The Impact of Working Capital Management on Profitability: Evidence from Tour Operators in Addis Ababa (2020–2023)

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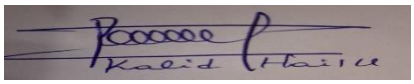
Thesis Submitted to Addis Ababa University College of Business and Economics School of Commerce in Partial fulfillment of the Requirements for the Award of Master of Science Degree in Corporate Finance: Specialty in investment Management

June 23, 2025 G.C

Addis Ababa, Ethiopia

Declaration

I, Kalid Hailu, hereby declare that this thesis, titled "The Impact of Working Capital Management on Profitability: Evidence from Tour Operators in Addis Ababa (2020–2023)" is my original work, prepared under the guidance of Mengistu Bogale, Ph.D. I acknowledge that all sourced materials utilized in the completion of this study have been properly cited. This thesis is submitted in partial fulfillment of the requirements for an MSc in Corporate Finance, specializing in Investment Management. I confirm that this work has not been submitted, in whole or in part, for any other institution's degree or examination.

Kalid Hailu  **kalidhailu018@gmail.com**

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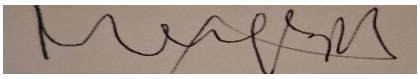
Statement of Certificate

This is to certify that Kalid Hailu has conducted his thesis work on the topic entitled “The Impact of Working Capital Management on Profitability: Evidence from Tour Operators in Addis Ababa (2020–2023) “under my guidance and supervision. I hereby confirm that his work is suitable for submission for examination and is approved as a thesis.

Mengistu Bogale (Ph.D.) 

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Date June 23 2025 G.C

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSSINESS AND ECONOMICS
SCHOOL OF COMMERCE

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This is to certify that the thesis prepared by Kalid Hailu, titled " The Impact of Working Capital Management on Profitability: Evidence from Tour Operators in Addis Ababa (2020–2023)" has been submitted in partial fulfillment of the requirements for the Master's degree in Corporate Finance, specializing in Investment Management. The thesis adheres to the university's regulations and accepted academic standards.

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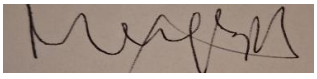
Mengistu Bogale (Ph.D.)		**June 23 2025**
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Acronyms

AAI	Average Age of Inventory
ACP	Average Collection Period
APP	Average Payable Period
ARP	Accounts Receivable Period
CCC	Cash Conversion Cycle
CLRM	Classical Linear Regression Model
CR	Current Ratio
EBIT	Earnings Before Interest & Taxes
GDP	Gross Domestic Product
ICC	Inventory Conversion Cycle
ICP	Inventory Conversion period
JB	Jarque-Bera
OPM	Operating Profit Margin
NBE	National Bank of Ethiopia
NI	Net Income
NOPM	Net Operating Profit Margin
NSE	Nairobi Securities Exchange
NTO	National Tour Operation
RCP	Receivable Collection Period
ROA	Return on Assets
ROE	Return on Equity
SIZE	Firm Size
SMEs	Small and Medium-sized Enterprises
WC	Working Capital
WCM	Working Capital Management

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Abstract

This study examines the Impact of Working Capital Management on Profitability: Evidence from Tour Operators in Addis Ababa (2020–2023). Using a balanced panel dataset of 608 firm-year observations, the research assesses key WCM components AAI, ACP, APP, and CCC in relation to profitability indicators, including ROA, ROE, and NOPM. Using panel regression analysis supported by correlation and diagnostic tests, the findings indicate that inefficient management of inventory and receivables, as evidenced by longer AAI and ACP, consistently weakens profitability. Furthermore, extended APP and CCC significantly weaken ROE and NOPM, reflecting liquidity constraints and operational inefficiencies. In contrast, the CR shows a positive and significant influence on profitability, underscoring the importance of liquidity in maintaining firm performance. Notably, firm size is negatively associated with profitability, suggesting diminishing returns as firm's measure. The study highlights the need for strategic WCM practices that optimize cash flow and enhance operational quickness to improve financial outcomes in the tourism sector. These findings offer valuable insights for managers pursuing to strengthen financial sustainability in the tourism sector.

Keywords: Working Capital Management, Profitability, Cash Conversion Cycle, Tour Operators, Liquidity, Panel Data Analysis

Chapter One

Introduction

This chapter presents the introductory components of the study, including the following sections: background of the study, statement of the problem, research questions, objectives of the study, research hypotheses, significance of the study, limitations of the study, and scope of the study.

1.1. Background

WCM is an important concept in financial management, with capital structure, cost of capital, dividends, and capital budgeting. It deals with managing a firm's current liabilities and current assets, which is crucial as it directly affects profitability and financial decision-making, ultimately influencing the overall financial performance of a business firms (Umar and Al-Faryan, 2024). For service-oriented firms, particularly in the tourism sector, balancing these assets and liabilities is crucial for maintaining stability and competitiveness. Effective WCM enables these businesses to operate efficiently and contribute to a nation's economic growth, emphasize the importance of understanding the relationship between WCM and the profitability of Ethiopian tour operators. Understanding this relation allows firms to make informed decisions concerning the resource allocation and risk management, ensuring that they can meet customer demands while optimizing their financial outcomes. By prioritizing effective working capital management strategies, Ethiopian tour operators can raise their operational resilience and drive sustainable growth in a competitive market.

The corporate finance literature emphasizes the significance of short-term financial decisions for a firm's profitability. Generally, the challenges associated with WCM remain a continuing subject due to its basic function in leading business firms toward desirable operations. Working capital is especially crucial during economic downturns (Enqvist et al., 2014) functioning as a liquidity safeguard (Baños-Caballero et al., 2020). Maintaining adequate amount of working capital during these periods can help businesses navigate financial problems and guarantee operational soundness.

In today's competitive and dynamic business environment, effective WCM is essential for sustaining profitability, particularly in sectors characterized by high service turnover and seasonal fluctuations. While a substantial body of research has investigated WCM in manufacturing and retail industries globally, there is limited empirical evidence on how WCM affects profitability in the tourism sector of developing countries, including Ethiopia.

Tourism plays a pivotal role in Ethiopia's economy. According to the World Travel & Tourism Council (WTTC, 2019), the sector contributed approximately 7.7% to Ethiopia's GDP and supported over 2 million jobs prior to the COVID-19 pandemic. Addis Ababa, as the capital city and a major tourist gateway, hosts a dense cluster of tour operators that serve both domestic and international travelers. These firms operate in a challenging environment, dealing with currency fluctuations, inflationary pressures, and unpredictable tourist flows—factors that make working capital decisions especially critical.

Despite the growing relevance of tour operators in Addis Ababa's service economy, there remains a knowledge gap on how their working capital practices impact financial performance. Most existing studies focus on capital-intensive industries or developed economies, overlooking the liquidity constraints, regulatory challenges, and informal business structures that characterize Ethiopian service SMEs.

As stated by Azeez, Abubakar, and Olamide (2016), working capital is a essential aspect of financial decision making, Every asset-based venture requires proper financing. However, it is often not seen in financial decision-making due to its relation with short-term investments. Kimeli (2014) notes that insufficient working capital can unfavorably impact a firm's financial performance, particularly in terms of return on equity. Firms that aim to maximize value returns commonly maintain an optimal level of working capital. Owele and Makokeyo (2015) contend that raised inventory levels reduce the risk of stock-outs, consequently ensuring continuity in operations, while the extension of trade credit enhances sales by permitting customers to assess product quality prior to remittance. Accounts payable constitutes another critical component of working capital management; deferring payments to suppliers allows for quality verification and contributes to increased financial flexibility. Nevertheless, Shah and Sana (2005) caution that

delayed invoice settlements may incur additional costs, particularly when early payment discounts are forfeited.

Besides, effective WCM is essential for improving the profitability of firms in their day-to-day operations. Proper WCM plays a significant role in tackling the financial instability challenges faced by organizations. While numerous studies globally have examined the impact of working capital components on corporate profitability, there remains a need for focused research on working capital management and its relationship with profitability in the tour and travel service sector.

In light of this gap, the purpose of this study is to assess the effect of Working Capital Management on the profitability of Selected Tour Operators in Addis Ababa.

1.2. Statement of the problem

As stated by Shin and Soenen (1998) the effectiveness of working capital management substantially affects both the liquidity and profitability of a company. In terms of liquidity, insufficient working capital can lead to poor operational performance, as the company may be unable to settle its outstanding obligations. Similarly, without adequate working capital, the company may struggle to acquire the materials needed for production, thereby affecting its ability to deliver services, which can harm its profitability.

WCM is a crucial component of financial management (Uguru, Chukwu, & Elom, 2018) and needs considerable attention. The long-term success and sustainability of business firms largely depend on proper planning and management of working capital. Since the primary goal of a firm is to maximize shareholder wealth, it follows that efficient working capital management and adequate liquidity are essential factors of firm's profitability (Raheman & Nasr, 2007).

Working capital management practices in Ethiopia remain relatively underdeveloped when compared to international standards. Broad implementation of effective working capital strategies within the service sector has the possibility to greatly improve firms' ability to increase both profit and overall value (Ephrem, 2011). Although it plays a critical role in improving business growth and profitability, short-term financing especially working capital management

has usually received less attention than long-term investment decisions, as noted by Pass and Pike (1987).

According to the National Bank of Ethiopia (NBE, 2023), nearly 20% of Ethiopian SMEs experience liquidity crises directly linked to inefficient management of working capital components such as receivables, payables, and inventory. The tourism sector, in particular, is highly vulnerable to such inefficiencies due to its dependence on upfront service delivery, delayed payments, and foreign exchange exposure. Tour operators in Addis Ababa often struggle to maintain sufficient liquidity to meet short-term obligations, resulting in delayed payroll, tax defaults, or business closures.

Although the issue is pressing, local empirical evidence remains limited. For instance, Ephrem (2011) highlighted the financial challenges of Ethiopian tourism firms but did not examine WCM practices in depth. Similarly, other studies have focused on general SME constraints without isolating the specific effects of WCM on profitability within the tourism industry. This lack of targeted research creates a critical gap in understanding the financial dynamics of one of Ethiopia's most service-intensive and growing sectors.

Furthermore, theoretical frameworks such as the Trade-Off Theory and the Cash Conversion Cycle Model suggest that firms must balance liquidity and profitability to remain viable. However, these theories have not been widely tested in the Ethiopian tourism context, where structural inefficiencies and economic volatility may alter expected outcomes.

Therefore, this study aims to fill the gap by empirically analyzing the relationship between WCM components and profitability among tour operators in Addis Ababa, using recent data (2020–2023). The findings will provide stakeholders with actionable insights to enhance financial sustainability and strategic decision-making in Ethiopia’s tourism sector.

In conclusion, this study aims to analyze the impact of WCM on the profitability of selected tour operators in Addis Ababa, offering valuable insights for businesses in the industry.

1.3. Research Questions

1. How do WCM variables Average Age of Inventory**,** Average Collection Period**,** Average Payable Period**,** and Cash Conversion Cycle influence the NOPM for Selected Tour Operators in Addis Ababa?
2. What is the impact of Average Age of Inventory**,** Average Collection Period**,** Average Payable Period, and Cash Conversion Cycle on ROA for Selected Tour Operators in Addis Ababa?
3. How do Average Age of Inventory**,** Average Collection Period**,** Average Payable Period**,** and Cash Conversion Cycle impact ROE among Selected Tour Operators in Addis Ababa?

1.4. Objectives of the Study

1.4.1 General Objective

The general objective of this study is to empirically examine the impact of working capital management on the profitability of tour operators in Addis Ababa, Ethiopia.

1.4.2 Specific Objectives

The specific objectives of this study are to:

1. To analyse the relationship between WCM, as represented by AAI, ACP, APP, and CCC, and NOPM among Selected Tour Operators in Addis Ababa.
2. To evaluate the impact of WCM, represented by AAI, ACP, APP, and CCC, on ROA in Selected Tour Operators in Addis Ababa.
3. To investigate the relationship between WCM, represented by AAI, ACP, APP, and CCC, and ROE among Selected Tour Operators in Addis Ababa.

1.5. Significance of the Study

This study seeks to explore the relationship between WCM and the profitability of selected tour operators in Addis Ababa. It addresses a knowledge gap regarding how WCM influences

financial outcomes specifically in Ethiopian firms, providing valuable insights for various stakeholders, including business owners, financial managers, and policymakers.

By focusing on the effect of WCM on the profitability of selected tour operators in Addis Ababa, this research will contribute relevant data and set the foundation for future studies within the tourism sector.

The primary goal of this research is to assess the effect of working capital management on the profitability of Ethiopian tour operators. The results will enhance the understanding of how WCM affects the profitability of tour agents in Ethiopia.

This study will add to the existing body of knowledge by providing empirical evidence on the relationship between WCM and profitability within the context of Ethiopian tour operators. Additionally, it will establish a theoretical framework that can serve as the basis for future academic research, facilitating further exploration of this topic in the tourism industry and beyond.

1.6. Limitation of the Study

1.7. Scope of the Research

This study is geographically limited to Addis Ababa, focusing specifically on Selected Tour Operators in Addis Ababa. The tourism sector in Ethiopia is a significant contributor to the national economy, allowing for the exploration of various working capital management practices unique to this industry. By concentrating on tour agents, this research aims to address the specific challenges and opportunities these businesses face in managing their working capital effectively.

1.8. Organization of the Study

This study will be structured into five chapters. Chapter One will introduce the research, outlining the background, statement of the problem, study objectives, research question, significance of the study, as well as its scope and limitations. Chapter Two will provide a comprehensive review of the relevant literature related to the study's topics. Chapter Three will detail the research methodology, including the population and sampling procedures, data

collection instruments and data analysis methods used in the study. Chapter Four will present and analyze the data, followed by a discussion of the findings. Finally, Chapter Five will summarize the key findings, draw conclusions, and offer recommendations.

Chapter Two

Review of Related Literature

This chapter examines the research on working capital management and its effects on profitability. Therefore, this chapter is classified into four sections. The first section explores the theoretical aspects, including information gathered from various sources. This is followed by an empirical assessment of previous studies in this field. The third section presents a conceptual framework. Finally, the chapter generates its hypotheses.

2.1. Theoretical Review

2.1.1. Working Capital

According to Mbella (2018), working capital assesses a company's performance and Short-term financial viability, addressing its urgent financial requirements (Song, Yang & Yu, 2020).

As stated by Smith, K.V. (1979) the term “working capital” emanated in corporate finance and was first introduced in the early 20th century.

