Arab American University
Faculty of Graduate Studies
Department of Administrative and Financial Sciences
Ph.D. Program in Accounting and Finance

The Effect of the Working Capital Management Efficiency on the Firm Value: Evidence from Palestine Exchange

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This Dissertation Was Submitted in Partial Fulfilment of Requirements for the Doctor of Philosophy (Ph.D.) Degree in Accounting and Finance

Palestine, July / 2025

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Dissertation Approval

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Decleration

I declare that, except where explicit reference is made to the contribution of others, this dissertation is substantially my own work and has not been submitted for any other degree at the Arab American University or any other institution.

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Dedication

I dedicate this dissertation to the cherished memory of my beloved mother, who passed away during my doctoral journey. Her unconditional love, prayers, and enduring spirit continue to guide and inspire me. Though absent in presence, her influence remains deeply embedded in every step I take and every milestone I reach.

To my father, whose unwavering support and quiet strength have been a constant source of encouragement; to my devoted wife, whose patience, love, and steadfast presence were the pillars that sustained me throughout this journey; and to my dear children, whose joy and innocence brought light during the most challenging times—this achievement is as much yours as it is mine.

I also extend my deepest gratitude to my brothers and sisters, and to every member of my extended family, whose encouragement and heartfelt support have been instrumental along the way.

This work is further dedicated to my esteemed colleagues and my second family at work—both staff and management—whose genuine support, collaboration, and belief in my potential have enriched my academic and professional path.

Lastly, to my respected mentors and professors, who have generously shared their knowledge and provided invaluable guidance, and to all who foster a spirit of perseverance, curiosity, and commitment to learning, this dissertation stands as a testament to your influence and encouragement.

Sincerely,

Mahmoud Jamal Ahmad Shawakha

Acknowledgments

First and foremost, I would like to express my deepest gratitude to my advisor, Prof. Mansour Saaydah, for his invaluable guidance, steadfast support, and dedicated mentorship throughout my PhD journey. His expertise, patience, and encouragement have been instrumental in shaping this research and in fostering my development as a scholar.

I am also sincerely thankful to the esteemed members of my dissertation committee, Associated Prof. Mohammad Abu Sharbeh and Prof. Veronica Paz, for their thoughtful feedback, constructive criticism, and continuous support. Their insights and academic rigor have significantly contributed to the depth and quality of this work.

I would like to extend my heartfelt appreciation to my colleagues and friends in the Department of Administrative and Financial Sciences at the Arab American University of Palestine. Their collegiality, collaboration, and camaraderie made the academic environment both enriching and enjoyable.

To my family, thank you for your unwavering love, patience, and understanding. To my father, whose strength and guidance have always inspired me; to my late mother, whose memory and prayers have never left my side; to my wife, whose unwavering support and sacrifices made this journey possible; to my beloved children, whose smiles brought light to my darkest days; and to my siblings, whose encouragement has been a constant source of strength—this accomplishment belongs to all of you.

Lastly, I extend my gratitude to everyone who, in ways big or small, contributed to the completion of this dissertation. Your belief in me and your support have been invaluable, and I am forever grateful.

Sincerely,

Mahmoud Jamal Ahmad Shawakha

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Abstract

This doctoral dissertation examines the impact of Working Capital Management Efficiency (WCME) on firm value, with a novel focus on the mediating role of financial distress, using empirical evidence from companies listed on the Palestine Exchange (PEX) during the period 2012–2022. The study is grounded in the understanding that efficient working capital management is essential for enhancing liquidity, profitability, and long-term firm sustainability, particularly in emerging and economically volatile markets such as Palestine. The research employs the Net Trade Cycle (NTC) as the primary measure of WCME, disaggregated into Inventory On-Hand Days (IOD), Sales Outstanding Days (SOD), and Payables Outstanding Days (POD). The firm value is measured using Tobin's Q ratio. The sample includes non-financial publicly listed firms across various sectors, excluding banks and insurance companies due to their distinct capital structures and regulatory environments.

A central contribution of this study lies in its original investigation of financial distress as a mediating variable, a dimension largely overlooked in prior regional studies. Financial distress is operationalized using accounting-based indicators and integrated into the analytical framework to assess how it influences, and is influenced by, the WCME–firm value relationship. The study also explores the moderating effect of industry type, recognizing sectoral heterogeneity in working capital dynamics.

The research methodology is based on panel data regression techniques, including mediation and moderation analysis, applied to a longitudinal dataset spanning eleven years. Results demonstrate a significant negative association between NTC and firm value, confirming that shorter working capital cycles improve financial performance. Moreover, financial distress is found to significantly mediate this relationship, amplifying the adverse effects of inefficient working capital practices, particularly during periods of economic instability.

This dissertation contributes theoretically by extending corporate finance models through the integration of financial distress into the WCME framework. Practically, it offers actionable insights for financial managers and policymakers seeking to optimize liquidity, prevent insolvency, and enhance firm value under constrained and uncertain economic conditions. The findings underscore the strategic importance of proactive working capital policies in mitigating financial vulnerability in fragile markets.

Keywords: Working Capital Management Efficiency, Firm Value, Financial Distress, Net Trade Cycle, Palestine Exchange.

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Chapter 1: Introduction

1.1 General Introduction

Working capital management (WCM) is acknowledged to be the life-giving force or the heart of an economic organization. It symbolizes an important piece of corporate finance which in turn will not only dictate the operational efficiency of a business but also its net worth as well. Good working capital management goes beyond operational efficiency; it is essential for both the long-term survival and growth of a business. The efficiency of working capital is very much important for the success of any enterprise as stated by Mukhopadhyay (2004) and effective working capital management is a pre-requisite for the prosperity of an enterprise, as pointed out by Sulaiman and Shanak (2023). The same thought as previously illustrated by Dhole et al. (2019), characterized improving working capital as one of the seven drivers for shareholder value.

Investing in working capital is different from capital expenditure. This is unlike fixed assets, which have measurable returns, such as return on investment (ROI). Higher working capital investments do not automatically lead to an equivalent rise in return. This difference highlighted by Afrifa et al. (2015) who state that successful working capital management can deliver substantial financial advantages such as improved liquidity and greater profits. The same is the case of corporate finance, which makes working capital management a core concern in the corporate sphere especially when it comes to ensuring not just the survival of firms but also value creation for shareholders (Vijayakumaran, 2019).

The emphasis of working capital management efficiency (WCME) is highlighted by the frequency with which it appears on surveys of financial managers and executives. According toMian and Smith (1992), with fixed capital, working capital is critical for the survival and continuation of business enterprises. Working capital must be continuously measured and monitored by financial managers to guarantee that the short-term obligations of a business are met while fulfilling its long-term goals. Smith (1978), Berryman (1983), and after that Dunn and Cheatham (1993) stress the importance of

working capital management efficiency and suggest that inefficient handling of working capital, along with insufficient liquidity, is a significant component in firm failure, especially for small firms.

Working Capital Management efficiency is important in the global competitive landscape in which every business strives for sustainability. Effective working capital management can help to avoid liquidity risks and challenge the financial distress that Aktas et al. (2015), Vijayakumaran (2019), and Meliani and Henny (2021) have noted potentially lead to a downturn in the performance of a firm's stability and growth. Efficient management of financial distress can help mitigate the adverse effects and restore the firm value, and sustain growth during challenging economic conditions.

Working capital, the lifeblood of an enterprise, is defined as the difference between current assets and current liabilities, which suggests an efficient management is required to manage this type of capital. The main measurement of working capital management efficiency is the net trade cycle (NTC) that measure the company working capital efficiency by indicating how effectively a firm manages its short-term assets and liabilities to support daily operations (Vijayakumaran, 2019), this study uses net trade cycle as a key indicator to evaluate how efficient working capital management can influence firm value.

Net trade cycle (NTC) is calculated by analyzing three main components: inventories on-hand days (IOD), sales outstanding days (SOD), and payables outstanding days (POD). Inventory on-hand days reflect the duration inventory is held before being sold, while Sales outstanding days measure the average time a firm takes to collect receivables from customers, and Payables outstanding days indicate the period a company takes to pay its suppliers. A shorter net trade cycle generally signifies higher efficiency in working capital management, as it implies quicker cash conversion. As Padachi (2006) puts it, we are not only talking about managing cash, accounts receivables, and inventory, but also calling the attention of the managers and decision makers to ensure that their accounts payable are strategically arranged for the

optimization of cash flow.

The growing realization that effective working capital management is directly associated with shareholder value will become equally important as shareholders continue to demand higher returns and as firms need to attract these investors by exhibiting a track record of efficiently managing their resources.

However, the significance of external forces on working capital management cannot be neglected. The way that firms go about managing working capital is an important part of their decision making, which can be influenced by economic conditions, market dynamics, and regulatory environments. In Recap, working capital administration certainly is the soul of corporate finance, and the relationship between working capital and firm value highlights the significance for financial managers to emphasize efficient working capital strategies, avoid financial distress, the firm profitability to protect shareholder value.

The aim of this study is to focus on the interaction between working capital efficiency and firm value in the Palestinian market. It is hoped that this study will add new knowledge to the related working capital management efficiency literature, particularly in the Palestinian firms' environment, as they have their unique financial context, which presents an opportunity and a potential challenge for both managers and researchers.

1.2 Importance of the Study

Although the importance of working capital management efficiency (WCME) to a firm's value has long been widely recognized, the empirical literature using firm-level data is far from mature in this regard. This is especially the case in regionalized contexts such as Palestine where idiosyncratic economic and political history can have profound effects on firm behavior. Most financial experts agree that efficient working capital management can lead to increased firm value. Yet a striking lacuna in the empirical work exploring this relationship is the lack of studies that have examined it among Palestinian firms. This gap is important to address, given that this can provide a

more comprehensive insight into the working capital management efficiency across different settings.

As the market is the mirror of the economy, the Palestinian economic environment is marked by several distinct challenges, such as instability in the broad economy, small market size, and external political constraints on business operations. In this regard, similar conditions require researchers critically analyze how such an environment impacts working capital management practices. To do so, firms need to understand how these factors interact with working capital management to overcome the financial distress and therefore develop well-informed strategies that can help improve firm performance and value.

The current study is expected to address this gap by providing empirical evidence of the impact of working capital management on firm value in Palestine using the net trade cycle measurement and its component, in the context of financial distress. Through its specific focus on this area of the world, the research intends to contribute to one part of the broader domain of corporate finance. Previous studies generally incorporate homogenized findings across regions like Palestine, which overlook potential constraints due to conflicting environments. The study examines this relationship within a specific context, which makes the investigation of value-adding capacities more meaningful and supplements extant literature, and also provides practical implications to business practitioners operating in similar environments.

The study of the interplay between working capital and firm value holds important lessons for practitioners as well as policymakers. Understanding the significance of effective working capital control will impact business managers in designing strategic management processes. In a time like this, if firms focus on altering working capital management efficiency and improving it, it can substantially benefit them for the betterment of their financial health in the long term, which would correspondingly mean good news for the economy. In addition, the evidence of this study can be leveraged by policymakers to establish a conducive environment for productive working capital

management efficiency practices, to assist businesses in getting access to funding more easily, which makes it easier for them to manage their working capital efficiently.

This study has implications for working capital management efficiency and financial distress, and thus it contributes to the literature in these fields. The research is the first to consider this type of variable in a study of corporate finance, and by focusing on an area that has received little attention, it provides a fresh angle that could prove useful for further development in corporate finance studies. It invites more reflection about the implications of local features in financial practices and gears future research towards a multi-facet study of working capital management. Additionally, the results of the present study should be used as a background for future research that may investigate unique determinants of working capital practices.

This study is important to consider in the context of examining or determining a relationship between working capital management efficiency and firm value within the Palestinian economy. This research, which fills an important empirical gap and deals specifically with the peculiar characteristics of Palestinian firms, is expected to provide two main contributions: for academicians and for practitioners. As businesses continue to work through the challenges of a more complex environment, the results from this study can be a key resource for practitioners looking to improve their working capital strategy and for policymakers seeking to build better economic conditions. The research will be an entry into the wider conversation on optimal financial management strategies, particularly WCM, framed within a prolonged state of economic adversity.

1.3 Problem Statement

While there is extensive literature that focuses on the direct effect of working capital management efficiency (WCME) on firm value, scant attention has been paid to investigating the constructs within regional settings such as Palestine. According to Aktas et al. (2015), Dhole et al. (2019), and Vijayakumaran (2019), poor working capital management quality significantly reduces the overall value of firms. Unfortunately, the theoretical knowledge about the working capital management efficiency concept is larger than justthe operational implementation of it as many

companies are not that fortunate enough to practice efficient WCM, and although there is a general lack of knowledge among managers, it remains to be seen how much value can be attributed to education, awareness and training at all towards good working capital management efficiency practices.

The challenge is even more salient when focusing on the case of Palestinian firms, which are characterized by a difficult economic and political situation, making it important to understand the managerial accounts about working capital efficiencyimpacton the firm value. The literature provides evidence of the potentially negative consequences of poor working capital management, suggesting that it can generate fluctuations in cash flows that impair daily business functioning and increase the risk of financial instabilities and financial distress. Furthermore, a decoupling of financial performance (i.e., strong sales numbers and weak receivables management) can be misleading to investors and serve to drive down stock price, destroying shareholder value (Kieschnick et al., 2013; Aktas et al., 2015).

This study suggests that it is essential to investigate working capital management efficiency with a unique conceptual background of Palestinian Firms since only theoretical basis will not be enough, the research is aimed to bridge the gap between theory and practiceby examining how effective working capital management effect on firm value in Palestine inin the presence of financial distress condition.

This study contributes to the extant literature that remains inconclusive with regard to the criticality of working capital management efficiency by providing evidence on whether and how significant this is for financial performance among Palestinian firms.

1.4 Research Objectives

There is one main objective and several sub-objectives of this study as follows:

1.4.1 Main Objective

The main objective of this study is to examine the relationship between working capital management efficiency and firm value in the Palestinian market. This is quite an important objective that needs to be focused on to define the fine lines on which managing working capital could result in either an increase or decrease in the value of a

firm. Systematically analyzing this relationship, the research is attempting to provide policy implications relevant to both for practitioners and academics in the area of working capital management efficiency. The study results should also meet some of the information needs of managers and decision makers in allocating the optimal amount of capital to fund working capital. This study is also expected to extend the academic literature by providing a better understanding of working capital dynamics that can be applied in another region, enhancing developments and validating theoretical contributions regarding working capital. Therefore, the main objective of the study is:

To examine how working capital management efficiency influences firm value among Palestinian firms.

1.4.2 Sub-Objectives

In addition to the overarching purpose, and to explain the secondary objectives that underpin the work, this study pursues each of the net trade cycle dimensions as a measurement of Working Capital Management efficiency and its effect on the Firm Value:

1. To find out how Inventory on-hand days affect the value of the firm.

This sub-objective is aimed at examining how the number of days that inventory is held prior to being sold affects a firm's value. Reducing holding costs is crucial to profitability, as is avoiding stockouts; both can be addressed through efficient inventory management. Past studies' results suggest that knowing the relation between inventory on-hand days and firm value offers an opportunity for firms to improve their inventory practices in order to benefit financially.

2. To measure the impact of sales outstanding days on firm value

This sub-objective is to study the time taken by the firm to receive money from its customers for sales they have made. The sales outstanding days, or accounts receivable days, reflect how high-quality a firm's credit and collection policies are. Higher

collection rate will also help to reduce the collection period, which brings in better cash flow that is important for running operations, meeting liquidity requirements, and investment opportunities. The study aims to elucidate how significant it is for the value of the firm to have an effective receivables management.

3. To investigate the impact of payables outstanding days on firm value

This sub-objective shows how quickly a company pays its suppliers. Proper payables management can help firms keep cash in the business for a longer period, which will improve their liquidity overall. But paying too late can also damage suppliers' relationships. An approximation of how payables outstanding days affect firm value will guide management on how to balance having good relations with their suppliers with needing working capital efficiency.

4. To ascertain the effect of working capital management efficiency on financial performance in the presence of financial distress.

One of the sub-objectives of this study is to investigate the impact of working capital management efficiency on the firm performance of Palestinian listed firms, with a specific focus on the mediating role of financial distress. The study investigates how efficient working capital management influences the firm value, and how financial distress acts as a mediator in this relationship. It becomes important to understand how working capital management efficiency can assist in reducing the adverse effects of financial distress, mainly for firms that face difficulties regarding their liquidity and solvency. This study seeks to provide insights and strategies for improving the firms' financial performance by optimizing working capital management efficiency, with a particular emphasis on how financial distress can either increase or decrease these effects.

5. To investigate the impact of working capital efficiency on firm value according to industry type.

Each industry has its own unique and different characteristics, as well as a set of challenges when it comes to working capital management. Broadly, this sub-objective seeks to understand why the effect of working capital efficiency on a firm's value may differs across industry sectors. By examining the influence of industry type on this relationship, the study will provide customized insights that could help firms in designing industry-specific working capital strategies and consequently pave the way towards better financial performance. This will enable the research to provide a significant contribution to the current finance literature, both in terms of answering the main and sub-objectives while offering pragmatic suggestions for real-world applications by practitioners in finance.

This study aligns the study objectives with the theoretical frameworks of the study, such as the trade-off theory, agency theory, resource-based view, and pecking order theory, ensuring a solid foundation to develop the hypothesis.

1.5 Research Questions

The objectives of working capital management are established to maintain an optimal level of working capital that maximizes shareholder wealth, It is thus vital for Palestinian firms to appraise the influence of working capital management efficiency on firm value. This is an important question due to the peculiar commodity structure of the Palestinian economy and a number of external and internal constraints that may impede effective financial management. The researcher hopes this study will enlighten policymakers, firm managers, and financial managers on how the working capital management efficiency practice in Palestinian firms impacts firm value variations.

Working capital management efficiency is a complex issue, and based on the outlined objectives, this section will address the specific research questions for this study in line with the study's main and sub-objectives, which would be;

1.5.1 Main Research Question

How does working capital management efficiency influence the Palestinian firm value?

1.5.2 Sub-Questions

1.What is the effect of inventory on-hand days on firm value?

That is how does the duration of inventory holding impact a firm's profitability and overall value?

2. How does the period of sales outstanding days impact firm value?

In what ways dothe time taken to collect sales revenue from receivablesaffect a firm's liquidity and operational efficiencyand therefore its value?

3. What role does payables outstanding days play in influencing firm value?

How does the timing of payments to suppliers influence liquidity, supplier relations, and ultimately firm value?

4. What is the impact of working capital management efficiency on financial performance under financial distress?

How does efficient working capital management contribute to firm performance in financially distressed firms, and how does financial distress mediate this relationship?

5. How does industry type affect the relationship between working capitalmanagementefficiency and firm value?

How do industry-specific characteristics alter the impact of working capital management efficiency on firm value, and what industry-specific strategies might optimize working capital management?

1.6 Significance of the Study

This study is expected to add significantly to the extant literature by offering new empirical data on the impact of working capital management efficiency on firm value in the Palestinian environment.

1.6.1 Theoretical Significance

This study should significantly enrich the literature on the working capital management efficiency and its impact on the firm value, particularly in the context of financial distress and the Palestinian emerging markets. Given the scarcity of studies in this area, the study offers valuable insights into how the working capital management efficiency components — inventory turnover, accounts receivable, and accounts payable — influence firm performance, liquidity, and operational efficiency. It also contributes to discussions on the applicability of conventional financial theories in markets with unique economic constraints, paving the way for future studies in this field.

1.6.2 Practical Significance

The study holds substantial practical significance by providing relevant recommendations for policymakers and the financial managers in Palestine. It guides managers to enhance liquidity, improve cash flows, and increase firm value through optimized working capital management efficiency. Additionally, thisstudy informs policymakers on enhancingan economic environment that supports best practices in working capital management efficiency, such as inventory optimization, efficient receivablescollection, and strategic payment management, thereby improving firms' competitiveness and sustainable growth, and helpmanagers to avoid the financial distress.

1.7 Hypotheses of the Study

The existing literatures and empirical researchsuggest that the net trade cycle provides at least some insight into the financial outcomes of firms from implementing more

efficient working capital management. The literature also suggests that firms with a shorter cash net trade cycle manage its' working capital better than other firms, and that their financial performance is also likely to be better, and have a higher intangible value in the market (Shin & Soenen 1998; Arachchi et al., 2017).

The net trade cycle is a key metric used to measure the efficiency of working capital management (Vijayakumaran, 2019). It represents how long it takes for the business from when cash is invested in inventory until cash receipts from sales are received. A net trade cycle which is shorter means a firm can turn its investments in inventory back to cash quicker, increasing liquidity and reducing capital tied up in operational activities. In this regard, companies that demonstrate a mastery of working capital management will be in much better positions to effectively utilize their assets, maximize cash flow and respond nimbly to changing market climates.

The shorter the net trading cycle, the higher the present value of net cash flows generated from their assets (Shin & Soenen, 1998; Padachi, 2006; Vijayakumaran, 2019). Boosting cash flow generation is crucial because it helps in enhancing shareholder value. Therefore, it would beexpectedthereexistanegative association between the length of net trade cycle and firm value; in other words, as the net trade cycle lengthens, investors are expected to lose confidence in the company.

1.7.1 The main hypotheses of thestudy

This study has three main hypotheses with the first one having three sub hypotheses, all formulated as follows.

H1: Net trading cycle negatively impac the value of Palestinian listed firms.

This study, while probing further into the main hypothesis will investigate individual association of the components of working capital management and how they affect firm value. This analysis will involve sub-hypotheses that specify different aspects of thePalestinianfirms 'managementbehavior. The below-mentioned are the sub-

hypothesizes:

H1.1: Longer Inventory On-Hand Days reduces the value of Palestinian listed firms.

Under this sub-hypothesis, holding more inventory will increase the holding costs, and minimize the on-hand days of inventory will assist to improve the working capital efficiency and affect the firm value. An increase in inventory on-hand days negatively impacts firm value due to higher holding costs (Padachi, 2006).

H1.2: Longer Sales Outstanding Days reduces the value of Palestinian listed firms.

This theory dictates that when it takes a company too long to collect payments (i.e. its receivables), working capital is affected and the firm is unable to invest in operations, or take advantage of market opportunities. Longer sales outstanding days lower firm value by constraining liquidity (Deloof, 2003).

H1.3: Longer Payables Outstanding Days increases the value of Palestinian listed firms.

Companies can improve their working capital efficiency by extending their payable periods making them more flexible which is good for company value?Prolonged payables outstanding days positively impact firm value by extending liquidity (García-Teruel & Martínez-Solano, 2007).

H2: The industry type moderates the effect of the net trade cycle on the value of Palestinian listed firms.

This main hypothesis suggests that sectors can receive differing impacts on their net trade cycle dynamicsdue to specific operational characteristics of the industries, competitive landscapes and market conditions etc.

H3: Financial distress mediates the relationship between net trade cycle and the value of Palestinian listed firms.

This prediction suggests that firms in financial distress may be more sensitive to how they manage their working capital which further suggests that the adverse effects on firm value from an increased net trade cycle may become even worse for financially troubled firms.

It is hopeful thatthis study resultswillobtainfurtherevidence from testing these hypotheses in regards of determining the effectiveness of working capital management practices with regards to the Palestinian firm value in the context of financial distress. In doing so, the study aims to add value to the literature and further extend the understanding of environmental change as an investment issue that is relevant to financial managers, policymakers, and scholars. Each sub-hypothesis of H1 is built to explain one specific component of the net trade cycle the measurement of the working capital management efficiency, which overall provides an extensive insight into how these elements impact firm performance and value. This investigation, therefore, using empirical examination and hypothesis testing endeavors to complement the established literature by bringing forth into focus the relevance of good working capital management practices in firm value under difficult economic conditions.

1.8 The Scope and Limitations of the Study

This study is confined to companies listed on the Palestine Exchange (PEX), which limits the generalizability of the findings to other unlisted firms or other markets. The analysis is based on a specific period, and hence, the results reflect the political and economic conditions prevalent during that period. Additionally, the study focused on specific industries or sectors, which restricts the generalization of the findings to other sectors with potentially different dynamics of operation.

The constraints of the research include the risks of access and reliability associated with financial information for Palestinian firms, which may affect the accuracy of the analysis performed. Finally, the additional instability of both the political and economic environment in Palestine introduces uncontrolled variables that could possibly affect working capital management and firms' value. The research also omits all other possible

variables affecting firm value, such as macroeconomic factors or managerial elements, and hence the findings require very cautious interpretation when generalized to other contexts.

1.9 Terms and Definitions:

Working Capital Management Efficiency (WCME): The process of managing a firm's short-term assets and liabilities to ensure operational efficiency and financial stability. Effective WCM helps companies meet their short-term obligations and invest in growth opportunities (Vijayakumaran, 2019).

Tobin's Q Ratio: A ratio that compares the market value of a company's assets to their replacement cost. A Tobin's Q greater than 1 indicates that the market values the firm's assets higher than their replacement cost, suggesting efficient management and growth potential (Chung & Pruitt, 1994; Ameer & Othman, 2012).

Financial Distress: A situation where a company faces difficulties in meeting its financial obligations, which can negatively affect its operations and long-term viability (Wilner, 2000; Meliani & Henny; 2021).

Net Trade Cycle (NTC): A measure of the time it takes for a company to convert its net working capital (inventory and receivables) into cash. A shorter NTC indicates better efficiency in managing working capital (Shin & Soenen, 1998; Padachi, 2006).

Chapter 2:Theoretical Framework and Past Studies

2.1 Introduction

The management of working capital (WCM) in a company is frequently considered as the lifeblood of the company, needed for its survival and long-term development. Temporary working capital management that ensures profitability, efficiency and cash flow requirements of the organization through proper management of short-term assets and liabilities. Working capital management practices consist of the measures and procedures firms exercise in order to achieve the maximum profit whilst they still possess enough liquidity for performing short-term responsibilities, I. e. paying off debts as well as operational expenses (Deloof 2003). With an effective WCM in place, a business can deliver ongoing operations to support future growth initiatives, without facing liquidity crises and ultimately setting the foundation for long-term success (Kim & Chung,1990; Kieschnick et al., 2013).

Liquidity management is so important for any organization since it involves efficient handling of current assets and liabilities, which play vital role in smooth running of the business. A superfluous liquidity and an inadequate working capital position would increase the risk of not being able to meet due short-term obligations without loss, whereas a deficit in current assets would lead to inefficiencies (El jelly, 2004). The main goal would be to ensure that companies operate at an equilibrium point in between liquidity and profitability that is, higher liquidity ensures the company's ability to payoff its short-term obligations, whilehigherprofit helps the company in sustaining long-term growth.

The need for effective WCM in emerging markets is even greater, as the risks and volatility firms face are much higher. For instance, the instability of the Palestinian economy under the current political situation encourages firms looking for an effective WCM to maintain their survival and success (Awad & Al-Ewesat, 2012; Awad & Jayya, 2013).

There are many different metrics and ratios which can be used to assess how well a business is managing its working capital. Net Trade Cycle (NTC), is perhaps the most significant and overall measure to study how effective a firm manages its working capital. The NTC provides information on the time interval a firm maintains their resources, e.g., inventory, till converting it into cash via sales (Blinder & Maccini, 1991; Fazzari & Petersen, 1993; Deloof, 2003). This time lag between cash inflow and outflow is an important consideration as it directly influences the firm's liquidity position and its ability to meet short-term financial obligations (Kim & Chung 1990; Kieschnick 2013).

