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Effect of Cash conversion Cycle on Profitability: A case study of Binathman Household Supermarkets in Kenya

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Abstract

The objective of this research study is to investigate the relationship between the cash conversion cycle (CCC) and profitability in the context of Binathman Household Supermarket in Mombasa County. The study examines how the management of receivables, cash, payables, and inventories impact the supermarket's profitability. The literary examination scrutinizes antecedent research investigations that have explored the connection between managing working capital and profitability in various sectors. Theoretical frameworks, for example, the operating cycle theory and the trade-off theory of liquidity, give important insights into the variables that influence decisions on working capital and their impact on profitability. The study utilizes multiple linear regression analysis to evaluate the effect of inventory conversion, receivables conversion, and payables conversion on profitability. The study employs secondary data and measures profitability through return on assets (ROA). The research findings indicate a significant negative relationship between the cash conversion cycle and profitability. A shortened CCC leads to increased profitability by improving cash flow, reducing financing costs, and enhancing operational efficiency.

Key Words: Cash Conversion Cycle, Profitability, Receivables Conversion, Payables Conversion, Inventories Conversion

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1. Introduction

Working capital management is a crucial aspect of an organization that deals with the management of current assets and liabilities. In essence, it can be defined as the assets that can readily be converted into cash without any attenuation in value or disruption of operations within a period of one year. As highlighted by Chasha, Kavele, and Kamau (2022), effective working capital management requires the careful management of receivables, cash, payables, and inventories. Managing receivables is a critical aspect of working capital management that involves the implementation of appropriate guidelines to set credit sales levels, payment deadlines, and penalties for late payment to customers. Such measures can attract buyers and

compensate for any influence on the cash conversion cycle and cash flow by generating better income and investment returns. Cash management is another crucial aspect of working capital management that entails identifying the optimal cash balance that allows a firm to meet its day-to-day expenses while reducing expenses associated with holding cash.

Regarding current funding, suitable sources of finance should be identified, and inventory should be preferably funded by credits acquired from suppliers, a bank loan, a bank overdraft, or converting debtors to cash through factoring. The management of inventories is also critical to effective working capital management, and it involves identifying the optimal inventory level that does not interrupt operations while reducing investment and re-ordering costs, thereby increasing cash flow (Falope & Ajirole, 2009). Therefore, an effective working capital management system is essential for managers in retail supermarkets to enhance profitability.

The cash conversion cycle (CCC) is another crucial aspect of working capital management that refers to the time a business takes to settle the cost of expenditure through cash collected from credit sales of stock. As highlighted by Bringham and Ehrahardt (2008), CCC points to the speed at which a business converts its investment to cash and is equal to the inventory conversion period plus RCP less the payable deferral period. Managers in supermarkets can improve profit by reducing collection days to the optimal level, processing and selling goods more quickly, and cutting down turnover days and CCC days, leading to a sound administration of cash in a company and improved profits. This research study examined how the quality of cash management put in place affects income in Binathman Household supermarket, paying close attention to the time taken by the management to convert stock to cash.

In order to effectively manage cash, it is essential to take into consideration not only the costs and time involved but also the potential risks such as loss and fraudulent activities. Businesses can increase their level of liquidity and profitability by taking the appropriate actions to shorten the turnaround times for both transactions and decisions. In their study, Millan, Kamau, and Ibua (2023) emphasized this premise. Furthermore, as pointed out by Kengere et al. (2023), it is crucial to keep in mind that several factors, including expansion, tax shield, liquidity, instability in cash flow, and profitability, could significantly affect the cost of capital. Henceforth, it is evident that upholding a superior degree of fluidity is intricately connected to a corporation's profitability, highlighting the significance of executing efficient currency administration tactics.

2. Empirical Review

Deloof (2003) conducted a detailed exploration of the financial dynamics of large Belgian non-financial companies over a span of five years, commencing from 1992 to 1996. The investigation's key focus was to scrutinize the link between working capital (WCM) management and earnings. To achieve this objective, Deloof opted to select a sample of 1009 companies and utilized the number of days required to measure trade credit and inventory

policy. The study incorporated accounts receivables, payables, inventories, and the cash conversion cycle (CCC) as a comprehensive measure of WCM. The findings suggested that a reduction in CCC led to an increase in a firm's profit by decreasing both receivable and inventory days. Hence, companies with low profits often delay clearing debt. However, if there is a contract that permits the supermarket to extend the repayment period, then a longer time should be allowed. Nabonee (2009) also observed that a company can achieve better returns by reducing the average number of days it holds inventories. This current research aims to track the length of time taken by Binathman supermarket in Mombasa County to pay bills and the effect of this on the supermarket's profitability.

Eljelly (2004) examined the relationship between profit and cash flow in 929 Saudi Arabian joint-stock companies. The study revealed that the liquidity level and profits of these companies had a significant negative correlation. The author noted that the cash gap was a more relevant metric of liquidity than the current ratio, as the latter affected a firm's profit. The research focused on an individual supermarket in Mombasa County, analyzing the nature of the relationship between Binathman supermarket's cash gap and profitability.