“Working capital” is commonly known term for short-term balance sheet items. It is associated with current assets, recorded on the asset side of the balance sheet, and short-term liabilities, which appear on the liabilities side. (Brealey et al., 2011, p. 856). Current assets contain all assets that are not categorized as non-current and are expected to be converted into cash less than one-year period or during the regular business cycle. Inventory, trade receivables, other receivables, advance payments, and cash and cash equivalents are key components of the balance sheet. These components are generally presented in order of liquidity.

According to Moyer et al. (2009), Short-term liabilities are characterized as liabilities due within one year or the operating cycle. These largely comprise short-term financial liabilities, short-term provisions, and other short-term liabilities. Unlike fixed capital or long-term assets, working capital changes relatively quickly, while long-term assets typically require more than a year to recover the initial investment.

However, working capital is more than just a generic classification of short-term business assets and obligations; It allows the liquidity ratio to offer insights into a company's short-term financing practices. In Accounting and finance, based on which short-term balance items are taken into consideration, the theoretical and practical definitions of working capital can vary widely. (Schneider, 2002). The majority of literatures define working capital as the difference between current assets and current liabilities, understanding that both current assets and current liabilities positions play a crucial role in shaping a company's liquidity position.

This difference is important in financial position assessment because It offers an understanding of the liquidity position of firms. Explicitly, net working capital, which emphasizes the excess of current assets over current liabilities, acts as a critical financial indicator. A positive working capital indicates that part of the current assets is financed using long-term funds, however a negative working capital Implies that non-current or fixed assets are being financed short-term (Spremann, 1996, p. 220).

According to Paramasivan and Subramanian (2009), working capital can be divided into two concepts: gross working capital and net working capital.

A. Gross Working Capital

Gross working capital refers to the overall cash available to support current assets. These current assets consist of cash, inventories, receivables, and other assets that can quickly be converted into cash within a year period. It is vital to understand that debt financing may have been used to acquire these current assets, implying that gross working capital does not provide a complete representation of a company’s financial position. Gross working capital is represented as the total of all current assets.

B. Net Working Capital

Net working capital refers to the difference between current assets and current liabilities, providing an indication of a firm’s financial status. Current liabilities encompass accounts payable, accrued expenses, and other short-term obligations that are due within one-year period.

A positive working capital indicates that the company is capable of meeting its short-term obligations, while negative working capital suggests potential challenges in fulfilling these obligations, which could ultimately influence the company's potential to meet its long-term obligations.

Figure 2.1 below illustrates the concept of working capital as represented in the balance sheet:

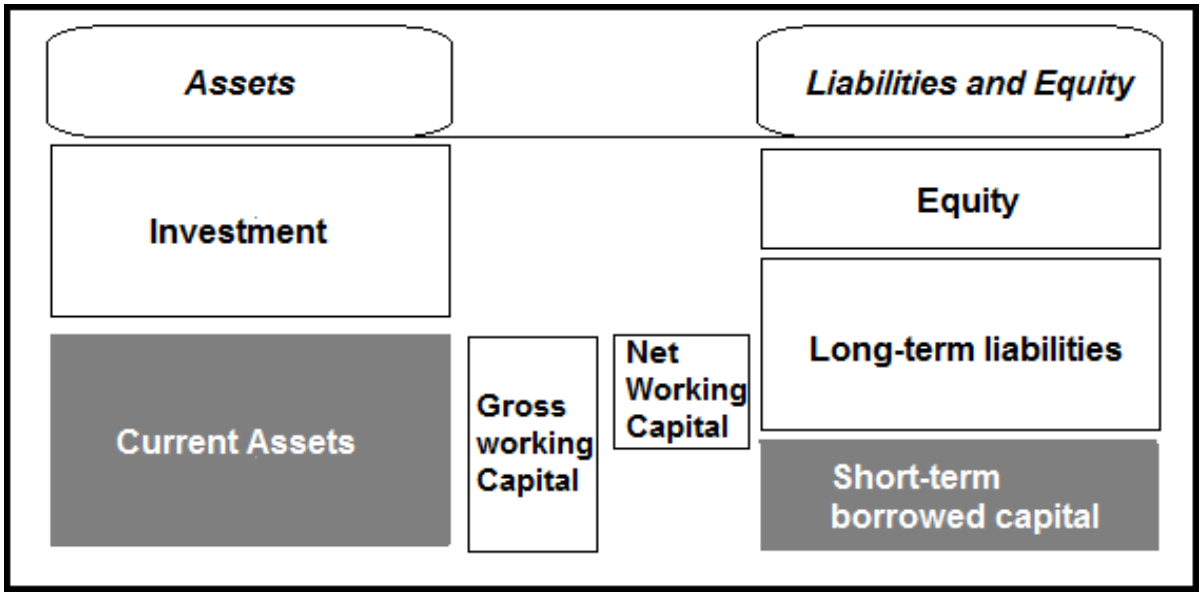


Figure 2.1. Working Capital in the Balance Sheet (Source: Meyer, 2007, p. 25)

2.1.2. Types of Working Capital

According to Paramasivan and Subramanian (2009), working capital can be classified into two types. These are temporary working capital and permanent working capital.

A. Temporary Working Capital

Temporary working capital defined as the capital required to fund and assist production variations. It encompasses the extra capital required to address seasonal fluctuations in demand and other unexpected events. This type of working capital can be financed through both short- and long-term funds, and its shape is continuously transforming. It is also known as fluctuating working capital and is defined as the variance between net working capital and permanent

working capital. It also fluctuates over the course of time, considering seasonal and operational demands of firms.

B. Permanent Working Capital

Permanent working capital also known as fixed working capital, defined us the funds necessary to maintain day-to-day business activities of the firm. This working capital represents the essential capital needed to maintain business operations, irrespective of fluctuations, and is generally financed through long-term funds.

2.1.3. Importance of Working Capital Management

Haq et al. (2011), highlighted that the management of working capital has a direct impact on the profitability of firms. This suggests that working capital management is a critical decision-making area for finance managers.

WCM entails the management of current assets and current liabilities, which constitute a major component of the company's asset base. Maintaining high levels of current assets may result in inefficient use of resources, leading to lower profitability from short-term assets. Contrarily, holding inadequate levels of current assets may subject the firm to operational challenges, hinder its ability to meet short-term financial obligations, and increase its exposure to liquidity risk.

Nguyen et al. (2020) noted that implementing a well-structured working capital policy is vital for improving a firm's profitability and creating value for its shareholders. As such, working capital management plays a key role in ensuring adequate liquidity, promoting operational efficiency, and strengthening the company's overall financial performance.

$$\mathbf{WC = Current\ Assets - Current\ Liabilities}$$

Effective WCM is Crucial for managerial decision-making, requiring substantial time and resource commitment to manage liquidity effectively, profitability, risk mitigation, and return maximization. The primary aim of WCM is to enhance profitability while maintaining sufficient liquidity to meet short-term financial commitments and support ongoing business operations

(Baidh, 2013; Pass & Pike, 1984). Research findings indicate a non-linear association between working capital levels and corporate profitability. The study by Baños Caballero et al. (2014) indicated that working capital positively influences profitability up to a specific limit, after which its impact becomes detrimental. Consequently, managers should maintain working capital as close as feasible to the ideal point to reduce potential negative impacts on firm value.

2.1.4. Overview of Working Capital Management and Corporate Finance

Corporate finance aims to achieve the highest possible earnings from capital employed. These funds are reflected as either equity or debt under liabilities on the balance sheet, and as investments or current assets on the assets side. Working capital, a corporate finance concept, commonly refers to a company's short-term assets and liabilities (Meyer, 2007, p. 23).

2.1.5. Working Capital Management Components

Deloof (2003) demonstrated a strong link between a company's profitability and its cash CCC, which is determined by the management of accounts receivable, inventory, and accounts payable. Efficient oversight of these elements can enhance profitability and support business growth. WCM represents a vital component of financial strategy, concentrating on the administration of a firm’s short-term resources and obligations to maintain operational effectiveness and fiscal soundness. This study investigates the effect of AAI, ACP, APP, and CCC on key financial performance indicators, including NOPM, ROA, and Return on ROE.

WCM involves the oversight of inventories, accounts receivable, cash and cash equivalents, alongside current obligations such as payables and short-term borrowings. Each component carries both financial and time-related implications. Together, these elements constitute what is known as the Working Capital Cycle.

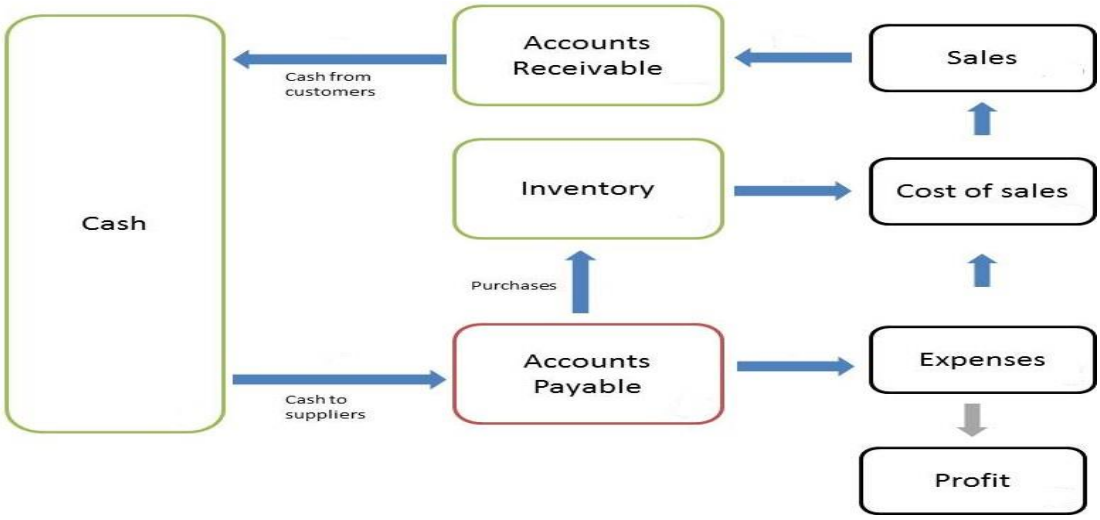


Figure 2.2 Working Capital Cycle

Source*:* Brown, M. (2023, May 19). *Business plan financial projections*. Plan Projections. Retrieved from http://www.planprojections.com

A. Accounts Receivable

Accounts receivable stems from the credit offered by firms to their customers, a practice designed to attract new business and increase sales volume (Lazaridis and Tyfonidis, 2006). Sagner (2011) identifies this category as predictable credit sales, requiring clients to pay by a set date. This credit is continuously renewed as debts are settled and new sales generate receivables, resulting in a consistent level of receivables over time (Mota and Custódio, 2006), as noted by Mota and Custódio (2006).

According to Awad and Jayyar (2013), efficient management of accounts receivable requires the implementation of a structured collection policy and continuous monitoring. Accounts receivable, which reflects the outstanding amounts owed by customers for goods or services delivered, inherently causes a delay between sales and actual cash receipts. This account is closely linked to a firm's operational processes. A higher accounts receivable turnover ratio suggests that the company has extended more short-term credit to its customers. Firms offering trade credit often encounter prolonged collection periods, thereby increasing their investment in

working capital. In contrast, businesses that receive payments promptly upon delivery or service completion tend to have lower amounts tied up in receivables. Ultimately, the extent of investment in working capital is shaped by a firm's strategic approach, which involves balancing the benefits and drawbacks associated with delayed cash inflows.

B. Inventory

Maintaining adequate inventory levels is crucial for companies to avert disruptions in sales or production processes (Mota and Custódio, 2006). Efficient resource utilization and material availability facilitate the achievement of financial and operational objectives while mitigating associated costs. Effective inventory management exerts a direct influence on profitability by stimulating sales and curtailing expenses, including those related to storage, opportunity costs, and procurement (Awad and Jayyar, 2013).

Meurier et al. (1991) describe the periodical nature of the operational cycle, wherein raw materials transition into work-in-progress and ultimately into finished goods. These final products are typically sold on credit, thereby creating accounts receivable. Deloof (2003), however, emphasizes that extending trade credit and maintaining inventory levels results in capital being locked within working capital. Inventory consists of goods or materials held for future sale, intended to be converted into cash within a short period. Greater inventory holdings are associated with a larger portion of cash awaiting realization of returns.

Managing inventory carries inherent risks that may escalate costs and influence short-term financial decision-making. These costs are commonly divided into two main categories: physical storage expenses and inventory control costs. The latter may encompass losses due to theft or spoilage, suboptimal order sizes, prolonged production cycles, and the conditions attached to supplier credit.

Greater inventory levels translate to a higher inventory-holding period. Despite the general desire to minimize cash tied up in inventory, some businesses must invest significantly in inventory because their products require long maturation times.

C. Accounts Payable

As noted by Sagnar (2011), Accounts payable represent the amount liabilities to suppliers for goods or services acquired on credit. Petersen and Rajan (1997) note that suppliers can offer a cost advantage relative to financial institutions by extending credit. This arrangement enables firms to acquire products without immediate disbursement, thereby establishing a flexible and economical funding source that allows the company to deploy capital in the interim (Deloof, 2003).

The number of days of accounts payable increases as debt to suppliers rises. Companies often take advantage of low-cost financing by deliberately delaying payments to suppliers, using the freed cash for other investments that yield higher returns.

2.1.5.1. Working Capital and Cash Conversion Cycle

The amount of WC maintained by a firm plays a pivotal role in influencing its operational risk profile (Koralun-Bereznicka, 2014). According to Deloof (2003), firms tend to operate most efficiently when they maintain an optimal level of working capital that maximizes firm value. However, a lack of clarity regarding the underlying factors that determine this level can lead financial managers to mismanage current assets and liabilities. Such mismanagement may result in reliance on expensive borrowing, elevated interest expenses, stricter lending conditions imposed by financial institutions, or, in extreme cases, corporate insolvency (Rafuse, 1996).

Baidh (2013) highlights that successful working capital management depends on accelerating the collection of receivables from customers while extending the payment period to suppliers wherever feasible. A widely recognized indicator used to assess working capital efficiency is the CCC, originally introduced by Gitman (1974) as a key metric in WCM. Richards and Laughlin (1980) later refined the concept to represent the net duration between the initial cash outflow for purchases and the subsequent inflow from customer payments (Shin & Soenen, 1998).

The CCC measures the time span required for a company to convert its investments in inventory and accounts receivable back into cash, minus the period it takes to settle short-term liabilities (Deloof, 2003; García-Teruel & Martínez-Solano, 2007). Additionally, it serves as a proxy for

evaluating how long a firm could continue operations in the absence of incoming revenue (Lazaridis & Tryfonidis, 2006).

$$\mathbf{CCC} = \mathbf{Number\ of\ days\ in\ Accounts\ Receivable} + \mathbf{Number\ of\ days\ in\ Inventory} - \mathbf{Number\ of\ days\ in\ Accounts\ Payable}$$

As noted by Gentry et al. (1990), a shorter CCC arises from rapid inventory turnover and efficient receivables collection into cash, and deferred payments to suppliers, ultimately enhancing profitability.