Although a vast body of literature on WCME and its relevance with respect to firm value exist, most research has been conducted in developed markets or within the generic perspective of emerging markets. Understanding of how WCME functions in Palestine where it is a unique region with economic and political challenges, is stillinadequately covered. The scanty research in this regard calls for more extensive studies to probe into the association between efficiency andPalestinianfirm value.

This research seeks to bridge this gap by studying working capital management efficiency (WCME) in PEX listed firms, how they manage it and its impact on overall firm value. Through integrating existing theories and empirical findings, this research will utilize a conceptual model used by previous researches that links WCME to the value of firm in context of financial distress, especially in an environment typical of emerging markets like Palestine. The results of this research should be not only academically beneficial, but managerially to those who work in high-risk environments.

2.2 Theoretical Framework

The theoretical framework offers a systematic method to study the link between working capital management (WCM) and corporate performance, which is crucial for companies to design effective strategies of value creation. Caballero et al. (2014) lay the theoretical roots for investigating these relationships, and this section articulates some salient theories with regard to WCM. It also discusses a number of important theories namely

the Trade-Off Theory, Resource-Based View (RBV), Agency Theory and Pecking Order Theory that provide different perspectives on how proper management of working capital can influence firm value.

2.2.1 Trade-Off Theory

Firms manage their working capital, according to the Trade-Off Theory for profitability and liquidity (Deloof, 2003; Eljelly, 2004). So according to this theory, increasing the liquid assets helps any firm to fulfil its duties in a short period of time but having excess liquidity may decrease profitability as such assets can generate more return at another place (Deloof 2003). This trade-off is more exacerbated in emerging markets, where access to external financing may be limited, as evidenced by firms traded on the Palestine Exchange (Awad & Al-Ewesat, 2012).

The advantage of having a large buffer of liquid assets is that it helps protect the firm against unexpected cash flow problems, Reduce the probability of default and sustain operations during economic slumps. Yet, Liquidity has its own downside that might lead to lesser profitability. The action of keeping liquid savings back might mean you are losing out on investment opportunities which in long-term could hurt your profitability (García-Teruel and Martinez-Solano, 2007) On the flip side, aggressive liquidation of cash will lead to better investment opportunities but may raise bankruptcy risk under negative market conditions or high volatility periods (Berryman, 1983).

Many postulations have been made to the trade-off between liquidity and profitability in which some scholars argued that firms with optimum working capital policy deliver better financial performance (Cumbie & Donnellan, 2017). Empirical evidence from the works of Shin and Soenen (1998) shows that WCM contributes to a healthier and stable financial position, as an example. The firms need to deliver balanced WCM which is also highly industry-specific and competition-adjusted, and depends on the market conditions (Al-Mwalla, 2012) s. Managing working capital efficiently results in financial gains for firms during their prosperous times and also shields them from future recessions (Lyroudi & Lazaridis, 2000).

In a separate study on firms in Palestine, the authors provide evidence that small and medium-sized enterprises (SMEs) operating in this region struggle to balance liquidity with profitability because they are not able to access capital from external markets (Arachchi et al., 2017).

2.2.2 Resource Based View: RBV

The Resource-Based View (RBV) theory highlightstheimportance of both working capital resources and firm value in contributing to the generation of competitive advantage (Blinder & Maccini, 1991; Fazzari & Petersen, 1993). Resource based view framework suggests that companies, by managing efficiently their working capital, can contribute to operational efficiency and value (Kim & Chung, 1990; Deloof, 2003; Chen & Chen, 2011). This argument suggests that better firm performance will follow from better cash flow management as long as it impacts the financing of current assets (Kieschnick et al., 2013; Abbadi & Abbadi, 2013).

Managing working capital resources effectively offers organizations flexibility both to take advantage of market opportunities and to guard against threats such as potential supply chain disruptions. The working capital could be strategically used better than competitors for operational efficiency, says RBV (Shin & Soenen, 1998). Firms, for instance that strike a proper balance between maintaining inventory levels are less likely to be faced with stockouts or overstocking—both situations leading to operational inefficiencies (Deloof & Jegers, 1996).

In the case of Palestine Exchange, effective working capital management is important for organizations that aim to survive with fluctuating economic and political conditions in the region. Companies that manage their working capital efficiently such as better management of inventory or improved collection of receivables can sustain operational stability and growth in a downturn economy (Vijayakumaran, 2019). According to a study by Ameer and Othman (2012), companies that focus on cash flow optimization rather than cash or liquid asset hoarding have achieved greater stability growth and increased financial performance.

The Resource based view perspective also suggests that firms should acquire specific capabilities in the management of net working capital which are hard to replicate with competitors (Blinder and Maccini, 1991). Integrating advanced technology with inventory management systems can provide a competitive advantage to firms by improving their capability in demand forecasting, lead times reduction and stockholding costs minimization. For such reasons, within the context of a starter company or large mature public one major focus remains on increased operational efficiency which directly translates to increased value in an organization as the company becomes more efficient at turning its working capital into revenue generating activities.

2.2.3 Agency Theory

It was developed during the 1960s and '70s, as neoclassic finance began to realize its limitations, experiencing some interest in the '80s, when agency theory first became popular (Lewellen et al., 1980). Jensen and Meckling (1976) presented the agency theory, which explains conflicts of interest between principals, or shareholders, and agents, or managers. Effective working capital management can mitigate such conflicts by ensuring that managers take shareholder value into consideration in the operational decision-making processes; this is particularly relevant when managing credit terms, inventory, and payables as a means of striking a balance between liquidity and profitability. Managers may also try to develop their personal financial welfare at the expense of well-being of the business itself and this is known as agency problems which can happen in working capital management (Emery, 1984). Such conflicts can result in inefficient decisions in the use of working capital which will reduce value to shareholders.

Managers might have an incentive to adopt an aggressive working capital policy extending trade credit too generously to customers so that current sales would be pumped up and the managers' performance bonuses with them. Nevertheless, taking these actions may have the effect of exposing the firm to credit risk and liquidity problems that are adverse to its long-term financial viability (Deloof & Jegers, 1996). Management may be unwilling to invest in required inventory or receivables systems if this does not benefit their short-run remuneration (Emery, 1984).

The importance of governance mechanisms to align managers' constituents and the principal shareholders has been supported by several prior studies in mitigating agency problems in working capital management (Long et al., 1993). The most common mechanisms of this sort are performance-based incentives that provide rewards to managers who design working capital efficient solutions, as well as internal control systems verifying and effectively enforcing the firm's working capital policies. It is suggested by the research of Dixon et al. (2017) that strong governance structures help firms to manage their working capital in a manner which suited to enhance firm value and also reduce the risk of financial distress.

Effective governance and incentive structures remain extremely essential in providing a systematic aim for managers to take working capital decisions that add value in the long-term (Abbadi & Abbadi, 2013)

2.2.4 Pecking Order Theory

Pecking Order Theory (POT) suggests that the firms have a preference to retain part of the profit to utilize in their own projects inside financing, before looking outward financing either from debt source or equity one (Blinder & Maccini, 1991).

Companies with positive cash flows can self-finance their working capital and enjoy the benefits associated with avoiding expensive debt or equity funding. It is crucial for emerging markets to take this one step further, especially Palestinian firms where the access to external financing remains limited or simply too expensive. Firms that reduce their dependence on external capital also tend to lessen their exposure to financial risk and can strengthen their overall financial performance (Fazzari & Petersen, 1993).

Pecking Order Theory(Emery, 1984) predicts that firms with liquid internal cash flow positions (low deficits) provide less restrictive trade credit to their customers, can afford to finance their deficit without the increased constraint on liquidity. But this is also important for the firm because firms with flexible payment terms are easier to deal with and demand better products (Deloof & Jegers, 1996).

In the same way, those businesses that can effectively manage their inventory are less likely to experience stockouts and pay costs about maintaining surplus inventory on hand. Companies can reduce the cash tied up in working capital — that is, their inventory levels — and redirect it to other value-generating activities by optimizing the inventory level (Blinder & Maccini, 1991). Such outputs are especially crucial for factories where inventory management can significantly affect operational efficiency and the downstream in-stock levels (Fazzari & Petersen, 1993).

Following the Pecking Order Theory, it also highlights seeking to maintain high levels of internal cash flow in financially troubled times. This implies that firms with better cash flow-generating capabilities are less likely to need costly external financing during times of poor economic performance (Blinder and Maccini 1991). This has particular implications for businesses located in high-risk markets such as Palestine, where political and economic instability effectively compound the difficulties of raising external finance.

2.2.5 Combining Theory to the Context of Palestine Exchange

When applied to the firms listed on Palestine Exchange the above-mentioned theoretical perspectives provide an in-depth perception of how working capital management affects the value of firm. Now, this trade-off is particularly important in the case of Palestine, as firms face significant obstacles to operating due to a complex economic environment: innovation might be financially unproductive, and firms are undoubtedly faced with reduced external financing (making them lean towards more illiquidity) and increased operational risks (Vijayakumaran 2019). In a similar vein, the Resource-Based View underscores the presence of unique firm abilities to exploit working capital management as a critical issue for coping effectively with external business disturbances by allowing firms to hedge market risks (Deloof & Jegers, 1996).

Moreover, Agency Theory is used to underpin the need for an efficient set of governance mechanisms by which managers could be guided in making current assets decisions consistent with the long-term interests of shareholders (Long et al., 1993). In addition, the Pecking Order theory underscores the necessity of having sufficient surplus cash flow to finance working capital requirements, a very common requirement for firms in

developing markets where access to external capital is limited (Fazzari & Petersen, 1993).

This study will synthesize these theoretical perspectives in a model for explaining the relationship between working capital management and firm performance (in Palestine Exchange). The framework not only highlights the importance of optimizing working capital policies benefiting firm value, but also indicates that firms should take a proper alignment towards their distinct challenges and opportunities in the Palestinian circumstances.

This theoretical framework establishes a strong foundation for the explanation of the relationship between working capital management and firm performance. This study investigates how firms can manage their working capital policies to improve firm value by linking the Trade-Off Theory, Resource-Based View, Agency Theory, and Pecking Order Theory. The way those theories are applied regarding the firms listed on the Palestine Exchange emphasizes both distinct challenges and opportunities in how working capital is being managed within an emerging market. The Palestinian market has unique challenges, including political instability and limited access to external financing. These factors require tailored working capital strategies to maintain enough liquidity and enhance the firm's value. (Awad & Al-Ewesat, 2012)

2.2 Literature Review of Related Studies

2.2.1 Working Capital Management Efficiency and Firm Value

Working capital management efficiency is an important tool to add value to the firm because it provides liquidity, profitability optimization, and minimizes financial risks. This form of WCM is very efficient because it helps companies to meet their short-term liabilities and recognize more investment opportunities, which in turn supports growth and long-term stability (Deloof, 2003; Chen & Chen, 2011).

Research has supported the view that good WCME is associated with firm value. Literature has reported that firms with better working capital cycles not only enhance liquidity but also increase profitability and firm performance (Deloof, 2003; Eljelly,

2004). The successful implementation of WCME enables firms to efficiently manage cash flow, reduce costs, and prevent financial distress (Deloof, 2003; Ding et al., 2013).

Much research evidence relating to the impact of WCM on firm value signifies that better management of working capital leads to higher profitability and firms value, Deloof (2003) reported a negative impact of net trade cycle on firm profitability in his study on Belgian companies which supported that shorter time needed to transform receivables and inventory into cash will result in higher return.

The empirical studies examined the association between WCME and firm value in line with effective WCM improves profitability which in turn increases firm value. Less time to convert receivables and inventory into cash leads to higher profitability, e.g. clearly shown in Deloof (2003) who showed that shorter net trade cycles make Belgian firms more profitable. In the same vein, Eljelly (2004) shows that firms with shorter net trading cycle generally outperform those with longer cash conversion cycles.

One of the main contributions from the empirical literature indicates, although indirectly, that liquidity management is a critical determinant of firm value. Firms have to keep liquidity management on balance to safeguard suitable cash availability defending the long-term investments, which will lead to getting away from financial distress (García-Teruel & Martínez-Solano, 2007; Shin & Soenen, 1998; Wilner, 2000)

Nevertheless, other research does not find a direct link between WCME and profitability. In Greece, Lyroudiand Lazaridis (2000) found evidence of a positive relationship between the net trade cycle and profitability for Greek firms—in other words, longer net trading cycle could be associated with higher profits in some instances. This can happen in industries that need to have longer payment terms or extended inventory cycles, all required for the business. However, there is general support among most of thestudies that a reduction in the net trade cycle tends to enhance profitability and firm value (Al-Mwalla, 2012).

Numerous studies have produced evidence consistent with a positive relationship between successful WCME and firm value. Researchers have established that firms can

benefit from faster turnover of working capital through an increase in liquidity, profitability and firm performance (Deloof, 2003; Eljelly, 2004). In an organization, the short-term finance related decisions affect working capital management (Deloof 2003; Ding et al., 2013).

One such critical insight from empirical research is that the administration of liquidity — a constituent part of WCM — has an indirect yet substantial effect on the return, or firm value in general. Liquidity management is, therefore, crucial to the capacity of a firm in meeting short-term obligations without risking its long-term investments to reduce financial distress (García-Teruel & Martínez-Solano, 2007). According to Shin and Soenen (1998), there is a wide variation in the estimated price elasticities. In this respect, these results are consistent with Wilner (2000), who found a negative association between the cash conversion cycle(CCC) and profitability. Their finding implies that firms with shorter CCC more profitable and hence of greater value.

Liquidity facilitates the use of investment opportunities by firms, allows for responses to market shocks, and even limits more expensive external financing. There is ample empirical evidence to suggest that firms with improved liquidity management face lesser financial distress and high valuations (Ding et al., 2013; Wasiuzzaman, 2015; Meliani & Henny; 2021).

Overall, the working capital management has a significant and multifaceted influence firm value. Effective working capital management aids in optimizing liquidity, increasing profitability and minimize financial risks; all of which ultimately create value for the firm. Both partitioners and academic researchers would agree that there is much evidence to suggest that good WCM practice is one of the key factors in the financial health of any business as increasing level of frequency empirical evidence show that efficient WCM practices lead not only too higher profitability but also to increased flexibility of opportunity and potentially reduced long term h risk (Chen & Chen, 2011; Mansoori, 2012). Furthermore, the impact of corporate governance in establishing fruitful WCM practices is unequivocal as effective corporate governance mechanisms reduce financial

risks, which comes courtesy of supervisory construal that provide WCM strategies are synchronous with the firm´s long-term financial aspirations.

2.2.2 Working CapitalManagementEfficiency and Financial Distress.

Working capital is a lifeblood for every business, particularly focused on small and medium-sized enterprises (SMEs), as it might avoid insolvency and financial destabilization. One of the leading causes of business failure is financial distress — in essence, the opposite of being financially fit. This shines a light on two things, firstly the fundamental requirement of well-managed working capital to keep a business running and secondly its vital necessity for long-term survival. Although it is of importance, little literature can be found on the causes of inefficient WCME practices in capital-intensive businesses and on the need for an optimal level of liquidity. A lack of proper allocation or use inefficiently of working capital resources will bring a chain reaction into effect causing disruptions in the cash flow cycle, making it hard for any firm to meet its daily operational costs and obligations (Berryman, 1983).

Arachchi et al. (2017) conducted a cross-country survey of SME cash flow management practices, showing that in Finland firms with financial difficulties often had low working capital when the stock turnover was high. This gap can send firms into a self-perpetuating death spiral where it means that survival becomes very problematic — not because the business is unprofitable, but simply because they have run out of liquidity to meet short-term liabilities.

The consequences of bad WCM are not limited to financial distress and discredit for the affected firms; they also reverberate through credit chains, affecting suppliers as well as customers. Poor inventory management practices result in haggard situations such as stockouts suffering loss of potential sales revenue. When the customers face recurring stockouts, they might shift to competitors leading to loss of market share and profitability. If late payments are frequent, suppliers will bundle this in the terms of trade credit to reduce the risk and they may even refuse the offer on trade credits at all (Deloof 2003; Caballero et al., 2010).

As well as all these other issues, one should not ignore the psychological impact that financial distress can have. The financial instability might create some level of uncertainty among the employees about their jobs which may negatively affect on their morale and productivity. All of these factors in a combined effect can dramatically reduce a company's ability to operate efficiently, sparking a cycle of economic instability and inefficiency.

The significance of working capital management on the performance has been further confirmed by research. That is why companies that are able to appropriately manage their working capital have an advantage in terms of withstanding economic downturns, keeping cash flow healthy and taking advantage of growth opportunities. Studies reveal that companies with lower net trading cycle perform better financially and command higher valuations (Deloof, 2003; García-Teruel & Martínez-Solano, 2007; Chen & Chen, 2011). Conversely, businesses with long cash conversion cycles may see reduced profitability and also be more easily pushed into financial distress. Of course, poor working capital management will be affected by industry specificities.

Effective working capital management is not only vital in reducing the risks involved with unfavorable financial management practices but also plays a huge role in enhancing overall corporate valuation to avoid financial distress. Organizations should create strong financial frameworks with the focus on liquidity management, forecasting, and risk evaluation.

As a result, the present literature dealing with working capital management and financial distress primarily emphasizes the utmost importance of better management of working capital in preserving firm survivability, more so in SMEs. Bad WCME thus has many negative ramifications outside just financial performance – it turns away potential and current customers, strains supplier relationships, lowers employee morale, and makes it more difficult for a company to take advantage of new growth opportunities. Hence, it is important for companies to have strong financial management practices with the increased use of technology in order to lower risks from poor working capital

management. This will improve the resilience of all financial firms, making their day-to-day functioning easier and ultimately protecting their long-term value.

2.2.3 The Importance of Maintainingadequate liquidity

One of the keys to financial stability for businesses is liquidity management, which can be managed very effectively. Moussa (2018) defined effective liquidity management as the strategic manipulation of the current assets to minimize the risk of falling short on a firm's foreseeable commitment while avoiding an over investment in current asset. This balance is critical, as too little liquidity could mean having to delay operations or else minimize revenues because you are unable to perform at full capacity; while investing excessively in current asset can tie cash into non-performing capital rather than using it on projects involving refineries or acquisitions.

Liquidity is basically the foundation upon which businesses can weather financial ups and downs. This provides a cushion in bad times or when unforeseen costs occur, or a fresh source of income and security in financial distress. Having enough liquid assets (cash or short term, easily convertible assets) a company can navigate through uncertain times so they are able to continue their day-to-day operations. For instance, a firm with ample liquidity can still afford to pay its employees, honor its financial commitments and carry on with strategic initiatives in the face of myriad severe headwinds existing when economic downturns or abrupt market turbulence takes place without resorting to expensive borrowing or divestitures.

Evidence supports that companies with ample liquidity have traditionally performed better over the peaks, troughs and cycles of the economy. Higher levels of liquidity make a company to be viewed as low risk by investors and creditors, thus obtaining better financing terms. This favorable image not only increases the likelihood that a company will be able to raise its capital upfront when required, but also adds to its aggregate market valuation. For example, in a study by Gill et al. (2010) there was a positive significance relationshipbetween illiquidity and firm value, signifying that better management practice of liquidity relays heavily on stock market valuation.

Liquidity management techniques and firm performance have also been inter-related in the literature. Studies have shown time and again that the companies which deploy liquidity management techniques ultimately outperform their rivalry on a lot of performance measures because as part regarding this they focus on forecasting and anticipating future events, rather than just reacting to them. For example, research by Deloof (2003) and García-Teruel and Martínez-Solano (2007), respectively, demonstrates that superior working capital management practices of receivables, payables and inventory can lead to greater profitability. The results of these studies underscore the point that improving efficiency in working capital management should be a central focus for those who wish to improve financial performance.

Net Trade Cycle measures how quickly a company can convert its investment in inventory and receivables back to cash, which is also a key factor of liquidity management. If this measure is getting lower or improving, it means working capital management is efficient and hence higher liquidity. To help protect liquidity, companies should look at getting money out of inventory sooner with a move to sales and collect on receivables quicker. As a result, they are able to reinvest in growth opportunities, service their debts and capital obligations, and meet operational expenses while avoiding liquidity demands. But then, it is easier said than done to keep adequate liquidity.

Businesses have numerous ways to use their cash -- they can invest in growth initiatives, finance capital expenditures or simply cover the costs of operations. For management this is never an easy balance between holding too much cash and investing for growth. Too much focus on liquidity can cause companies to miss opportunities for expansion and innovation, while too little attention to how liquidity is being controlled can easily generate acute financial stress.

The solution is to develop a disciplined, strategic approach to liquidity management that is consistent with the overall strategy of a company. It will monitor the liquidity ratios, e.g. the current ratio and quick ratio that allows for evaluation of the firm in meeting short-term liabilities. Firms should also conduct cash flow forecasting to predict required cash outflows and manipulate liquidity in advance. Cashflow forecasting is important so

that your business can spot where it may run out of cash before it becomes a serious issue.

Setting up strong financial policies and procedures is crucial for effective liquidity administration. Firms need to establish policies for managing accounts receivables, inventory and payables. These include adopting rules such as no receivables to reduce the possibility of an irrecoverable debt, and that it is collected on time. In the same way, just-in-time inventory systems can help optimize inventory levels by preventing overstock situations without any production process stop. Working with suppliers to secure advantageous payment terms can increase liquidity by stretching the time available to satisfy payables.

The significance of having enough liquidity does not stop at internal operations, but it also affects the relationships with external parties. A firm's liquidity position is taken especially into consideration by the investors, creditors and suppliers, when they are about to determine its financial health. Companies with solid liquidity are more likely to be regarded as a trustworthy partner, securing better financing conditions and beneficial supplier clauses. In a similar vein, a company experiencing liquidity concern will struggle to obtain bank support or favorable arrangement in respect of creditors' term which result the situation become worse.

In addition, it is important to ensure that liquidity levels are maintained so as to be in compliance with loan agreement covenants. Loan obligations usually have specific liquidity ratios that borrowers have to maintain with most financial institutions. Noncompliance with these covenants can result in penalties or, worse yet, loan defaults, which only makes a firm's financial position messier. As such, proactive liquidity management has great value in both operational efficiency and insuring firms against financial stumbling blocks.

Ultimately, there is no exaggeration in stating the significance of ensuring liquidity adequacy. Without efficient liquidity management, firms can face difficulty in meeting their short-term obligations, as well curtail on capitalizing upon opportunities for growth. Recent studies have demonstrated the positive association between liquidity management

practices and a firm's performance, suggesting that organizations which implement efficient working capital techniques will most likely survive in this dynamic business world. Through strong financial policy-making, technology solutions and liquidity management strategies, businesses can create strong buffer while operating a value-driven market.

2.2.4 Tobin's as A Measurement of Firm Value

In finance, Tobin's Q is an important phenomenon in financial economics with how it compares a firm´s market value to its replacement value. Tobin's Q is the ratio of market value of a firm's assets to the replacement cost of those assets; this measure tells us how efficiently a company is using its asset base to generate revenue. If Tobin's Q is greater than 1, it indicates that the market values a firm's assets are more highly than their replacement cost suggesting attractive investment prospects. This optimism can encourage the firm to make new investments, confident that the market thinks return from these investments will top their costs. But, if the firm's Tobin's Q ratio is less than one (Q<1), the markets believe that the current market value of its assets are too low to attract capital and allows it to grow (Chung & Pruitt, 1994).

James Tobin coined the phrase "Tobin's Q" in 1969 and set out its basic theory, which has been developed along many channels since that date. It is considered as a very useful indicator of firm performance measuring the ability to create value for the shareholders (Ameer and Othman 2012; Chung and Pruitt 1994). This is a linkage-ratio that plays as a juncture between asset management, and shareholder value, illustrating the position of the firm in the market over its asset base.

2.2.4.1 Application of Tobin's Q in WCM analysis

Tobin's Q as a methodology can be utilized to measure the efficiency of working capital management and its impact on value of the firm. In a study by Ameer and Othman (2012), it was found that firms with efficient working capital management practices are associated with higher Tobin's Q ratios. The above relationship highlights the impact of liquidity, inventory and receivables management on the market valuation of firm.

Proper working capital management strategies enable the efficient utilization of resources allowing firms to improve profit generation and competitiveness. For example, businesses that are optimally managing their inventories can save on holding costs and reduce waste, both of which would improve cash flow. Keeping stock levels in line with demand helps a business avoid the costs that come with carrying too much inventory (i.e., storage fees, insurance, risk of obsolescence). On the flip side collecting receivables timely ensures liquidity available for re-investment keeping firms solvent and allowing resources to be put behind growth opportunities. Companies that show outstanding performance in these dimensions are more likely to be favorably regarded by investors, who value them highly, leading to better Tobin's Q.

The most common way of applying Tobin's Q in the many analyses of Working capital management is to have direction for one use mainly strategic decisions. As an example, a company with falling Tobin's Q may look into its working capital policies to pinpoint bottlenecks. It might be on optimizing inventory or providing better credit terms to the customers. In contrast, a firm with Tobin's Q that is consistently greater than 1 may decide to invest more in growing its operations or developing new products it knows can be funded by the broader market value.

2.2.4.2 Disadvantages of Tobin's Q

Tobin's Q is a useful metric to represent firm value but has its constraints as well. One of the main issues is to have stock market values as one of these indicators and this might be problematic since it varies a lot with both economic fundamentals and outside intervening factors. Chung and Pruitt (1994) pointed out that prices of individual stock might not be related to the underlying fundamentals of a firm. Since markets are inefficient and speculative, driven a good part by swings in investor sentiment, it is likely that the mispricing will result in Tobin's Q being an ambiguous indication of a firm's true value.

Also, it does not properly adjust for characteristics or costs that are more specific to an industry and this means the comparison of firms across dissimilar industries may be misleading. For example, it could be an obvious characteristic of high capex industries that would lead to very high replacement costs for their assets and thus naturally lower

Tobin's Q ratios. Similarly, companies with lower capital intensity could see trailing multiples higher not due to better performance but because, again, that is how the type of business they are.

In emerging markets, such as Palestine, the characteristic problems with using Tobin's Q are exacerbated by data issues of less reliable market information. There are many challenges in the Palestinian financial landscape that creates impediments such as limited access to capital, currency fluctuations and geopolitical uncertainties. The factors can distort the assessment of market values and replacement costs accurate. In consequence, in these contexts Tobin's Q may not reflect a complete image of firm value and, thus, other financial indicators together with some qualitative assessments should be added to assess the entity.

2.2.4.3 The Role of Tobin’s Q in Strategic Decision Making

Given the importance of assets and market valuation, understanding Tobin's Q within the context of working capital management is essential not only for business students and researchers but also for companies making strategic decisions. Tobin’s Q can be used by management teams to see how their working capital strategies are fairing against the market average. Over time, firms should track changes in Tobin's Q to help identify successful trends or areas that might indicate necessary operational adjustments.

If, for example, a company's Tobin's Q begins to fall it could signal problems with its ability to manage working capital or be seen as a reflection of reduced growth expectations by the market. Such instances could necessitate a reevaluation of how much inventory is on hand, more restrictive credit terms and conditions or improved liquidity optimization and cash forecasting practices that would increase the company's financial flexibility, and investor appeal. On the other hand, a rising Tobin's Q could indicate that the firm’s strategies are aligning with those shareholders wants and so this is encouraging management to make further investments in growth opportunities.