It is quite impressive how Phuong and Su (2011) investigated the interdependence of WCM and CCC in the Vietnamese stock market during 2006–2008. The study relied on secondary data collected from the firms, with gross operating profit serving as the measure of profitability and CCC and its various components as the measure of WCM. The outcomes suggested a powerful negative correlation between CCC and profitability, prompting the analysts to infer that a great CCC diminishes a firm's profitability. The study recommends that managers work to reduce their CCC days in order to enhance their profit and improve shareholder value. This research examines the relationship between Binathman Household Supermarket's profitability and CCC and its various components.

Mathai (2010) observed a weak, non-significant negative correlation between the average collection days, average payment period, and net operating profit in retail supermarket chains in Kenya. However, a weak but significant correlation was found between CCC and supermarkets' net operating profits. The study suggests that supermarkets should adopt a comprehensive WCM strategy that can guide them in making investment decisions and plans. This research focuses on the role of Binathman supermarket's management workers in WCM and how their efforts have affected the supermarket's profitability. The cash conversion cycle (CCC) is a crucial technique used to assess the level of efficiency of working capital management. The CCC is defined as the duration between the time of purchases of raw materials and/or goods and the time of receipt of payments (Chasha, Kavele, & Kamau, 2022). The study looks into the interaction between the management of working capital and profitability in the context of Binathman Household Supermarket in Mombasa County. The profitability of this supermarket is evaluated with respect to the management of receivables, cash, payables, and stocks. The cash conversion cycle (CCC), which is a fundamental indicator of effective working capital management, is analyzed as well.

3. Theoretical Review

This study is guided by the following theories.

3.1 Operating Cycle Theory

A firm's operational time is a significant metric that displays the pace and flow of its money flow. This, in turn, enhances the cost and benefit of internal cash holdings (Wang, Ji, Yu, Chen, & Song, 2014). Operational time encompasses the period from the procurement of stock to the collection of cash from customers. It is essential to note that this concept excludes accounts payable in liquidity analysis, which is contrary to the Cash Conversion Cycle (CCC), thus failing to provide a comprehensive understanding of the networking cycle. The theory seems to propose that credits are not crucial in the process of operating a business. However, payables are a source of funding for a business that improves proceeds. Considering this oversight in the operating theory, this research included payables to increase understanding in a supermarket environment. It is imperative to examine all aspects of operational time, including accounts payable, to gain a comprehensive understanding of a company's cash flow and networking cycle.

3.2 Trade - off Theory of Liquidity

The present theoretical framework aims to provide a comprehensive analysis of the capital construction decisions that businesses undertake. According to the theoretical underpinnings, firms resort to capital injection when the benefits accrued from such a decision outweigh the associated costs (Quresh, Sheikh, & Khan, 2015). In the context of supermarkets, the latter may opt to refrain from accessing external financing opportunities due to the excessive charges incurred as a result of their high leveraging ratio and adjusting costs. Business owners, on the other hand, may reap the benefits of tax deductions by attracting debt but would also bear the cost of interest payments (Ramadhan, 2015). Small businesses, including supermarkets, may face the risk of financial distress, leading to economic failure. In such cases, supermarkets may choose to scale back on debt as opportunities become scarce. This implies that superstores will purchase debt when the level of risk decreases and issue equity when the level of risk increases, thus enhancing their turnover. The theoretical framework offers valuable insights into how supermarkets can effectively manage their working capital to avoid bad debts, thereby reducing costs and increasing relevant cash flows, which invariably leads to improved profit margins.

4. Methodology

A questionnaire distributed to 41 employees of the supermarket was utilized as the primary source of data. The supermarket's financial records were used for collecting secondary data. In order to determine the effect of the working capital management cycle on the profitability of the supermarket, the data was subjected to a multiple linear regression model. The regression model that was tested is presented as follows:

$$Y = \alpha + \beta_1 Inv + \beta_2 Rec + \beta_3 Pay + \varepsilon$$

Where: -
Y = Profitability of the firm (ROA)
Inv = Inventory Conversion
Rec= Receivables conversion
Pay = Payables Conversion
ε = Error term
β_1 β_2 β_3 = Are the regression coefficient

5. Research Findings

5.1 Normality Tests

To conduct an evaluation of the normality of residuals through the utilization of the Shapiro-Wilk test, it is customary to juxtapose the p-value acquired against the selected level of significance (alpha). The null hypothesis (H_0) in the test postulates that the residuals have been derived from a population that is distributed normally.

Table 1: Shapiro-Wilk Test (Profits)

W	0.957
p-value (Two-tailed)	0.146
alpha	0.05

Given that the calculated p-value (0.146) is found to be greater than the predetermined significance level alpha (0.05), we are unable to furnish enough evidence to discredit the null hypothesis. It can be deduced that we cannot arrive at a conclusive stance regarding the dissimilarity of the residuals from a normal distribution based on this particular test. Thus, the inference drawn is that the test fails to establish substantial proof to corroborate the contention that the residuals deviate from a normal distribution. It is imperative to assume that the residuals conform to a normal distribution for the purpose of the analysis.