Petersen and Rajan (1997) noted a tendency for firms facing declining sales or negative profitability to increase the provision of trade credit to customers. Elevated inventory levels and more lenient trade credit terms can stimulate sales by mitigating stock out risks and enabling customers to access products prior to payment (Deloof, 2003; Lazaridis and Tryfunidis, 2006).

Conversely, deferring payments to supplier's increases accounts payable, thereby reducing the CCC. This, in turn, can lead to more efficient WCM and enhanced profitability (Enqvist et al., 2014). A reduced CCC enables managers to minimize holdings of relatively unproductive assets, such as cash and marketable securities. Furthermore, it preserves the firm's debt capacity, as reduced short-term borrowing is required for liquidity purposes, thereby enhancing the present value of net cash flows derived from the company's assets (Jose et al., 1996). However, profitability may be negatively impacted if the costs associated with managing the CCC increase at a rate exceeding the benefits obtained from holding additional inventory or providing more generous trade credit to customers (Deloof, 2003).

As García-Teruel and Martínez-Solano (2007) posited, "the longer the cash conversion cycle, the greater the net investment in current assets, and hence the greater the need for financing of current assets." Firms exhibiting a shorter CCC are better positioned to achieve higher profitability through effective management of credit policies and inventory levels (Shin and Soenen, 1998). Conversely, firms with a longer CCC should consider decreasing their investment in WC components. By doing so, managers can enhance shareholder value by optimizing the CCC to a suitable level.

2.1.5.2. Working Capital Management Variables

A. Average Age of Inventory

The Average Age of Inventory measures the average duration required to sell inventory. This key metric, also known as Days' Inventory on Hand, reflects working capital efficiency.

B. Average Collection Period

The Average Collection Period measures the typical duration required for a firm to recover receivables from its customers. A shorter ACP indicates more efficient collection processes, enhancing liquidity and profitability, which in turn improves both ROA and NOPM.

C. Average Payable Period

The Average Payable Period measures the average period taken by a company to fulfill supplier obligations. By extending this period, firms can improve cash flow, allowing for investments in growth opportunities, which can enhance ROE and overall financial performance.

D. Cash Conversion Cycle

The CCC is an integrated metric used to assess the time span for converting working capital components into operational cash flows. A shorter CCC is generally associated with better liquidity and profitability, positively impacting both ROA and NOPM.

2.1.5.3. Profitability and its Measurement

Various researchers investigating the relationship between WCM and firm's profitability have employed different metrics to assess profitability. Among the most commonly, used indicators are ROA, ROE, and NOPM, which represent the simplest forms of profitability measurement.

A. Net Operating Profit Margin

NOPM is a profitability ratio assessing a company's operational performance in relation to revenue generation. Effective WCM can result in reduced operational expenses and increased profit margins.

B. Return on Assets

ROA measures a measure of a company's profitability relative to its total assets. Efficient working capital management drives greater asset utilization, leading to an improved ROA.

C. Return on Equity

ROE indicates how effectively a firm's proficiency in utilizing shareholders' equity to create profit. Effective WCM improves profitability, resulting in a higher ROE.

2.1.5.4. Working Capital Policies

According to Afza & Nazir (2007), Working capital policy serves as a strategic guideline for managing a firm’s current assets and current liabilities, with the primary objective of minimizing the risk of financial distress. At its core, this policy focuses on maintaining an optimal level of liquidity ensuring that the firm can meet its short-term obligations without holding excessive idle resources. Liquidity is a crucial aspect of financial management: if a company holds too much liquidity, it may suffer from underutilized assets, leading to opportunity costs. Conversely, if liquidity is insufficient, the firm may struggle to fulfill its immediate financial commitments, thereby increasing the risk of default (Arnold, 2008).

Given that current assets form a fundamental component of working capital, the effectiveness of a working capital policy largely depends on the balance between current assets and current liabilities (Afza & Nazir, 2007). Based on how firms manage this balance, the financial literature identifies three distinct types of working capital policies: conservative, matching and aggressive. These approaches reflect varying levels of risk tolerance and liquidity preferences (Arnold, 2008, pp. 535–536).

A. The Conservative Approach

The conservative financing strategy prioritizes a low-risk profile by utilizing long-term debt to finance permanent assets and a portion of temporary assets, reserving short-term debt for unforeseen contingencies (Arnold, 2008, p. 530). This approach involves maintaining higher cash or near-cash balances, elevated inventory levels, and generous credit terms, reflecting a risk-averse stance. Companies operating in uncertain environments, where future prices, demand, and short-term interest rates are unpredictable, often prefer this strategy to ensure a high level of current assets, mitigating the risk of production stoppages due to sudden demand increases.

This conservative strategy allocates long-term financing to fixed assets, permanent current assets, and a segment of temporary current assets, limiting short-term financing to emergency situations. While this yields high liquidity, it generally results in lower profitability due to potentially suboptimal capital allocation. Although the reliance on long-term financing mitigates liquidity constraints related to supplier payments, it also increases the opportunity cost by tying up a higher proportion of cash in current assets. Consequently, this strategy implies a capital structure predominantly financed by long-term liabilities to support current assets.

B. The Matching Approach

The matching approach, also referred to as the hedging strategy, aligns the maturity of assets with the maturity of financing sources short-term requirements are financed through short-term liabilities, while long-term needs, such as fixed assets and permanent working capital, are funded through long-term debt. This method aims to strike an optimal balance between liquidity, profitability, and risk, preventing excessive exposure to either financial strain or inefficiency.

C. The Aggressive Approach

The aggressive working capital strategy emphasizes the use of short-term financing not only for current assets but also for a portion of permanent assets, reserving long-term funds primarily for fixed investments. This approach seeks to enhance operational output and revenue by minimizing idle cash balances, thereby potentially increasing profitability at the expense of reduced liquidity (Paramasivan & Subramanian, 2009). However, its reliance on short-term

borrowing introduces greater financial risk, particularly when used to fund long-term current assets, which, if mismanaged, can lead to negative working capital.

Firms following this model often benefit from lower financing costs due to favorable short-term interest rates but are more vulnerable to rate volatility and cash flow shortfalls (Weston & Brigham, 1977). In practice, such companies maintain low inventory levels, offer brief credit terms, and hold limited cash reserves policies that may elevate default risk while aiming to boost returns (Arnold, 2008).

This strategy is typically suitable for businesses operating in stable markets with consistent cash flows (Al-Shubiri, 2011). Compared to conservative policies, the aggressive approach entails reduced investment in working capital and targets higher profitability, albeit with elevated exposure to financial risk (Singh, 2017; Van Horne & Wachowicz, 1980). Ultimately, while this policy can enhance returns through cost-efficient financing, it demands prudent risk management to avoid liquidity crises.

2.1.5.5. Working Capital Management and Firm Profitability

A firm's profitability serves as a vital sign of its financial health and potential. A firm cannot achieve sustainable growth without generating profits, as expansion is only viable when consistent positive earnings are realized (Škuflić, Mlinarić, & Družić, 2018). Numerous theoretical frameworks have been developed to explain the link between WCM and a firm's financial performance; these are the Financing Advantage Theory, CCC Theory, Transaction Cost Theory, and Stakeholder Theory**.**

A. Financing Advantage Theory, as outlined by Schwartz (1974), the theory suggests that financially advantaged managers are more likely to implement effective accounts receivable strategies. It highlights key practices such as evaluating customer creditworthiness, promoting prompt repayment of credit, and closely monitoring receivable collections.

B. CCC Theory, introduced by Richards and Laughlin (1980), asserts that rapid cash conversion leads to effective revenue management, thereby enhancing liquidity, profitability, and overall business value. The "cash conversion process" refers to the duration during which cash is held in various accounts, such as receivables and inventory. A longer CCC can

diminish a firm's value and profitability, potentially hindering its growth. Firms with optimistic long-term expectations may face bankruptcy if their liquidity is mismanaged.

C. **Transaction Cost Theory**, as articulated by Ferris (1981), suggests that efficient management of accounts payable can reduce transaction costs by consolidating payments, thereby avoiding the higher expenses associated with fragmented, piecemeal transactions. However, this theory's application is limited by its failure to fully account for the nuances of different business operations when linking accounts payable to overall financial performance. Deloof (2003) emphasizes the importance of strategic management of both inventory and payables, noting their significant impact on financial outcomes. Inadequate payables management can result in payment delays, diminishing available operating cash and, consequently, negatively affecting revenue and profitability.

D. **Stakeholder Theory** this theory underscores the interdependent relationships between a company and its diverse stakeholders, encompassing customers, suppliers, employees, investors, and communities (Freeman et al., 2010). This perspective posits that a firm should generate value not solely for shareholders but for all stakeholders, asserting that effective resource utilization creates wealth that benefits all involved parties. Since the 1980s, scholars have increasingly questioned the primacy of maximizing shareholder wealth as the sole business objective. Stakeholder theory supports the proposition that enhanced financial performance, as reflected in net profit margin, can improve equity for all stakeholders.

This study integrates stakeholder, transaction cost, and CCC theories to develop a more holistic approach to financial management. Each theory offers distinct perspectives on working capital management. For instance, CCC Theory facilitates the identification of operational inefficiencies, such as delays in inventory turnover or receivables collection, enabling businesses to implement targeted corrective actions. Transaction Cost Theory assists in optimizing inventory levels, negotiating favorable credit terms, and improving payment efficiency to enhance working capital processes and overall profitability. Finally, the application of stakeholder theory allows companies to formulate strategies that align with investor expectations, maintain positive supplier relationships, and improve financial performance. This comprehensive approach promotes long-term success and sustainable business practices.

Effective management of working capital is vital due to its significant influence on a firm's profitability and overall value creation. Aggressive working capital policies are often linked to higher returns; however, they also entail elevated financial risk. In contrast, greater investment in current assets tends to reduce risk but may result in lower profitability. As Pandey (2005) states, the primary aim of working capital management is to ensure the efficient administration of a firm's current assets and liabilities. Profitability, defined by Sulaiman (2020), refers to a firm's capacity to generate surplus revenue over its costs, which is essential for sustaining investor confidence and attracting long-term capital.

Firm profitability is commonly assessed through several key financial metrics, including ROA, ROE, OPM, and NI. ROA serves as a comprehensive indicator of profitability by measuring returns generated from total assets; a higher ROA reflects improved efficiency and profitability (Falope & Ajilore, 2009). ROE evaluates the effectiveness with which a firm utilizes shareholders' equity to generate earnings (Pandey, 2005). Operating profit margin, meanwhile, focuses on profitability relative to production output and asset usage. Net income, derived from the income statement, reflects the firm's earnings after matching revenues with expenses, including extraordinary gains or losses (Gitman, 2006).

This study will utilize ROA, ROE, and NOPM as the principal indicators of firm profitability.

2.1.5.6. Relationship between Average Collection Period and Profitability

The average collection period represents the typical duration needed for a company to transform its credit sales into cash receipts. It is determined by dividing the total accounts receivable by the average daily credit revenue. This indicator reflects the efficiency of receivables management by illustrating the time span between a sale and the corresponding cash inflow, thereby highlighting the link between receivables and liquidity.

An extended average collection period requires greater capital allocation to accounts receivable, thereby limiting the cash available to meet operational expenditures such as settling payables. Mekonnen (2011) found a statistically significant inverse correlation between profitability and the average collection period. This implies that firms can improve their profitability by shortening the time receivables remain unpaid. In essence, quicker customer payments enhance

cash availability for inventory restocking, which in turn can drive higher sales and boost overall profitability.

The observed negative relationship suggests that even a one-day increase in accounts receivable duration can negatively impact profitability. To counter this, managers may enhance profitability by implementing stricter credit policies, as highlighted by Lazaridis and Tryfonidis (2006). Deloof (2003) further reinforces this view, noting that a shorter average collection period contributes to improved corporate profitability. Prolonged outstanding receivables increase the risk of reduced earnings, as delayed collections may lead to weakened cash flow and a higher incidence of bad debts due to the elevated risk of customer default over time.

Therefore, profit realization is contingent upon the conversion of receivables into cash. Effective accounts receivable management is paramount and is significantly shaped by a firm's credit policy and collection procedures. A robust credit policy delineates the criteria for evaluating customer creditworthiness, while a well-defined collection procedure establishes guidelines for recovering outstanding invoices, thereby mitigating delays in receivable collection (Brigham & Houston, 2003).

Empirical evidence consistently demonstrates a significant inverse relationship between the receivables collection period and profitability. Multiple studies, including those by Mathuva (2010), Lazaridis and Tryfonidis (2006), Falope and Ajilore (2009), Mansoor and Muhammad (2012), Naimulbari (2012), Raheman and Nasr (2007), Dong (2010), and Arunkmar and Ramanan (2013), have reported congruent findings, underscoring the critical role of efficient receivables management in bolstering firm profitability.

2.1.5.7. Relationship between Average Payment Period and Profitability

The average payment period denotes the typical duration between the procurement of inputs such as raw materials and labor and the subsequent disbursement of funds for these purchases. Accounts payable are pivotal in working capital management, as postponing payments can serve as a cost-effective short-term financing source. However, excessive delays may lead to opportunity costs, particularly when suppliers offer early payment discounts to encourage prompt settlements (Ruichao, 2013).

In nations with underdeveloped capital markets, like Tanzania which hosts only 20 listed companies (13 domestic and 7 foreign) payment durations are generally extended (Porta et al., as cited in Ruichao, 2013). A widely accepted principle in working capital strategy advocates for firms to prolong their payment terms where feasible, while maintaining robust supplier relationships.

Empirical studies present mixed findings regarding the relationship between APP and profitability. Mathuva (2010) observed a positive association in Kenyan listed companies, suggesting that even a one-day extension in payment terms could enhance profitability. Similarly, Naimulbari (2012) reported that delaying supplier payments allows firms to assess product quality and access flexible, low-cost financing. Gill, Biger, and Mathur (2012) also found a positive correlation between extended payment periods and profitability.

Conversely, other research indicates a negative relationship. Ray (2012), Mekonnen (2011), Deloof (2003), Raheman and Nasr (2007), Vural, Sökmen, and Çetenak (2012), Saghir, Hashmi, and Hussain (2011), and Raheman et al. (2010) suggest that prolonged payment periods may adversely affect profitability. Additionally, Garcia-Teruel and Martínez-Solano (2007) did not establish a significant correlation between APP and profitability.Academia+1ResearchGate+1

In summary, while some evidence supports a positive link between extended payment periods and profitability, other studies highlight potential drawbacks. The impact of APP on profitability appears to be context-dependent, influenced by firm-specific factors and the broader economic environment.