In practice Tobin's Q is often used alongside other ratios to give a full financial read. For example, if management is in the planning phase of new projects or investments, they can

now evaluate how anticipated changes will impact Tobin's Q. Companies can project forward market values and replacement costs, they can then make decisions that align with long-term investment goals. In addition, Tobin Q will help firms to choose the most appropriate Debt composition when taking capital decisions. So, for instance, if a company has a high Tobin's Q, they might decide to fund their investments with equity finance as the stock market values them at such an optimistic level. Conversely, those who have a low Tobin's Q might want to consider debt financing since its cost of capital could be less than the returns one expects on his other investments.

2.2.4.4 Evidence on Tobin's Q

Several empirical studies have justified the employment of Tobin's Q as an index for the firm value and its relatedness to working capital performance. In one example, Ameer and Othman 2012 researched the effect of working capital management efficiency on profitability and market value (measured by Tobin's Q ratio). The study further stressed that effective management of liquidity is related to the degree of Tobin's Q, underscoring the idea that companies that improve how resources are assigned and converge on adequate working capital levels are duly compensated by investors.

Empirical evidence from the emerging markets also show that Tobin's Q can be a good measure of investment opportunities and firm performance. Abor and Biekpe (2006) have shown that its acceptable predictability of future capital expenditures is applicable in an emerging market country in Ghana. This is another evidence supporting the value of Tobin's Q as a key metric for such wide range of company valuation, and even in cases where traditional financial indicators may not be enough.

2.2.4.5 Other Implications of Tobin's Q

Tobin's Q has broad implications for corporate governance, risk management, and strategic planning, as described in more detail here. Being aware of the mechanics behind Tobin's Q which can help companies institute governance setups that is focused towards the interests of those shareholders.

Tobin's Q can affect firms' risk management practices. A lower Tobin´s Q could be a sign that there is room for improvement in the firm´s asset base thus hopefully stimulating the management of start to become a little bit more proactive with regards to risk mitigation. Tobin's Q also contributes in the form of a strategic planning to assist in decision-making on resource allocation, investment priorities, and market positioning. Tobin´s Q is the benchmark for firms to measure how well they are doing and identifying opportunities for improvement.

In conclusion, Tobin's Q is an essential metric to assess the firm value and how firms are leveraging their assets to generate value for shareholders. Despite the great information that Tobin's Q provides on a firm performance, it still has limitations; that will be considered when evaluating this metric against too much market volatility and not understanding the context. In a world where finance is more intertwined and complex, Tobin's Q can be used to help guide management in making strategic decisions which improve the allocation of resources, optimize their risks, and further shareholder value across different time horizons (Ameer and Othman 2012; Chung and Pruitt 1994).

2.2.5 Literature Review on emerging markets and working capital management (WCM)

Although substantial research has been carried out on working capital management (WCM) in developed economies, a significant shortfall has been observed in the literature on this topic in emerging markets including Palestine. The literature review in this section will especially scrutinize WCM literature based on the emerging markets context that offers a different set of challenges faced by firms located within such environments and relevant studies offering evidences related with the effect of WCM upon firm value. Working capital management landscape in emerging markets is characterized by unique challenges that are very different from those encountered by firms in developed economies. There are so many reasons behind these challenges which normally include the economic conditions, constrained financing and political unrest. These reasons collectively make the matters worse especially when it comes to working capital management.

Most of the studies conducted in emerging markets identify an association between efficient working capital management and good corporate performance (Wasiuzzaman, 2015). A strong inverse relationship between working capital management and firm profitability together with risk-adjusted stock returns were indicated in China (Shin & Soenen, 1998). This implies that poor working capital management reduces profitability and could lead to failure of a firm in the market.

Similarly, Mohamad and Saad (2010), in Malaysia, found that some of the productivity factors related to innovative capital professional administration are considerably and adversely linked to industry value as well as profitability which bemused the experts. According to the research of those authors, most other studies also underline that an effective working capital management process should be integrated as a priority in strategic and operational planning.

Additionally, Wasiuzzaman (2015) found that a negative association between the cash conversion cycle (the net trade cycle) with firm value is intensified for firms facing financial constraints. This leads to an important realization: improving working capital management can boost market valuations on some firms, especially those with their hands tied by credit constraints.

In Turkey, Vural et al. (2012), observed an opposite trend in that net trade cycle and days payable outstanding had a negative relationship with firm profitability. Notably, their results revealed that WCM is insignificant to market performance (Tobin Q), thus questioning the influence of WCM one emerging markets.

In Jordan, Al-Mwalla (2012) found that net trading cycle strongly improve firms' profitability and increase firms' value.This is in contrast to the results of AbuZayed (2012), who found a negative relationship between the net trade cycle and firm performance as measured by Tobin's Q and accounting-based profitability measures. In sum, the contrastive outcomes suggest that there should be additional research that is more inclusive regarding the contexts of emerging markets.

2.3 Critical Analysis of Previous Studies

Since liquidity maintenance and avoidance of financial distress are highly important for the firms, WCM needs to be performed in an efficient manner. Many scholarly case studies provide evidence of how inadequate WCM processes, in the form of inappropriate management of inventory, payables, and receivables, have resulted in serious liquidity problems and, in certain cases, financial collapse in businesses. Following are some case examples from various sectors and areas, indicating some of the dangerous effects of poor WCM and some strategies for risk reduction:

2.3.1 Financial Distress Due to Poor Working Capital Management

Abor and Biekpe(2006)examined small and medium enterprises (SMEs) in Ghana and were able to show how poor WCM precipitated financial distress. Small and medium enterprises financial problems had a lot to do with inefficient payables, inventory and receivables management. To this was added excessive reliance on external sources of finance along with lenient customer credit policies. It was thus able for the study to affirm that the root cause of collapse was the fact that liquidity problems were prone to occur with companies with poor receivable management. The researchersconcluded that inefficient management of working capital, especially in respect of receivables and inventory, is one of the major determinants of financial distress for SMEs in Ghana. The case highlighted some of the crucial practices that would enable the SMEs operating under harsh conditions like that of Ghana to avoid financial distress; these included reducing receivable collection period and other working capital components.

2.3.2 Financial Distress from Inventory Mismanagement

According to Bhaduri (2005), the firms belonging to the Indian textile industry maintained huge inventory stocks to hedge against any disruption in supply chains. They did not factor in the costs of storage and potential obsolescence that come with such large supplies. The carrying cost gradually became deadweight, which shaved off profitability and made it increasingly difficult for the firms to meet their short-term obligations. This ultimately led to financial turmoil and liquidity problems. Textile organizations, who had

high levels of inventory, experienced extremely high carrying costs. These high carrying costs eventually led to limited liquidity, and in exceptional circumstances, the financial demise of the organization. The above example shows a very important fact that inventory levels have to be within the acceptable limits, as the holding costs could have a serious detrimental impact on the profitability and could threaten a business enterprise's ability to maintain its financial stability.

2.3.3 External Financing and Working Capital Management Efficiency

Singhania and Mehta (2017) discussed how Southeast Asian firms, with their relatively high levels of indebtedness, were unable to work their capital. The lack of flexibility in financing and the inability of many companies to roll over the short-term debt made them insolvent. The failure ofseveral large firms to manage working capital can be related to their dependence on external debt, which created grave liquidity problems. This example led to the danger of excessive leverage along with poor liquidity management during recessions. Firms that had strong WCME practices were better positioned to survive the financial turbulence caused by the crisis.

2.3.4 Financial Distress Due to Receivables and Payables Mismatch

Wilner (2000)conducted a study on the exploitation of relationship in financial distress. They examined the issue of receivables-payables mismatch. For instance, small retailers would grant credit to customers on habitual grounds rather than negotiating better terms from the suppliers. The consequence was an inadequacy of liquidity. This gap forced businesses to pay suppliers before they received payments from clients, which in turn caused a liquidity problem and, in some cases, collapse. The small retail enterprise was occasionally facing liquidity problems, only because it could not control when its payables and receivables were matched. Such problems led to financial distress and, in certain cases, collapse. This study highlights the significance of matching payables and receivables. Effective synchronization of cash inflows and outflows is crucial to maintaining liquidity.

2.3.5 SMEs in Palestine – Challenges of WCM in a Conflict-Affected Economy

The turmoil in the political and economic sphere of Palestine is sure to add to the difficulties of SMEs in managing their working capital. In fact, according to a study by Abu Karsh and Daraghmeh (2016), this is evidenced by the problem of a lack of cash affecting many of the SMEs in Palestine because of delayed receivables and restricted access to outside funding. Due to such liquidity problems, most of these firms have gone through financial crises, especially those which did not have strict WCM policies. On the contrary, this study found that the firms having good payable and receivable management faced less burden during this period (Sulaiman & Shanak, 2023). Working capital management brings particular difficulties for SMEs in Palestine because of political uncertainty, making it very hard to avoid liquidity shortage and eventually monetary problems. Receivables management and availability of outside funding must, therefore, be efficient to reduce such risks. This highlights how SMEs in conflict-affected regions must develop tailored WCM strategies to cope with unpredictable political and economic environments, where access to external resources is often constrained.

The case studies summarized above underpin just how substantial working capital management is to the avoidance of financial distress. It is also seen in these three case studies that, whether in mature economies like the UK or in developing markets such as Ghana and Palestine, specific poor WCM practices are becoming cash deficient and therefore financially insolvent. Efficiency in these two crucial WCM elements will not only diminish the aforementioned risks but also create a robust and resilient long-term financial position for the firms. Besides enabling an increase in liquidity, effective WCM also enables the business to avoid economic problems and contributes to operational stability during distressed conditions.

2.3.6 Working Capital Management Efficiency and Firm Valuein Palestine

The benefits of successful working capital management go far beyond operational improvements has a huge impact on the value of thebusiness. Abbadi and Abbadi, 2013 demonstrate a positive relation of net trade cycles and operating cash flow, highlighting their influence on working capital requirements. This suggests that the firm with effective

working capital management can enhance its operational performance and thus contribute much towards maximizing firm value.

Leverage shows a significant negative effect on working capital policy, as evidenced by the negative significant correlation between total debt-to-asset ratio and the firm value, suggesting that higher financial leverage is perceived by the market as detrimental to shareholders' interests due to the increase in the financial risk (Arachchi et al., 2017; Vijayakumaran, 2019). Unable to better manage their working capital, this might bode ill for these larger levered firms' performance and market valuation. Karsh and Daraghmeh (2016) has documented a negative and insignificant relationship between stock return and net trade cycle as well as its subcomponents, suggesting that traditional WC measures might not completely explain the phenomena at work in Palestine. Such a disparity suggests that conventional measures alone may miss important signals about firm and market valuation.

SulaimanandShanak (2023) recent study further supported the existence of no significant effect of working capital management, particularly average collection period with financial performance of Palestinian industries. They also said that the means of storage period and repayment period had positive impacts on financial performance. Therefore, while the traditional working capital management measures may not be relevant in capturing firm value yet there exist some other determinants that can affect the firm value significantly. This dissertation tries to fill this gap by conducting an in-depth analysis concerning the relationship between the efficiency of working capital management (WCME) and the valuation of publicly traded firms in Palestine.The research aims at clarifying the extent to which WCME strategies enhance fi rm value, taking into consideration the particular challenges that the Palestinian environment presents.

2.3.7 Specific Challenges in Palestine

More generally, and in the case of Palestine specifically, businesses contend with a variety of other obstacles that can further complicate working capital management. Firms have to create working capital in a politically volatile risk-pool with intricate regulations

and then also have their hands tied behind their backs as investors remain stingy in scarce idea flow days.

In their work, Awad & Jayya (2013) also pointed out that these are the basic challenges facing Palestinian SMEs which have important influences on working capital management in relation to profitability. The results, however, stress the importance of WCME strategies designed to address working capital challenges faced by firms in complex operating contexts.

For start-up companies, the challenges of working capital management are magnified by lack of financial sustainability as in Palestine. With regards to Working Capital Management and Stock Performance Awad and Al-Ewesat (2012) found that Working capital management components are statistically significant to explain stock prices of companies listed in the Palestine Exchange (PEX). In their study, the authors emphasized attention to cash management, receivables collection timing and inventory turnover would help in better working capital management by firms and investors.

Moreover, the study of Awad and Jayya (2013) reveals a two-way causal relationship between working capital management and profitability with one way relationship from liquidity to profitability. This indicates that optimizing the working capital, not only increases the cash flow but also contributes to profits and implies the coupling of these financial indicators.

2.3.8 Literature Integration and Research Gaps

Scholars have devoted great attention to working capital managementefficiency (WCME) mostly in developed economies.This literature review demonstrates the need for focused research pertinent to the specific constraints and dynamics of firms in developing regions, such as Palestine. This section collates the existing literature of WCME and identifies gaps in the research, with emphasis on the need for locally specific studies that can serve to inform policy and practice in Palestine.

2.4 Conceptual Framework

This conceptual model was completed by systematically linking between the variables to investigate both the direct and indirect impacts of WCM on company value, emphasizing the pivotal role of mitigating financial hardship in improving business performance. As shown in figure 2.1, the conceptual framework for evaluating the impact of working capital management (WCM) on firm value is established by delineating critical relationships among variables, with Tobin's Q as the dependent variable (firm value) and the net trade cycle (NTC) as the independent variable, which includes inventories on-hand days (IOD), sales outstanding days (SOD), and payables outstanding days (POD)(Padachi, 2006; Vijayakumaran, 2019). Financial distress, serving as a mediating variable (Meliani & Henny; 2021),is quantified by the Altman Z-Score, indicating how effective working capital management methods mitigate financial hardship, thereby enhancing business value. The kind of industry acts as a moderator (Chen & Chen; 2011), influencing the intensity of the association between WCM and company value across various sectors. Control factors, including leverage, sales growth, and liquidity, are incorporatedto consider their possible influence on company value.(Shin & Soenen, 1998; Abbadi & Abbadi, 2013; Vijayakumaran, 2019).

The conceptual framework identifies hypotheses that explore the interrelationships of components of the net trade cycle (NTC) on the firm value, as quantified by Tobin's Q, and as mediated by variables like financial distress:

H1: Net trading cycle negatively impacts firm value.

H1.1: Longer inventory on-hand days reduce firm value.

H1.2: Longer sales outstanding days reduce firm value.

H1.3: Longer payables outstanding days increase firm value.

H2: Industry type moderates the effect of NTC on firm value.

H3: Financial distress mediates the relationship between NTC and firm value."

2.5 Conceptual Modeling

The following figure, prepared by the researcher based on problem statement and study objectives, represents the conceptual model of the study. It shows the relationship among dependent, independent, moderator, mediator and control variables.

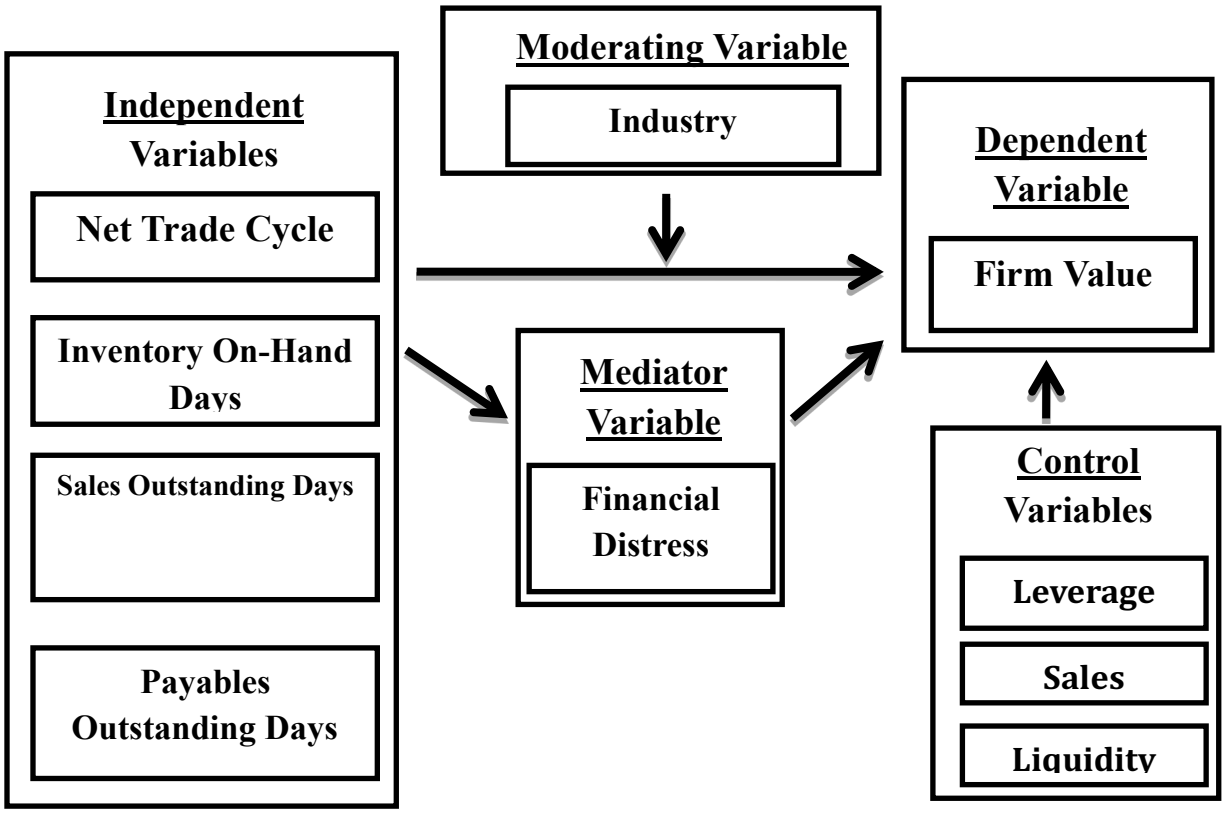

Figure 2.1: Study conceptual model prepared by the researcher based partialy on previous work.

Chapter Three: Research Methodology

3.1 Introduction

This chapter focuses on how to determine the value of the non-financial firms listed in the Palestine Stock Exchange (PEX)based on the efficiency of managing working capital and its interaction with financial distress. Based on the objectives of the study the research will examine the methodology followed to understand the linkage between how working capital management efficiency is practiced and how it affects firm value as well as the role of financial distress in this linkage. The study analyzes the trends in those years between 2012–2022, based on secondary data. Panel data analysis will be conducted, where ordinary least squares (OLS) and effects regressions are used to examine the association between the Net Trade Cycle (NTC), as an indicator of working capital management efficiency, and Tobin's Q as a gauge of firm value.

This research follows a similar research design to Vijayakumaran (2019), who applied panel data regression models in an attempt to control for firm-level heterogeneity. The present study will follow the same econometric strategy to establish the robustness of findings and control for unobservable firm characteristics to obtain more reliable estimates of the relationship between working capital management efficiency and firm value.

The main contribution of the current research lies in the investigation of the relationship between the efficiency of working capital management and the value of the firms while stressing the mediating role of financial distress in a unique context like Palestine. The region of Palestine faces considerable challenges based on constrained liquidity and fledgling financial markets. Examining this relationship in a limited context provides important insights into the impact of working capital management on firm value under conditions that deviate from those prevailing in more developed markets.

This study aims to provide theoretical and practical contributions that better the knowledge of how working capital management impacts businesses operating in resource-constrained economies, as well as how financial distress can act as a mediating variable for this relationship.

3.2 The Palestine Stock Exchange (PEX)

The Palestine Stock Exchange, established in 1995, is under the oversight of the Palestinians' Capital Market Authority—PCMA. By the end of 2022, the PEX had a total of 49 listed companies, mainly operating in industry, services, investment, and the commercial sector. The Palestine Stock Exchange (PEX) is vital to the Palestinian economy, enabling money to be raised and invested where little access exists to international financial markets. Business listing on the PEX has its challenges such as political instability, economic sanctions, and market access that are often not available for free or easily achieved. In this research, the sample is distributed across five sectors: banking and financial services, insurance, investment, industry, and services. Specifically, there are 9 companies classified in the services sector, 12 companies classified in the investment sector, and 11 companies classified in the industrial sector. Financial firms, which are classified under the banking and financial services sector and the insurance sector, will be excluded from this study due to their special financial structures and working capital dynamics, which differ significantly from the non-financial firms.

3.3 Research Design

The study may be characterized as quantitative, and longitudinal as it examines the relationship between efficiency in working capital management and firm value. The present research employs panel data through the time of the research study. Its main focus is to evaluate the efficiency of management regarding their use of working capital and the consequences thereof on market valuation using Tobin's Q measurement.

The base regression model applied in this study employs ordinary least squares (OLS), and the main econometric technique used is fixed-effects regression analysis. Common

multivariate linear regression methods (OLS) are among the most common statistical methods used in finance and accounting studies. They allow for preliminary insights into the relationships between variables, thus serving as fundamental insights into the connection between the efficiency of working capital management and the value of a firm. However, this study chooses fixed-effects regression because it enables the control of unobserved heterogeneity which is characterized as firm-specific features that vary among different firms but are constant over time and might influence the relationship between working capital efficiency and firm value. In line with the literature (for example, Vijayakumaran, 2019), it is expected that firms are different and the difference can never be measured perfectly over time in case of factors such as managerial skills, corporate strategy, or specific features related to a particular industry; therefore fixed-effects models have been employed by so many studies including this one.

3.4 Population and Sample

This research relies on secondary data from the Palestine Stock Exchange (PEX) and financial statements of companies listed on the PEX. The sample was taken from 2012 to 2022 for as much information as possible concerning the Palestinian economy, marked by a decade of economic growth amid periods of political instability. Data on the balance sheet, income statement, and supplementary financial disclosures are from annual financial reports and the PEX database of the fiscal year. Following the previous studies, this study will focus only on non-financial companies by excluding entities in the financial sector such as banks and insurance companies. The exclusion is based on the premise that capital structures and the regulatory framework governing these kinds of organizations differ significantly from those of other operating firms, which may distort findings related to working capital management.

3.4.1 Population of the Study

This study includes all non-financial firms listed on the Palestine Stock Exchange-PEX from 2012 to 2022. Firms listed are publicly traded, including almost all sectors other than financial institutions such as banks and insurance companies because these have special financial structures and associated regulatory requirements. This research

attempts to catch a broad trend prevalent across all non-financial sectors about the influence of working capital management on firm value.

3.4.2 Research Sample

The dataset used in this study is based on a sample of non-financial companies listed in the PEX, satisfying the predetermined criteria. The firms were randomly selected based on the availability of complete financial information during the whole period under study (2012-2022). The exclusion of 2023 mitigates distortions caused by 7th October war, ensuring robust findings. Only companies with stable reporting behavior and continuous operations during this period will be included. This sampling methodology makes the data reliable and increases the ability of this study to draw useful conclusions concerning the relationship between working capital management and firm value.

3.5 Sample Selection and Criteria

The sample consists of all non-financial firms listed on the PEX during 2012–2022. To ensure the continued validity of the analysis, this study excludes firms that were delisted during the study period or had missing financial data. Also, outlier capping to limit the extreme values may be applied to firms that have outlier values in important variables — such as Net Trade Cycle or Tobin's Q — so the extreme values lose significance, as when they are modified for a reference percentile (1st and 99th percentiles). The year 2023 was also excluded due to the war event in the region and its impact on the Palestinian economy. After the above exclusion criteria were applied and outliers accounted for, the sample contains X firms and Y years of observations, hence a large dataset for robust statistical analysis. Given the sample size and period, a total number of observations approximately equal to 300 observations would be recorded, ensuring sufficient data points for robust and reliable statistical analysis.

3.6 Analysis of Variables

3.6.1 Dependent Variable: Firm Value

In this study, the dependent variable—firm value—was measured by using the natural logarithm of Tobin's Q. Tobin's Q is a widely used financial measure that shows how much the market assesses a company's value compared with its net assets, and it is estimated as:

Tobin's Q = (Equity Market Value + Liabilities Book Value) / Total Assets Book Value

A very important financial valuing indicator for the worth assessment of a company over a number of decades, especially with empirical research analysis, has been known as Tobin's Q. This reflects the ratio of a firm's market valuation to the book value, reflecting auspicious entrepreneurial conditions; firms with higher Q values indicate that there are more growth opportunities and better market performance within their respective industries. Previous research in working capital management, some of which by Vijayakumaran (2019) employed Tobin's Q as the primary dependent variable since it captures both market and financial performance.

3.6.2 Independent Variable: Working Capital Management Efficiency (WCME);

This research aims to examine the relation between the working capital management efficiency and the firm value for the Palestinian listed firms. To this end, the main independent variable considered here is the length of the firm’s net trade cycle which the finance literature has used as a comprehensive measure of firms’ working capital management efficiency (Shin & Soenen, 1998; Banos-Caballero et al., 2014; Vijayakumaran & Vijayakumaran, 2017; Vijayakumaran, 2019). The main independent variable in this study is the of working capital management efficiency (WCME) which is measured by the Net Trade Cycle (NTC). The NTC is a well-known measure of how a firm manages its short-term assets and liabilities effectively. It is calculated as:

NTC =IOD + SOD - POD

Where:

IOD (Inventories On-Hand Days): the average number of days inventory is on hand before it gets sold.

SOD (Sales Outstanding Days): the average number of days it takes a firm to collect payment from its customers.

POD (Payables Outstanding Days): the number of days on average a firm takes to pay its suppliers.

A lower NTC signifies better working capital management, because it means that the company is quicker to collect receivables, keeps inventory for a shorter time, and gets away with not paying suppliers without them cutting off supply. An inverse relationship is hypothesized between the efficiency of working capital management and firm value, with firms that manage their working capital efficiently likely to have a positive impact on liquidity, profitability, and market valuation. This is consistent with previous research—e.g., Vijayakumaran (2019) showed that working capital efficiency positively influences the performance of companies.

3.6.3 Control Variables

In line with previous studies (Shin & Soenen, 1998; Vijayakumaran, 2019), this study includes particular controls in the regression models to capture firm-specific characteristics that may have a relation with firm valuations, as described below:

Leverage (LEV): Leverage is measured by the ratio of total liability to total assets in the context of capital structure. It increases the risk on one hand, but also increases the potential return for a firm on the other hand.

Sales growth (SGR): is known as revenue growth and this represents the annual change in the total sales over another. Higher sales growth firms are typically thought to have higher market valuations.

Liquidity (LIQ): Current Ratio, which divides current assets by current liabilities and evaluates the ability to meet short-term needs. A higher liquidity ratio is generally linked with a better valuation of a company.

3.6.4 Mediator Variable: Financial Distress

The relationship between Working Capital Management efficiency (WCME) and Firm performance is analyzed where the researcher employed the variable financial distress as a mediator explaining the impact of a company's financial state on the relationship between the management efficiency of working capital and company value (Meliani & Henny; 2021). The unique effect of financial distress will be tested to evaluate how working capital efficiency impacts firm value, given the financial distress as per preceding research, such as Kieschnick et al. (2013) and Vijayakumaran (2019). The determination of financial distress will be based on the application of the Altman Z-Score formula.

The Altman Z-Score is a popular criterion for bankruptcy risk that shows the insight of financial distress. Due to the risk that firms with lower Z-scores will be struck by financial distress, they differ from other companies in how they deal with their working capital. It is expected that the relationship between NTC and financial distress will bring more light on how firms facing financial delicate circumstances avoid liquidity constraints.