5.2 Regression Results

The present research was conducted with the aim of comprehending the probable influence of the independent variables, namely "Inv" (Inventory conversion), "Rec" (Receivables conversion), and "Pay" (Payables conversion), on the dependent variable, "Profitability". The method employed for this analysis was regression analysis, which is a widely used statistical technique in the field of business research. Table 2 that is exhibited herewith depicts the findings of the regression analysis, where the dependent variable that is under scrutiny is "Profitability". The aforementioned analysis is crucial for the purpose of comprehending the interplay between the independent and dependent variables and, thereby, enabling the formulation of valuable insights for the enhancement of business outcomes.

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Table 2: Regression Results

Source	DF	Sum of squares	Mean squares	F	Pr > F
Inv	1.000	1.202	1.202	0.770	0.386
Rec	1.000	12.853	12.853	8.229	**0.007**
Pay	1.000	7.054	7.054	4.516	**0.041**

Table 2 provides a comprehensive summary of the results of an extensive regression analysis that was conducted using three predictor variables, which are commonly known as the independent variables, in conjunction with a singular dependent variable. The table offers a wealth of information about the degrees of freedom, sum of squares, mean squares, F-statistic, and the associated p-value (Pr > F) for each predictor variable. It is worth mentioning that the predictor variable "Rec" has a highly significant effect on the dependent variable (Pr > F = 0.007). The p-value is lower than the conventional significance level of 0.05, which unequivocally indicates that the relationship between "Rec" and the dependent variable is statistically significant. This finding is highly relevant in the context of the research question and provides crucial insight into the nature of the relationship between the two variables.

Another significant predictor variable, "Pay," was found to have an impact on the dependent variable (Pr > F = 0.041). Although the p-value is slightly higher than the predetermined significance level of 0.05, it is still deemed statistically significant. This result is of paramount importance since the predictor variable "Pay" is a crucial variable that is highly relevant to the research question. In contrast, the predictor variable "Inv" did not have a significant effect on the dependent variable (Pr > F = 0.386). The p-value is higher than the predetermined significance level of 0.05, suggesting that the relationship between "Inv" and the dependent variable is not statistically significant. This finding is essential in that it provides further insight into the nature of the relationship between the predictor variables and the dependent variable.

Effective management of working capital, which is denoted by a reduction in the duration of the cash conversion cycle, is of utmost importance when it comes to augmenting the profitability of retail supermarkets. The adequate administration of receivables, cash, payables, and inventories has the potential to optimize the utilization of working capital and have a constructive impact on a company's cash flow and overall financial well-being. By utilizing the discoveries of this research, executives in retail supermarkets, such as the esteemed Binathman Household Supermarket, can implement superior cash management strategies that can facilitate the attainment of enhanced profits and financial performance.

6. Discussion and Conclusion

Efficient management of working capital is a crucial aspect of corporate financial management. The cash conversion cycle (CCC) is a vital metric that offers profound insights into a company's working capital management. An abbreviated CCC is indicative of a company's efficient inventory, receivables, and payables management. By curtailing the time required to convert investments into cash, the company can optimize its working capital. This, by happenstance, guarantees that the corporation does not possess enough cash reserves to satisfy its immediate responsibilities, abandon expansion possibilities, and embrace extreme short-term funding.

An abbreviated cash conversion cycle has a constructive impact on a company's cash flow. It implies that the company can receive cash from sales expeditiously, thereby bolstering its cash flow position. Positive cash flows are indispensable for day-to-day operations, investment in novel projects, and debt settlement. Enhanced liquidity may result in improved economic stability and the capacity to finance expansion ventures, R&D, and other undertakings that promote long-term profitability. The efficient management of the cash conversion cycle can also reduce financing costs for a company. By decreasing its reliance on external funding such as bank loans or credit lines to cover operational expenses or working capital needs, a company could potentially reduce its financing costs. Lower financing costs translate into higher net income and improved profitability.

Another benefit of an optimized cash conversion cycle is faster inventory turnover. A shorter day's inventory outstanding (DIO) implies that a company is selling its inventory quickly, which is generally a favorable sign. A faster inventory turnover rate reduces the risk of holding obsolete or slow-moving inventory, leading to cost savings and better profitability. Improved accounts receivable management is another advantage of an optimized cash conversion cycle. A shorter days sales outstanding (DSO) indicates that a company is collecting payments from its customers more efficiently. This reduces the risk of bad debts and increases the availability of cash for the company to use for various purposes, thereby positively impacting profitability.

Strategic supplier management is another crucial aspect of efficient working capital management. A longer day payable outstanding (DPO) may suggest that a company is taking longer to pay its suppliers. While this can potentially strain supplier relationships, it also means the company has more time to use its cash before settling outstanding payments. This can lead to improved cash flow and profitability, provided the company maintains positive supplier relationships. In conclusion, an optimized cash conversion cycle contributes significantly to a company's profitability by improving cash flow, reducing financing costs, and enhancing overall operational efficiency. However, it is important to note that the perfect cash conversion cycle can differ by industry and business model. A company must strike a balance between accelerating cash flows and maintaining good relationships with customers and suppliers.

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