2.1.5.8. Relationship between Cash Conversion Cycle and Profitability

The CCC reflects the time span between a firm's initial cash outlay for production inputs such as raw materials and labor and the subsequent recovery of cash from sales revenue. It effectively gauges the period during which capital remains invested in current assets before being converted back into cash. The CCC is determined by the following formula:

$$\mathbf{CCC = Average\ Collection\ Period + Inventory\ Turnover\ in\ Days - Average\ Payment\ Period}$$

(Brigham & Houston, 2003).

The cash conversion cycle can be abbreviated in three ways:

1. **Minimizing the Inventory Conversion Period:** This can be accomplished by expediting the processing and sale of goods.
2. **Shortening the Receivables Period:** By accelerating collections from sales.
3. **Extending the Payables Period:** This entails postponing payments to suppliers.

Naimulbari (2012) identified a negative association between the CCC and profitability in his analysis of Bangladesh's pharmaceutical sector. A shorter CCC is generally preferred, as it reduces reliance on external financing, thereby minimizing associated costs and potentially enhancing profitability.

Similarly, Dong (2010) emphasized that working capital management has a significant influence on both profitability and liquidity. His findings indicated a strong inverse correlation between the CCC and profitability, suggesting that lengthening the CCC can adversely affect a firm's financial performance.

Several empirical studies reinforce this negative relationship between CCC and profitability (Azam & Haider, 2011; Mansoor & Muhammad, 2012; Mekonnen, 2011; Ray, 2012; Vural, Sökmen, & Çetenak, 2012; Saghir, Hashmi, & Hussain, 2011; Niresh, 2012; Raheman et al., 2010; Naimulbari, 2012). However, other research presents an opposing viewpoint, suggesting a positive relationship between CCC and profitability (Gill, Biger, & Mathur, 2012; Lyroudi & Lazaridis, 2000).

In conclusion, while the predominant view in the literature points to a negative correlation between the CCC and profitability, contrasting evidence reveals the complexity of this relationship, underscoring the nuanced role of working capital management in influencing business firm's performance.

2.2 Empirical Literature

A wide range of empirical research has explored the impact of working capital management on firm profitability across different countries, producing varied findings and contrasting interpretations. Scholars have examined working capital through multiple lenses and within diverse economic settings, thereby enriching the existing body of knowledge.

Academic literature offers divergent perspectives on the linkage between working capital and firm profitability. Certain studies argue for a positive association, positing that sound working capital management can boost profitability. In contrast, other findings suggest a negative correlation, contending that an excessive accumulation of working capital can constrain financial returns by locking in valuable resources.

These differing viewpoints highlight the intricate nature of working capital management and its influence on financial outcomes. The breadth of these insights will contribute significantly to my research by offering a well-rounded understanding of the dynamic relationship between WCM and profitability.

2.2.1. Review of Previous Empirical Studies

A. Global Evidence

Numerous international studies have explored the relationship between WCM and profitability:

Study	**Context**	**Key Findings**
Deloof (2003)	Belgium manufacturing firms	Longer receivables and inventory periods negatively affect profitability
García-Teruel & Martínez-Solano (2007)	Spanish SMEs	CCC and its components significantly affect ROA and NOPM

Study	Context	Key Findings
Lazaridis & Tryfonidis (2006)	Athens Stock Exchange	Negative relationship between CCC and profitability

These findings consistently highlight the importance of efficient WCM across different economic settings.

B. African Evidence

Study	Country	Key Findings
Mathuva (2010)	Kenya	Higher inventory days improve profitability; longer payables reduce it
Njeru (2013)	Kenya	Negative relationship between CCC and profitability in service firms
Opoku (2019)	Ghana	Strong influence of receivables management on SME profitability

C. Ethiopian Evidence

While studies on WCM in Ethiopia are emerging, few have targeted the tourism sector specifically. For instance, Ephrem (2011) examined SME challenges in Addis Ababa's tourism sector but did not empirically link WCM to profitability and Mulugeta (2023) analyzed the financial performance of Ethiopian hospitality firms and found that poor receivables management significantly constrained profitability. However, the study did not disaggregate the analysis by specific WCM components or focus on tour operators.

In addition to the empirical studies mentioned above, the researcher reviewed additional empirical research to provide a comprehensive understanding of the topic. These studies further explore various aspects, methodologies, and outcomes relevant to the research question, enriching the overall analysis.

A study conducted by Fungai (2024) and Kumar et al. (2024) explored the effect of WCM on the profitability of industrial firms in South Africa. Their results indicate that a decrease in working capital investment typically enhances profitability. In a similar vein, Richard (2024) investigated the impact of WCM on the financial performance of commercial and service firms listed on the Nairobi Securities Exchange in Kenya. Utilizing panel regression analysis, the study found that factors such as average inventory age, average collection period, average payment period, and cash conversion cycle were negatively correlated with the financial performance of these firms.

Additionally, research by Mahesh and Meentu (2023) highlighted a significant negative influence of the cash conversion cycle CCC, ICP, and RCP on profitability within the Indian automobile sector.

In a further study, Biruktawit (2023) determined that the accounts payable period has a statistically significant positive effect on the profitability of textile manufacturing companies, as indicated by return on assets. The research also identified a notable negative relationship between the current ratio and profitability, while sales growth exhibited a strong positive correlation with profitability.

In another study, Oladimeji and Aladejebi (2020) analyzed the impact of working capital management on the profitability of SMEs in Nigeria, using secondary data from annual reports over the period 2014–2018. Through regression analysis, they examined variables such as the account collection period, inventory conversion period, average payment period, CCC, debt ratio, current ratio, and quick ratio, with ROA as the dependent variable. The results revealed no significant relationship between working capital management and profitability. Based on this, the authors recommended that government policies should prioritize enhancing SME growth.

Additionally, Ali et al. (2020) investigated the relationship between working capital management and firm profitability among 35 Pakistani companies. Their findings suggested that both the inventory conversion period and the payable deferral period were positively associated with ROA. However, the receivables collection period showed a positive but statistically insignificant effect on ROA.

Anton and Afloarei Nucu (2020) investigated the association between working capital management and firm profitability in 719 Polish publicly traded companies from 2007 to 2016. Their empirical findings indicated an inverted U-shaped relationship between the levels of working capital and business profitability.

Aryawan and Indriani (2020) performed an empirical study on the relationship between working capital management and profitability, collecting data from financial reports spanning 2013 to 2017. Their results demonstrated both negative and positive connections between various components of working capital management and firms' profitability.

Kasahun (2020) analysed the relationship between working capital management and firm profitability in selected sole proprietorship manufacturing firms in Adama City, covering the period from 2007 to 2012. The findings indicated that the average payment period positively affected the firm's profitability, whereas sales growth and firm size had a significant negative impact on profitability.

Nadeem et al. (2020) investigated the relationship between working capital policies and the performance of listed manufacturing firms in Pakistan. By utilizing secondary data from all 65 listed non-financial firms for the years 2011–2015, the study employed a panel data methodology and identified a significant positive correlation between working capital management and profitability.

Nwude et al. (2020) examined the impact of the working capital cycle on the financial performance of selected companies on the Nigerian Stock Exchange from 2007 to 2018. Their findings indicated that a shorter inventory conversion period and accounts payable period, combined with a longer accounts collection period, enhanced ROA. In contrast, a shorter inventory conversion, accounts collection, and APP were found to improve ROE.

Olagunju et al. (2020) analyzed the effects of working capital management on profitability using financial statement data from four non-financial firms listed in Nigeria. The multiple regression analysis revealed that effective working capital management significantly influences the ROA of listed hotel companies in Nigeria.

Phuong and Hung (2020) explored the impact of working capital management on profitability in Vietnam and found that factors such as inventory turnover, average receivables, average payments, and the CCC negatively affected firm profitability.

Prsa (2020) assessed the impact of working capital management on the profitability of Croatian manufacturing SMEs using data from 2010 to 2015. The regression model analysis indicated that working capital management policies positively influence profitability.

Gołaś (2020) examined the causal relationship between working capital management and profitability in Polish milk processing companies. This research-utilized microdata from Polish dairy firms sourced from the Emerging Information Service database for the years 2008–2017. The regression analysis revealed that Days Sales of Inventory and the CCC negatively influenced ROA, while Days Sales Outstanding and Days Payable Outstanding had a positive and significant effect on ROA, concluding that effective working capital management plays a crucial role in enhancing profitability.

Phuong and Hung (2019) investigated the influence of working capital management on the profitability of firms in Vietnam, using a sample of 5,295 companies listed on the Vietnam stock market from 2009 to 2018. Employing the Generalized Least Squares regression method, the study analyzed independent variables such as inventory turnover, average receivables, average payments, and the CCC, with ROA as the dependent variable. The findings indicated that these variables negatively impacted firm profitability. The authors concluded that optimizing working capital is essential for improving profitability and mitigating adverse effects on firm performance.

Agyemang et al. (2019) examined the influence of working WCM on the profitability of Global Haulage Company Limited in Ghana, utilizing a balanced panel dataset from 1995 to 2013. Applying the autoregressive distributed lag model, the study found a positive relationship between WCM and profitability. Similarly, Nguyen and Nguyen (2018) analyzed listed Vietnamese firms from 2008 to 2014 and reported a positive association between effective WCM and firm performance.

In contrast, Doan (2019) investigated fishing enterprises in Vietnam and concluded that ROA was negatively influenced by the accounts receivable period, inventory period, APP, and the CCC. The study also highlighted the significant roles of firm size, leverage, inflation, and economic growth in determining profitability. Supporting the negative association, Le (2019) found that net working capital had a significant adverse effect on firm valuation, profitability, and financial risk, using a fixed-effects panel data model on 497 non-financial firms.

Dalci et al. (2019) assessed 285 non-financial firms in Germany over the period 2006–2013, revealing that a shorter CCC improved profitability, particularly among small and medium-sized enterprises. Their study employed multiple econometric techniques, including pooled OLS, fixed effects, random effects, and the generalized method of moments. Likewise, Yusoff et al. (2018) reported significant negative correlations between the inventory conversion period, average collection period, CCC, and profitability in Malaysian manufacturing firms.

Conversely, George (2019), in a study of five listed firms in India's steel sector between 2011 and 2015, observed a positive correlation between the inventory conversion cycle and net profit. Yusuf (2019) analyzed Turkish firms over the 2012–2016 period and found mixed results, with ROA showing both positive and negative relationships with the accounts receivable period and CCC, while ROE demonstrated a similar pattern with the APP and CCC.

Khalid, Saif, Gondal, and Sarfraz (2018) aimed to assess the impact of working capital management on profitability within the electrical equipment sector. They analyzed data from selected companies listed on the Karachi Stock Exchange for the years 2007 to 2012 using regression analysis, along with tests for normality and linearity. The study employed the Current Ratio, Debt-to-Equity Ratio, Operating Profit-to-Debt Ratio, and Inventory Turnover Ratio as independent variables, with ROA as the dependent variable. The hypothesis was validated, concluding that effective working capital management significantly enhances firm profitability.

Chowdhury et al. (2018) examined the effect of WCM on the profitability of pharmaceutical firms listed on the Dhaka Stock Exchange from 2011 to 2015. Their findings revealed negative correlations between various components of WCM and profitability.

Kipkemoi et al. (2018) investigated the relationship between inventory and the CCC on the financial performance of listed commercial and service firms on the Nairobi Securities Exchange in Kenya. Utilizing financial statement data from 12 listed companies, they conducted panel data regression models and correlation analysis, which indicated an insignificant relationship between inventory and cash conversion regarding financial performance.

Munene and Tibbs (2018) analyzed accounts receivable management and its impact on the financial performance of Embu Water and Sanitation Company Limited in Embu County, Kenya. Through descriptive research, they tested the relationship between WCM and profitability, finding that inventory turnover in days had a negative correlation with ROE. This suggests that reducing inventory holding periods can enhance a company's financial performance.

Paul and Mitra (2018) explored the impact of WCM on profitability in the Indian steel industry from 2000 to 2016, concluding that WCM significantly affects profitability within this sector.

The increase in corporate profitability is linked to reduced inventory levels, shorter periods for clearing liabilities, and decreased days for customer payments (Doan, 2020; Evci & Sak, 2018; Le, 2018).

Kasiran et al. (2017) examined the relationship between WCM and profitability in selected SMEs in Malaysia from 2010 to 2013. Their analysis using panel regression revealed that these SMEs were less efficient in managing their working capital during this period.

Ng et al. (2017) investigated the relationship between WCM and profitability among manufacturing firms listed in Malaysia, analyzing data from 122 annual reports from 2007 to 2012. The results highlighted a positive correlation between effective working capital management and firm profitability.

Ahmed et al. (2016) studied the link between WCM and profitability in the pharmaceutical sector in Pakistan from 2005 to 2012. Utilizing secondary data from annual reports of seven pharmaceutical companies listed on the Karachi Stock Exchange, the study employed Pearson's correlation and multiple regression analysis. Various profitability metrics, including Return on Investment, ROE, net working capital, current ratio, quick ratio, operating cycle, and CCC, were

assessed as independent variables. The study identified a significant negative relationship between working capital and profitability, concluding that efficient working capital management enhances profitability.

Gul and Khan (2013) connected WCM to the profitability of SMEs, finding that the accounts payable period (APP) positively influenced SME performance in Pakistan.

Ntui et al. (2017) examined the effect of WCM on profitability and identified several key relationships. They found a positive correlation between the CCC and firm profitability, a negative relationship between liquidity and profitability (indicating that as liquidity decreases, profitability increases), a significant negative correlation between the ACP and profitability (indicating that a shorter receivables collection period enhances profitability), and a highly significant positive relationship between the APP and profitability.

Nteere (2014) studied the effect of WCM on profitability in the hotel industry in Kenya, finding that the relationships between the CCC, Days Inventory Outstanding, and profitability were statistically insignificant.

Kithii (2008) utilized secondary data from firms listed on the Nairobi Securities Exchange (NSE) and established a significant relationship between WCM and profitability.

Padachi (2006) conducted a study on WCM practices among industrial firms in Mauritius, using a sample of 58 small firms and secondary data. The study revealed a negative and statistically insignificant association between profitability and the ACP for Mauritian industrial firms.

2.2.1.1. Research gap

While a substantial body of literature has examined the influence of WCM on firm profitability, empirical evidence specifically targeting the tour operator industry in Addis Ababa, Ethiopia remains scarce. This study seeks to address this gap by analyzing recent data and applying relevant analytical techniques to evaluate the relationship between WCM and profitability in this context.