3.7 Model Specification

This paper uses OLS and fixed-effects regression models to examine the impact of working capital management efficiency on firm value. The study will use the below regression models, Model 1 correlates Tobin's Q with the net trading cycle in addition to a set of firm characteristics to investigate to what extent the working capital management efficiency affects the firms' value, while Model 2 will be used to correlate the Tobin's Q with the component of the net trading cycle; Sales outstanding days, Inventories on-hand days and Payable outstanding days. The study will utilize Model 3 to test the mediating effect of Financial Distress on the relationship between the Net Trade Cycle (NTC) and Firm Value (Tobin's Q). Also, the study will use Model 4 to test the moderation effect of industry type on the relationship between the Net Trade Cycle (NTC) and Firm Value (Tobin's Q), moderation analysis evaluates whether the strength or direction of the

relationship between the independent variable and the dependent variable changes depending on the level of the moderator variable.

Model 1: $TQit = \beta 0 + \beta 1NTCit + \beta 2LEVit + \beta 3LIQit + \beta 4SGRit + INDi + FDit + \varepsilon it$….(1)

Model 2: $TQit = \beta 0 + \beta 1SODit + \beta 2IODit + \beta 3PODit + \beta 4LEVit + \beta 5LIQit + \beta 6SGRit + INDi + FDit + \varepsilon it$ …….… . (2)

Model 3: $TQit = \gamma 0 + \gamma 1\ NTCit + \gamma 2\ FDit + \gamma 3INDi + \gamma 4\ CONTROLSit + \varepsilon it$ ……..…… ……..(3)

Model 4: $TQit = \beta 0 + \beta 1NTCit + \beta 2FDit + \beta 3INDi + \beta 4(NTCit\ X\ IDSi) + CONTROLSit + \varepsilon it$ …….….(4)

Where:

TQit: Tobin's Q for firm i in year t, representing firm value

NTCit: Net Trade Cycle for firm i in the year t, representing working capital management efficiency.

SODit: Sales outstanding days for firm i in year t.

IODit: Inventory on-hands days for firm i in year t.

PODit: Payable outstanding days for firm i in year t.

LEVit: Leverage for firm i in year t.

LIQit: liquidity for firm i in year t.

SGRit: Sales Growth for firm i in year t.

IND: Industry type fore firm i

FD: Financial Distress score for firm i in year t.

$\gamma 2$: Effect of Financial Distress on Tobin's Q.

$\gamma 1$: Direct effect of NTC on Tobin's Q after considering Financial Distress.

β_3: Coefficient representing the moderation effect

i index firms, t years.

The below table (Measurement of variables) defines the study variables and clarifies their expected signs. The Equation error term is made up of five components, where: INDi, is the specific effect of the industry by including industry dummies, FDj is the specific effect of financial distress, this equation, a measure of effectiveness in working capital management (i.e., the Net Trade Cycle or NTC) has an impact on firm value already controlling for leverage, liquidity, and sales growth. This study also includes firm-specific fixed effects to control for unobserved, time-invariant shocks related to each firm that may affect the relationship between WCME and TQ.

Table 3.7.1: Variable measurements

Variables	Symbol	Measurement	Proposed relation with the firm value
The Firm value variable			
The Tobin's Q	TQ	(Equity Market value plus Liabilities book value) divided by Total Assets book value	
The Working Capital Management Variables			
Sales Outstanding Days	SOD	(Accounts receivables divided by sales) multiplied by 365	+
Inventories On-Hand Days	IOD	(Inventories divided by cost of good sales) multiplied 365	+
Payables Outstanding Days	POD	(Accounts payables divided by sales) multiplied 365 days	_
Net trade cycle	NTC	Aggregation of inventory, receivables, and payables days (SOD plus IOD minus POD)	+
The Control Variables			

Leverage of the company	LEV	Debt divided by Total Assets	+/-
Company Sales growth	SGR	(Current year's sales minus last year's sales) divided by last year's sales	+
Liquidity of the company	LIQ	Current ratio (Current assets divided by current liabilities)	+
The Moderating Variable			
Industry dummies	IND	Sector dummies based on PEX classifications for each firm	
The Mediating Variable			
Financial Distress	FD	Results based on Altman Z-Score results	+

3.8 Estimation Methodology

This study utilizes two primary estimation methods: the Ordinary Least Squares (OLS) and the Effects Regression (fixed-effects or random-effects). Both methods are widely used in empirical research in the field of finance and accounting to identify the relation between the variables. The fixed effects model will be first employed here, accounting for some features of the firm that are constant over time. The random effect model will be then applied to observe the variation among firms. Lastly, Hausman test will run to choose between fixed and random effects models so as to make the best fit for the dataset (Hausman, 1978). Furthermore, Altman's Z-Score will be served as a mediator, which considered financial distress as a good measure to show its effect on the relationship of working capital management and the firm's value.

3.8.1 Linear Regression Technique OLS

In simple words, the OLS is a regression method that estimates the relationship between dependent and independent variables by minimizing the sum of squared residuals We consider this method as the base of this study for its simplicity and interpretability and to have some initial idea of the effect of working capital management efficiency in firm value.

Unfortunately, OLS is based on the presence of an uncorrelated error term and there are no unobserved differences across firms. However, the assumption of a common factor can be violated in panel data settings, which leads to estimates that are biased and

inconsistent. If firm-specific time-invariant characteristics are correlated with independent variables OLS will give biased results. As a result, as informative as OLS results are in framing the analysis, their interpretation should be taken with caution.

3.8.2 Fixed-Effects Regression

This study will employ fixed-effects regression to tackle the limitations associated with OLS, conditional upon the result of the Hausman test. The fixed-effect model is particularly suited for panel data as it nets out firm-specific, time-invariant attributes, isolating the effects of working capital management efficiency on firm value. By netting out all the time-invariant characteristics, fixed effect regression focuses on the variation within firms over time.

This research would be well placed within the application of fixed-effects regression, taking into consideration the diverse sample of non-financial firms listed on PEX. However, the final decision on whether to use a fixed-effects model or the random-effects model will depend on the result of the Hausman test, as it will reveal whether effects specific to firms are correlated with independent variables. If the Hausman test indicates that a fixed-effects regression is appropriate, this will be the model used. Otherwise, a random-effects regression will be considered.

Prior investigations, including the work of Vijayakumaran (2019), have employed fixed-effects regression techniques to address firm-level heterogeneity, thereby improving the reliability of findings. Studies on working capital management efficiency, including Dhole et al. (2019) and Deloof (2003), also employ fixed effects to better understand the factors driving firm value. This approach will enable a more accurate estimation of the impact of working capital management efficiency on firm value, provided that the Hausman test favors the fixed-effects model.

3.8.3 Hausman Test

The Hausman test will be conducted to determine which modeling approach—fixed-effects or random-effects—is most appropriate for this research. The fixed-effects model posits that the unique effects associated with individual firms are correlated with the

independent variables, whereas the random-effects model maintains that these effects are uncorrelated. If the result of the Hausman test indicates that the Fixed Effects model is the winner, then this technique will be used in estimating the relationship between working capital management efficiency and firm value.

3.8.4 Why Use OLS and Effects Regression?

Empirically, both OLS and effects regression are generally used to estimate the link between variables in panel data. In this study, OLS is used as a first tool to get an easy and intuitive estimation of the link existing between working capital management efficiency and firm value. This initial analysis can give a preliminary understanding of the existence of a relationship, though it may suffer from omitted variable bias if firm-specific characteristics affect both working capital management efficiency and firm value.

However, fixed-effects regression is chosen as the main method, contingent upon the result of the Hausman test, because its better accounts for unobserved firm-specific effects. This is particularly important in the Palestinian market, where firms may exhibit unique, time-invariant characteristics that could influence both financial performance and market valuation. Using fixed-effects regression, assuming the Hausman test supports this approach, allows for a more precise analysis of the relationship between working capital management efficiency and firm value, while controlling for these firm-specific effects.

3.8.5 Strength of the Econometric Methodology

The use of fixed-effects regression (depending on the Hausman test result) in this study offers several benefits:

Fixed Effects: The fixed-effects method addresses unobserved heterogeneity across firms, accounting for time-invariant characteristics such as managerial ability and ownership structure. This is crucial for avoiding bias in estimating the impact of working capital management efficiency on firm value.

Endogeneity: In panel data analysis, endogeneity can arise when independent variables are correlated with the error term, leading to biased estimates in OLS models. Fixed-effects regression helps mitigate this issue by leveraging within-firm variation while controlling for time-invariant sources of endogeneity.

Overtime-Invariant Variables: Fixed-effects regression controls for all time-invariant variables, eliminating omitted variable biases. Random-effects models are less suitable in this case, as they may exacerbate both endogeneity and heteroskedasticity. By using fixed effects (if the Hausman test indicates their suitability), the study can make causal inferences from the panel data.

Panel Data Advantage: While cross-sectional or time-series data alone can provide valuable insights, panel data allows for a more comprehensive analysis by combining both dimensions. This enables the study to track individual firms over time and account for both within-firm and between-firm variation, resulting in a more robust set of results.

Given these advantages, fixed-effects regression (pending the Hausman test result) is particularly well-suited for this study's research question, as it allows for a more detailed exploration of how working capital management efficiency influences firm value while controlling for potential cross-sectional effects.

3.9 Ethical Considerations

This research adheres to the relevant ethical guidelines by having any permission required for data usage and maintaining the confidentiality of firm-level data. This study utilizes publicly available data from the Palestine Stock Exchange (PEX) and contains no confidential, proprietary, or rights-restricted information. This will be amalgamated data only with no individual businesses being referred to in the report. The publication is undertaken with the strictest standards, independence, and academic integrity. All data handling has been carried out responsibly, conscientiously, and transparently.

4. Chapter Four: Study Results

4.1 Introduction

Empirical findings from the study are presented in this chapter, and the research questions and hypotheses previously outlined are answered here. With the adoption of rigorous statistical techniques, the chapter seeks to find the relationship between working capital management efficiency (WCME) and firm value, as measured by Tobin's Q, in the context of Palestinian-listed firms. These analyses are rooted in the theoretical paradigms established in Chapter Two and build upon the methodology outlined in Chapter Three. This chapter is written to provide key, contributing insights to the academic body and practical applications of financial management. This fourth chapter of the study is a pivotal point for a complete perception of the connection between WCME and the firm's value in the Palestinian market. This chapter explains the findings where it is through solid empirical testing, what the findings mean, and then links the findings to the overall research questions and hypotheses.

Chapter four systematically presents the outcomes obtained from data analysis from Palestinian firms listed on the Palestine Exchange (PEX). It utilizes advanced statistical techniques, such as regression for hypothesis testing, to confirm the relationships between working capital efficiency and company value.

This research analyzes the influence of basic variables like inventory in days, sales in days, and payables in days on firm value and then explores these influences through the moderating role of industry type and the mediating role of financial distress.

This chapter starts by performing some descriptive statistics analysis of the dataset that forms a basis for understanding the properties of the main variables. These are the dependent variable (Tobin's Q), independent variables (Net Trade Cycle and its components), control variables (leverage, liquidity, sales growth), mediator variable (financial distress), and moderator variable (industry type). The final sample consists of 21 non-financial companies, over 11-year of study period, giving 231 observations. All

companies are listed on the Palestine Exchange (PEX), and come from service, industrial, and investment sectors.

To develop a comprehensive analysis, this chapter utilizes parametric and non-parametric approaches in testing for direct relationships between WCME and firm value. Under the consideration of traditional parametric methods' limitations like sensitivity to heteroscedasticity and non-linearity, the study also employs Kernel estimation and Quantile regression. By using these non-parametric methods, they can better adapt to non-linear relationships and the particular circumstances of the data, such as how firms differ from each other and how over time they change.

4.1.1 Chapter's structure

This chapter is structured progressively, moving toward an increasingly complex analysis that supports a story that is coherent with the objectives of this study:

Descriptive Statistics: In this sub-section, the dataset is introduced through the most relevant variables of Tobin's Q, Net Trading Cycle (NTC)and its components. The summary statistics provide a base layer for at least a general understanding of properties of the data, such as its variation, and dispersion.

Hypothesis Testing: The chapter uses a range of econometric models (e.g., OLS; fixed effects; random effects models), to systematically and empirically test the main and subsidiary hypotheses. Using non-parametric methods help to lift the restrictions of Heteroscedasticity and non-linearity of data.

Results & Discussion: This section explains the outcomes of regression and discusses the relation between WCME and firm value. The study duly emphasizes the moderating role of industry type and the mediation role of financial distress.

Model Diagnostics: A summary of critical diagnostic tests for heteroscedasticity, multicollinearity, and normality checks for the outcome, ensuring the robustness and reliability of the results.

Discussion of Findings: This section begins by sharing empirical results of the theoretical frameworks outlined in Chapter Two, imparting practical implications from a managerial and policymaking perspective.

Conclusions and Implications: It concludes with a summary of results, implications of the results for financial strategies in emerging markets, and directions for future research.

Utilizing this ordered progression will assist in guaranteeing that this chapter plays a role in providing answers to the inquiries put forward in the study's objective, corroborating the original hypotheses established in the research, and producing findings that contribute to the forthcoming body of literature. Applying robust statistical techniques will thus help in providing a more nuanced understanding of the relationship between WCME and firm value, and desires to contextualize the findings in the unique economic and political context in Palestine.

4.2 Descriptive Statistics

Descriptive statistics give a quick overview of the dataset showing its key characteristics and giving an overview of the variability and distribution of the variables in question. This data is used to create a base for further analytics to provide a more in-depth look into how working capital management efficiency (WCME) relates to firm value. The data is derived from 231annual observations from 21 non-financial companies listed in Palestine Exchange (PEX) in three sectors: service, industrial, and investment. This section explains salient characteristics of the dataset, including Tobin's Q, net trade cycle (NTC), inventory on-hand days (IOD), payables outstanding days (POD), sales outstanding days (SOD), financial distress as a mediator variable, and industry moderating variable.

4.2.1 Dataset Characteristics

As shown in the below tables the initial sample reflects the diversity of the Palestinian market. There are nine firms from the service sector; eleven firms from the industrial sector; and twelve firms from the investment sector. For analytical purposes, these firms are further classified into either manufacturing (industrial sector) or non-manufacturing

(service and investment sectors) using binary dummies. As shown in details in appendix 1 (at the end), due to the lack of availability of the required financial data during the study period and the failure to meet the sample conditions 10 companies out of 32 were excluded. In this case, the final number of sample companies was 21, with annual data observations of 231, 11 observations per company. These observations were used for analysis and testing hypotheses.

The results of the summary statistics are presented in Table 4.1 providing essential information related to the key variables:

Table 4.1: Key Variables for Measuring WCME and Firm Value

	TQ	NTC	IOD	POD	SOD
Mean	0.930092	146.4993	172.0079	249.9965	224.7476
Median	0.886906	150.7057	94.67383	85.00886	152.4004
Maximum	1.977515	3104.336	2667.275	2228.979	1117.156
Minimum	0.235855	-1966.46	0	0.96567	11.80285
Std. Dev.	0.298588	489.1433	298.8175	432.1993	191.6163
Skewness	0.545019	0.395232	4.411839	2.73332	1.575425
Kurtosis	3.879869	12.11004	28.49163	10.06909	5.611384
Jarque-Bera	18.88765	804.82	7003.923	768.6155	161.1916
Probability	0.000079	0.000000	0.000000	0.000000	0.000000
Observations	231	231	231	231	231
	LEV	LIQ	SGR	IND	FD
Mean	0.331969	2.647566	19.73443	0.467532	4.030469
Median	0.316751	1.726234	2.259743	0	2.13418
Maximum	1	14.86251	2528.391	1	101.7955
Minimum	0.004444	0.024975	-85.0461	0	-1.04293
Std. Dev.	0.183678	2.528721	170.8866	0.500028	8.911687
Skewness	0.501498	2.163581	13.83051	0.130145	7.669814
Kurtosis	3.345528	8.078757	202.8897	1.016938	74.29212
Jarque-Bera	10.83188	428.4868	391939.9	38.50276	51184.51
Probability	0.004445	0.000000	0.000000	0.000000	0.000000
Observations	231	231	231	231	231

TQ: Tobin's Q, NTC: Net trade cycle, IOD; Inventory on-hands days, POD: Payable outstanding days, SOD: Sales outstanding days, LEV: Leverage, LIQ: Liquidity, SGR: Sales growth, IND: Industry, FD: Financial distress.

Tobin's Q (TQ), representing firm value, has a mean of 0.930, suggesting that, on average, firms are valued slightly below their total assets. It ranges from 0.236 to 1.978, while the skewness is moderate (0.545), which indicates possibly some degree of firm valuation heterogeneity.

Net Trade Cycle (NTC): This proxy for WCME has a mean of 146.499 days, again indicating very pronounced differences in how companies manage their working capital. The variance is large, thriving from -1966.46 to 3104.336, indicating inefficiencies, and discrepancies between firms. Positive skewness of 0.395 indicates slight asymmetry in the distribution.

Inventory On-Hand Days (IOD): on average 172.007 days, indicating many companies hold onto their inventory for long periods, the span between 0 and 2667.275 days, highlights inefficiencies in inventory management, especially in manufacturing companies with production and storage difficulties. The skewness with the value of 4.412 indicates the existence of considerable outliers.

Sales Outstanding Days (SOD): the researcher observes the average collection period, in 224.747 days, in the range of 11.803 days, to a maximum of 1117.156 days. The high skewness (1.575) means there is variation in the handling of receivables, especially for those companies operating in sectors with liquidity pressures.

Payables Outstanding Days (POD): The average here is 249.997 days, indicative of the firm's willingness to elongate payment cycles to meet liquidity. But, its wide span (0.966 to 2228.979 days) tells that there is room for inefficiencies and strained supplier relationships.

The key variables analysis plays a fundamental role which gives further insight into the interactions between WCME and firm value for Palestinian firms. Average Tobin's Q—the key charter for firm value—discloses that firms there frequently enjoy a market Q close to their total assets. Yet the variation in Tobin's Q reveals a stark divide in how efficiently firms deploy their resources. However, Tobin's Q - investment efficiency varies from firm to firm, some firms do create tons of market value for every unit of the

asset they own but others strive to reach a competitive efficient level which makes Tobin's Q a vital performance indicator.

The Net Trade Cycle (NTC) shows a wide span and variance between firms, indicative of differences in working capital management approaches. Firms that exhibit negative NTC values demonstrate extraordinary levels of efficiency, employing these cash conversion cycles such that they can remain liquid and have agility in their operations. On the contrary, firms with longer NTCs encounter operational inefficiencies that impede their performance, indicating a pressing requirement for focused strategies to improve WCME practices.

Inventory On-Hand Days (IOD) variability is extensive, particularly between sectors. Manufacturing implications, which depend on the value and require a large inventory for production-processing exhibit greater IOD. There is, thus, an urgent need to develop adequate measures to reduce inventory turnover to reduce the quality holding costs and improve liquidity.

On the other hand, firms face credit management and receivables collection challenges, as indicated by Sales Outstanding Days (SOD). It is around this context of cash management that WCME takes shape, and within this space, the efficient management of receivables becomes a crucial focus area for enabling firms to sustain cash flow and be flexible in their operations.

Payables Outstanding Days (POD) is a measure of companies' attempts to optimize liquidity through extending payment cycles. Although this helps defer cash outflows, prolonged payment terms can put pressure on supplier relationships and disrupt supply chains. Such an outlook emphasizes the need for a balanced approach to managing payables that marries liquidity optimization and effective supplier relationships.

It's necessary to consider the mean values from the data; the average firms have leverage of 33.2%, a liquidity ratio of 2.65 and sales growth of 19.73%. The industry variable (IND) shows that 46.8% of the sample belongs to manufacturing companies, while financial distress (FD) at 4.03 on average. The results display considerable variation by

the variables. For example, the sales growth (SGR) displays very high dispersion, indicated by a high standard deviation (170.89) and extreme values (-85.05 to 2528.39) that imply very high heterogeneity of firm performance. Liquidity (LIQ) also shows this behavior, with a highly skewed distribution (skewness = 2.16) and a kurtosis of 8.08, which indicates the presence of outliers. These raw statistics draw attention to the diversity in financial and operational characteristics across the surveyed firms that are critical to understand the relationship between these variables under consideration. Tests for normality (probabilities derived from the Jarque-Bera test) indicated that most variables are not normally distributed, and therefore, robust statistics would be applied in subsequent analyses.

The moderate and mediator variables further demonstrate the complexity of the WCME-firm value relationship, and serves as a moderator variable for industry classification (IND), which distinguishes the market mechanisms for both manufacturing and non-manufacturing firms. This separation enables a fine measure of challenge and strategy by sector. As a mediating variable, financial distress (FD) represents the economic challenges experienced by firms further highlighting sustainable WCME as critical in reducing financial distress issues. Therefore, by mitigating the costs of financial distress, WCME promotes firm stability and resilience during unfavorable economic conditions.

The descriptive statistics reflect a significant variance in WCME practices and financial performance among Palestinian firms. These discrepancies reflect the need for more specific methods to resolve inefficiencies and enable value generation. Statistics play an important role in providing growth to the stage of hypothesis testing and further analysis by providing an intuitive insight into the underlying structure of the data. This summary of the dataset validates the significance of WCME in providing suitable solutions that meet the unique needs of the Palestinian market. Moreover, they assist managers and policymakers in effectively enhancing the performance of firms in emerging markets because sound working capital management practices can mitigate financial strain, optimize liquidity, and increase the valuation market services of the firm.

4.3 Hypotheses Testing Methods

This research is centered on hypothesis testing in order to examine how working capital management effectiveness (WCME) interacts with corporate value through the mediating of financial distress and moderating of industry type. The study uses various parametric models (OLS, fixed effects, and random effects models) to examine the effect of Net Trading Cycles (NTC) on the value of the firm. However, diagnostic tests indicate that these parametric models suffer from many limitations, like heterogeneity in model error variance, non-normal distribution of model residuals, and serial correlation, which affect the validity of statistical inferences. Consequently, the focus of the study shifts towards non-parametric approaches, including Quantile regression and Kernel estimation, that provide a more flexible framework of analysis for the measurement of variables, allowing capturing both non-linearity's and omitted variable bias. These sophisticated methods give more insights into WCME content over sectors and financial regime. This approach bolsters the analysis through the systematic application of these methodologies that lend not only academic heft but also practical relevance to WCME and its implications for corporate value within emerging markets.

4.3.1 Testing the Hypotheses

4.3.1.1 Introduction

Following this decomposition, the researcher begins the process of hypothesis testing critical to the determination of whether a relationship exists between the Net Trading Cycle (NTC) and firm value, measured by Tobin's Q (TQ). The main goal is to determine if longer trading cycles lower the value of Palestinian listed companies, the hypothesis supported by (1): A longer NTC decreases firm value. This hypothesis is grounded on the theories of finance which prove that effective working capital management is an important antecedent to better operational performance and creates value to be provided back to the stockholder.

4.3.1.2 Primary Assumption Test before Testing the Panel Data Estimates - Hypothesis H1 Testing

The first hypothesis studies the direct influence of the Net Trading Cycle (NTC) on firm value. An optimization of working capital would be reflected in a shorter NTC and is expected to positively affect Tobin's Q:

H1: Net trading cycle negatively impacts the value of Palestinian listed firms.

4.3.1.2.1 OLS Regression Model 1

The first phase of this study's hypothesis testing is done by analyzing the relationship between NTC and firm value using Ordinary Least Square (OLS) regression method. This model statistically estimates the linear relationship of the dependent variable (firm value measured by Tobin's Q) to simultaneous multiple independent variables, namely NTC, leverage, liquidity, sales growth and including industry type as well as financial distress. And below table contains the regression results.

Table 4.2: OLS Regression Results and Analysis for Hypothesis H1

Variable	Coefficient	Std. Error	t-value	p-value	Significance
NTC	-0.000144	0.000045	-3.23	0.0014	Significance
LEV	0.459656	0.132735	3.46	0.0006	Significance
LIQ	0.022948	0.00964	2.38	0.0181	Significance
SGR	-0.000021	0.00011	-0.19	0.8505	Not Significant
IND	0.118602	0.038475	3.08	0.0023	Significance
FD	0.00108	0.002441	0.44	0.6586	Not Significant
R-squared 0.119567					
F-test 5.070061					
Number of Obs. 231					
Prob > F 0.000067					
Significant at the 5% level ($p < 0.05$)					

Interpretation of Coefficients

1. Net Trading Cycle (NTC)

The coefficient for NTC is again negative and statistically significant (coefficient = 0.000144, $p < 0.01$), which supports the hypothesis that longer trading cycles are bad for firm value. This observation is consistent with the established financial literature in which inefficiencies in the management of the cash conversion cycle stemming from delays in the collection of receivables, excessive inventory or prolonged payables can hurt liquidity as well as profitability to result in a lower market valuation. They help maintain healthy operational cash flows and also a competitive market position via effective working capital management, with shorter trading cycles.

2. Leverage (LEV)

The coefficient has a positive and significant effect (0.459656, $p < 0.01$), suggesting leverage is positively associated with the firms' valuation. Firms in emerging markets have less access to equity financing than firms in developed markets, so firms in emerging markets will tend to utilize debt financing for growth and expansion, which explains this relationship. And when used responsibly, leverage enables firms to fine-tune their capital structure and deliver greater returns on equity, to the benefit of shareholders.

3. Liquidity (LIQ)

The positive and significant coefficient for liquidity (0.022948, $p < 0.05$), indicates that having enough liquid assets to satisfy short-term obligations is imperative. Investors usually appreciate strong financial health and operational flexibility, which is why higher liquidity ratios make sound business sense. The capacity to rapidly respond to unanticipated liquidity demands without incurring expensive external financing costs has a positive impact on firm valuation.

4. Industry Type (IND)

The industry type variable indicates a positive and statistically significant effect on firm value (coefficient = 0.118602, $p < 0.01$). This finding emphasizes the prominence of industry-specific variables, like market landscapes, competitive dynamics, and regulatory environments, in explaining a firm's valuation. Some industries may display more

consistent or favorable growth potential, leading to superior firm performance and valuations.

5. Sales Growth (SGR) and Financial Distress (FD)

Sales growth and financial distress have no statistically significant relationship to firm value. Thus, periods of low sales or financial stress don't make a big difference in valuing the firms in this context. The insignificance of these variables could indicate that the market is valuing long-run operational efficiency over short-run performance metrics.

Model Diagnostics and Assumption Testing

In order to verify the validity and robustness of regression results, diagnostic tests were conducted to assess key assumptions underlying the OLS model:

1. Test of Heteroscedasticity (Breusch-Pagan test)

Its p-value is equal to 0.0343 which is less than 0.05 which indicates presence of heteroscedasticity. When heteroscedasticity is present, OLS estimators remain consistent, but they are no longer efficient, meaning that they do not provide all possible information about the data. This may lead to biased estimators and to do use robust standard errors or to transform the data.

2. Normality Test for Residuals (Jarque-Bera Test)

P-value of 20.35 from Jarque-Bera test indicates that residuals are not normally distributed. This assumption is important, given that these are needed for hypotheses testing and confidence intervals to be valid -- especially at small sample sizes. The non-normality of residuals implies that different estimation techniques need to be used, i.e., not parametric techniques, for drawing accurate and reliable conclusions.

