014). Role of Inventory Management on Performance of Manufacturing Firms in Kenya—A case of new Kenya Cooperative Creameries. *European Journal of Business Management*, 2(1), 336-341.
- [13]. Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, 30(3), 607-610.
- [14]. Liu, S. (2012). *Innovation management in knowledge intensive business services in China*. Springer Science & Business Media.
- [15]. Lwiki, T., Ojera, P. B., Mugend, N., & Wachira, V. (2013). The impact of inventory management practices on financial performance of sugar manufacturing firms in Kenya. *International Journal of Business, Humanities and Technology*, 3(5), 75-85.
- [16]. Mercado, E. C. (2007). *Hands-on inventory management*. London: Auerbach Publications, Taylor & Francis Group.
- [17]. Mugenda, O. M., & Mugenda, A. G. (2003). Qualitative and quantitative approaches. *Research Methods Africa Center for Technology Studies (Acts) Press. Nairobi Kenya*.
- [18]. Pandey, I.M. (2007). *Financial Management*. 9th Edition, Mumbai: Vikas Publishing House PVT Limited.
- [19]. Panigrahi, A. K. (2013). Relationship between Inventory Management and Profitability: An Empirical Analysis of Indian Cement Companies. *Asia Pacific Journal of Marketing & Management Review*, Vol. 2 (7) pp107-120
- [20]. Periasamy, P. (2009) *Financial Management* (2nd edition), New Delhi: Tata McGraw-Hill.
- [21]. Polit-O'Hara, D., & Beck, C. T. (2006). *Essentials of nursing research: Methods, appraisal, and utilization* (Vol. 1). Lippincott Williams & Wilkins.
- [22]. Popa, A. E., & Ciobanu, R. (2014). The Financial factors that Influence the Profitability of SMEs. *International Journal of Academic Research in Economics and Management Sciences*, 3(4), 177.
- [23]. Prempeh, K. B. (2016). The impact of efficient inventory management on profitability: evidence from selected manufacturing firms in Ghana. *International Journal of Finance and Accounting*, 5(1), 22-26.
- [24]. Rafuse, M. E. (1996). Working capital management: an urgent need to refocus. *Management Decision*, 34(2), 59-63.
- [25]. Raheman, A., & Nasr, M. (2007). Working capital management and profitability—case of Pakistani firms. *International review of business research papers*, 3(1), 279-300.
- [26]. Schreiberfeder, J. (2004). A New Look at Safety Stock. URL: <http://www.effectiveinventory.com/article26.htm>.—6 p.
- [27]. Sekeroglu, G., & Altan, M. (2014). The Relationship between Inventory Management and Profitability: A Comparative Research on Turkish Firms Operated in Weaving Industry, Eatables Industry, Wholesale and Retail Industry. *World Academy of Science, Engineering and Technology, International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 8(6), 1698-1703.
- [28]. Shim, J. K., & Siegel, J. G. (1999). *Operations management*. Barron's Educational Series.
- [29]. Temeng, V. A., Eshun, P. A., & Essey, P. R. K. (2010). Application of inventory management principles to explosive products manufacturing and supply—a case study. *International research journal of finance and economics*, 38, 198-209.
- [30]. Wild, T. (2002). Best Practice in Inventory Management Tony Wild, The Institute of Operations Management.

Francis Kakeeto. "Inventory Management and Organizational Profitability at Gumutindo Coffee Cooperative Enterprise Limited, Uganda." *International Journal of Business and Management Invention (IJBMI)*, vol. 6, no. 11, 2017, pp. 01-08.