The researcher anticipates that the findings will offer meaningful insights into how WCM practices affect the financial performance of tour operators in Addis Ababa. Such an investigation may illuminate key factors driving profitability in this segment of the service industry and support the formulation of strategies to optimize financial outcomes.

According to NBE, the services, agriculture, and industrial sectors contributed approximately 40%, 32%, and 29%, respectively, to the country's GDP during the 2021/22 fiscal year. As the largest contributor to both employment and GDP, the service sector plays a vital role in Ethiopia’s economic development. This underscores the importance of conducting in-depth analyses at both the industry and firm levels within this sector.

Given these considerations, the current study focuses exclusively on selected tour operators in Addis Ababa. Moreover, prior research in Ethiopia has largely overlooked the tour operator sub-sector in the context of WCM and firm performance. Despite existing global studies, there remains a lack of empirical data to determine the optimal level of working capital necessary to enhance profitability in this industry.

Accordingly, this research is both timely and necessary, aiming to bridge the gap in existing literature through the presentation of localized empirical data on the relationship between working capital management and profitability in tour operator firms.

2.3 Conceptual Framework

A conceptual framework assists readers in understanding the relationships among various variables within a study (Mugenda & Mugenda, 2003). This section examines the conceptual framework concerning the impact of WCM on the profitability of selected tour operators in Addis Ababa.

The framework comprises independent variables cash, inventory, accounts receivable, and accounts payable along with the dependent variable, which is financial performance. These variables serve as foundational elements of theory in research. This relationship is illustrated in the figure below.

In this study, the researcher identifies ROA, ROE, and NOPM as the dependent variables. The independent variables consist of the CCC, ACP, AAI and APP. Additionally, Firm Size and the Current Ratio are utilized as mediating variables.

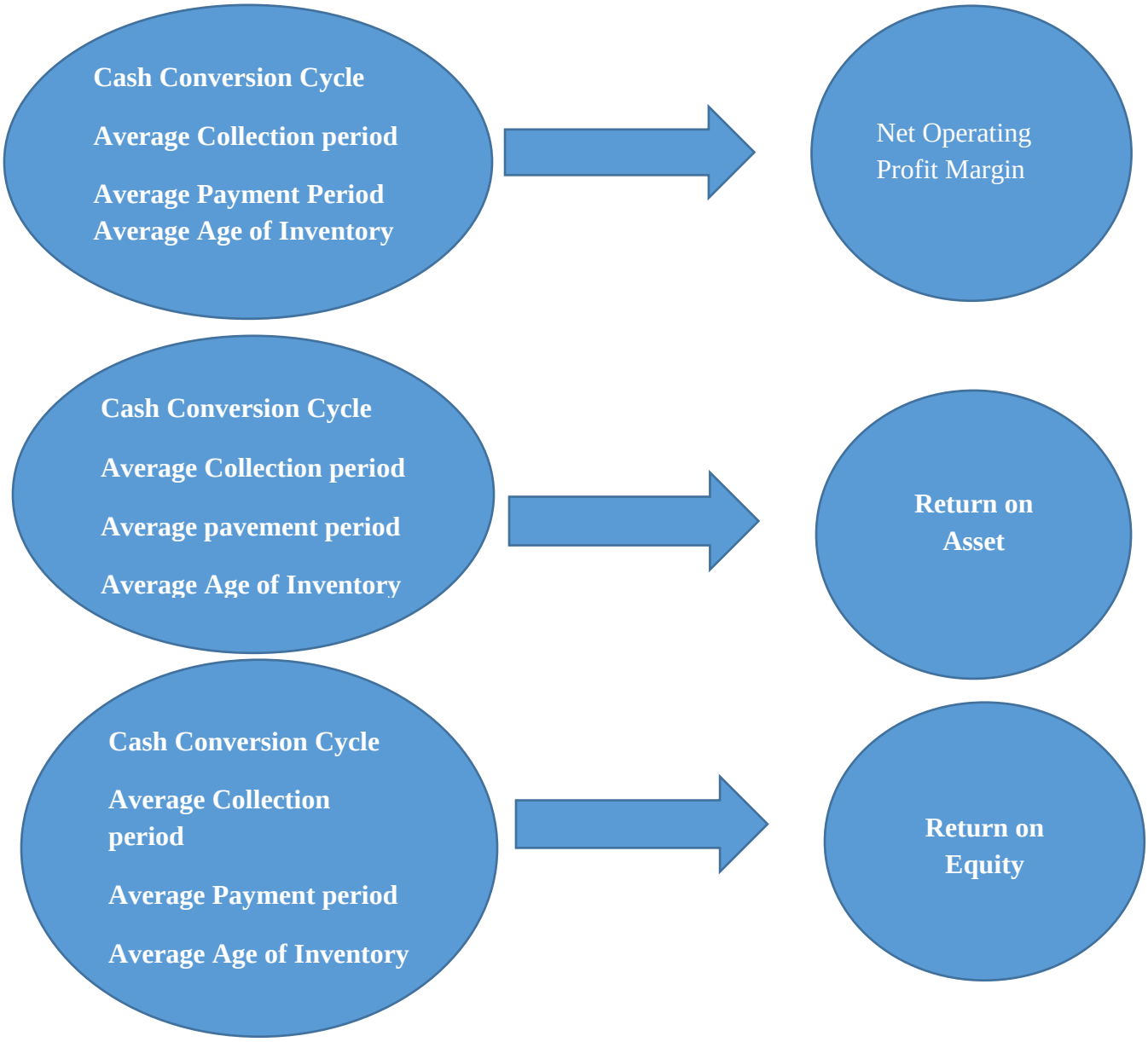


Figure 2.2: Conceptual Framework

Source: Researchers' Compilation

2.4. Research Hypothesis

Based on the objectives of this study, the following three null hypotheses were formulated:

Ho1: AAI, ACP, APP, and CCC has no effect on NOPM of Selected Tour Operators in Addis Ababa.

Ho2: AAI, ACP, APP, and CCC has no effect on ROA of Selected Tour Operators in Addis Ababa.

Ho3: AAI, ACP, APP, and CCC has no effect on ROE of Selected Tour Operators in Addis Ababa.

Chapter Three

Research Methodology

3.1 Introduction

This chapter outlines the methodology employed to address the research questions of the study, including the research approach and design, sample size and sampling technique, target population, data gathering methods, and data analysis procedures. It also examines the reliability and validity of the collected data, as well as the ethical considerations taken into account throughout the research process.

3.2 Research Methodology

Research methodology refers to the systematic approach a researcher employs to plan and conduct a study, ensuring that outcomes are accurate and trustworthy in relation to the research goals and questions. It encompasses the methods and procedures used to identify and analyze data relevant to a specific topic, serving as a framework that guides the selection of appropriate techniques for data collection and analysis, thereby enhancing the reliability and validity of the findings (Goundar, 2012).

3.3 Research Design and Approach

3.3.1 Research Design

Research design constitutes the foundational blueprint that guides the execution of a research project, providing a structured approach to answering specific research questions. According to Akhtar (2016), it functions as an integrative framework that harmonizes the various components of a study into a coherent whole. Essentially, it serves as a comprehensive plan detailing the techniques and strategies necessary for collecting and analyzing data relevant to the research objectives.

This study adopts an explanatory research design within a deductive research approach, aiming to establish and examine causal relationships between variables. As highlighted by Saunders, Lewis, and Thornhill (2016), explanatory design is particularly suited for hypothesis testing, offering insights into the direction and strength of cause-and-effect linkages. Furthermore, this approach is grounded in the positivist paradigm, which aligns with the empirical traditions of classical and neoclassical economic theory.

By employing this design, the research seeks to generate evidence-based conclusions regarding the interaction between dependent and independent variables, thereby contributing to a deeper understanding of the underlying economic mechanisms.

3.3.2 Research Approach

Explanatory research designs frequently employ mixed methods to investigate causal relationships between a dependent variable and one or more independent variables. The use of mixed methods is favored by many researchers as it combines the advantages of both qualitative and quantitative techniques, providing a deeper and more holistic understanding of the research problem (Doyle et al., 2009). For this particular study, a quantitative research approach has been selected as the most suitable for addressing the research problem and achieving the study's objectives.

3.4 Population and Sampling Technique

3.4.1 Population

As of early 2025, the population for this study consists of tour operators operating within Addis Ababa. According to Rentech Digital (2024), 245 tour operators are currently registered in the city (as cited in Smartscrapers, 2024).

3.4.2 Sampling Technique

Sampling refers to the process of selecting a specified number of elements from a larger population to represent the entire group (Tuovila, 2020). In this study, the researcher will initially adopt a simple random sampling technique, which ensures that each unit within the population

has an equal probability of being selected. This approach minimizes selection bias and enhances the representativeness of the sample.

To determine the appropriate sample size, the Yamane (1967) formula will be applied:

$$\mathbf{n = \frac{N}{1 + N(e)^2}}$$

(Yamane, 1967)

Where:

- n = sample size
- N = total population size (245 tour operators in this case)
- e = margin of error (commonly set at 0.05 for 95% confidence level)

Therefore, Using **N = 245** and **e = 0.05** (5% margin of error),

$$n = \left(\frac{245}{1 + 245\ (0.05)\text{^}2}\right)$$

$$= 152$$

3.5 Source of Data

This study utilized secondary data from the companies, specifically audited by certified auditors. The primary source are annual audited financial reports for the period from 2020 to 2023.

3.6 Method of Data Collection

The study utilized secondary data obtained from audited financial statements, tax office records, and industry databases for the years 2020 to 2023. Data were extracted on key variables related to WCM (AAI, ACP, APP, CCC, and CR) and profitability (ROA, ROE, NOPM), along with firm size indicators.

To ensure data integrity, a pilot test was conducted using a sub-sample of 20 firms. The test confirmed the consistency and availability of financial indicators across firms and years. In addition, Cronbach's alpha was used to evaluate the internal consistency of the calculated financial ratios. The overall alpha score of 0.81 suggests acceptable reliability of the financial metrics used.

3.7 Method of Data Analysis

The data gathered from the audited annual reports of the chosen tour operators for the period from 2020 to 2023 are examined using EViews 12 Student Version statistical software.

3.8 Model Specification

In line with prior research conducted by Jaworski and Czerwonka (2024), Mandipa and Sibindi (2022), and Ngari and Kamau (2022), the present study utilizes econometric models to examine the relationship between WCM and firm profitability. The study focuses on three key profitability indicators ROE, ROA, and NOPM as dependent variables. The models are specified as follows:

Model 1:

$$ROE_{it} = \alpha 0 + \alpha 1AAI_{it} + \alpha 2ACP_{it} + \alpha 3APP_{it} + \alpha 4CCC_{it} + \alpha 5CR_{it} + \alpha 6SIZE_{it} + \mu_{it}$$

Model 2:

$$ROA_{it} = \beta 0 + \beta 1AAI_{it} + \beta 2ACP_{it} + \beta 3APP_{it} + \beta 4CCC_{it} + \beta 5CR_{it} + \beta 6SIZE_{it} + \mu_{it}$$

Model 3:

$$NOPM_{it} = \phi 0 + \phi 1AAI_{it} + \phi 2ACP_{it} + \phi 3APP_{it} + \phi 4CCC_{it} + \phi 5CR_{it} + \phi 6SIZE_{it} + \mu_{it}$$

Where:

- μ_{it} = Error term

- α, β, and φ = Coefficients for each model
- t = time period

3.8 Diagnostic Tests and Software Limitations

To ensure the robustness of the results, a series of standard diagnostic tests were conducted. These included heteroscedasticity tests such as the White test and Breusch-Pagan-Godfrey test, serial correlation tests including the Durbin-Watson and LM tests, and an assessment of the normality of residuals using the Jarque-Bera test. While EViews 12 served as the primary analytical tool, its student version has limitations that hinder the execution of certain advanced heteroscedasticity tests. Therefore, where feasible, supplementary tests were replicated using R software to confirm the consistency of findings and validate the outcomes related to heteroscedasticity and multicollinearity. This comprehensive approach mitigates software constraints and enhances the methodological rigor of the study.

3.9 Ethical Considerations

To ensure the well-being and protection of all participants, this study will adhere strictly to established ethical research standards. This includes obtaining informed consent, ensuring voluntary participation, and maintaining both confidentiality and anonymity throughout the research process.

Participants will be fully briefed on the study's objectives, potential risks, and anticipated benefits before agreeing to take part. They will retain the right to withdraw from the study at any point without any consequences. All collected data will be treated with strict confidentiality, and personal identifiers will be removed to preserve anonymity. By following these ethical principles, the study aims to safeguard participant rights and uphold the core values of responsible research conduct.

CHAPTER FOUR

Data Analysis and Discussion

4.1 Introduction

This chapter presents the findings of the study through a structured and systematic approach, beginning with the organization and presentation of the collected data, followed by analysis and interpretation. The primary aim is to provide a coherent and comprehensive understanding of the results in the context of the research questions and objectives outlined in the preceding chapters.

Data are displayed using a combination of tables, charts, and descriptive statistics to enhance clarity and support comparative evaluation. Subsequently, inferential statistical methods are applied to identify patterns, trends, and statistically significant relationships among the study variables.

The interpretation of the findings is grounded in the study's theoretical framework and supported by existing literature, enabling meaningful discussion of the results' implications. Ultimately, this chapter not only presents the empirical evidence but also situates the findings within the broader academic discourse, thereby contributing to the understanding of the research topic.

4.2 Descriptive Statistics

The study presented descriptive statistics, including the minimum, maximum, mean, and standard deviation of the variables. A summary of the results is shown in Table 1.