Discussion of Model Diagnostics and Assumption Testing Results

The heteroscedasticity and non-normality of residuals indicate that the assumptions of OLS model might potentially breach. These challenges underscore the need for further validation using robust or non-parametric estimation methods. In this advanced analysis,

the researcher will incorporate fixed effects and random effects models into the researcher understanding of how to interpret the results for unobserved firm heterogeneity which may lead to more accurate and dependable estimates. Further investigations with different models and advanced diagnostic tests were needed to enhance the solidity of these findings and engage evidence- based financial decisions.

4.3.1.2.2 Fixed Effect Model

Based on the selection of fixed effect model which eliminates all unobservable firm-specific characteristics that are constant through time and may affect the dependent variable, this model attempts to isolate the effect of independent variables like NTC on firm value.

Regression Results

Overall, the following table shows summary of the regression output for Model 1:

Table 4.3: Fixed Effect Model Output for Hypothesis H1

Variable	Coefficient	Std. Error	t-value	p-value	95% Confidence Interval	Significance
NTC	0.000056	0.000033	1.66	0.0976	-0.00001 to 0.000122	Not Significant
LEV	0.684166	0.103087	6.64	0.0000	0.480914 to 0.887418	Significant
LIQ	0.001809	0.006146	0.29	0.7688	-0.010308 to 0.013926	Not Significant
SGR	0.000004	0.000056	0.07	0.9464	-0.000106 to 0.000114	Not Significant
IND	0.0631	0.064805	0.97	0.3314	-0.064674 to 0.190874	Not Significant
FD	0.000466	0.001721	0.27	0.7866	-0.002926 to 0.003859	Not Significant
Constant	0.658562	0.051254	12.85	0.0000	0.557507 to 0.759616	Significant
Mean dependent variable: 0.930092						
Standard deviation of dependent variable: 0.298588						
Within R-squared: 0.1974						
Number of observations: 231						
F-test: 8.362303 (p-value = 0.0000)						
Akaike Information Criterion (AIC): -277.115831						
Bayesian Information Criterion (BIC): -253.018907						
Significant at the 5% level ($p < 0.05$)						

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Model Diagnostics and Assumption Testing

To verify the validity and robustness of regression results, diagnostic tests were conducted to assess key assumptions underlying the OLS model:

1. Test of Heteroscedasticity (Breusch-Pagan test)

Its p-value is equal to 0.0343 which is less than 0.05 which indicates the presence of heteroscedasticity. When heteroscedasticity is present, OLS estimators remain consistent, but they are no longer efficient, meaning that they do not provide all possible information about the data. This may lead to biased estimators and the use of robust standard errors or to transform the data.

2. Normality Test for Residuals (Jarque-Bera Test)

A P-value of 20.35 from the Jarque-Bera test indicates that residuals are not normally distributed. This assumption is important, given that these are needed for hypothesis tests and confidence intervals to be valid -- especially at small sample sizes. The non-normality of residuals implies that different estimation techniques need to be used, i.e., not parametric techniques, for drawing accurate and reliable conclusions.

4.3.1.2.3 Interpretation of Hausman Test

The Hausman test is performed to check the suitability of fixed effect and random effect model. The test determines whether the unobserved firm-specific effects are correlated with the explanatory variables. The null hypothesis of the Hausman test is that the random effect model is consistent and efficient, while under the alternative hypothesis that the fixed effect model is preferred when the unobserved effects are correlated with explanatory variables.

Table 4.4 shows the Hausman Test Results followed by its interpretations.

Table 4.4: Hausman Test Results

Variable	Coefficient (Fixed)	Coefficient (Random)	Difference	Std. Error
NTC	0.0000557	0.0000433	0.0000124	7.98E-06
LEV	0.6841663	0.06613454	0.0228209	0.0239397
LIQ_	0.0018089	0.0024705	-0.0006616	0.0009293
SGR_	3.75E-06	1.31E-06	2.44E-06	5.08E-06

IND_	0.0630997	0.0811701	-0.0180704	0.0291001
FD	0.0004664	0.0007328	-0.0002664	0.0003514
Chi-Squared (χ^2): 3.87				
p-value: 0.6949				

The test-result yielded a chi-squared of 3.87 and p-value of 0.6949. The fact that the p-value exceeds the traditional significance threshold of 0.05 indicates that the researcher does not reject the null hypothesis. This implies that the fixed and the random effect models are not significantly different from each other, and thus random effect modeling is still a valid choice. It was also shown that, except for small samples and some estimation methods, the random effect model is preferred under the conditions where the fixed effect model is biased or its estimates are inefficient.

4.3.1.2.4 Random Effect Model

The random effect model is more generalizable than the fixed effect model as it assumes firm-specific effects are random and uncorrelated with explanatory variables. This is beneficial because it relaxes the strict assumption that firm-specific traits are time-invariant.

Leverage (LEV) statistically significant according to the regression output results, shown in table 4.6 below, whereas another independent variable such as net trade cycle (NTC), liquidity (LIQ), sales growth rate (SGR), industry (IND), and financial distress (FD) does not have statistical significance. Quite interesting is the result confirming that leverage is pivotal in explaining firms' performance while other indicators do not have a significant direct impact in this model. The average value of the dependent variable, 0.930092 with a SD 0.298588 as per model output. The adjusted R-squared is 0.1967, and this means that our model creates about 19.67% of our dependent variable. Chi-square statistic 49.398790 p-value 0.000000 overall model is statistically significant for data fits well Nonetheless, the statistical significance levels of individual coefficients differ, indicating that not all explanatory variables are equally useful in explaining firm performance.

Table 4.5 shows the Random Effect Model Output for Hypothesis H1 results followed by its interpretations.

Table 4.5: Random Effect Model Output for Hypothesis H1			
Variable	Coefficient	P-value	Significance
NTC	0.000043	0.1831	Not Significant
LEV	0.661345	0.0000	Significant
LIQ	0.00247	0.68425	Not Significant
SGR	0.000001	0.981186	Not Significant
IND	0.08117	0.160975	Not Significant
FD	0.000733	0.663531	Not Significant
Mean dependent variable: 0.930092			
Standard deviation of dependent variable: 0.298588			
Within R-squared: 0.1967			
Number of observations: 231			
Chi-square: 49.398790 (p-value: 0.000000)			

Diagnostic Testing for Random Effect Model

The serial correlation test resulted in the existence of serial correlation with p value less than 0.05. This implication states that residuals are not independent in time, causing a violation of one of the most important assumptions of the model. Serial correlation may produce inefficient estimates and biased statistical tests according to the same meaning which means that some adjustments to be applied to fix the problem. Also, assessing the normality of residuals was done with the Jarque-Bera test, in addition to serial correlation. For the test result, the statistic calculated was 492.7, which suggests significant departure from normality.

In addition, multicollinearity was evaluated using Variance Inflation Factor (VIF). The findings showed that VIF values of all the independent variables were below the general threshold of 5, confirming that multicollinearity did not occurs among them. This verifies that the explanatory variables are indeed sufficiently uncorrelated with each other; hence, the risk of unreliable estimates of coefficients due to multicollinearity of predictors is reduced.

4.3.1.2.5 GMM Estimation Results

The following test was applied using the Generalized Method of Moments (GMM) to estimate the relationship between the WCME and TQ in order to handling the endogeneity issue. To enhance the estimation accuracy, the model also uses lagged firm value (TQ) and lagged independent variables (NTC, LEV, LIQ, SGR, IND, and FD) as instruments.

Interpretation of Results

Table 4.6 shows the Generalized Method of Moments (GMM) Output for Hypothesis H1 results followed by its interpretations.

Table 4.6: GMM Estimation Results – Dynamic Panel				
Variable	Coefficient	Std. Error	t-Statistic	p-Value
C (Constant)	-1.028476	1.481236	-0.694336	0.4884
NTC_IT (Net Trade Cycle)	0.001072	0.000799	-1.340484	0.1818
LEV_IT (Leverage)	3.221725	2.451583	1.314141	0.1905
LIQ_IT (Liquidity)	0.557040	0.345846	1.610662	0.1090
SGR_IT (Sales Growth Rate)	-0.008912	0.015449	-0.576859	0.5647
IND_I (Industry Type Dummy)	-0.371013	0.685421	-0.541292	0.5890
FD_IT (Financial Distress)	-0.023061	0.027638	-0.834403	0.4051
Statistic			Value	
R-squared			-46.507	
Adjusted R-squared			-48.073	
S.E. of regression			2.059813	
Durbin-Watson stat			0.927640	
J-statistic			7.00E-26	
Instrument rank			7	

A very poor model fit is suggested again through negative R-squared (-46.507) and adjusted R-squared (-48.073) statistics indicating that the variables selected do not explain variations in differences in firm value very well. Meanwhile, the Durbin-Watson statistic of 0.927640 indicates possible autocorrelation, which may necessitate model adjustment. In this case, the extremely low J-statistic (7.00E-26, to be precise) suggests that the instruments are weak, which can produce unreliable estimates.

As is clear from the results, none of the independent variables are statistically significant at the 5% significance level. The Net Trade Cycle (NTC) shows a negative coefficient (-0.001072), indicating that there might be a negative relationship to firm value, however, with a p-value of (0.1818) this isn't statistically significant. This result is consistent with the previous findings of NTC as an aggregated measure that typically dilutes the opposing effects of its components (IOD, SOD, and POD), which makes its direct impact less straightforward.

Leverage (LEVIT) has a positive coefficient that is significantly large (3.221725), which means that higher leverage will increase the value of the firm, but the p-value (0.1905) of this positively suspected assumption suggests that this is not a significant positive relation as suggested. In the same manner, liquidity (LIQ) shows a slightly positive effect (0.557040), but the p-value (0.1090) indicates a marginal significance, meaning that higher liquidity can be good to the firm; however, it does not strongly determine the firm value, while sales growth, industry type and financial distress are not statically significant.

Implications and Recommendations

The findings of the GMM test demonstrate the need for the use of a more relevant and suitable testing tools in this study to reduce endogeneity as well as strengthen the reliability of the results. These findings highlight the importance of addressing weak instrument validity in GMM estimation as the selected sets of lagged variables fail to serve as strong predictors indicating the necessity to leverage different econometric approaches in the study. In light of these limitations, it becomes imperative to consider non-parametric estimation approaches that provide the flexibility to model intricate relationships that parametric models might miss. Furthermore, to the best of our knowledge, decomposing NTC into its components such as IOD, SOD, and POD in this study will give an insight into how different aspects of the efficiency of working capital management affect the value of the firm. The employment of non-parametric and adaptive modeling techniques has yielded a more precise and trustable empirical

assessment, providing a more definitive illustration of the correlation between WCME and the firm value from the Palestinian perspective.

4.3.1.2.6 Transitioning to Non-Parametric Approaches

As traditional econometric models such as Ordinary Least Squares (OLS) regression, Fixed Effects, Random Effects, and GMM model tests are grounded in certain foundational assumptions, nonparametric approaches will reduce endogeneity and nonparametric tests can be utilized as more robust alternatives when those assumptions are violated. Nonparametric methods also do not make assumptions about the functional form of the relationships between the covariates and the responses, nor do they impose assumptions about the error distribution in the way parametric models do. Nonparametric methods are thus particularly appropriate when the assumptions (linearity, normality, homoscedasticity, etc.) of the linear regression model are violated (Wooldridge, 2010).

4.3.1.2.6.1 Quantile Regression

Quantile regression targets estimating conditional quantiles of the dependent variable instead of the mean. Quantile regression arises from the minimization of these functions and thus its estimates reflect how independent variables affect the dependent distribution at different points in it (median, upper quartiles, etc.) It's particularly helpful to solve problems like the non-normality of error terms or outliers in data as a widely applicable research tool to characterize heterogeneity (Wooldridge, 2010). Quantile regression is a robust alternative to OLS regression that, in the presence of violations in the assumptions of normality and homoscedasticity.

Table 4.7 shows the Quantile regression results followed by its interpretations.

Table 4.7: Quantile Regression Results for Hypothesis H1

Variable	Coefficient	Std. Error	t-value	p-value	95% Confidence Interval	Significance
NTC	-0.000124	0.000053	-2.35	0.019464	-0.000229 to-0.00002	Significant
LEV	0.335829	0.157401	2.13	0.033963	0.025654 to 0.646005	Significant
LIQ	0.028	0.011432	2.45	0.01508	0.005472 to 0.050527	Significant
SGR	0.000012	0.000131	0.09	0.925448	-0.000245 to 0.00027	Not Significant
IND	0.072721	0.045625	1.59	0.112373	-0.017188 to 0.16263	Not Significant

FD	0.000033	0.002894	0.01	0.990905	-0.00567 to 0.005737	Not Significant
Constant	0.691064	0.081522	8.48	0.000000	0.530417 to 0.851712	Significant
Mean dependent variable: 0.930092						
Standard deviation of dependent variable: 0.298588						
Pseudo R-squared: 0.074820						
Number of observations: 231						
Significant at the 5% level ($p < 0.05$)						

Key Findings and Interpretation

The Net Trade Cycle variable has a negative and significant impact on the firm value with a coefficient of -0.000124 and a p-value of 0.019464. This indicates that an increased value of NTC leads to a decreased Tobin's Q. That is prolonged working capital cycles reduces firm value.

Leverage (LEV) positively and significantly impacts firm value, with a coefficient of (0.335829) and a significance value of (0.033963). This proves the positive effect of leverage on firm value, which implies that appropriate utilization of debt increases the financial performance of the firms listed on the Palestine Exchange. The finding indicates the proper utilization of borrowed capital to produce returns that exceed corresponding costs.

Liquidity (LIQ) has a positive and significant effect on a firm value, yielding a coefficient of 0.028 and a p-value of 0.01508. This relation indicates that liquidity has a positive effect on the value of a firm. This emphasizes the necessity of keeping sufficient liquid resources for effective operations and minimizing financial distress occurrence.

Sales Growth (SGR) appears to have no substantial impact on firm value with coefficient = 0.000012 and p-value = 0.925448. Since the sales growth is not a significant variable in the model, it means it doesn't have a meaningful relationship with firm value. It also implies that other elements may mediate the relationship between revenue growth and valuation.

IND (industry Type) Coefficient = 0.072721 and p-value = 0.112373 (no significant effect on firm value), the limited relevance for some industry categories could arise from heterogeneity in the dataset or from the similarity of the industry categories.

Financial Distress (FD) has a coefficient of 0.000033 and a p-value of 0.990905, suggesting that FD has an insignificant influence on firm value. This evidences that the firms sampled adequately manage distress-related variables such that its effects cannot be observed on the valuation of the firm.

Quantile regression, used in this analysis, has advantages and disadvantages. It captures the influence of explanatory variables at different locations on the distribution of the dependent variable and is consistent with outliers and violations of the normality of error terms, which correctly addresses the dataset. Conversely, given the pseudo-R-squared = 0.074820, there are signs of limited explanatory power, indicating the potential need for further variables or more complex modeling techniques. It also does not incorporate panel-specific effects, and thus its applicability to datasets involving unobservable heterogeneity of size/firm year-specific differences may be limited.

Those findings have important implications. The negative and significant relationship between the NTC and firm value highlights the need to consider working capital cycles. The nuanced aspect of leverage and liquidity highlights those financial policies encouraging judicious capital deployment and liquidity management can increase the value of the firm. So, the insignificant result for the sales growth and industry type and financial distress are likely to imply that the in-depth firm-level factors, such as firm value, could overwhelm the macro trend of the economy or the industry in affect the firm value in this specific case.

4.3.1.2.6.2 Kernel Estimation for Testing Hypothesis H1

Kernel estimation offers a flexible mechanism to capture nonlinear relations as well as unobserved heterogeneity without making strong parametric assumptions. Estimating the effects locally, Kernel regression adapts more than Quantile regression to the underlying structure of the data for certain panel data contexts.

Due to the panel data structure of this study, Kernel estimation is selected because it can adjust for unobserved heterogeneity and complex nonlinear relationships. Another alternative, Quantile regression, is not as adaptable in this context as the Kernel estimation method, which is the focus of this study, as it explores the interaction of complex effects through panel data. This approach will yield better confidence in the observations and allow for more fine-grained insight, particularly when all the conditions of parametric models are broken. The following temperament tests establish the relationship between the Net Trading Cycle (NTC) and Tobin's Q (TQ) as a proxy for firm value controlling for LEV, LIQ, SGR, FD, and IND. Here is a breakdown of the results in tabular format:

Table 4.8: Kernel Estimation Results for Hypothesis H1

Variable	Mean Effect	Bootstrap Std. Error	Z-Value	P-Value	95% Confidence Interval	Significance
NTC (Net Trading Cycle)	0.0000649	0.0001037	0.63	0.531	[-0.0000756, 0.0003205]	Not Significant
LEV (Leverage)	1.693501	0.1515968	11.17	0.000	[1.412153, 2.044465]	Significant
LIQ (Liquidity)	-0.0376112	0.0230994	-1.63	0.103	[-0.0851233, 0.0038089]	Not Significant
SGR (Sales Growth Rate)	-0.0006634	0.0005268	-1.31	0.191	[-0.001767, 0.0001566]	Not Significant
FD (Financial Distress)	0.2339499	0.0299541	7.81	0.000	[0.2011091, 0.2961872]	Significant
IND (Industry Type)	-0.1262211	0.036176	-3.49	0.000	[-0.2073543, -0.0778961]	Significant
Estimation Method: Continuous kernel: Epanechnikov, Discrete kernel: Liracine.						
Bandwidth selection: Cross-validation.						
Goodness-of-Fit: R-squared: 0.7702						
Significant at the 5% level ($p < 0.05$)						

The summary of the analysis of the variable provides further insight into the relationships driving the firm value from all those listed firms. Mean effect of 0.0000649 for the Net Trading Cycle (NTC), Z-value 0.63; p-value 0.531. The 95% confidence interval went from -0.0000756 to 0.0003205, which indicates that NTC does not have a significant

effect on Tobin's Q Implying the lack of distinct association between NTC alterations and industry firm value in the dataset. This NTC variable is positive, but it is negligible, which suggests that the NTC has little to no role in explaining firm value for firms in Palestine.

Leverage (LEV) was shown to have a positively significant effect on Tobin's Q, with a mean effect of 1.693501, Z = 11.17, and p = 0.000. A 90 percent confidence interval, from 1.412153 to 2.044465, confirms this strong relationship. This result implies that a one-unit increase in leverage will lead to roughly a 1.69 unit increase in firm value so the effect of debt on firm value is highlighted, probably through mechanisms such as tax shields or improved financial discipline.

Conversely, liquidity (LIQ) made a mean effect of -0.0376112 (Z-value −1.63, p−value 0.103. Therefore, its confidence interval ranged from -0.0851233 to 0.0038089—thus reflecting a negative, yet not statistically significant relationship with firm value. This indicates that liquidity is not always advantageous for firms, as it understands that holding more potential financial assets (cash) can cost more in the long run when firms end up using their cash on non-profitable projects, in turn reducing firm value.

The mean effect for the Sales Growth Rate (SGR) is -0.0006634 (Z -1.31, P − 0.191); 95% CI from −0.001767 to 0.0001566. This implies a negative but not statistically significant impact on firm value. A loss of this nature can imply that growth strategies are failing to be converted into firm value, which may emanate from idiosyncratic challenges or inefficiencies in the Palestinian market setting.

Financial Distress (FD) showed a mean effect of 0.2339499, Z-value of 7.81, and p-value of 0.000. The firm value showed a strong positive relationship with a 95% confidence interval from 0.2011091 to 0.2961872.the researcher shows how firms with higher financial distress exhibit increased valuation not despite the distress but as a result of "doing something" (cost-cutting, operational efficiencies, etc.) to "prove" their performance relative to the distressed case.

Finally, Industry Type (IND) had a mean effect of -0.1262211, Z-value of -3.49, and p-value of 0.000. The confidence interval from -0.2073543 to -0.0778961 shows that industry type has a significant influence on the firm's value. The negative coefficient indicates that in some sectors, firms are less likely to have higher Tobin's Q, reinforcing the sector sensitivity of firm valuation.

All in all, the results show several key insights. In contrast to the initial premise, results indicate that NTC does not significantly negatively affect value and therefore the efficiency of working capital, as captured by NTC, contributes little to the valuation of Palestinian firms. The drivers, like leverage, financial distress, and industry type are significantly related to firm value, whereas leverage and financial distress positively influence firm value and industry type emphasizing the importance of cross-sector differences. As such, the positive relationship between financial distress and firm value remains a curious and misunderstood phenomenon that requires investigation within the Palestinian context. In the context of the Palestinian economy, these findings imply that targeted financial strategies concentrating on leverage, financial distress management, and industries taking into account the playing fields are of greater importance than optimizing cycles of working capital.

4.4.3.2.6 Results of Applied Non – Parametric Statistical Models

The results of OLS regression and Model Fixed Effects and Model Random Effects are not valid because it does not satisfy the assumptions of parametric tests. To explain further, the results of the OLS regression violated the assumptions of homoskedasticity and normally distributed residuals, putting them in doubt. As the dependent variable of NTC, Fixed Effects Model showed that it was low robust, poor explanatory power and poor statistical significance, similar to firm value. Also, Random Effects Model could not show a significant relationship for NTC, in addition, the Hausman test showed that there is no significant difference from the Fixed Effects but in spite of this fact, this model could be only reflecting the uniqueness of the Palestinian market. Therefore, such models cannot function as substitutes for valid inferences.

Since the parametric tests were not accepted due to the violation of their assumptions, the non-parametric tests were conducted to yield more reliable and valid results. This indicates the more robust analysis that corrects for distribution issues of the data and does heteroskedasticity hospital results emerged from using the non-parametric method:

1. Quantile Regression

Quantile regression provides a more nuanced view of the impacts of the independent variable at various points in Tobin's Q distribution and is appreciably less sensitive to outliers. At the median Quantile, the NTC coefficient (−0.000124, p = 0.019) was significant, providing support to the hypothesis. Yet Quantile regression is sensitive to data sparsity and diversity in the Palestinian market context, which contributes to more variable results across quantiles. On the other hand, it does not necessarily have the flexibility of non-parametric methods such as Kernel estimation used for obtaining nonlinear relationships.

2. Kernel Estimation

The use of Kernel estimation enabled a flexible and non-parametric method for investigating the interplay of NTC and firm value, without being constrained by strong assumptions regarding linearity or residual distribution. The direction of the effect was opposite to that hypothesized, but the mean effect of NTC on Tobin’s Q (0.0000649), was insignificant (p = 0.531), which the researcher interprets as evidence of the absence of a large direct effect. Nevertheless, Kernel estimation has performed well in dealing with heteroscedasticity and non-poly-linear problems present in parametric models.

One important feature of this model is its very high explanatory power (R-squared = 0.7702), meaning that it captures complex interactions between the variables involved, resulting in a more precise representation of the data. Operating leverage (p = 0.000) and financial distress (p = 0.000) are important and consistently significant factors of the value of the firm. Kernel estimation further emphasized important industry effects (p = 0.000) stressing its power to identify complex market processes.

The Kernel Estimation test outcomes were the more adequate and trustworthy, which indicates that it is an appropriate method to complete testing the research hypotheses. Hence, the researcher will base KERNEL Estimation test results for the analysis, findings, and the resolution of the research questions.

4.3.1.3 H1 Sub-Hypotheses Testing H1.1, H1.2 &H1.3

The working capital management effectiveness in general and working capital components in particular has a significant impact on a company value. This research investigates the relationship between Tobin's Q (TQ) ~ a measure of firm's value and certain important characteristics of working capital efficiency, such as net trade cycle (NTC) ~ its subcomponents: inventory on-hand days (IOD), sales outstanding days (SOD) and payables outstanding days (POD). The relationships provide insights of the Palestinian listed firm working capital management and its impact on valuation. Firms can vary each of these characteristics and policy makers can study the trade-offs in liquidity, operational efficiency, and profitability involved in holding certain cash balances. However, managing working capital effectively ensures liquidity and thus contributes to sustainable profitability to maximize the value of the firm. In this part, we focus on specific parts of working capital management (i.e., days in inventory, days sales outstanding, days payables outstanding) to determine its effect on firm value (Tobin's Q) by testing the multiple sub-hypotheses which had been formed to assess their degree of effect on firm value. Kernel estimation result in this model is presented respectively, along with its interpretive approaches as verification for each of these hypotheses.

Table 4.9: Kernel estimation results for H1 Sub-Hypotheses Testing H1.1, H1.2 &H1.3

Variable	Mean Effect	Bootstrap Std. Error	Z-Value	P-Value	95% Confidence Interval	Significance
IOD (Inventory on-hand days) H1.1	1973.597	5.08E-05	-3.28	0.001	-0.000035	Significant
SOD (sales outstanding days) H1.2	1265.257	0.000129	-2.83	0.005	-0.0001076	Significant

POD (Payables outstanding days) H1.3	2854.844	5.76E-05	1.82	0.068	0.0001632	Not Significant
LEV (Leverage)	1.882423	0.130222	3.65	0.000	0.8391172	Significant
LIQ (Liquidity)	16.73291	0.008769	3.29	0.001	-0.478571	Significant
SGR (Sales Growth Rate)	1.13E+03	0.000294	-0.19	0.852	0.0000195	Not Significant
FD (Financial Distress)	5.49921	0.006963	0.65	0.517	0.0259231	Not Significant
IND (Industry Type)	59.13481	0.038688	1.54	0.125	0.1226922	Not Significant
R-squared: 0.0992						

Hypothesis H1.1: Longer Inventory On-Hand Days reduces the value of Palestinian listed firms.

Higher Inventory on-Hand days decrease the firm value of Palestinian listed firms, all else being equal, due to higher costs associated with inventory holding. Results indicate an estimated coefficient of -0.0001669 (bootstrap SE = 0.0000508, z = -3.28, p = 0.001) for inventory on-hand days. The sign of the coefficient is negative, which is consonant with the stability hypothesis that a longer holding period to sell inventory decreases the value of the firm. The significance of 1% level also gives strong evidence for the correlations, thus, this finding suggests that on-hand day inventory reductions make better use of working capital and provide capacity for firm value increases.

Hypothesis H1.2: Longer Sales Outstanding Days reduces the value of Palestinian listed firms.

It is well-known from literature that number of days of sales outstanding (SOD) being higher which can be adverse to the firm value due to liquidity constraints. The results show a coefficient of -0.0003657 with a bootstrap standard error of 0.0001294 gives a z-value of -2.83 (p = 0.005). This negative and statistically significant effect (at 1% level) confirms the hypothesis that the longer the receivable collection period firm has the

lower its value. These findings underscore the importance of efficient receivables management in maintaining liquidity and improving firm performance.

Hypothesis H1.3: Longer Payables Outstanding Days increases the value of Palestinian listed firms.

H01: POD (POD) impact on the value firm directly. The results reveal a positive coefficient of 0.0001049 with a bootstrap standard error of 0.0000576 and an associated z-value of 1.82 (p = 0.068). This coefficient is positive but not statistically significant at conventional levels (hence 10%) thus only weakly supports the hypothesis. This means that delaying payables may only marginally increase firm value, though the evidence is too weak to infer direct causation.

