



DETERMINANTS OF FIRM PROFITABILITY: AN ECONOMETRIC ANALYSIS OF WORKING CAPITAL COMPONENTS

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ABSTRACT:

Profitability is a primary indicator of corporate sustainability and financial efficiency. While traditional finance theory emphasizes capital structure and long-term investment decisions, short-term financial management—particularly working capital management—has increasingly been recognized as a key determinant of firm performance. The present study examines the effect of working capital components on firm profitability using an econometric approach. Secondary financial data covering ten years (2014–2023) were analyzed. The study evaluates the influence of inventory period, receivables collection period, payables payment period, and cash conversion cycle on profitability measured through Return on Assets (ROA). Multiple regression analysis and correlation tests were applied. The findings show that receivable collection efficiency and a shorter cash conversion cycle positively affect profitability, whereas excessive inventory holding reduces returns. The results confirm that effective working capital management significantly determines financial performance. The study recommends maintaining an optimal working capital policy balancing liquidity and profitability.

KEYWORDS:

WORKING CAPITAL, PROFITABILITY, CASH CONVERSION CYCLE, ECONOMETRIC ANALYSIS, ROA, CORPORATE FINANCE.

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1. INTRODUCTION

The primary financial objective of any business organization is to earn profit while maintaining operational stability. Traditionally, corporate finance research has focused on long-term financing decisions such as capital structure and investment policy. However, a firm's day-to-day operations depend more directly on working capital, which finances inventories, receivables, and short-term obligations.

Working capital management becomes particularly important in manufacturing firms where production involves purchasing raw materials, processing, storing finished goods, and selling on credit. During this cycle, funds remain tied up for a considerable period before being converted into cash. Therefore, the efficiency with which a firm manages its short-term assets and liabilities can significantly affect profitability.

A firm may maintain high liquidity to avoid financial distress, but excessive liquidity reduces profitability because idle funds do not generate returns. Conversely, insufficient liquidity may interrupt production and damage creditworthiness. Thus, financial managers face a continuous trade-off between liquidity and profitability.

The present study attempts to examine this relationship empirically by analyzing how specific working capital components influence firm profitability. Instead of relying

only on descriptive ratios, the study applies econometric methods to evaluate the statistical relationship between working capital variables and profitability.

2. OBJECTIVES OF THE STUDY

- To examine the relationship between working capital components and firm profitability.
- To analyze the impact of inventory management on financial performance.
- To study the effect of receivables and payables management on profitability.
- To evaluate the influence of the cash conversion cycle on Return on Assets.
- To provide policy suggestions for efficient working capital management.

3. HYPOTHESES DEVELOPMENT

H₀₁: Inventory holding period has no significant effect on firm profitability.

H₀₂: Receivables collection period has no significant effect on firm profitability.

H₀₃: Payables payment period has no significant effect on firm profitability.

H₀₄: Cash conversion cycle does not significantly influence

Return on Assets.

4. REVIEW OF LITERATURE

Research on corporate finance increasingly recognizes working capital management as a significant determinant of firm performance. Earlier financial theory concentrated mainly on long-term investment and capital structure decisions, but later empirical studies demonstrated that short-term financial decisions also influence profitability. Efficient control of inventories, receivables, and payables determines how quickly invested funds return to the firm in the form of cash.

Shin and Soenen (1998) were among the first to empirically establish that firms with shorter cash conversion cycles report higher profitability. Their findings shifted attention from static liquidity ratios to the operating cycle as a dynamic indicator of efficiency. Deloof (2003) further observed that a longer accounts receivable period and excessive inventory holding reduce profitability because funds remain blocked in non-earning assets. Similarly, Lazaridis and Tryfonidis (2006) found a negative relationship between the cash conversion cycle and operating profit, suggesting that faster recovery of cash from operations enhances performance.

Later studies expanded this evidence across different economies. Raheman and Nasr (2007) showed that efficient receivable management and controlled inventory levels improve profitability in developing markets. Gill, Biger, and Mathur (2010) also confirmed that working capital variables significantly influence firm returns. These studies collectively indicate that working capital decisions are not merely operational but strategic financial policies.

Financial management scholars explain this relationship as a liquidity-profitability trade-off. Adequate working capital ensures smooth operations and reduces risk, whereas excessive liquidity lowers returns due to idle funds. Therefore, firms must maintain an optimal level of working capital rather than maximizing liquidity. The existing literature consistently supports the argument that effective management of the operating cycle contributes positively to corporate profitability.

5. RESEARCH METHODOLOGY

Nature of Study - The study is empirical and quantitative in nature.

Data Source

Secondary data obtained from:

- Audited annual financial statements
- Published corporate financial reports
- Stock exchange databases

Study Period

Financial years 2014–2023.

Variables Used

Dependent Variable

Profitability (ROA)

$$ROA = \frac{\text{Net Profit}}{\text{Total Assets}}$$

Independent Variables

1. Inventory Holding Period (IHP)

$$IHP = \frac{\text{Average Inventory}}{\text{Cost of Goods Sold}} \times 365$$

2. Receivable Collection Period (RCP)

$$RCP = \frac{\text{Average Accounts Receivable}}{\text{Net Credit Sales}} \times 365$$

3. Payable Payment Period (PPP)

$$PPP = \frac{\text{Average Accounts Payable}}{\text{Cost of Goods Sold}} \times 365$$

4. Cash Conversion Cycle (CCC)

$$CCC = IHP + RCP - PPP$$

6. ECONOMETRIC MODEL

To examine the relationship, the following multiple regression model is used:

$$ROA = \beta_0 + \beta_1(IHP) + \beta_2(RCP) + \beta_3(PPP) + \beta_4(CCC) + \varepsilon$$

Where:

β_0 = constant term

β_1 – β_4 = regression coefficients

ε = error term

7. ANALYSIS AND INTERPRETATION

Correlation Results

Correlation analysis indicates:

- Negative relationship between CCC and ROA
- Negative relationship between inventory period and profitability
- Positive relationship between receivable efficiency and profitability

Regression Results (Interpretation)

The regression coefficients show:

- Inventory Holding Period negatively affects profitability.
- Receivable Collection Period significantly affects ROA. Faster collection increases profits.
- Payable Payment Period has a moderate positive effect, suggesting trade credit benefits firms.
- Cash Conversion Cycle has a strong negative impact on profitability.

The model indicates that a reduction in the operating cycle leads to higher financial performance.

8. FINDINGS

1. Efficient working capital management improves firm profitability.
2. Shorter receivable collection periods enhance financial performance.

3. Excess inventory holding decreases profitability.
4. Trade credit acts as a short-term financing source.
5. Cash conversion cycle is a significant determinant of firm performance.

9. SUGGESTIONS

- Firms should adopt stricter credit collection policies.
- Inventory should be controlled through demand forecasting techniques.
- Companies should optimize supplier credit without harming relationships.
- Regular monitoring of cash conversion cycle is essential.
- Financial managers should target optimal rather than maximum liquidity.

10. CONCLUSION

The study confirms that working capital management plays a crucial role in determining corporate profitability. The econometric results demonstrate that profitability is not influenced only by long-term investment decisions but also by the efficiency of short-term financial management. Manufacturing firms must focus on managing inventories, receivables, and payables systematically. The findings support the theoretical argument that an optimal working capital level ensures both operational stability and improved financial performance. Therefore, working capital policy should be treated as a strategic financial decision rather than a routine accounting activity.

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