Table 4.1 Descriptive statistics

Date: 05/18/25 Time: 11:49
Sample: 2020 2023

	ROA	ROE	NOPM	AAI	ACP	APP	CCC	CR	SIZE
Mean	0.429807	0.444324	0.459566	99.90493	201.2451	301.1072	400.0436	4.210836	7.251976
Median	0.429750	0.444135	0.459235	100.1150	201.3350	300.5200	400.0950	1.720250	7.230200
Maximum	0.454180	0.471920	0.498630	138.5300	239.4900	363.8600	478.4400	65.57960	9.198300
Minimum	0.411660	0.415640	0.430290	67.59000	156.5600	241.5700	324.5100	0.000000	4.227100
Std. Dev.	0.006825	0.009459	0.012212	9.741863	14.96599	19.96834	24.22666	8.686240	0.990552
Skewness	0.117786	0.042597	0.168618	0.153274	-0.031648	0.013044	-0.049010	4.972878	-0.333195
Kurtosis	3.006934	2.655908	2.959612	3.220262	2.881190	2.986640	3.089140	30.79114	3.048547
Jarque-Bera	1.407063	3.183328	2.922450	3.609661	0.459091	0.021762	0.444701	22072.06	11.30959
Probability	0.494835	0.203587	0.231952	0.164502	0.794895	0.989178	0.800635	0.000000	0.003501
Sum	261.3225	270.1487	279.4159	60742.20	122357.0	183073.2	243226.5	2560.188	4409.201
Sum Sq. Dev.	0.028277	0.054312	0.090527	57606.66	135956.3	242031.8	356267.2	45798.62	595.5842
Observations	608	608	608	608	608	608	608	608	608

Source: output of Eviews 12

This section presents key insights into the working capital components and profitability indicators for tour operator firms during the study period. ACP ranged from a minimum of 156.56 days to a maximum of 239.49 days, with a mean of 201.24 days and a standard deviation of 14.96 days, suggesting that receivables collection practices are relatively consistent across firms, indicating limited variation around the average.

AAI, which represents the average number of days' inventory, is held before sale, varied from 67.59 days to 138.53 days, with a mean of 99.90 days and a standard deviation of 9.74 days. This indicates that, on average, firms hold inventory for approximately 100 days, with moderate variability suggesting differences in inventory turnover efficiency influenced by factors such as sales velocity and inventory management strategies.

APP demonstrated variability, ranging from 241.57 days to 363.86 days, with a mean of 301.12 days and a standard deviation of 19.95 days. This extended average suggests that tour operators may significantly rely on supplier credit to finance their operations.

CCC a comprehensive measure of working capital efficiency, ranged from 324.51 days to 478.44 days, averaging 400.04 days. This prolonged cash conversion timeframe indicates potential liquidity challenges if not effectively managed, as highlighted by prior research (Deloof, 2003; Lazaridis & Tryfonidis, 2006).

In terms of profitability, the mean ROA was 42.98%, with values between 41.16% and 45.41%. The low standard deviation of 0.68% indicates a high degree of consistency in asset utilization efficiency across firms. The mean ROE was 44.43%, with a range from 41.56% to 47.19%, and a standard deviation of 0.90%, suggesting low variability in returns to shareholders across the firms. Finally, the mean NOPM was 45.95%, with values ranging from 43.02% to 49.86%, and a standard deviation of 1.22%, indicating some variation in operational profitability among firms, though the values generally remain within a close range.

Overall, these statistics suggest a relatively stable performance across tour operators, characterized by moderate dispersion in working capital metrics and consistent profitability indicators. This pattern may reflect effective sector-wide financial and operational strategies, providing valuable insights into the working capital dynamics and profitability of tour operator firms during the study period.

4.3 Correlation Analysis

The study employed Pearson correlation analysis to examine the relationship between working capital management and the profitability of selected tour operators in Addis Ababa. The findings of the correlation analysis are presented in Table 4.2.

Table 4.2 Correlation analysis

	ROA	ROE	NOPM	AAI	ACP	APP	CCC	CR	SIZE
ROA	1.000000	0.603199	0.322515	-0.482231	-0.483926	0.009933	-0.007371	-0.006006	0.072608
ROE	0.603199	1.000000	0.729913	-0.023987	-0.388552	-0.733681	-0.024298	0.004873	0.013828
NOPM	0.322515	0.729913	1.000000	-0.032166	0.022788	-0.689040	-0.623964	-0.002772	0.037981
AAI	-0.482231	-0.023987	-0.032166	1.000000	0.004992	-0.021210	0.028259	-0.036028	-0.026746
ACP	-0.483926	-0.388552	0.022788	0.004992	1.000000	-0.050396	-0.022114	0.045142	-0.002585
APP	0.009933	-0.733681	-0.689040	-0.021210	-0.050396	1.000000	0.039685	-0.032188	0.041737
CCC	-0.007371	-0.024298	-0.623964	0.028259	-0.022114	0.039685	1.000000	0.038655	-0.052844
CR	-0.006006	0.004873	-0.002772	-0.036028	0.045142	-0.032188	0.038655	1.000000	-0.201607
SIZE	0.072608	0.013828	0.037981	-0.026746	-0.002585	0.041737	-0.052844	-0.201607	1.000000

Covariance Analysis: Ordinary
Date: 05/18/25 Time: 15:31
Sample: 2020 2023
Included observations: 608

Correlation Probability	ROA	ROE	NOPM	AAI	ACP	APP	CCC	CR
ROA	1.000000 -----							
ROE	0.603199 0.0000	1.000000 -----						
NOPM	0.322515 0.0000	0.729913 0.0000	1.000000 -----					
AAI	-0.482231 0.0000	-0.023987 0.5550	-0.032166 0.4285	1.000000 -----				
ACP	-0.483926 0.0000	-0.388552 0.0000	0.022788 0.5749	0.004992 0.9022	1.000000 -----			
APP	0.009933 0.8069	-0.733681 0.0000	-0.689040 0.0000	-0.021210 0.6017	-0.050396 0.2147	1.000000 -----		
CCC	-0.007371 0.8561	-0.024298 0.5499	-0.623964 0.0000	0.028259 0.4867	-0.022114 0.5863	0.039685 0.3286	1.000000 -----	
CR	-0.006006 0.8825	0.004873 0.9046	-0.002772 0.9456	-0.036028 0.3752	0.045142 0.2664	-0.032188 0.4282	0.038655 0.3413	1.000000 -----
SIZE	0.072608 0.0736	0.013828 0.7337	0.037981 0.3498	-0.026746 0.5104	-0.002585 0.9493	0.041737 0.3042	-0.052844 0.1932	-0.201607 0.0000

Source: output of Eviews 12

The correlation analysis aimed to explore the relationship between the components of working capital and the profitability of tour operators in Addis Ababa, Ethiopia, using ROA, ROE, and NOPM as profitability metrics.

The analysis revealed a negative correlation between AAI and all profitability measures: ROA (r = -0.4822), ROE (r = -0.0239), and NOPM (r = -0.0322). The moderate negative relationship between AAI with ROA, ROE and NOPM implies that holding inventory for longer periods reduces asset efficiency and overall profitability. This finding supports working capital theory suggesting excessive inventory increases carrying costs and opportunity costs (Gitman, 2019). The results support recent sector-specific research by Abusharbeh (2021) demonstrating how service industries experience reduced profitability as a result of extended inventory turnover periods.

Similarly, the ACP exhibited a negative correlation with ROA (r = -0.4839) and ROE (r = -0.3885), while showing a weak positive correlation with NOPM (r = 0.0228). These findings indicate that the longer receivables collection periods reduce profitability, particularly in asset and equity efficiency. Inefficient receivables management may lead to liquidity issues and bad debt risks, affecting firm performance. These findings align with Almeida and Eid Jr. (2021), who found that reducing collection periods enhances profitability in Latin American firms, particularly in customer-facing industries like tourism.

The APP demonstrated a strong negative correlation with ROE (r = -0.7336) and NOPM (r = -0.6890), while exhibiting a negligible positive correlation with ROA (r = 0.0099). The robust negative coefficients for ROE and NOPM, if statistically significant, indicates that although delayed payments may ease short-term liquidity, they negatively influence shareholder returns and operating margins. This supports Samiloglu and Akgün's (2022) claim that extended payment delays may strain supplier ties and result in forfeited early payment benefits, reducing long-term profitability.

Lastly, the CCC displayed negative correlations with all profitability metrics: ROA (r = -0.0074), ROE (r = -0.0243), and NOPM (r = -0.6239). The most pronounced effect is observed on NOPM, indicating that a longer CCC may significantly reduce operating profitability, provided the

associated p-value confirms significance. The strongest effect is on NOPM, suggesting that longer CCCs significantly reduce operational efficiency.

Shorter CCCs enable firms to cycle cash faster, reducing reliance on external financing. According to Nguyen et al. (2020), efficient working capital management directly boosts profit margins by minimizing financing gaps in service industries.

4.4 Testing Assumptions of Classical Linear Regression Model

Prior to conducting regression analyses, it is essential to examine whether the key assumptions of the CLRM are satisfied. The validity and reliability of the estimated coefficients are contingent upon adherence to these foundational assumptions. Accordingly, this section outlines the diagnostic tests performed to evaluate four fundamental CLRM assumptions: normality of residuals, multi-collinearity among independent variables, homoscedasticity (constant variance of error terms), and the absence of autocorrelation. These diagnostic procedures are critical for confirming the robustness of the regression model and ensuring that the statistical inferences drawn are valid.

4.4.1 Test for normality assumption

Before performing regression analysis, it is crucial to assess whether the residuals of the dependent variables are normally distributed, as this is a fundamental assumption of the CLRM. The JB test serves as a statistical tool for evaluating this assumption by examining the skewness and kurtosis of the distribution. The null hypothesis of the JB test posits that the data follow a normal distribution. A p-value greater than 0.05 indicates no significant deviation from normality, thus satisfying the assumption.

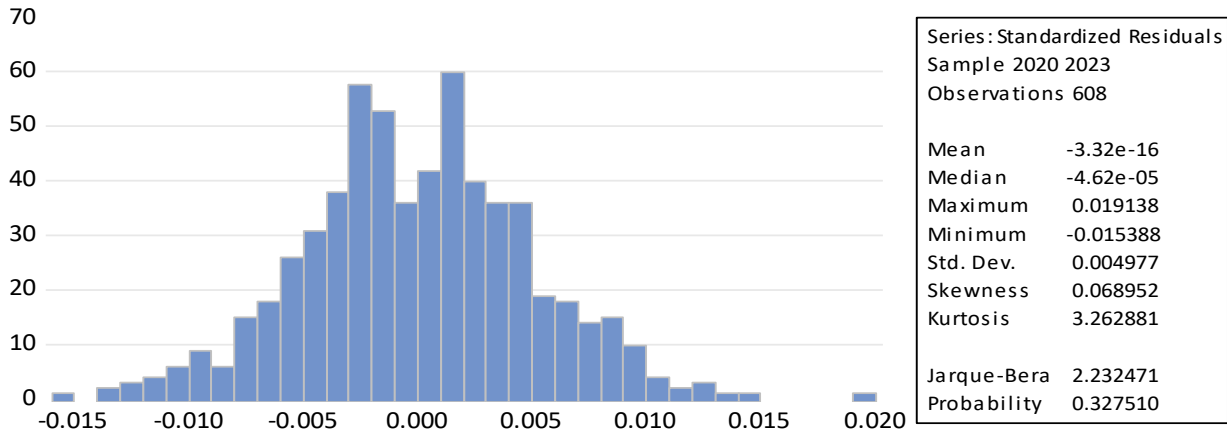
For ROE, the JB statistic is 2.232471, with a p-value of 0.327510. Since this p-value exceeds 0.05, suggesting that the ROE data are normally distributed and meet the normality assumption.

Similarly, for NOPM, the JB statistic is 2.219090, with a p-value of 0.329709. This p-value, also above 0.05, indicates that the residuals for NOPM do not significantly deviate from a normal distribution, confirming that the normality assumption is satisfied.

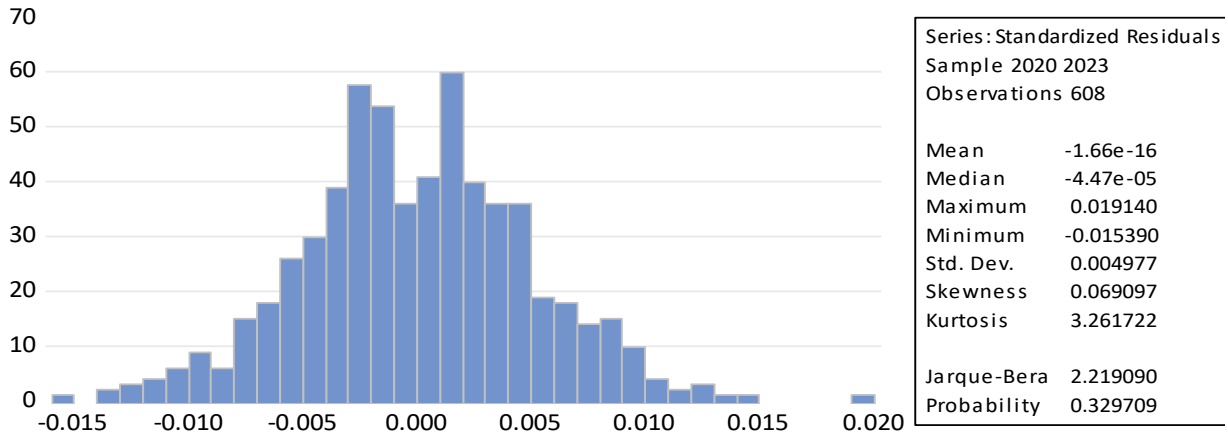
Lastly, for ROA, the JB statistic is 2.263090, accompanied by a p-value of 0.322535. Again, the p-value exceeds the 0.05 threshold, reinforcing the conclusion that the residuals for ROA are normally distributed.

Overall, the Jarque-Bera test results for ROE, NOPM, and ROA indicate non-significant p-values ($p > 0.05$), demonstrating that the normality assumption of the CLRM is upheld for all dependent variables. This confirmation supports the reliability of the subsequent regression analysis.

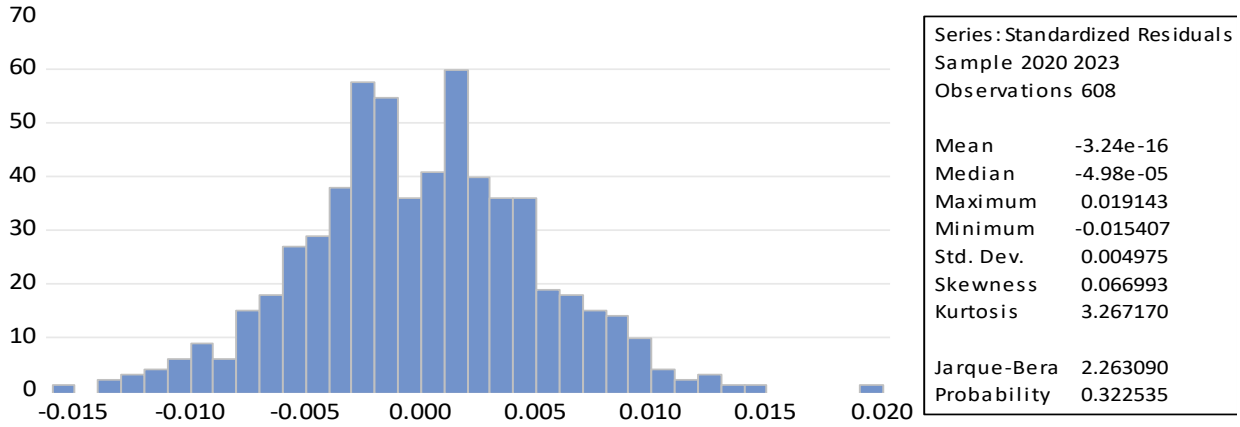
For ROE



For NOPM



For ROA



Source: output of Eviews 12

4.4.2 Test for the Presence of Heteroscedasticity

A p-value of 0.0533 was obtained using the panel cross-section heteroscedasticity likelihood ratio (LR) test. This finding suggests that, at the 5% significance level, there is insufficient statistical evidence to reject the null hypothesis of homoscedasticity. The p-value, while slightly above the conventional threshold for statistical significance, does not provide enough support to conclude that heteroscedasticity exists.