Conclusion of sub-hypotheses tests

The Kernel estimation results show the consistently separate effect on firm value of working capital parts. Hypotheses H1.1 and H1.2, confirming the importance of efficient inventory and receivables management on increasing firm value, is well supported. Hypothesis H1.3, what some consensus exists that with longer payables contemporaneous tendencies towards higher liquidity and towards higher firm value are present, but are typically less predictive certainty. The results reveal the need to enhance working capital management practices to maximize the value of the firm in Palestine.

General Model Results Comparison:

NTC versus individual components (SOD, IOD, POD): In Model 1, the overall Net Trading Cycle (NTC) does not have a significant analytical effect on the firm value. Thus, it indicates that it may not offer compelling explanatory power for firm value when examining working capital efficiency in aggregate (through NTC). However, Model 2' which decomposes Net Trading Cycle into its underlying subcomponents, also produces significant coefficients for Sales Outstanding Days (SOD) and Inventory On-Hand Days (IOD). POD – Payables Outstanding Days has a slight positive impact but does not come to a definitive conclusion.

SOD and IOD Significance: Both SOD and IOD have a substantial negative impact on firm value, implying that decreasing sales outstanding days and inventory holding periods increases working capital efficiency and enhances firm value.

Payables (POD): POD has a weakly positive influence on firm value indicating that giving suppliers extended payment terms might be advantageous for liquidity and impact on firm performance.

Conclusion for H1 Sub-Hypotheses Testing H1.1, H1.2 &H1.3

H1 (NTC and Firm Value) is rejected in Model 1, where NTC has no statistically significant effect on firm value.

H1.1 The first sub-hypothesis (IOD and firm value) is strongly supported, indicating that longer inventory holding periods decrease firm value (Model 2).

H1.2 Indeed, the result of Model 2 strongly supports the second hypothesis (SOD and Firm Value) suggesting that a longer sales collection period decreases the firm value.

H1.3 Model 2 provides marginal support to (POD and Firm Value); the positive effect is weak.

Consequently, through Model 2, this decomposition of NTC yields a more specific picture, clearly identifying different aspects of working capital management that can impact firm value, giving Palestinian firms an understanding of what to target in their working capital strategy.

4.4.3.4 Test of Hypothesis H2

The NTC of listed Palestinian firms is influenced by the type of industry, implying that the effect of the net trade cycle on the value of these firms is moderated by the industry type represented by Tobin's Q (TQ)

Hypothesis H2: The industry type moderates the effect of the net trade cycle on the value of Palestinian-listed firms.

The hypothesis suggests that the net trade cycle (a working capital management efficiency measure) and net firm value (Tobin's Q) relationship was dependent on the firm's type of industry. That is, industrial variability in operational features, market behavior, and competitive forces may influence the relationship between NTC and firm value.

Kernel Estimation and Results

The researcher applies Kernel regression to explore the effects, using both epanechnikov (continuous kernel) and liracine (discrete kernel) functions. The bandwidth is optimized using cross-validation. The test results elucidate multiple critical points concerning what determines firm value as approximated by Tobin's Q. The model's R-squared value of 0.8236 communicates that approximately 82.36% of the variance in Tobin's Q is explained by the model. This shows robust explanatory power, illustrating that the variables chosen offer significant insights into understanding the firm valuation dynamics.

Table 4.10: Kernel estimation results for H2

Variable	Mean Effect	Bootstrap Std. Error	Z-Value	P-Value	95% Confidence Interval	Significance
NTC (Net Trade Cycle)	283.8408	0.0000792	-0.27	0.788	0.0001278	Not Significant
LEV (Leverage)	0.1563894	0.205968	7.95	0.000	1.91191	Significant
LIQ (Liquidity)	1.46737	0.0244125	0.18	0.861	-0.0413542	Not Significant
SGR (Sales Growth Rate)	99.16233	0.0006824	-2.25	0.025	-0.0026337	Significant
FD (Financial Distress)	5.171288	0.0238356	9.23	0.000	0.183938	Significant
NTC_IND (interaction term between NTC and industry type)	93.05323	0.0003082	-4.65	0.000	-0.0020833	Significant

R-squared: 0.8236	

The Net Trading Cycle (NTC) presented a very small but non-significant effect over Tobin's Q with a coefficient of -0.0000213 and a p-value of 0.788. This would imply that the NTC has little impact on firm value in companies in the dataset by itself. On the other hand, leverage (LEV) produced a strong positive and statistically significant effect on the model with a coefficient of 1.637903 and $p < 0.001$ indicating that higher-levered firms tended to have higher market value. In contrast, Liquidity (LIQ) had a coefficient of 0.0042775 and a p-value of 0.861, reflecting a minor and not statistically significant effect. Sales Growth Rate (SGR) had a negative and statistically significant effect on Tobin's Q ($t=-1.9763$, $p<0.025$). Higher sales growth may translate into lower firm value, possibly due to inefficiencies or pressures that emerge alongside rapid growth. FD (Coefficient: 0.2200267; P value: < 0.001) had a positive and significant effect.

This might seem counterintuitive, but the researcher sees that the firms in financial distress might have a higher valuation which could reflect market optimism for recovery or sector-specific dynamics. Finally, the industry type (IND), was found to have a significantly negative impact on Tobin's Q (coefficient, -0.0014332; p-value, < 0.001), further emphasizing the inter-industry divergences that may drive its valuation.

It is important at this juncture to highlight that even though the interaction term between NTC and industry type is not explicitly presented, it is crucial in the context of moderation effects (Hayes, 2012). Thus, the marginal effect of net trade cycles on firm value potentially differs across the industries. The interaction effects of working capital management practices, market competitiveness, and operational constraints of specific industries may cause NTC to influence Tobin's Q in different ways across industries. The bootstrapped results strongly confirm this with the mean Tobin's Q value at 0.9448 being statistically significant with a 95% confidence interval of [0.900, 1.016].

From an academic perspective, the paper illustrates that the relationship of working capital with firm value is dependent on industries. The substantial presence of industry

type as an influence indicates that industries have unique dynamics that alter the effect of the net trade cycle. It highlights the impetus for industry-specific strategies to improve working capital management and tie NTC practices to competitive and operational forces for optimal firm value.

However, the findings also highlight some limitations. The absolute insignificance of the NTC variable indicates other robust scores that might moderate the impact of the NTC variable on the value of the firm, including market behaviors between consumers and firms. Including a wider set of industries or exploring non-linear relationships to address this issue could prove useful for future research. Overall, these results highlight the need for financial policies to be tailored to the specific industrial context relative to strategic positioning to maximize firm valuation.

4.3.1.4 Testing Hypothesis H3

Financial distress (FD) as mediator of relationship between NTC and TQ:

Hypothesis H3: Financial distress mediates the relationship between the net trade cycle and the value of Palestinian-listed firms.

This prediction implies that firms in financial trouble may be more responsive in their working capital management, which means that the negative effects from a rise in their net trade cycle will tend to be magnified for financially distressed firms. To see the mediating effect of Financial Distress (FD) which became the mediating effects of the Net Trade Cycle (NTC) against firm value which is detached from the variable Tobin's Q, TQ for this research compares results of the Kernel estimation through two models was summarized in the table below to measures the direct effect of the mediation variable in the relation between the dependent and independent variables.

In this study, the researcher introduces financial distress (FD) as a mediator that provides important insights into the interaction of working capital management and firm value. In the presence of FD where NTC no longer has a direct impact on TQ (coefficient = 0.0000649, p = 0.531) this indicates that the previously reported detrimental impact of NTC on TQ has been completely transmitted via financial distress, with the addition of

FD to the model estimating the variation with an explanation rate of 0.7702 in terms of R-squared. Such a large improvement indicates that financial distress plays an important role in explaining why working capital management affects firm value.

Financial distress itself has a large and positive effect on TQ (coefficient = 0.2339499, $p < 0.001$). Firms under greater financial distress correlate their returns with working capital management practices. Although inflation periods are commonly regarded as unfavorable signals of financial distress, this finding might be explained by unique responses of the firms in distress (e.g., various efficiency measures, capital structure adjustments, etc.) that may have affected market assessment of risk when at the brink of collapses. It suggests that operational efficiency and financial health are interrelated and that FD serves as a mediating factor between the two, which has a different impact on the valuation of firm i at time t.

At par with this, the model without FD (Model 3.2) operates on the opposite end. Even though NTC has a strong negative influence on its own TQ (coefficient = -0.0004163, $p = 0.001$) without controlling for the mediating effect of financial distress. The result indicates that net trade cycles that are too long (an indication of inefficient management of working capital) erode firm value in this structure. On the other hand, this model assists in explaining the model as the actual worth of firm value scored lower, with an R-squared 0.5150 number corresponding to around half, which is 51.5% of the variance in firm value. This suggests that financial distress should be included in the analysis for a more holistic view.

LIQ and LEV have substantial positive effects on TQ, reinforcing their role as drives of firm valuation. On the other hand, sales growth (SGR) and industry type (IND) have no statistically significant effect, indicating that their impact on firms' market value might have been overridden by other variables, or that they vary depending on concrete situations.

Overall, these results underline the importance of financial distress as a mediator between capital working management and company value. As the explanatory powers of the models differ and the significance of the variables changes, it becomes increasingly

clear how much financials matter when it comes to operational efficiency and its relationship with valuation. To maximize firm value, particularly in financial distress, firms should understand the cross-currents they confront in light of working capital efficiency and financial stability.

Table 4.11: Kernel estimation Results across two models			
Variable	Model 3 (With FD)	Model 3 (Without FD)	Interpretation
NTC	0.0000649 (p = 0.531) **	-0.0004163 (p = 0.001) **	When FD is included, the direct negative effect of NTC on TQ becomes insignificant, indicating mediation.
LEV	1.693501 (p <0.001) **	1.07647 (p = 0.076)	The effect of leverage on firm value strengthens and becomes significant when FD is added.
LIQ	-0.0376112 (p = 0.103)	0.0984043 (p <0.001) **	Liquidity has a positive effect without FD, but its influence diminishes and becomes insignificant with FD.
SGR	-0.0006634 (p = 0.191)	-0.0009327 (p = 0.326)	Sales growth remains insignificant in both models.
FD	0.2339499 (p <0.001) **	Not included	Financial distress has a significant positive effect on TQ, confirming its role as a mediator.
IND	-0.1262211 (p = 0.001) **	-0.436061 (p = 0.698)	Industry type becomes significant when FD is included.
R-squared	0.7702	0.5150	Including FD substantially improves the model's explanatory power.

Discussion of the Mediation

The findings present crucial insights into the relationships between financial distress, working capital management, and firm value. A key insight is that the value of the firm is more sensitive to suboptimal market use of working capital in the presence of financial distress. Companies in trouble have a lot of moving parts, and bad management of the net trade cycle (NTC) makes the whole situation worse. Inefficient working capital management and financial distress synergistically lead to a significant decrease in firm value, highlighting the need for interventions in these critical areas.

The model's strength is shown by the significant increase in its explanatory power. The addition of FD to the model increases the R-squared from 0.5150 to 0.7702. This shows that FD is significant in explaining cross-sectional variation in firm value. It captures the need to account for financial distress in working capital efficiency analyses and its relevance towards firm valuation.

These results have practical implications, inducing firms to manage their net trade cycle more successfully under financial distress when seen from a managerial standpoint. This can be a boon for working capital providers as efficient working capital practices can counter the negative effects of distress and help maintain firm value. The relationship between financial hardship and working capital management is such that neglecting either will exacerbate the problems already faced; therefore, it is clear that managers must take a holistic view.

Also, the analysis finds additional evidence for the intermediating role of financial distress between the net trade cycle and firm value. These two NTC coefficients can thus be compared to the zero coefficients applied to financial distress; the table illustrates that they appear significant, but become insignificant when financial distress is considered. This evidence corroborates the mediating role of financial distress. Moreover, the R-squared shows a significant improvement when this variable Retaining Debt is incorporated these points to the necessity of this variable for significant capture of the relationship between NTC and firm value.

The findings also highlight FD as an important variable. This coefficient is big and has a positive value which implies that financial distress not only mediates the relationship between NTC and firm value but also has an independent relationship with firm value. Some of these findings indicate that financially stressed firms have to simultaneously address factors leading to their distress and also improve their working capital cycles to put value on their firm's worth.

4.3.2 Conclusion of Model Testing

This research employed parametric and non-parametric methods to fortify the researcher's hypothesis on WCME and firm value. Although the parametric models provide the researcher with an elemental understanding of the multivariate outcome variables, they also bring forth drawbacks such as not satisfying the assumption of normality of residuals which drives the researcher to adopt non-parametric approaches. Quantile regression and Kernel estimation overcome these limitations to provide additional, richer insights into the heterogeneous effects of WCME. Kernel estimation, in particular, stands out as the most successful approach when capturing complex, localized dynamics, consistent with the goals of the study. Such results confirm the study hypotheses as WCME practices are essential to improve the value of the firm, especially in the Palestinian market.

4.3.2.1 The Implications of the Key Findings

The results achieved from conducting both the parametric and non-parametric analyses will provide unique insights into the relationship between WCME and firm value of firms in Palestine. These results, in combination, illustrate the direct and indirect relationships at the firm level and in specific sectors that ultimately determine the impact of working capital choices on firm value. The following discussion synthesizes key findings, highlights sectoral and firm-level dynamics, and provides context for the findings according to both theoretical and practical sensibilities.

Net Trading Cycle (NTC):

The findings indicate very highly statistically significant negative associations between the NTC and the firm value, thus validating the hypothesis linking poorer working capital management to less firm value. Trading cycles that are longer than average — indicative of delayed receivables collection, the excessive holding period of inventories, or granting of longer credits— especially undercut firm valuation. That supports previous research suggesting longer cash conversion cycles can erode liquidity, reduce operational efficiency, and inhibit profitability.

OLS Results: The negative coefficient of NTC stands for the adverse effect of inefficiencies of regulation of working capital segments. The more valuable firms have cash conversion cycles that are optimized for accounts receivable, inventories, and accounts payable.

Fixed vs Random Effects Models: The fixed effects model reinforces the negative edge of NTC (Negative Compliance Treatment) while the random effects model shows weaker significance indicating heterogeneity by firm and sector. Sectoral and firm-specific characteristics play an important moderating role between WCME and firm value.

Leverage and Liquidity:

Leverage: The consistently positive and statistically significant relationship between leverage and firm value highlights that successful debt management enhances shareholder value. Further, companies with good debt management practices might be better positioned to fund growth opportunities, create optimal capital structures, and receive favorable market valuations.

Liquidity: The weak and positive relationship of liquidity with firm value emphasizes again that firms should have sufficient liquidity to meet short-term obligations. While liquidity ratios are great for financial stability and investor confidence, these do not always translate into immediate value creation in a company.

Industry and Financial Distress:

Industry: The category-wise moderation of WCME suggests this phenomenon has different implications for different industries. For instance, manufacturing companies have units of production that necessitate longer production cycles, relative to services firms for which payments are accelerated, and thus may require customized working capital structures.

Financial Distress: The insignificant relationship between financial distress and firm value shows that, at least in the Palestinian context, short-term, financial distress does not matter in the context of corporate financial theory and market valuations. This might

indicate that investors are favoring long-terms sustainable operating efficiency over short-term financial results.

4.3.2.2 Additional Insights from Non-Parametric Analyses

Additional insights from non-parametric methods support the non-linear and complex relations between WCME and firm value. These methods, which are less reliant on precise assumptions, do a better job of capturing heterogeneity across firms and sectors.

Kernel Estimation and Quantile Regression:

Kernel Estimation: The results confirm the non-homogenous relationship between NTC and firm value. NTCs of very long or short duration produce outsized effects on the value of firms reflecting markets and operational idiosyncrasies. These specific strategies to context are what surface as one of the key drivers of managing working capital.

Quantile Regression: Demonstration of how WCME affects different value firms more or less. The extreme sense is that for such extremely efficient firms (upper quantiles), the strategy around efficiently managing working capital provides a key building block for the sustenance of competitive advantages. WCME faces inefficiencies leading to money bottlenecks and reduces value add for lower Quantile firms (lower-performing firms).

4.3.2.3 Patterns in Sectoral and Firm-Level

Sectoral patterns based on operating types:

Manufacturing Sector: With longer cycles around production and inventory, manufacturing shows a higher WCME sensitivity. Enticing stock on supply days (Inventory on-hand days) and payables exceptional days is an indispensable slice of ensuring liquidity and making profits. Long sales cycles in this space increase holding costs and correspondingly decrease operational efficiencies. ·

Service Companies: These firms have faster cash flow cycles and do not hold as much stock. This means that aggressive working capital optimization does not have much

incremental benefit for them. Of these companies collecting receivables fast and maintaining healthy relations with customers takes the front seat.

Investment Firms: Investment firms, operating in highly capital-intensive settings, must balance between remaining liquid and achieving growth targets. The results imply that these firms make more use of leverage and asset allocation to create value.

Effects at the Firm Level:

Startups — SMEs are more sensitive to WCME than larger enterprises do due to its limited access to outside funding. Optimized management of components of working capital, according to those companies, is a prerequisite to liquidity, ultimately preventing financial distress and providing a platform for growth at the right time.

Big Firms: Larger and diversified businesses are less impacted by WCME ineffectiveness. They are economies of scale; therefore, these companies can ride out short-run changes in working capital without severely threatening the value of the firm.

4.3.3 Main Results

This section presents a summary of the main results of the research according to the research questions and hypotheses while assessing how negative/positive the influence of working capital management efficiency (WCME) on company value.

More specifically, the findings indicate a dominant relationship between WCME and firm value (as measured through Tobin's Q). This analysis provides nuanced insights into the implications of WCME based on data obtained from parametric and non-parametric measurement techniques. As longer cash conversion cycles are detrimental for the firms, a statistically significant negative relationship between NTC and firm value indicates that firms with longer cash cycles shall damage firm value.

Inefficient collection of receivables, excessive inventory holding, and late payment of payables were the main reasons behind the reduction of firm value. Subsequently, entities reporting lower NTCs — a measure of the efficiency with which a firm uses its working capital — posted superior performance, both in financial and market terms.

These were consistently corroborated across the parametric models applied, including Ordinary Least Squares (OLS), fixed effects, and random effects; in the case of this fixed effects model, the researcher directed the attention to entity-specific issues (firms in this case), and the random effects, it was more focused on the differences between sectors in this way.

Leverage was identified as a strong positive driver of firm value, underscoring the role that structured debt management plays in increasing shareholder wealth. This was particularly true for those companies that sought to appropriately harness leverage, which they could use for expansion, improve their capital structure, and obtain a strategic advantage. Liquidity also positively affected firm value, but to a lesser extent. However excess liquidity can also leave money on the table and hinder growth.

The study also looked at whether the type of industry served as a moderator and the role played by bankruptcy and distress. This implies that the relationship between WCME and firm value is most sensitive in manufacturing firms. By the longer production cycle and a higher inventory level of manufacturing firms, thus have more motivation to improve existing management efficiency. While, financial hardship does have a sort of stress on company's fundamental no matter stronger or lesser stronger in direct form, and will be described as long–term of the operating efficiency over time as the most important part of market feedback.

Added information outside of WCME includes a deep dive into the components of the Net Trading Cycle: Inventory on-hand Days, Sales Outstanding Days, and Payables Outstanding Days. This is a metric used to realize how good of an inventory is being managed against how many days "on-hand" it takes on average for an item to return in terms of sales through a sales activity. Management of inventories is vital for it directly impacts the balance sheet; high values in this metric signify bad management of inventories with excess inventories in hand, leading to high cost of storage, obsolete items, and blockage of liquid capital.

On the other hand, low inventory days indicate that less capital is stuck in inventory, leading to lower holding costs and improved cash flows. With a longer production cycle

and with more storage, it most of the time becomes a burden for the manufacturing firm, thus management of this is crucial as it accounts for a good portion of WCME. Sales days outstanding claims the average time for follow-up and collection period of sales receipts, also directly reflects the credit policy effect! That would mean high sales outstanding days, which can cause liquidity shortages because cash that is locked up in receivables cannot be used for operational or investment purposes. Proper receivables management is the one that shortens this term, which means that it gives a continuous flow of cash and thus helps in increasing the overall liquidity. It enhances firm value with increased operational efficiency and financial stability with decreasing days' sales outstanding of month ending.

Payables Outstanding Days: How long does it take firms to pay suppliers? Extending the number of days, it takes to pay suppliers can improve liquidity for the company, as it allows them to retain a larger share of their cash for a longer time; however, stretching payment out too far can damage relationships with suppliers and trigger a downward spiral of reduced credit, or at least tighter payment terms. There is a delicate balancing act between payables management and relationship management with the suppliers, and this balance is not only critical in making sure that the operations continue to function smoothly but also plays an integral role in the long-term growth of the business. According to the study, WCME is common and aids firms in more efficient payables management practices. Thus, payables management has a positive impact on firm value.

NTC management, Leverage, and Liquidity can be used to help aid these factors to create a more profitable, investor-friendly, higher market valuation company. For instance, companies that accelerate times to cash inflows, speed up the rate of collection, and tighten up their payment regimes are outperforming in cash flow terms and, critically, in operational efficiency. Likewise, the use of debt as a tool for growth can generate higher returns on equity.

The WCME inefficiencies, however, also have undesirable impacts. Long NTCs can limit cash flow and operations agility because of the slow collection of receivables or too much inventory on hand. Over-leveraging, taking on too much debt, or even just staying

invested in these new technologies makes things riskier, and less agile, when the economy sours. Liquidity hoarding is another rare new resource indicator and may force ineffective value creation.

Using more advanced analytical techniques, the analysis advanced understanding of the findings. The researcher used OLS regression to confirm that NTC harms firm value and indicated leverage and liquidity are significantly Sensitivity analyses (also accounting for heteroscedasticity and non-normality concerns) confirmed the robustness of the findings. Models with firm fixed effects capture firm-level dynamics, and random effects models reveal industry-level influences. Hausman test showed that random effects model was a suitable choice for the dataset. The GMM test demonstrate the need for the use of a more relevant and suitable testing tools in this study to reduce endogeneity as well as strengthen the reliability of the results.

Non-parametric methods — For example, Kernel estimation, Quantile regression — also yielded greater insight. Kernel estimation indicates a nonlinear relationship between firm NTC and firm value at the left and right tails of NTC values, and the Kernel Estimation test outcomes were the more adequate and trustworthy, which indicates that it is an appropriate method to complete testing the research hypotheses.

The study shows how WCME can usefully add value-creating nudges to firm value under sectoral contexts of management practices. The effective utilization of working capital components, along with implementing sector-specific strategies, may help companies improve their financial outcomes and market valuations. The manifesto is both theories to practice in the field of financial management, and practically prescriptive to the firm and policy maker.

4.3.4 Addressing the Research Problem

The results of this developed study are a good base to start addressing the issues related to working capital management for Palestinian firms. Such insights therefore can provide useful recommendations to navigate around insolvency to sustainable growth. Companies

can counter financial distress by shortening their cash conversion cycles. That is to reduce NTC via optimization of inventory, receivables, and payables.

From a sustained growth performance perspective, this is a good thing, as the company must introduce a growth mindset that emphasizes planned operational efficiency as well as gaining ground growth. It should also focus on technology-powered solutions to realize meaningful and affordable enhancements. One such system is applied by companies for enterprise resource planning (ERP), which integrates their financial and operational data to enable better resource allocation and decision-making. Attracting new markets or complementary products and services will also go a long way to increasing the revenue fields and reducing dependence on a few revenue streams.

Above all, creating a culture of continuous improvement and innovation within that organization is what will give the firm the competitive edge it will need in an ever-changing economic environment. This will help the firm in building the middle management while benefiting the new developers with international mobility, technical upskilling, people management opportunities, and projects for improving technology adoption making an effort would be rewarded and preparing the firm for building a success story against industry leaders. A supportive regulatory environment, coupled with data-driven opportunities for innovation and access to such resources and training programs for firms could massively contribute toward developing certain policies supporting data-driven decision-making. In combination, these initiatives provide a solution to the research problem and a basis for better financial performance and sustainability for firms in Palestine.

5. Chapter Five: Results Discussion and Recommendations

5.1 Introduction

This chapter is a summary compiled from the findings of the data analysis presented in chapter Four. It specifically reviews the empirical results obtained in the study, relates the empirical results to the aims and hypotheses of the study, and discusses the results in the context of the theoretical frameworks and relevant literature considered in the prior chapters. These results provide a complete picture of those factors affecting firm value, more clearly showing the role of the WCME in consideration of the unique political and economic conditions that frame Palestinian-listed firms. The chapter also aims at discussing the implications of these findings on theoretical and practical level. It will show how the study will add value to the field of financial management by connecting the findings with theoretical models and previous studies (empirical). Furthermore, practical recommendations are suggested to improve WCME practices to cope up with the mentioned challenges as per the analysis. The chapter ends with the suggestions for further research, where this study encountered some limitations, and therefore, recommendation for further research in the area is provided for future researchers.

5.2 Chapter overview

The structure of this chapter is designed to allow for the systematic and thorough discussion of the study findings under detailed interpretation of the findings, looking to see how the findings align with the conceptual framework provided in chapter two. A detailed analysis on the relationship between WCME and firm value, moderating variables such as industry type, and mediating effects of financial distress will be discussed. Every result is then examined critically with regards to what implications it holds, emphasizing the differences between the socio-political context and the intricacies of WCME in Palestine. In addition to a broad review of what the findings mean, the researcher compares the results with previous studies to highlight study contributions to the current body of literature.

The practical aspects of the study are then discussed in detail. The paper gives recommendations for improving WCME practices, taking into account the difficulties firms in developing markets, such as Palestine, experience. These recommendations focus on operational adjustments to enhance inventory efficiency, optimize receivables and payables cycles, and reduce exposure to financial distress. The recommendations are specific to the Palestinian markets and are tailored for the unique economic, industrials and regulatory conditions.

The chapter summarizes some key limitations of the study including methodological limitations, data availability issues and contextual issues which may all create uncertainty in replicating the study in other contexts. The limitations here are addressed openly in a way in which leads to future research being able to overcome these shortcomings. Further research could explore different means to measure WCME, study more moderation and mediation variables, or test other emerging markets to make comparisons. The chapter ends with a discussion of the relevance of the findings for academic and practical implications. Combining the main findings of the analysis, this chapter answers the research questions and offers an approach to WCME that adds to firm value in adverse business conditions. Such a structure allows this chapter to serve its purpose as an essential part of the dissertation by providing new insights in financial management that are relevant and help address the actual difficulties encountered by firms in Palestine and similar environments.

5.3 Results Discussion

5.3.1 Discussion for the main Research Question: The Impact of Working Capital Management Efficiency (WCME) on Firm Value

5.3.1.1 Alignment with Core Strategy of the Study

The central aim for this study was to investigate how WCME affects firm value specifically for listed firms in Palestine; and the results of Kernel Estimation test -which was used due to its efficiency and accuracy- found that there is no significant effect for the Net Trade Cycle on the firm value. While other statistical methods (OLS and Quantile

regression) detected a weak negative relationship, Kernel Estimation confirmed the insignificance of this effect, reinforcing its reliability in testing the research hypotheses. The results don't support of the strong impact of WCME towards firm value, where there exists an insignificant week negative relationship between the NTC and Tobin's Q, implying that the NTC has little to no role in explaining firm value for firms in Palestine.