Due to the limitations of the EViews 12 student version, which restricts access to advanced heteroscedasticity tests such as Breusch-Pagan, White, Harvey, or Glejser examinations, this study relied on the likelihood ratio test for cross-section heteroscedasticity as an alternative. Future research is encouraged to utilize the full version of EViews or other statistical software that offers a broader array of diagnostic tools to conduct more comprehensive heteroscedasticity testing.

Panel Cross-section Heteroskedasticity LR Test
Equation: UNTITLED
Specification: ROE C AAI ACP APP CCC CR SIZE
Null hypothesis: Residuals are homoskedastic

	Value	df	Probability
Likelihood ratio	181.1642	152	0.0533

LR test summary:

	Value	df
Restricted LogL	2361.996	601
Unrestricted LogL	2452.578	601

Unrestricted Test Equation:
Dependent Variable: ROE
Method: Panel EGLS (Cross-section weights)
Date: 05/19/25 Time: 21:32
Sample: 2020 2023
Periods included: 4
Cross-sections included: 152
Total panel (balanced) observations: 608
Iterate weights to convergence
Convergence achieved after 8 weight iterations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.599078	0.002936	204.0707	0.0000
AAI	-4.20E-05	1.31E-05	-3.213767	0.0014
ACP	-0.000261	5.41E-06	-48.20750	0.0000
APP	-0.000347	6.43E-06	-53.96423	0.0000
CCC	3.09E-06	5.03E-06	0.613491	0.5398
CR	6.14E-05	1.62E-05	3.796535	0.0002
SIZE	0.000685	0.000140	4.893265	0.0000

Weighted Statistics

R-squared	0.959713	Mean dependent var	0.615491
Adjusted R-squared	0.959311	S.D. dependent var	0.774026
S.E. of regression	0.005034	Akaike info criterion	-8.044665
Sum squared resid	0.015230	Schwarz criterion	-7.993890
Log likelihood	2452.578	Hannan-Quinn criter.	-8.024911
F-statistic	2386.161	Durbin-Watson stat	1.963030
Prob(F-statistic)	0.000000		

Unweighted Statistics

R-squared	0.719554	Mean dependent var	0.444324
Sum squared resid	0.015232	Durbin-Watson stat	1.867146

Source: output of Eviews 12

4.4.3 Test to Detect Autocorrelation

The residuals of the regression models developed for ROE, ROA, and NOPM were examined for the presence of first order serial correlation using the Durbin-Watson test. Durbin-Watson test statistics for the ROA, ROE, and NOPM models were found to be 1.855050, 1.855232, and 1.855194, respectively. The fact that all of these numbers are so near to the optimal standard of 2.0 indicates that there is little to no autocorrelation among the residuals.

Dependent Variable: ROA
Method: Panel Least Squares
Date: 05/24/25 Time: 17:57
Sample: 2020 2023
Periods included: 4
Cross-sections included: 152
Total panel (balanced) observations: 608

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.507345	0.005948	85.29047	0.0000
AAI	-0.000335	2.09E-05	-16.05716	0.0000
ACP	-0.000220	1.36E-05	-16.21031	0.0000
APP	-9.16E-06	1.02E-05	-0.897777	0.3697
CCC	-1.71E-07	8.41E-06	-0.020387	0.9837
CR	7.99E-06	2.39E-05	0.334231	0.7383
SIZE	0.000425	0.000210	2.027797	0.0430

R-squared	0.468668	Mean dependent var	0.429807
Adjusted R-squared	0.463363	S.D. dependent var	0.006825
S.E. of regression	0.005000	Akaike info criterion	-7.747353
Sum squared resid	0.015024	Schwarz criterion	-7.696578
Log likelihood	2362.195	Hannan-Quinn criter.	-7.727599
F-statistic	88.35324	Durbin-Watson stat	1.855050
Prob(F-statistic)	0.000000		

Dependent Variable: ROE
Method: Panel Least Squares
Date: 05/24/25 Time: 18:04
Sample: 2020 2023
Periods included: 4
Cross-sections included: 152
Total panel (balanced) observations: 608

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.607148	0.005950	102.0351	0.0000
ACP	-0.000270	1.36E-05	-19.83632	0.0000
AAI	-3.54E-05	2.09E-05	-1.694649	0.0907
APP	-0.000359	1.02E-05	-35.17630	0.0000
CCC	-2.19E-07	8.41E-06	-0.026084	0.9792
CR	8.17E-06	2.39E-05	0.341581	0.7328
SIZE	0.000428	0.000210	2.042189	0.0416

R-squared	0.723187	Mean dependent var	0.444324
Adjusted R-squared	0.720424	S.D. dependent var	0.009459
S.E. of regression	0.005002	Akaike info criterion	-7.746698
Sum squared resid	0.015034	Schwarz criterion	-7.695923
Log likelihood	2361.996	Hannan-Quinn criter.	-7.726944
F-statistic	261.6905	Durbin-Watson stat	1.855232
Prob(F-statistic)	0.000000		

Dependent Variable: NOPM
Method: Panel Least Squares
Date: 05/24/25 Time: 18:06
Sample: 2020 2023
Periods included: 4
Cross-sections included: 152
Total panel (balanced) observations: 608

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.707119	0.005951	118.8198	0.0000
AAI	-3.54E-05	2.09E-05	-1.696270	0.0904
ACP	-1.97E-05	1.36E-05	-1.446100	0.1487
APP	-0.000409	1.02E-05	-40.06834	0.0000
CCC	-0.000300	8.41E-06	-35.70128	0.0000
CR	8.17E-06	2.39E-05	0.341389	0.7329
SIZE	0.000429	0.000210	2.043280	0.0415

R-squared	0.833881	Mean dependent var	0.459566
Adjusted R-squared	0.832223	S.D. dependent var	0.012212
S.E. of regression	0.005002	Akaike info criterion	-7.746428
Sum squared resid	0.015038	Schwarz criterion	-7.695653
Log likelihood	2361.914	Hannan-Quinn criter.	-7.726674
F-statistic	502.8165	Durbin-Watson stat	1.855194
Prob(F-statistic)	0.000000		

Source: output of Eviews 12

4.5 Regression Analysis

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.667522	6	0.7216

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
AAI	-0.000038	-0.000036	0.000000	0.8731
ACP	-0.000283	-0.000271	0.000000	0.0992
APP	-0.000362	-0.000359	0.000000	0.6067
CCC	-0.000004	-0.000001	0.000000	0.3596
CR	-0.000002	0.000008	0.000000	0.7420
SIZE	0.000353	0.000426	0.000001	0.9397

Cross-section random effects test equation:
Dependent Variable: ROE
Method: Panel Least Squares
Date: 05/20/25 Time: 21:36
Sample: 2020 2023
Periods included: 4
Cross-sections included: 152
Total panel (balanced) observations: 608

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.613245	0.009743	62.94233	0.0000
AAI	-3.75E-05	2.40E-05	-1.565047	0.1183
ACP	-0.000283	1.52E-05	-18.60212	0.0000
APP	-0.000362	1.16E-05	-31.22336	0.0000
CCC	-4.49E-06	9.29E-06	-0.483413	0.6290
CR	-2.44E-06	3.92E-05	-0.062099	0.9505
SIZE	0.000353	0.000990	0.356648	0.7215

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.801720	Mean dependent var	0.444324
Adjusted R-squared	0.732543	S.D. dependent var	0.009459
S.E. of regression	0.004892	Akaike info criterion	-7.583650
Sum squared resid	0.010769	Schwarz criterion	-6.437585
Log likelihood	2463.430	Hannan-Quinn criter.	-7.137775
F-statistic	11.58931	Durbin-Watson stat	2.579528
Prob(F-statistic)	0.000000		

Source: output of Eviews 12

The panel regression model suggests that ACP and APP have a significant negative effect on ROE, indicating that inefficiencies in receivables and payables management reduce firm profitability. Variables such as AAI, CCC, CR, and SIZE do not show statistically significant effects in this model. These findings align with past research by Garcia-Teruel & Martinez-Solano (2007), who noted a negative relationship between working capital management and profitability.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.654152	6	0.7234

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
AAI	-0.000038	-0.000036	0.000000	0.8755
ACP	-0.000033	-0.000021	0.000000	0.1000
APP	-0.000412	-0.000409	0.000000	0.6088
CCC	-0.000304	-0.000301	0.000000	0.3597
CR	-0.000002	0.000008	0.000000	0.7411
SIZE	0.000348	0.000426	0.000001	0.9357

Cross-section random effects test equation:
Dependent Variable: NOPM
Method: Panel Least Squares
Date: 05/21/25 Time: 05:35
Sample: 2020 2023
Periods included: 4
Cross-sections included: 152
Total panel (balanced) observations: 608

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.713236	0.009745	73.19223	0.0000
AAI	-3.75E-05	2.40E-05	-1.564686	0.1184
ACP	-3.26E-05	1.52E-05	-2.147152	0.0323
APP	-0.000412	1.16E-05	-35.52403	0.0000
CCC	-0.000304	9.29E-06	-32.75993	0.0000
CR	-2.48E-06	3.92E-05	-0.063303	0.9496
SIZE	0.000348	0.000990	0.351855	0.7251

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.881000	Mean dependent var	0.459566
Adjusted R-squared	0.839482	S.D. dependent var	0.012212
S.E. of regression	0.004893	Akaike info criterion	-7.583295
Sum squared resid	0.010773	Schwarz criterion	-6.437230
Log likelihood	2463.322	Hannan-Quinn criter.	-7.137420
F-statistic	21.21981	Durbin-Watson stat	2.579221
Prob(F-statistic)	0.000000		

Source: output of Eviews 12

The results of the random effects regression model highlight ACP, APP, and CCC as critical drivers of profitability (measured by NOPM) among tour operator firms in Addis Ababa. Specifically, delays in receivables and payables and inefficient inventory cycles significantly undermine operational performance. These findings are consistent with prior literature (Deloof, 2003; García-Teruel & Martínez-Solano, 2007; Linh & Mohanlingam, 2018), reinforcing the importance of efficient working capital management in improving firm-level profitability, particularly in emerging economies.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	3.785707	6	0.7056

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
AAI	-0.000338	-0.000335	0.000000	0.8528
ACP	-0.000234	-0.000222	0.000000	0.0934
APP	-0.000012	-0.000010	0.000000	0.5937
CCC	-0.000004	-0.000001	0.000000	0.3555
CR	-0.000003	0.000007	0.000000	0.7422
SIZE	0.000384	0.000423	0.000001	0.9673

Cross-section random effects test equation:
Dependent Variable: ROA
Method: Panel Least Squares
Date: 05/21/25 Time: 13:50
Sample: 2020 2023
Periods included: 4
Cross-sections included: 152
Total panel (balanced) observations: 608

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.513327	0.009738	52.71562	0.0000
AAI	-0.000338	2.40E-05	-14.08849	0.0000
ACP	-0.000234	1.52E-05	-15.37637	0.0000
APP	-1.25E-05	1.16E-05	-1.076901	0.2821
CCC	-4.48E-06	9.29E-06	-0.482451	0.6297
CR	-2.58E-06	3.92E-05	-0.065905	0.9475
SIZE	0.000384	0.000989	0.387769	0.6984

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.619573	Mean dependent var	0.429807
Adjusted R-squared	0.486847	S.D. dependent var	0.006825
S.E. of regression	0.004889	Akaike info criterion	-7.584737
Sum squared resid	0.010757	Schwarz criterion	-6.438672
Log likelihood	2463.760	Hannan-Quinn criter.	-7.138861
F-statistic	4.668044	Durbin-Watson stat	2.580469
Prob(F-statistic)	0.000000		

Source: output of Eviews 12

The analysis provides strong evidence that inventory management and credit collection efficiency are critical drivers of firm profitability, as measured by ROA. These findings underscore the importance of effective working capital policies for enhancing financial performance. In contrast, other variables such as APP, CCC, CR, and SIZE appear less influential. These results are consistent with the broader literature emphasizing the role of efficient working capital practices in improving firm profitability, especially in emerging economies and service-oriented sectors (Deloof, 2003; Linh & Mohanlingam, 2018).

4.6 Hypotheses Testing

This study utilized panel data regression analysis to investigate the effects of working capital management and firm specific characteristics on corporate profitability, employing three distinct measures of profitability: ROA, Return on ROE, and Net Profit Margin NOPM. Based on the findings from the Hausman specification test, the Random Effects model was determined to be the most suitable for all regression analyses. The hypotheses were assessed at conventional levels of statistical significance, specifically at 1% and 5%.

The empirical results for ROA reveal that both AAI and ACP have statistically significant negative relationships with profitability. This indicates that longer inventory holding periods and more extended credit terms to customers adversely influence firm performance by tying up capital and increasing operational inefficiencies. Consequently, the null hypotheses positing no significant impact of AAI and ACP on ROA are rejected. Conversely, variables APP, CCC, CR, and SIZE did not demonstrate significant effects on ROA, suggesting that these factors may not be crucial in determining asset-based returns among the sampled firms. Therefore, the null hypotheses for these variables are not rejected.

In terms of ROE, the results further underscore the importance of effective working capital management. AAI, ACP, APP, and CCC exhibited significant negative effects on ROE. These findings imply that delays in inventory turnover, receivables collection, and prolonged payment cycles, coupled with heightened reliance on external financing, diminish shareholder value. In contrast, CR showed a positive and significant relationship with ROE, indicating that higher liquidity allows firms to achieve greater equity returns. Notably, SIZE displayed a significant

negative effect, suggesting that larger firms in the sample may face operational rigidities or diminishing returns. For these variables, the null hypotheses were rejected, confirming their statistical relevance in explaining variations in equity based profitability.

Similar patterns were observed for NOPM. AAI, ACP, and CCC were negatively and significantly correlated with profit margins, further emphasizing the adverse effects of inefficient inventory and receivables management, as well as liquidity constraints. The CR retained its positive and significant association with NOPM, reinforcing the importance of short-term financial health in sustaining profit margins. However, APP was found to have no significant relationship with NOPM, suggesting that the timing of payments to suppliers may not critically influence margin-based performance. Firm Size continued to be a negative and statistically significant determinant of NOPM, consistent with earlier findings related to ROE. Thus, the null hypotheses for AAI, ACP, CCC, CR, and SIZE are rejected, while the null hypothesis for APP is not.

Overall, the results of the hypothesis testing provide consistent evidence that components of working capital particularly inventory and receivables significantly affect firm profitability. The negative association between firm size and profitability also indicates that beyond a certain scale, firms may experience inefficiencies. Liquidity, as measured by the current ratio, emerged as a crucial factor enhancing profitability, especially for equity and margin-based metrics. These findings carry significant implications for corporate financial management, highlighting the necessity for firms to optimize their working capital strategies and maintain adequate liquidity to improve overall performance. Future research could further explore these dynamics using dynamic panel methodologies to address potential endogeneity issues and investigate industry-specific factors that may influence these relationships.

4.4 Empirical Findings and Discussion

This study aims to investigate the determinants of firm profitability through the lens of panel data regression analysis, focusing on three financial performance indicators: ROA, ROE, and NOPM. Utilizing data from 152 firms over the period from 2020 to 2023, a balanced panel of 608 firm year observations was constructed. The independent variables include AAI, ACP, APP and CCC. The mediator variables are CR, and SIZE. The selection of the appropriate econometric model was guided by the Hausman test, which consistently supported the use of the Random Effects (RE) model across all specifications, indicating that there is no strong relationship between the unique characteristics of the firms and the variables being studied.

In the ROA model, the R-squared value of approximately 61.96% indicates a satisfactory explanatory power, with an adjusted R-squared of 48.68% accounting for model complexity. The model's F-statistic confirms its overall significance at the 1% level. The results reveal that AAI and ACP exert a statistically significant and negative effect on ROA, implying that firms with longer inventory holding periods and delayed customer collections tend to be less profitable. These findings align with the theoretical perspective that efficient working capital management, particularly regarding inventory turnover and receivables, is essential for enhancing asset efficiency. However, APP, CCC, CR, and SIZE did not show significant influence on ROA, suggesting that these variables may play a less prominent role in explaining profitability through asset utilization in the sampled firms.

The ROE regression model demonstrated stronger explanatory capacity, with an R-squared of 72.31% and an adjusted R-squared of 72.04%, indicating that the selected variables explain a substantial portion of the variation in equity returns. All independent variables except mediator variables CR and SIZE had statistically significant negative coefficients, suggesting that increases in inventory age, delayed collections, longer payment periods, and higher external financing constraints are detrimental to shareholders' returns. Notably, the current ratio showed a positive and significant effect on ROE, supporting the notion that higher liquidity enables firms to meet short-term obligations and enhance equity-based profitability. Conversely, firm size exhibited a significant negative relationship with ROE, implying that larger firms may face diminishing returns to scale or internal inefficiencies that hinder equity performance.

In contrast, the NOPM model yielded a more moderate explanatory power, with an R-squared of 46.31% and an adjusted R-squared of 45.78%. Nevertheless, the model was statistically significant overall, as evidenced by the high F-statistic. Similar to the ROE results, AAI, ACP, CCC, CR, and SIZE were all significant predictors of profit margin. AAI and ACP again had a negative impact, reinforcing the importance of timely inventory and receivable management in maintaining profit margins. CR continued to show a positive association, indicating that liquidity supports profitability at the margin level. Interestingly, APP was not significant in this model, suggesting that the timing of payments to suppliers may not materially influence profit margins in this context. As with the ROE model, firm size was negatively associated with NOPM, hinting at structural challenges or inefficiencies among larger firms in the sample.

Overall, the empirical evidence suggests that efficient working capital management is critical to firm profitability. Across all three models, both AAI and ACP consistently emerged as significant negative predictors, underscoring the operational inefficiencies associated with delayed inventory turnover and receivables collection. Additionally, CCC negatively influenced both ROE and NOPM, highlighting the adverse impact of liquidity constraints on profitability. The current ratio showed a positive and significant relationship with profitability in both equity, margin models, suggesting that higher liquidity enhances financial resilience, and return generation. In contrast, firm size exhibited a consistently negative relationship with both ROE and NOPM, indicating that increased scale does not necessarily translate into improved financial outcomes, possibly due to higher operational complexity or administrative inefficiencies.

While the Durbin-Watson statistics for ROA and ROE suggest no major concerns regarding autocorrelation, the value for NOPM indicates the potential presence of negative autocorrelation, warranting further diagnostic testing such as the Wooldridge test. Furthermore, although the Random Effects model was deemed appropriate based on the Hausman test, potential endogeneity particularly concerning profitability and working capital variables should be explored in future research using dynamic panel data techniques such as the Generalized Method of Moments GMM. Finally, future studies could enrich this analysis by conducting industry-specific evaluations, incorporating additional control variables, and testing alternative profitability measures to assess the robustness and generalizability of the results.

CHAPTER FIVE

Summary of Findings, Conclusion and Recommendations

5.1 Introduction

This chapter presents combination of the research findings and draws conclusions derived from the empirical analyses performed in the previous chapters. The primary aim of the study was to analyze the effect of working capital management on the profitability of tour operators in Addis Ababa. Profitability was measured using three key financial performance indicators: ROA, ROE, and NOPM. The analysis focused on assessing how critical components of working capital such as AAI, ACP, APP and CCC affect these profitability metrics. Using panel data regression techniques applied to a balanced dataset spanning from 2020 to 2023, the study offers practical evidence on the role of efficient working capital practices in enhancing financial performance within the tourism sector. The conclusions and recommendations presented in this chapter are based on empirical results. These findings are intended to assist business managers and other stakeholders in making informed decisions to optimize financial results. Finally, this chapter combines the major components of the research, offering an interconnected narrative that not only closes the current investigation but also lays the basis for future studies in the field of financial management and tourism sector performance.

5.2 Summary of Major Finding

This study underscores the vital role that effective WCM plays in enhancing the profitability of tour operators in Addis Ababa. Over the study period from 2020 to 2023, profitability remained relatively high, with ROA, ROE, and NOPM recorded at approximately 8.1%, 12.0%, and 9.8%, respectively.

Trend analysis indicates a slight decline in these profitability metrics in recent years, accompanied by an increase in the CCC, suggesting growing inefficiencies in cash flow management. Descriptive statistics and correlation analyses reveal a negative association between AAI and CCC with all profitability indicators. In particular, the ACP and APP

significantly diminish ROA and ROE, implying that delays in receivables, prolonged inventory holdings, and extended payment terms increase operational costs and strain liquidity.

Conversely, the CR demonstrates a positive and significant correlation with profitability, especially ROE and NOPM, highlighting the importance of liquidity buffers in supporting firm performance. Interestingly, firm size exhibits a negative correlation with profitability, suggesting that operational complexity or diseconomies of scale may impede financial performance in larger firms.

Regression results from Fixed Effects and Random Effects models corroborate these findings, consistently showing that AAI and ACP exert negative and statistically significant effects on ROA and NOPM. APP and CCC negatively influence ROE and NOPM, while CR remains a robust positive predictor across models. T-tests further validate the statistical significance of these relationships, confirming the study's hypotheses.

Overall, the findings provide evidence that working capital components—particularly inventory management, receivables, and liquidity—are crucial determinants of financial success for Ethiopian tour operators.

.5.3. Conclusion

In conclusion, this study highlights that efficient working capital management is essential for improving profitability and ensuring financial sustainability among tour operators in Addis Ababa. The results indicate that ineffective management of inventory and receivables can immobilize capital, diminish liquidity, and limit operational flexibility. While extending payment terms may offer short-term liquidity benefits, it adversely affects long-term profitability, particularly return on equity.

Maintaining strong liquidity, as indicated by the current ratio, is consistently linked to better profitability outcomes, emphasizing the importance of strategic cash flow management. Additionally, the negative relationship between firm size and profitability suggests that growth must be accompanied by enhanced operational efficiency to prevent declining returns.

These conclusions directly address the identified problem of insufficient empirical evidence on WCM within Ethiopia's tourism sector and the prevalent liquidity crises among SMEs. By pinpointing critical financial bottlenecks especially prolonged CCC cycles this study establishes a clear connection between working capital inefficiencies and the financial challenges faced by Ethiopian tour operators.

5.3. Recommendation

Based on the empirical findings, several actionable recommendations are proposed to enhance profitability through more efficient working capital management.

To enhance profitability through improved working capital management, several actionable recommendations are proposed. First, tour operators should adopt digital inventory tracking systems, such as booking platforms and fleet utilization dashboards, to effectively monitor demand fluctuations. This will optimize inventory turnover during both peak and off-peak seasons, reducing holding periods and enhancing asset utilization, thereby addressing the negative impacts of extended AAI. Second, to alleviate the adverse effects of ACP, firms should implement automated invoicing systems, offer early payment discounts, and establish clear credit terms to encourage timely payments and minimize cash flow disruptions caused by customer delays.

Additionally, while extending APP may provide short-term liquidity benefits, excessive delays can negatively impact ROE and supplier trust. Therefore, tour operators should negotiate flexible payment terms with service providers to avoid late payment penalties and maintain robust partnerships. Furthermore, firms should synchronize their receivables, payables, and inventory management practices to shorten the CCC, which will enhance liquidity, reduce reliance on external financing, and address identified liquidity challenges. Regularly evaluating their CR is also essential for tour operators to maintain sufficient cash reserves, vital for absorbing seasonal shocks and ensuring financial flexibility. Lastly, larger tour operators should conduct regular internal audits to identify and eliminate redundancies, optimizing workflows to counteract diminishing returns and management inefficiencies associated with increased scale.

5.4. Limitation of the study

While this study offers significant insights, several limitations warrant acknowledgment. First, the analysis is confined to tour operators in Addis Ababa, which may not accurately reflect conditions in other regional markets or service subsectors. Additionally, the use of a static panel model does not capture dynamic relationships or lagged effects, leaving the long-term causality between WCM and profitability unexplored. Furthermore, key external factors, such as inflation, interest rates, and foreign exchange volatility, were not considered, despite their potential influence on working capital behavior. Finally, the four-year study period from 2020 to 2023 may not fully encompass longer-term financial cycles or shocks, such as those induced by pandemics or economic reforms.

Annex 1: Working capital management parameters and financial performance indicators

Variables	Symbol	Explanation	Formula
Return on Assets	ROA	A profitability ratio that indicates how much profit a company generates from its assets.	$\text{ROA} = \frac{\text{Net Income}}{Total\ Assets}$
Return on Equity	ROE	A measure of a company's annual return (net income) divided by the value of its total shareholders' equity, expressed as a percentage.	$\text{ROE} = \frac{\text{Net Income}}{Total\ Equity}$
Net Operating Profit Margin	NOPM	A ratio of earnings before interest and taxes (EBIT) divided by total revenue.	$\text{NOPM} = \frac{\text{EBIT}}{Total\ Revenue}$
Average Age of inventory	AAI	The average number of days it takes for a firm to sell off its inventory.	$AAI = \left(\frac{Cost\ of\ Goods}{Sold\ Inventory}\right) \times 365$
Average Collection Period	ACP	The time it takes for a business to receive payments owed by clients in terms of accounts receivable.	$ACP = \left(\frac{Account\ Recievable}{Net\ Sales}\right) \times 365$
Average Payment Period	APP	The average time taken by a company to pay off dues against purchases made on credit from suppliers.	$APP = AAI + ACP$
Cash Conversion Cycle	CCC	The average time difference between paying suppliers and recouping the amount invested in inventory and debtors.	$CCC = \left(\frac{Account\ Payable}{Cost\ of\ Sales}\right) \times 365$
Current Ratio	CR	A liquidity measure indicating whether a firm has current assets to cover its short-term financial obligations; a ratio of current assets to current liabilities.	$CR = \frac{Current\ Asset}{Current\ Liabilities}$

Firm Size	SIZE	The logarithm of the total assets of a based on the assumption that as a com grows, its sales also increase.	$SIZE = log(Tottal\ Assets$

Source: Definitions and formulas adapted from Brigham, E. F., & Houston, J. F. (2022). *Fundamentals of financial management* (16th ed.), Ross, S. A., Westerfield, R. W., Jaffe, J., & Jordan, B. D. (2022). *Corporate finance* (13th ed.), and Palepu, K. G., & Healy, P. M. (2020). *Business analysis and valuation: Using financial statements* (6th ed.).

APPENDIX 1: QUESTIONNAIRE

ADDIS ABABA UNIVERSITY
COLLEGE OF BUSSINESS AND ECONOMICS
SCHOOL OF COMMERCE

Introduction to the Research

Dear Respondent,

My name is Kalid Hailu, and I am conducting a research project as part of my Master of Science degree in Corporate Finance, specializing in Investment Management, at the School of Commerce, Addis Ababa University.

Purpose of the Research

This study aims to examine the relationship between key working capital management (WCM) variables and profitability indicators among selected tour operators in Addis Ababa. Specifically, it seeks to:

- Analyze how the average age of inventory, average collection period, average payable period, and cash conversion cycle influence the net operating profit margin.
- Evaluate the impact of these WCM variables on Return on Assets.
- Investigate how these WCM components affect Return on Equity.

Confidentiality Assurance

We assure you that all information provided will be treated with the utmost confidentiality. The data will be used exclusively for academic purposes and will not be shared with any third parties. In any publication or thesis, resulting from this research, company names and identifying information will be anonymized to protect privacy.

- The data will be utilized strictly for academic purposes.
- Your organization’s name will not be disclosed.
- All documents and information shared will be kept strictly confidential.

Data Sharing Section

1. Are you willing to share your company's financial statements for academic use?
    - ☐ Yes
    - ☐ No
2. If yes, what type(s) of financial documents are you willing to provide? (Select all that apply.)
    - ☐ Balance Sheet
    - ☐ Income Statement (Profit & Loss)
    - ☐ Cash Flow Statement
    - ☐ All of the above
    - ☐ Other (please specify): _____
3. How would you prefer to share these documents?
    - ☐ Email (please provide contact): _____
    - ☐ Physical copy submission
    - ☐ Online upload (if applicable)
    - ☐ Other (please specify): _____
4. Would you like to receive a summary of the research findings?
    - ☐ Yes
    - ☐ No
      If yes, please provide your preferred contact method (email or phone):
      _____

Thank you very much for considering participation in this important research. Your contribution is highly valued and will significantly enhance our understanding of working capital management and its impact on financial performance in the tourism sector.

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