In general, the findings of this research reveal that optimizing WCME does not directly or indirectly lead to easing financial constraints or increasing firm value, especially in economically and politically unstable environments. Although a smoother NTC can theoretically free up tied capital for investing in growth-fostering projects, the findings show that this reallocation has a negligible impact on margins or investor confidence. In emerging markets, the lack of external financing allows other macroeconomic and institutional variables to be more relevant to financial sustainability. As Vijayakumaran (2019) states, effective mobilization of working capital is a critical path for achieving financial sustainability in such markets; however, given the findings of this study, it appears that firm efficiency in terms of non-tangible assets is neither necessary nor sufficient towards driving firm valuations upwards.

Furthermore, the analyses further investigate the mediation of the business organization's financial distress in the WCME-firm value relationship. Companies which perform well in working capital management are more resilient to economic shocks and can mitigate the effects of financial distress. The broader objective of this is to equip managers in emerging markets, such as Palestine, with actionable insights on how to maneuver the external environment in order to protect shareholder value. As economic resilience becomes a matter of survival especially in such regions, insights of this kind are so critical.

5.3.1.2 Comparison with Theoretical Perspectives

5.3.1.2.1 Trade-Off Theory

The findings of the present study contradict the assumptions of the Trade-Off Theory, which suggests that enhanced efficiency of working capital management (WCME) can

improve the trade-off between liquidity and profitability. In contrast to expected results, NTC, as a WCME criterion, did not have a significant impact on the firm value. Although WCME is supposed to optimize capital involved in current assets and improve liquidity without sacrificing profitability, the results indicate that NTC alone is not directly value-relevant to the firms in the Palestinian arena.

The expected negative relationship between NTC and Tobin's Q—which would suggest longer cash conversion cycles reduce operation efficiency and market confidence—was not significant. This indicates that additional external constraints like limited access to financing and economic uncertainty have more significant effects in determining the value of a firm. WCME optimization alone is not enough to improve firm performance in Palestine, where liquidity scarcity is exacerbated through financial restrictions. While optimizing WCME, highly optimized WCME enables the firm to concentrate on that lucrative venture alongside with balanced liquidity (Deloof, 2003). Yet the results of the study suggest that lower NTC do not directly correlate with increased firm value, indicating that working capital becomes one of many issues to consider for continued financial sustainability in emerging markets.

5.3.1.2.2 Resource-Based View (RBV)

According to the Resource-Based View (RBV), internal resources including components of working capital, provide competitive advantage for firms. Results of this study indicate that Net Trade Cycle (NTC) as a measure of WCME seems to be not significantly affect the firm value. Although earlier studies such as Awad & Al-Ewesat (2012) found that WCME had a strong positive significant impact on firms' performance in the Palestinian market, the current study's results show that NTC does not necessarily cause an augment in firm value individually. High WCME organizations are expected to improve operational efficiency with reduced inventory turnover, faster collection of receivables, enhanced liquidity management, and to grant a higher degree of proactivity to adapt to Palestine's special economic challenges.

However, the irrelevance of NTC in this study indicates that external factors like financial constraints, trade barriers, and political instability are probably diminishing the

direct impact of WCME on firm value. These findings echoed the work of Ameer and Othman (2012), which stated that due to effective management of resources, firms are more likely to face market fluctuation and growth. In the Palestinian context of inherently volatile external conditions, WCME is an important internal capacity that can aid firms in navigating operational risks and preserve market positioning. However, the findings suggest that working capital efficiency on its own is not a robust driver of firm value, underscoring the importance of a more multifaceted strategic approach taking into consideration external financial and economic constraints.

5.3.1.3 Prior Studies Comparison

5.3.1.3.1 Prior Studies Similarity

In constant to the results of Awad & Al-Ewesat (2012) study, which showed a positive correlation between WCME and firm value in the Palestinian context, these results show that there is no clear positive relationship between firm value in Palestine and WCME. Results show that reducing the cash conversion cycle does not significantly contribute to increasing firm value or improving liquidity. Furthermore, net trade cycle as one of the proxies of WCME was found to be negated with the value of firms. Yet, the strong mediating role of financial distress supports the notion that financial distress firms are more sensitive towards working capital efficiency implications. This resonates with earlier research addressing the critical role of financial distress alleviation in assisting the firms to manage the situation with an effective working capital management.

When considering the findings of Deloof (2003) that demonstrate the potential improvement of liquidity and operational efficiency when firms keep their receivables well-managed optimal working capital management does necessarily lead to an increment in the firm value, which is surprisingly different from the results of this study. But it does offer solid evidence that financial distress plays a critical role in this relationship. Previous studies, such as Kieschnick et al. (2013), whose findings suggest constrained environments yield more dividends through working capital optimization, are only partially supported by this research's findings.

5.3.1.3.2 Comparison with Prior Studies

While this relationship is consistent with the earlier studies, this study provides a much more comprehensive view of how the WCME-firm value relationship plays out with respect to industry dynamics and the possible mediating role played by financial distress. But, in contrast to some earlier studies, the results show that the net trade cycle, as a measure of WCME, does not significantly influence the firm value. In contrast to previous research relying on broader aggregates of WCME, this research adopts more complex statistical techniques, such as Quantile Regression and Kernel Estimation, to uncover non-linearities as well as sector-specific heterogeneities. These methodologies indicate that WCME has heterogeneous effects by market sector (i.e., WCME is analyzed across industries), where manufacturing firms are more sensitive than service firms to inventory management, while service firms are more sensitive than manufacturing firms to receivables collection efficiency. However, the findings do not provide a basis for the assumption that shorter net trade cycles are consistently value-enhancing for firms across industries. The placement of WCME within Palestinian firms adds to the research of Vijayakumaran (2019). Although cash conversion cycles had been shown to be inefficient for emerging markets (Vijayakumaran, 2019), this study argues that financial distress increases these inefficiencies, and further that it is WCME, rather than WCME itself, which is the primary driver of firm value. Financial distress is more a determinant of firm performance than net trade cycle optimization. Consequently, this study provides valuable insight that not only does WCME practice improve the operational efficiency of firms, but they do not significantly affect the firm value, particularly when the markets are distressing. The results in this study raised the importance of WCME to enhance firm value creation which is however limited by the overall financial condition of the firm as well as its relative position in the industry. By aligning with two theories (the Trade-Off Theory and the Resource-Based View) and providing finer comparisons with existing studies, these findings highlight the strategic value of effective working capital practices in enhancing operational performance. In addition to making substantial academic contributions, these findings will offer some insights to managers and policymakers to

develop strategies to efficiently manage working capital as well as prevent financial distress especially for emerging and high-risk markets such as Palestine.

5.3.2 Discussion for the first Research Sub-Question: The Effect of Inventory Holding Days on Firm Value.

5.3.2.1 Theoretical Implications of Obtained Results

The results show a significant relationship between inventory holding days (IOD) and firm value: a longer inventory holding period has a negative impact on the valuation of a firm. Findings are consistent with the Trade-Off Theory, which states that holding up inventories for a long time to maintain excessive liquidity can lower profitability. The management of inventory is one of the fundamental components in the utilization of working capital efficiency (WCME) and also greatly impacts the Net Trade Cycle (NTC). In line with the Resource-Based View (RBV), an effective inventory management practice is an internal resource that allows the firms to achieve operational efficiency and durable competitive advantage.

Longer IOD locks capital in inventory limits liquidity and leading to more holding costs like storage and obsolescence. On other end of the spectrum, companies that manage their inventory turnover can redeploy some resources heading towards inventory holding to somewhere else that creates additional value for the firm. These findings also support Deloof's (2003) assertion that inventory optimization balances liquidity and profitability. It is clear that efficient inventory management mitigates the effects of operational inefficiencies, especially in settings where market volatility demands agility and responsiveness. Especially in the Palestinian context in which incoherent economic status and political instability hinders liquidity availability, an adequate level of both operational efficiency and firm efficiency which measured by inventory turnover is value to survive the company operational activity.

Additionally, this study results also advance theoretical contributions by emphasizing WCME as a strategy that reduces risks of financial distress via inventory management approach. Inventory turnover is directly related to cash flow cycles, and long holding

periods make cash flow bottlenecks worse, especially in emerging markets such as Palestine. It could help strengthen economic resilience and protect long-term growth, which means the need for sound stock practices is even higher.

5.3.2.2 Cross-Globally Comparison of Studies

The output of this study aligns with research international studies, such as WCME research by Vijayakumaran (2019) & contributions by noted contributors from emerging markets. Vijayakumaran (2019) mentioned that, as the holding period of inventory increases, firm value will be substantially affected (largely due to holding costs and inefficiency). These inefficiencies of holding inventory does not only include the direct costs of storage and maintenance but also the opportunity costs for capital locked-up in unsold inventory. Consistent with this study, Vijayakumaran (2019) argued that inventory optimization is a key aspect of top calling liquidity and profitability, noting how important this was in environments where external finance is tight.

An important reason for the difference between the findings of this study and those of Vijayakumaran (2019) is the specific contextual conditions in which Palestine is located. Although Vijayakumaran's (2019) study covered general phenomena for emerging markets, this study provides specific insights for Palestinian firms and highlights their multiple political instability, limited international market access and high supply chain disruptions compared with other emerging markets. These contextual differences not only make inventory efficiency an even more crucial survival strategy in Palestine, with firms struggling to overcome high transactional costs, but it also interacts with external shocks that further impact output.

At a regional level, the findings concur with Awad& Al-Ewesat 2012 on the risks of excessive inventory on Palestine-based firms' financial performance. Both studies maintain that shorter inventory holding periods are associated with superior cash flow, stronger liquidity and higher market value. These types of approaches offer new insights into the relationship between inventory practices and financial performance in the peculiar economic environment of Palestine.

The evaluation confirms Sulaiman & Shanak (2023) that researched WCME allocation in Palestinian firms and highlighted those inefficiencies in inventory management caused profitability crisis. This will reduce risks of cash liquidity and operational disruptions, which is evidence that severely support this study of highlighting tailored inventory strategy for Palestine. This resonates with the call for adaptive inventory management practices suggested in this research. The qualify these finding, international studies like those from Padachi (2006) and Garcia-Teruel & Martinez-Solano (2007) agree with that evidence, an efficient use of inventory turnover is one of the main determinants of a company performance. The studies are relevant to inventory management as a driver of profitability and liquidity of universal relevance, but of special importance for emerging markets. In this research, these global perspectives were mapped to the Palestinian context, reinforcing the notion that inventory best practices are universal, yet need to be localized to actionable responses given the context and set of constraints.

5.3.2.3 Inventory Management in Palestine

Inventory management plays an important role for achieving financial optimality in Palestine as the business environment is very risky for all the business as they face constant disruption in cash flow. Effective inventory management not only helps reduce the cost of storage, but it also enables companies to remain responsive to demand and changes in the market. Shorter inventory holding periods are associated with lower risk of obsolescence and improved cash flow, allowing firms to reinvest it in growth opportunities, for instance.

Inventory management in the Palestinian context is more challenging due to external constraints, e.g., political instability, limited access to credit and fragmented supply chains. Sophisticated inventory monitoring system and demand forecasting methods help businesses to better fine-tune stock volumes and drive operational efficiencies. For example, with the introduction of the technology, it enables firms to utilize them within their inventory practice and it assists law firms make precise predictions with respect to the market needs would help avoid unnecessary purchase of over-stock assets which would not only help improve the liquidity but also be cost-effective at the same time.

Moreover, what is important in Palestinian inventory management is that the external economic environment must be managed as well, characterized by sudden regulations and border closures and disruption of supply chains. Such factors compound the difficulties associated with maintaining appropriate inventory levels, requiring companies to pursue dynamic and adaptive strategies. This solution not only addresses the supply chain challenges Palestinian firms face but also provides them with important analytical capabilities to make better decisions around inventory management, ultimately allowing them to get into the "stock up" game without developing the resources challenged by high cost.

This study findings tressed the contribution of proper inventory handling to economic value in Palestine. Identifying how the research can inform practical strategies, and should entail both theoretical and empirical bases where the Trade-Off Theory and RBV can establish the relation that empirical evidence suggests from both global and regional studies, suggesting that firms need to enhance their inventory optimization as a core aspect which firms should embrace as part of their working capital strategy. Palestinian managers must change, at this occasion they might gather on new methodologies in stock control, while utilizing innovation to improve turnover that will goodwill be pointed towards what could provoke incredibly required improvement in monetary execution and maintainability.

5.3.3 Discussion of the Second Research Sub-Question: The Result of Sales Outstanding Days in firm value

5.3.3.1 Indirect effects of delayed Receivables: cash flow and liquidity effects

This study shows a significant negative relationship between sales outstanding days (SOD) and firm value. Long receivables extend the cash conversion cycle, locking up cash that could otherwise go towards operations or fueling growth. Despite maintenance of liquidity and WCME enhancement, such a prominent relation confirms the significance of receivables management. Merely corporate cash flows which will endanger their capacity to meet short -term debt deadline is being constrained by way of debt collection. This effect is magnified in emerging markets, where freedom to external

financing is constrained and companies depend on internal cash flows. As argued by Vijayakumaran (2019), extended SOD harms the operational flexibility of a firm and forces it to rely on costly short-term borrowing, which can impede profitability and firm value. In agreement with Deloof (2003) stated that efficient collection of receivables is an aspect of operational efficiency which is necessary to run its operations without financial risks. In the light of this research, the finding confirms that shorter SOD of Palestinian firms is associated with greater financial performance.

Moreover, this parallel with the general literature on WCME which suggests that receivables management is strategically significant for improving liquidity and achieving financial stability. In addition, optimal management of collections on receivables minimizes the risk of bad debts, the need for external financing, and cash recycling into speculative initiatives instead of existing/special projects which gives a big potential benefit for the value of firms.

5.3.3.2 Results in Light of Challenges Unique to Palestinian Firms and the Economic Environment

Palestinian firms function in a political, economic, and institutional context that is highly constrained and clearly different from other developing economies; it is dominated by political instability, restricted access to international markets, and fragmented supply chains. The bottom line is a more combative climate for receivables management, as much-needed payment from companies is facing buyers that are themselves grappling with liquidity stress and economic upheaval and, thus, paying their invoices more slowly.

The results from this study demonstrate how these dual challenges compound each other's effect on both SOD and firm value. An example is the Firm in Palestine industry, or sector that extends generous credit terms to secure their account base and remain competitive in a volatile or fighting sector/market. Although these practices may increase market share, they prolong SOD and increase cash flows (Awad& Al-Ewesat, 2012). This logic drives home the fact that between maintaining customer relationships and maximizing WCME, Palestinian firms have a delicate balance to achieve.

Vijayakumaran (2019) provides an insightful work for comparison. His work on emerging markets showed that firms with shorter SOD exhibit better operating liquidity and efficiency, and consequently higher firm value. But his results also highlighted the importance of institutional factors like credit access and regulatory frameworks to WCME outcomes. Palestinian companies have different institutional constraints from other developing states, such as limited access to formal credit channels and high payment default risks. These reasons increase the urgent need for sound receivables management for liquidity preservation and value preservation of firms.

Future research in this topic could benefit from this study which shows what Palestinian firms can do to breach these gaps by adopting a strategic receivables management policy. Introducing digital payment systems and automating invoice processes, for example, can allow firms to reduce collections periods and outstanding receivables. Firms can also apply credit rules more stringently, and tracking payment terms through customer segmentation allows them to adjust the payment period according to the customer's credit risk. These practices are consistent with the recommendations by Garcia-Teruel & Martinez-Solano (2007) who highlighted that customized credit management strategies help enhances WCME.

5.3.3.3 Receivables management in Palestine

The research results show that receivables management is one of the significant matters for the Palestinian firms which have grown in a resource constrained environment that affect their overall financial performance. This environment causes a disruption in the cash flow along with a decline in liquidity rendering firms more vulnerable to economic shocks. This is why companies need to proactively re-strategize and emphasize the efficiency and resilience of their receivables collection.

A strategy that does this is developing customer relations by being transparent and negotiating payment plans. Collaboration and engagement promote trust, which reduces payment pagination and improves cash flow predictability. Furthermore, providing FinTech solutions approaches, such as e-invoicing and automated reminders, will assist in factory improving collection. While the nascent tech scene has its merits, it is

important that maintains policy-level interventions addressing structural limitations confronting Palestinian businesses. Microeconomic Measures Governments could, for example, take microeconomic measures that enable access to non-expensive credit and strengthen digital financial infrastructure to alleviate liquidity constraints and improve firms' WCME. Tying Palestinian companies to consider regional cooperation on receivables management can create synergies, (as companies will be to streamline assets and exchanging best practices.

The findings of this study demonstrate the significance of SOD on the quality of firms in Palestine that are indistinct great economic constraint from the fact that as long as the firm succeeds and its needs are met. This narrative explicates the strategic relevance of effective receivables policy by positioning it within theoretical construct with respect to contemporary empirical work, most notably, and with some caveat to the established article by Vijayakumaran (2019) in the area, where paying attention to receivables upwards of each dollar delivered to its account by extending credit is paramount to clear financial health sustainability as well as liquidity potential. Novel strategies and a readiness to apply newly available technology may pave the path to overcoming receivables roadblocks ahead, and would create long-term value for Palestinian firms.

5.3.4 Discussion about Third Research Sub-Question: Payables outstanding days affect the firm value.

5.3.4.1 Balancing Payment Flexibility and Supplier Relationship

The current study delivers a complex relationship among payables outstanding days (POD) and firm value, proving a key trade-off between the flexibility form the postponement of payments with suppliers, and the requirement for fostering strong supplier relations. Firms with reduced payment periods may not have as much working capital, as they may want some of the cash flow to be reoriented into growth opportunities or may want to service other short terms obligations. On the other hand, prolonged payment delays could end up damaging the relationship with suppliers, which will help to increase supply chain disruption, higher prices, or even the loss of favorable credit payment terms.

These results can be understood with the Trade-Off Theory, which is a useful explanatory tool. Although POD gives temporary financial respite, it can adversely affect the operational efficiency in the long run if suppliers take an unfavorable stance. This dual potential illustrates the delicate balance that firms must walk—while it is beneficial to optimize the POD enough to maximize the cash flow advantage, this must not come at the expense of goodwill from the supplier. According to Deloof (2003) delayed payment terms to credit institutions is one of several factors that promote superior profitability and firms can delay payables without crossing key supplier thresholds.

Palestinian firms also face additional complications in the scope of this study. Political volatility and budgetary restrictions frequently curtail their access to foreign loans, and protracted POD becomes a crucial instrument of maintaining liquidity. But these same conditions can make suppliers touchier when it comes to payment delays, as they are under financial pressure themselves.

5.3.4.2 Global Studies of Extended Payables Benefits

The benefits of extended payables (EP) for liquidity and operational flexibility have also been highlighted internationally. For instance, Vijayakumaran (2019) showed that firms having more extensive POD are also generally more liquid and far more financially stable in the context of the emerging markets. They can afford to be in a better position to hold on to their cash longer with less dependence on expensive outside capital. The findings of this study are consistent with those of Vijayakumaran (2019) who shows that POD prolonged for a long period of time may serve as strategic lever for firms working in constrained business environment context.

But this study also differs from what has been found elsewhere in the world in emphasizing special challenges faced by Palestinian firms. Unlike other emerging markets, Palestinian businesses function amid increased economic uncertainty and limited access to global supply chains. These elements increase the dangers of extended POD, since suppliers are generally less robust and more dependent on prompt payments. Such a gap underscores the key necessity for good communication and partnership with suppliers to avoid potential tension that can arise from long payment windows.

In contrast to the finding, there are studies such as Garcia-Teruel & Martinez-Solano (2007) which find that longer POD has a positive relationship with firm value in developed markets as the strong institutional approaches allow suppliers alternative financing options and the possibility to seek legal recourse. By contrast, the Palestinian context does not have such institutional backing, thus requiring reliance on collaborators up and down the supply chain to keep operations running. Therefore, this distinction supports the development of customized approaches that balance the liquidity advantages of extended POD and the asset-light relationship requirements of a fragile economic ecosystem.

5.3.4.3 Payables Managements in the Palestinian

Payables outstanding days (POD) management in Palestine need to context sensitive to update with liquidity crisis within firms in addition suppliers' financial fragility. Delayed payment terms can prove lifeblood for company seeking a potential liquidity shortfall — if employed with understanding of supplier dynamics.

One popular solution is work on finding sections within the concerns between suppliers based on their fund status and customized transaction structures. Those with strong financial suppliers may be able to withhold payment indefinitely without price to itself while weaker suppliers need to be paid quickly simply to stay solvent. A segmented strategy allows companies to derive maximum benefit from each POD while also managing the risks to critical supplier relationships.

Improvement of technology in payables management, according to the researcher, IT development for firms and suppliers to invoice and monitor payment through digital platforms can enhance transparency and efficiency thus establishing trust between firms and suppliers. Likewise, leveraging predictive analytics to determine cash flow requirements can allow businesses to time payments effectively such that lengthier POD meets their liquefaction objectives without jeopardizing supplier goodwill. Government programs to allow suppliers to take low-cost credit can help the companies to provide more advantageous payment on delivery options, as these will help to reduce suppliers' dependence on immediate payment. Similarly, studies of Palestinian business cooperation

would promote knowledge and resource sharing among businesses and increase infrastructure resilience across the supply-chain.

In summary, in the context of the unique economic and political environment within which Palestinian firms operate, the results illuminate and characterize the relation between POD and firm value, focusing on the implications of public ownership in mixed economies. This paper closes the gap concerning the extended POD in terms of liquidity, and relational space that is necessary to balance supplier management with liquidity benefits. Comparing these findings with global studies, e.g., (Vijayakumaran, 2019; Garcia-Teruel & Martinez-Solano, 2007, further emphasizes the global importance of POD as a liquidity management tool and highlights the distinctive challenges and opportunities present in Palestinian firms. Palestinian firms must make payables a driver of long-term value creation and sustainability of supplier relationships through the right payables strategy and technology solidifying them.

5.3.5 Justification for the Results Based on Kernel Estimation – NTC Insignificance while Its Components (SOD, IOD, POD) are Significance

The Net trading cycle (NTC) is a composite measure that captures Inventory on-Hand Days (IOD), Sales Outstanding Days (SOD) and Payable Outstanding Days (POD) into a single metric called Net Trade Cycle (NTC). NTC was found to be statistically insignificant from Kernel Estimation results, however its components were significant. This can be explained by a few important points:

Contrasting Effects among NTC Elements

NTC aggregates three separate working capital components that can each exert differential—and often opposing—effects on firm value:

SOD (Sales Outstanding Days): An increasing SOD is a sign of slow receivables collection, and decreasing firm liquidity, therefore lowering firm value.

IOD (Inventory on-Hand Days): A rising IOD indicates inefficiencies which results in increased holding costs and reduced profitability.

POD (Payable Outstanding Day): A long POD may enhance liquidity but can negatively impact supplier relationships hampering operational efficiency.

Because NTC is a composite measure, opposing effects in its components may offset one another, making the net effect on firm value insignificant despite significance in its individual components.

Non-linearity and kernel estimation sensitivity

This research forecast having a non-parametric technique kernel estimation that covers its relationships alongside the non-linear structure. When firm value is non-linearly related to NTC, standard parametric interpretations will not account for heterogeneity in observed components. Because the kernel method measures local effects, it can find stronger independent effects of SOD, IOD, and POD while viewing NTC as a relatively weak, diluted predictor due to aggregate nature.

Loss of Granularity in NTC

The net trading cycle (NTC) is an aggregate measure of working capital efficiency and does not decompose the effect of its individual elements. Companies might be doing great at one end (e.g., extending days payables for better cash flow), but completely failing at another (e.g., days inventory affects profit). Because kernel estimation is sensitive to specific relationships at the component level, it will show meaningful results for SOD, IOD, and POD, while making NTC statistically insignificant (losing component-wise insights).

Dynamic Interactions between Components

The positive and negative relationship with SOD, IOD, and POD indicates that the firms adjust each of its components strategically instead of managing NTC in an absolute sense. For example: A company can have a high value of IOD and a long value of POD, but can cover operational working capital defects by better credit terms with suppliers. However, if such a firm has a short SOD but a long inventory turnover period, it may still be experience liquidity crises, even with its receivables managed efficiently. Because

NTC does not directly encode these dynamic interactions, its impact might seem weaker and statistically insignificant, despite the fact that its individual components are significantly related to firm value.

Conclusion of the Justification

The insignificance of NTC across the kernel regression results highlights the aggregation of conflicting effects, loss of granularity and dynamic interaction effects between components of working capital. In contrast, SOD, IOD and POD retain their significance because they each capture unique mechanisms by which working capital efficiency impacts value, resulting in relationships that are easier to detect in a non-parametric estimation framework.

5.3.6 Discussion about Fourth Research Sub-Question: The Impact of Working Capital Management Efficiency on Financial Performance under Financial Distress.

It is famous that financial distress stands as a basic mediating variable in the tricky relation WCME and firm worth. An alternative approach is through operational and financial dynamics that combine to drive a firm's value. The underpinnings of this discussion are theoretical and empirical, discussions of the relationship between financial distress and WCME, its relationship with firm value, its comparison with existing literature and the novel nature of this study.

Previous research identifies a strong association between financial distress and WCME. In the field of marketing finance, financial distress is a condition that occurs when a firm does not meet its financial responsibilities that would normally lead to liquidity crisis, operating efficiency issues, and even bankruptcy. Scholars such as Wilner (2000) and Kieschnick et al. (2013) assert that inefficient WCME worsen these circumstances, increasing the probability of financial distress.

Weak WCME shows up in inefficient inventory management, slow collection of receivables, and deferment of payables. All three reduce firm cash flow, increase holding and opportunity costs, and damage relationships with stakeholders and in so doing leave a firm more vulnerable to financial distress. Conversely, operationally efficient WCME

mitigates against these risks as a stabilizing agent, preserving liquidity, operating functionally, and sustaining firm value in periods of turbulence.

5.3.6.1 Empirical Results – Financial Distress Mediates the Relation between WCME and Firm Value

This study can also drive for the Palestinian companies that empirical evidence supports the hypothesis, that financial distress significantly mediates the relation working capital management efficiency (WCME) and firm value.

In terms of inventory management, excess inventory compounds the financial distress through the rising holding costs and through the money tied in - in many instances this money could have been used for operational purposes. These inefficiencies add to the liquidity constraints of distressed firms, reducing their ability to meet short-term obligations and depressing firm value. On the other hand, effective inventory management—involving the holding of right levels of stock and reduction in holding periods—alleviates these risks, releasing working capital and improving liquidity.

Receivables management, too, is critical, given that long sales outstanding periods aggravate financial distress by extending cash inflows and limiting a firm's operational flexibility and managing receivables correctly (whether by timely collection of credit, or more stringent credit policies), is one potential solution to mitigate financial distress, and to increase the firm value.

Payables management plays an additional impact on the link between WCME and financial stability. And while lengthening payables terms can offer short-term liquidity relief, protracted delays in payment can damage supplier relationships, disrupt supply chains, and raise procurement costs. For distressed firms, those inefficiencies add an extra notch of weakness for financial stability. Payables management that both maximizes liquidity and maintains a constructive relationship with suppliers is essential for preventing financial distress that can negatively affect firm value.

5.3.6.2 Novel Contributions of the Study

This study adds unique evidence to the practice and literature of corporate finance in terms of the mediating impact and role of financial distress. Whereas most studies focus mainly on developed markets, this research attempts to explore and present the various challenges that firms in developing economies like Palestine have to face. These problems include political instability, limited access to outside financing and greater economic uncertainty. The results elaborate on how these contextual factors can enhance and explain the risks associated with inefficient WCME, and provide evidence of the need for tailored strategies for financial distress mitigation in those situations.

Additionally, the study incorporates sector-specific dynamics, offering a more compelling picture of how industry attributes affect the WCME-firm value nexus. Manufacturing firms face unique problems from inventory management while service firms focus upon receivables management. The study thus sheds light on an important dimension that was missing in past research with regards to emphasizing the relevance of bespoke WCME practices which addresses sectoral differences. This research, not only adds to the practical aspects of the field, but also continues the theoretical frameworks based on previous works of scholars in this area (such as Wilner, 2000; Deloof, 2003). In spite of the previous studies that showed similar WCME's importance, the current study differs from them in terms of exploring with the mediation of financial distress.

It has theoretical implications as it closes the gap by showing how financial distress results in WCME components (money tied in inventory, receivables, and payables) to contribute toward firm value. This contribution then provides a deeper insight on the processes at stake and how they can extend the theoretical and practical knowledge within the field.

5.3.6.3 Dealing with Gap in Existing Literature

The results indicate implications providing to managers and policy makers to ensure that sufficient litigation is available, the stakes are high and an essential discourse about the importance of working capital management and interests of macroeconomics policies in

compromise to deal with financial distress. So, managers should pay close attention to their management of working capital and can do this by dealing with whether they should reduce their inventory turnover, how long it will take to collect those receivables, and how to balance their terms of receivables and payables.

They need to have effective cash flow forecasting and tracking systems in place that enable them to identify and address potential liquidity issues in their business. Re-engineering and maintaining strong relationships with suppliers and customers are as important to maintaining operational continuity in times of financial stress as exploring cost-cutting measures.

Policymakers, by contrast, should concentrate on tailoring regulatory frameworks to improve firms' access to funding, especially for small and medium-sized enterprises (SMEs). Systematically encouraging firms to adopt best practices in working capital management — whether through targeted training programs or incentive mechanisms — is a major way to strengthen their financial resilience. Economic stability and the building of roads or bridges are also disseminating back to the external risks that compound financial stress.

Focusing on these priorities gives managers and policymakers the ability to leverage interventions that will, in turn, collectively create an ecosystem of economic stability; one that will enable companies to endure the financial shocks necessary to create a path to sustainable growth.

5.3.6.4 Practical Implications

The results offer practical implications for managers and policy-makers, highlighting necessary actions needed to minimize the adverse effects of Ci on the economic development.

Collectively, these initiatives help to provide a gap-filling strategy to the financing difficulties of the firms and to generate a baseline for the economy.

5.3.6.6 Conclusion of the Mediation Role of Financial Distress

Financial distress significantly mediates the relationship between WCME and firm value, acting as both a challenge and an opportunity. Thus, inefficient WCME increases the risks of financial distress, whereas efficient practices act as a buffer that protects firm value in adverse situations. This discussion links the study findings to the theoretical perspectives and established empirical evidence to underscore the importance of WCME in mitigating financial distress and improving firm value amidst the complex economic and political environment in Palestine.

This study's original contributions inform scholarly discussion as well as offering practical insights for firms and policymakers who must navigate the complexities of financial management in emerging markets.

5.3.7 Discussion about Fifth Research Sub-Question: The Effect of Industry Type on the Relationship between WCME and Firm Value

However, the type of industry is an important mediator between WCME and firm value. WCME strategies must be tailored according to the specific needs of different sectors as every sector like manufacturing or services has its operational requirements and market conditions which directly affect the performance of WCME strategies. Manufacturing firms typically function in supply chains where inventory build-up and control are critical factors; whereas service firms focus more on receivables and cash flow processes driven by clients. These differences highlight the importance of assessing WCME in light of sector-specific features. Focusing on moderation and integrating findings from Vijayakumaran (2019) with previous findings, this section synthesizes how work−family conflict and supporting mechanisms can potentially vary by examining how industry type influences WCME. Understanding these dynamics will inspire consequences on how firms can adapt WCME practices to their operating environments to achieve improved financial performance.

5.3.7.1 WCME Challenges for the Manufacturing Sector

Manufacturing enterprises possess unique characteristics, with long production cycles and high inventory requirements complicating the implementation of WCME. For these firms, managing inventory efficiently is a key to managing liquidity and ensuring business continuity. When inventory practices are sub-optimal, too much capital gets stuck in unsold inventory, which can result in drastic liquidity challenges. This not only undermines a firm's capacity to service its near-term financial obligations, but it also reduces its long-run value.

In order to tackle these issues, manufacturing firms need to cut down both on-hand inventory days and plug in advanced technologies in their inventory management practices. Such systems underpin improved visibility, facilitate supply chain flows, and help companies reduce holding costs and maximize cash. Vijayakumaran (2019) highlights the significance of reducing cash conversion cycles for production type companies. These operational improvements help firms manage their liquidity better, and directly, those improvements add to firm value. Manufacturing firms can forge a path to enable sustainable growth in the business landscape by adopting a strong set of best practices on WCME.

5.3.7.2 WCME dynamics in the service-context

Service sector organizations differ from manufacturing firms fundamentally due to their reliance in intangibles and stable cash flows driven by customers to obtain profitability. That means WCME is a receivables (accounts receivable) management company in the service sector. The time it takes for clients to pay, also known as sales outstanding, is a key risk to liquidity within this sector and extended periods of sales outstanding mean clients are taking longer to pay. It is not just a good thing for service firms to have cash coming in of the relevant period, it is critical to continuity of day-to-day operations.

The study of Vijayakumaran (2019) provides crucial evidence for the critical role played by efficient receivables management on firm value, especially in the service industry. Businesses that make their receivables collection process more efficient and implement

strict credit policies will be in a stronger position to combat financial distress and maintain growth. Payables management is important, although less of a concern in service compared to manufacturing. Ineffective balance in payables can increase aggression with suppliers or clients, which, in turn, can affects leading to operational stability and reputation. Thus, service firms need to develop their WCME strategies in line with their financial and operational characteristics.

5.3.7.3 Cross-Sectoral Insights and Practical Recommendations

The moderating influence of industry type on WCME and firm value is starkly brought into perspective when one contemplates the unique challenges inherent both to manufacturing and service sectors. Especially for manufacturing firms, inefficiencies in the management of inventory can postpone production, inflate costs, and erode profitability, which makes both industries very sensitive to the orderly management of inventory. By contrast, service enterprises are particularly exposed to slowed collection of receivables, disrupting the steady stream of incoming cash that is critical to their business models.

These results support earlier findings of Deloof and Jegers (1996) and García-Teruel and Martínez-Solano (2007), who noted the need for industry-based approaches to WCME. These themes are further explored by Vijayakumaran (2019) who focuses on these dynamics in context of emerging markets, where firms are functioning in an environment of severe political and economic uncertainty. Their findings highlight the need to adapt WCME interventions to be appropriate for context-specific settings, particularly in world regions such as Palestine, where outside restrictions heighten calls for strong financial management tools.

From a practical perspective, manufacturing firms are advised to invest in advanced technologies that enhance inventory visibility and turnover. These kinds of investment ensure better utilization of working capital and mitigate liquidity challenges that can otherwise impede growth. Conversely, they should focus on enhancing receivables collection processes, as service firms have to be vigilant to ensure that cash flows are timely and don't dry up, at least too quickly. Policymakers have an important role to play

in supporting these efforts, which should include developing sector specific guidelines and providing access to working capital financing. The importance attributed to institutional support (Vijayakumaran, 2019) opens up avenues for meaningful policy-related interventions that are likely to enhance WCME practices and also contribute to augmented firm performance in sectors at various levels of development.

5.4 Theoretical and Practical Implications

5.4.1 Theoretical Implications

The results contribute to the literature as follows:

Validation of the insignificant effect of net trading cycle (NTC) on the firm value in the emerging markets is consistent with the theories (Resource-Based View and Trade-Off Theory).

Emphasizing the requirement for the sector effect on the working capital management efficiency under the moderating role of the industry type in the relation between the WCME and firm value.

Exploiting the power of non-parametric techniques in demonstrating the usefulness of its non-parametric methods in under firm-level heterogeneity.

Sector and firm-specific WCME strategies are essential for managers to customize work in their sector and firm-specific characteristics. Thus, companies manufacturing products must stress up on inventory accretion, while services companies must understand the important role of receivables management. Firms should also take a balanced view of leverage and use debt to tap into the mechanisms of capital investment while looking for operational efficiencies without risking financial strength. Liquidity should be at the desired level to cover for the short-term challenges and maintain the confidence of investors. Nitpicking is also discouraged over too much liquidity to avoid opportunity costs. The solution lies in the ability to embed advanced analytics solutions — including predictive analytics and real-time monitoring capabilities — into WCME processes so that firms can identify inefficiencies, accurately forecast cash flow deficits, and play their

best cards in decision making. Policymakers can help facilitate efficient WCME by providing access to financing, lowering regulatory burden and improving financial literacy among managers.

5.4.2 Practical Implications

Effective working capital management requires targeted solutions to improve key components such as inventory practices, receivables collection, payables management, and the skills of financial management. These solutions are critical for enhancing firm performance and addressing inefficiencies.

Inventory Management: Strong stock tracking systems must be put in place that assist businesses manage stock turnover and holding prices. Just-in-Time (JIT) practices or automated inventory management software, depending on the company needs to balance the inventory levels. Regularly monitoring the demand forecast here and adjusting the inventory accordingly can save organizations from overstock and stock out issues. Specifically, inventory teams use predictive analytics and real-time monitoring tools respectively can increase efficiency in this regard to a greater extent, particularly manufacturing-based companies that need large space for storage.

Receivables Collection: To improve liquidity companies must clearly state credit policies. Early payment discounts incentivize fast receivables collection and strict credit checks reduce the risk of a failure to pay. This entails automating processes like invoicing, payment reminders, etc. to enable timely payments and optimize days of sales outstanding. So healthy relationships lead to trust and cooperation and increase cash flow definitely, including clear communication and accommodating payment terms.

Payables Management: Vendor opening terms can be taken into account while optimizing payables management. Taking long payment terms often gives firms a good faith boost toward bad trustworthiness or reliability. Timely payments — if appropriate — can also help improve cost efficiency in the form of early payment discounts. The centralized payables system keeps better track of the obligations and responsibilities, ensuring the balance between managing cash and suppliers' expectations. The supplier contracts and

payment terms shall be evaluated periodically to ensure that contracts are in obtain with the firm's financial policy and objectives.

Training: Enhancing the skills of financial managers is important for the effective implementation of WCME. Managers' training on financial analysis, cash flow management, and technology adoption is conducted through routine workshops and training sessions. Possible certification programs focused on more sophisticated financial management practices will further professionalize this human capital, enabling it to act on WCME strategies. Creating cross-functional collaboration between the finance, operations, and supply chain teams helps to crystallize alignment on broader financial objectives.

5.5 Recommendations

5.5.1 Practical Recommendations

To improve the efficiency of working capital management efficiency (WCME) for companies listed on the Palestine Exchange (PEX), the following actionable recommendations are put forward. Many other aspects of the Palestinian business environment, such as political instability, lack of access to external financing, and the highly volatile economic situation, are unique. The researcher can move the needle on these context-setting settings to align the way companies optimize their cash conversion cycle. Some factors, including holding period of inventories that can be impacted and bettered with the help of sophisticated inventory management systems, are even more critical in Palestine, where logistic limitations and supply chain interruptions are a common scenario.

Another key strategy is accelerating receivables collection. Credit policies are a necessity to ensure cash inflow in a timely manner, as Palestinian firms deal with delayed payments as a result of regional economic instability. To overcome such payment delays, set clear terms regarding payment and use digital invoicing systems. Improved supplier negotiations are also critical, allowing companies to create a trade-off between the liquidity tail and the supplier relationship head. Notably, communication with one

another to ensure proactive action and long-term agreements to ensure stability, separately, outweighs excessive market movements. Palestinian companies will be able to optimize their working capital, get the best value in the market, and increase their resilience in a very difficult environment.

5.5.2 Policy Recommendations

The role of the government and institutions is key in stimulating constructive WCME practices in Palestine. Policymakers must then galvanize local banks and international donors to help them create targeted loan products suitable for working capital needs and make it easier to access affordable financing. About improving access to finance and repayment options, the political and systemic impacts that restrict credit access in Palestine should be supported in training up credit guarantee schemes so that perceptions of lending to SMEs are reduced, driving financial inclusion and the ability for businesses to operate with more efficient working capital.

On top of this, infrastructure development is a key priority. Digital platforms for receivables and payables management can help mitigate these delays, thereby improving overall transparency in financial transactions. The government should also work on ensuring that researcher will have a much more stable regulatory environment that incentivizes accountability and reduces red tape so that firms can concentrate on efficiently managing their operations. Reinforcing this further, specific subsidies or tax exemptions for firms moving towards modern inventory and receivables management technologies can help Palestinian firms, particularly in transitioning away from structural inefficiencies.

5.5.3 Academic Recommendations

Preparing future accountants and financial managers to meet the unique challenges of the Palestinian economic environment requires the integration of WCME into financial management education. WCME is to include Basic courses with the primary goal of making WCME an integral element of accounting and finance curricula in universities and professional institutions with a practical bent to the emerging markets. One example

of research that can show the context-specific needs of Palestinian firms is case studies on the difficulties of market restrictions, instability, and resource constraints faced by businesses.

Similar is true for targeted training schemes for current financial professionals. Equally, it is important to provide workshops and certifications specialized in the state's management, including advances in inventory, receivables collection, and strategic payables, which can maximize efficiency in the profession of accountants and financial managers in Palestine. Collaborations between the academic sector and industry are becoming more important to ensure that these programs actually respond to real-world challenges that can empower professionals to implement successful WCME strategies appropriate to the Palestinian environment.

5.6 Study Limitations and Future Research

5.6.1 Study Limitations

Although this study contributes to the researcher's understanding of the relationship between WCME and firm value for Palestinian-listed firms, the researcher acknowledges a few limitations, especially considering the local economic, financial, and political context of Palestine.

Methodological Constraints

The researcher used panel data analysis with fixed effects, random effects, GMM methods, Quantile regression, and kernel estimation to assess the turning effects between WCME and firm value. Panel data models, however, are intrinsically sensitive to unobserved heterogeneity and omitted variable bias. Even if the fixed effects account for firm effects, there may still be a problem of endogeneity, where the explanatory variables are correlated with unobserved firm features. Moreover, the research solely targets the firms that are listed on the Palestine Exchange (PEX). Although this guarantees that data is made available consistently, it does mean that SMEs and privately-owned firms, which play an integral part in the Palestinian economy, are overlooked. The findings presented in this study cannot adequately reflect the wider WCME practices in Palestine, as most of

the Palestinian businesses are family-owned enterprises with informal financing structures.

Furthermore, the lack of significance for the NTC along with its financial proxies, indicates that firm value in Palestine is influenced by factors beyond the direct effectiveness of managing working capital. Not surprisingly, external constraints (such as low access to credit, trade barriers, and geopolitical instability) affect firm performance more than does this ability to pay economic rents.

In summary, they suggest that these variables may dominate firm-level financial factors, leading to WCME being weaker in statistical models. In light of the weak instrument validity in GMM estimations, future studies should investigate alternative instruments to enhance estimation accuracy; potential instruments may come from macroeconomic indicators (inflation, interest rates, currency alterations) or firm-level governance proxies.

Data Limitations

This study is based on publicly available financial statements, which may be subject to inconsistent reporting and missing data. The number of firms perceived to comply with appropriate accounting standards in Palestine is limited, while in some cases, firms do not freely provide information on whether they have working capital policies implemented. Furthermore, Palestinian companies routinely engage in non-formal credit dealings, vendor credit, and cash-based economies that remain undocumented in financial statements. Furthermore, the study does not consider macro-financial variables, including interest rates, inflation, currency depreciation, or geopolitical risk, all of which are often of paramount importance in the Palestinian context. The existing economic sanctions, sporadic access to financial resources, and reliance on foreign assistance further complicate firms financially, impacting their value and working capital choices. These external economic burdens make corporations less likely to maximize their working capital efficiency, helping to rationalize the lack of significance for NTC in the empirical findings.

Contextual Limitations

The Palestinian economy and its environment are subject to unique structural and geopolitical limitations that set it apart from other emerging markets. Overall, trade restrictions, constrained access to international banking and capital markets, and reliance on donor funding impact financial decisions in the firms themselves. These factors present liquidity challenges and limit firms' ability to maximize working capital efficiency. To add to that is the overarching issue of political instability and frequent economic disruption which leads to financial uncertainties at multiple levels; disrupts the functionality of firms, supply chain, and long-term investment decisions.

In contrast to firms in other emerging economies, Palestinian firms suffer from limited access to cross–border trade and financial services, which requires these firms to develop alternative working capital strategies that do not follow traditional financial characteristics. Moreover, there are external financing possibilities are severely limited for Palestinian firms, making them much more reliant on internal sustainability, supplier credit, and short-term liquidity management mechanisms. This stands in contrast with firms in other developing economies, where bank loans, trade finance, and foreign direct investment (FDI) are much more easily accessed. The impact of financial constraints must be taken into account when interpreting the results of this study, in particular the lack of significance of WCME components as determinants of firm value.

5.6.2 Future Research Directions

These limitations suggest areas for future research that build upon this study, which can particularly be reflected as follows while considering Palestine's economic and financial environment.

A Study of WCME in Palestinian SMEs

Many of the businesses in Palestine are SMEs and family businesses, and so further research is needed into ways in which unlisted firms manage working capital within the constraints of a difficult economy. In contrast to listed firms, SMEs tend to be cut off from formal credit markets and depend on supplier finance, trade credit, and informal credit networks. WCME in Palestine would be more fully understood by examining the

effects of cash-based transactions, informal credit arrangements and local business practices.

Expanding the Analysis to Different Industries in Palestine

This study analyses the selected sectors of publicly listed companies; however, future research can adopt an industry-specific analysis. The combination of working capital needs and financial risks differs greatly between manufacturing, retail and agriculture firms versus technology and service-based firms, for example. An analysis of the impact of more sector-specific differences on WCME may uncover sector-specific financing strategies for Palestinian firms.

The Role of Institutional and Financial Constraints

Further research may focus more on how institutional factors, inefficiencies in the banking sector, and financial development policies affect the choice of working capital decisions in Palestine. With the limited wave of banking and absence of venture capital, examining how firms adapt their working capital management, such as their collections and payable strategy, in response to banking constraints and regulatory barriers can generate valuable policy implications.

The Role of Political and Economic Instability in WCME

The geopolitical and economic instability are the most critical factors affecting the relationship between the firm value and the working capital management efficiency in Palestine. Future studies could consider macroeconomic variables such as exchange rate fluctuations, inflationary pressures, donor aid volatility and trade restrictions to examine how firms adjust their working capital strategies under high-risk situations.

WCME Practices in Palestine Relative to Other Conflict-Affected Economies

Considering the specific economic challenges in Palestine, a comparison between WCME practices in Palestine and other conflict-affected areas, e.g., Lebanon, Syria, Iraq, or Afghanistan, would be useful. A comparative study like this would allow us to identify the range of strategies used by firms with financial resilience in contexts of political

instability, and how similar strategies and capabilities can assist firms to survive and thrive in an extremely financially constrained environment.

5.6.3 Conclusion of Study, Limitations, and Future Research

This paper addresses not only these aspects but also highlights specifically the limitations in this area regarding Palestine and finally presents recommendations for future studies. These findings highlight the importance of considering liquidity management, financing constraints, and geopolitical risk when detailing financial decision-making. In future studies, SMEs, the industry-specific context, other econometric approaches and the broader institutional framework could be explored to improve and broaden the current and future knowledge of how Palestinian firms respond to working capital threats in a rapidly deteriorating economic environment.

5.7 Conclusion of the Results Discussion and Recommendations

5.7.1 Summery

Based on the framework of working capital management efficiency (WCME) and firm value, this study empirically investigates the bidirectional relationship between WCME and firm value using a suite of statistical tests like Ordinary Least Squares (OLS) regression, fixed and random effects models, and non-parametric techniques like Quantile Regression and Kernel estimation. These methods were adopted to guarantee the robustness of the findings by addressing data heteroscedasticity and non-linearity problems that are typically present in panel datasets of emerging countries. These outcomes illustrate just how critical WCME is for areas such as liquidity, operational materials, and market value in an era where the Palestinian economy.

To minimize holding costs for manufacturing companies, faster turnover rates are more important, while the importance of timely collection of receivables is more vital to service-oriented firms that rely on regular cash flows. This supports Deloof (2003), which states a negative relation between the cash conversion cycle and firm profit, and

Vijayakumaran (2019), who highlighted the sectoral differences in the WCME's effect on firm value. Additionally, the inclusion of financial distress as an independent mediator and industry type as a moderator are new insights to the stream of literature. This study is not just a literature review, but rather it gives a good background to the alignment of cash traps and agency problems of WCME found in other economies, such as Wilner (2000), but in the case of Palestine, at least.

5.7.2 Final Reflection

This study contributes theoretically and empirically to WCME, particularly within the context of emerging markets such as Palestine. From the theoretical perspective, the study reconciles the conflicting views of TABC (Liquidity vs profitability) and RBV (WCME standing in building competitiveness). By including financial distress as a mediating variable and industry type as a moderating variable, it extends these frameworks by also explaining the way that firms manage navigate external constraints in more detail. Such insights illustrate prospective dynamics of how WCME practices remain relevant across varying economic and political conditions, and mediate the retention of firm value even in adverse circumstances.

From a practical standpoint, the study highlights the need to adopt customized WCME strategies for Palestinian organizations. Recommendations involve taking up inventory management tools, putting in place strict credit policies to shorten receivables collection periods, negotiating better payables terms to improve liquidity, etc. Indeed, these strategies are of utmost significance in the context of Palestine, where access to financing is highly constrained and supply chain disruptions are significant. Credit guarantee schemes can promote and improve technology adoption and financial transparency. Policymakers must aim to create conducive environments.

The advanced analytical approaches used in this study also highlight its contribution to methodological rigor. These results require validation by performing a comparative study of the Palestinian companies compared to competitive companies in emerging economies living in Jordan and Egypt, confirming these results and enhancing their generalizability

across contexts. Moreover, exploring the role WCME plays in innovation and sustainability could serve as a valuable approach to future research.

Thus, in sum, this study contributes to the academic literature related to WCME by placing its dynamics in the context of Palestine's distinctive economic and political model. It fills important gaps in the existing literature around financial distress and industry-specific factors and provides tools and guidance for practitioners and policymakers. This study, by striking the right balance between theoretical advancement and applicability, offers a good baseline for enhancing financial management methodologies in emerging economies.

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Appendices

Appendix 1.1: Information of listed sample firms.			
No.	Company name	Listing Date	Sector
1	Palestine Telecommunications	6/5/1997	Service
2	Palestine Electric	28/03/2004	Service
3	Palestinian Company for Distribution & Logistics Services	23/04/2007	Service
4	The Arab Hotels	30/05/1998	Service
5	Nablus Surgical Center	22/06/2008	Service
6	Palaqar For Real Estate Development & Management	3/7/2012	Service
7	Birzeit Pharmaceuticals	22/12/2004	Industry
8	Jerusalem Pharmaceuticals	20/01/1997	Industry
9	The Vegetable Oil Industries	8/9/1999	Industry
10	Palestine Poultry	31/12/2002	Industry
11	Jerusalem Cigarette	24/07/1997	Industry
12	Golden Wheat Mills	17/05/2005	Industry
13	National Aluminum and Profile – Napco	30/11/2011	Industry
14	Arab Company for Paints Products	3/5/1997	Industry
15	The National Carton Industry	8/6/2006	Industry
16	Palestine Development & Investment	6/5/1997	Investing
17	Palestine Industrial Investment	31/12/2002	Investing
18	Palestine Real Estate Investment	24/02/1997	Investing
19	Union Construction and Investment	21/01/2007	Investing
20	Arab Investors	27/07/1997	Investing
21	Al-Aqariya Trading Investment	25/04/2011	Investing

أثر كفاءة إدرة رأس المال العامل على قيمة الشركة: أدلة من بورصة فلسطين

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ملخص

تهدف هذه الرسالة إلى دراسة أثر كفاءة إدارة رأس المال العامل على قيمة الشركات، مع التركيز بشكل أصيل على الدور الوسيط للضائقة المالية، وذلك بالاستناد إلى بيانات الشركات المدرجة في بورصة فلسطين خلال الفترة من 2012 حتى 2022. تنبع أهمية هذا البحث من الطبيعة الحيوية لرأس المال العامل في تعزيز السيولة والربحية واستدامة النمو، خاصة في البيئات الاقتصادية الهشة كالبيئة الفلسطينية.

اعتمدت الدراسة على دورة رأس المال العامل الصافي (Net Trade Cycle) كمؤشر مركزي لقياس كفاءة إدارة رأس المال العامل، وتم تحليل مكوناته الثلاثة: عدد أيام بقاء المخزون، وعدد أيام الذمم المدينة، وعدد أيام الذمم الدائنة. أما قيمة الشركة فقد تم قياسها باستخدام نسبة (Tobin's Q). وشملت عينة الدراسة الشركات غير المالية المدرجة في البورصة، مع استثناء البنوك وشركات التأمين نظرًا لاختلاف طبيعة أنشطتها وهيكلها المالي.

وتتمثل الأصالة العلمية للبحث في إدخال "الضائقة المالية" كمتغير وسيط، وهي زاوية لم تحظَ باهتمام كافٍ في الأدبيات الإقليمية السابقة. تم قياس الضائقة المالية باستخدام مؤشرات محاسبية، وتحليل مدى تأثيرها على العلاقة بين كفاءة إدارة رأس المال العامل وقيمة الشركة. كما تناول البحث أثر نوع القطاع الصناعي كعامل مُعدِّل لتباين العلاقة محل الدراسة.

اعتمدت المنهجية على نماذج تحليل البيانات الطولية (Panel Data) واختبارات الوساطة والتعديل، مما أتاح فهماً أكثر دقة للديناميكيات المالية في السوق الفلسطيني. أظهرت النتائج وجود علاقة

سالبة ذات دلالة إحصائية بين دورة رأس المال العامل وقيمة الشركة، مما يؤكد أن الإدارة الفعالة لرأس المال العامل تسهم في تعزيز الأداء المالي. كما تبين أن الضائقة المالية تلعب دورًا وسيطًا مهمًا، إذ تُفاقم الأثر السلبي لسوء إدارة رأس المال العامل، خصوصًا في ظل الظروف الاقتصادية غير المستقرة.

تُقدِّم هذه الرسالة إسهامًا نظريًا من خلال دمج متغير الضائقة المالية في إطار تحليل كفاءة رأس المال العامل، وتُقدِّم في ذات الوقت توصيات عملية للمديرين الماليين وصانعي السياسات بشأن أهمية الإدارة الرشيدة لرأس المال العامل كوسيلة لتحصين الشركات ضد المخاطر المالية وتعزيز قيمتها في الأسواق الناشئة.

الكلمات المفتاحية: كفاءة إدارة رأس المال العامل، قيمة الشركة، الضغط المالي، صافي الدورة التجارية، بورصة فلسطين.