Inventory and Operational Accruals Management for Firm Profitability

Master of Science

in

Management Sciences

Submitted By

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DEPARTMENT OF MANAGEMENT SCIENCES

NATIONAL UNIVERSITY OF MODERN LANGUAGES ISLAMABAD

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A thesis submitted in partial fulfillment of the requirements for the Degree of

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ABSTRACT

This research study is intended to explore the relationship between inventory and operational accruals management and profitability of the Pakistani Manufacturing Firms listed on the Pakistan Stock Exchange (PSX). The reason is to ascertain how efficient control of the Inventory turnover period, account collection period, account payable period, and cash conversion period impacts the profitability of firms i.e. Return on Assets, Return on Equity, and Operating Profit Margin. The methodology entails the use of a robust quantitative analysis of financial data of a sample of 100 manufacturing firms for the period between 2014 and 2023. A longer Inventory Turnover Period negatively affects ROA, ROE, and OPM. The negative impact is statistically significant for all metrics, indicating that an extended period for inventory turnover is associated with lower profitability and efficiency. The negative coefficients for the constant term suggest a baseline level of loss or deficit prior to the influence of other variables. The statistical significance of these constants across all models indicates a robust and consistent baseline impact on each financial metric. The implications of the study may help practitioners and policymakers to improve financial performance by better managing the inventory and production processes. Possible future research themes are outlined, comprising cross-sectoral studies, the impact of technological growth, and the effects of other macroeconomic factors, to expand the knowledge of this relationship. This study, therefore, contributes to the broader understanding of how inventory and operational management practices influence the financial health and performance of manufacturing firms, providing valuable insights for stakeholders in the industry.

Keywords: Inventory Management, Operational Accruals, Firm Profitability

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DEDICATION

I dedicate this thesis to Almighty God, whose grace and blessings have guided me throughout this journey.

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And to my mentors and teachers, who have been a source of knowledge, guidance, and inspiration.

This work is a reflection of your love, support, and belief in me.

DECLARATION

I, **SAJID YAQOOB**, S/O **MUHAMMAD YAQOOB KHAN**, a student of MS Management Sciences at the Department of Management Sciences, National University of Modern Languages Islamabad, hereby declare that this thesis titled, "Inventory and Operational Accruals Management for Firm Profitability" is my own research work and has not been submitted, published, or printed elsewhere in Pakistan or abroad. Additionally, I will not use this thesis for obtaining any degree other than the one stated above.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACP	Average Collection Period
APP	Average Payment Period
CCC	Cash Conversion Cycle
CCP	Cash conversion Period
DR	Debt Ratio
ITP	Inventory Turnover Period
OPM	Operating Profit Margin
ROA	Return on Asset
ROE	Return on Equity

CHAPTER 01

INTRODUCTION

1.1 Background

An organization's inventory consists of all the physical items and their constituent parts that are kept on hand. The term "stock" in accounting terms means all the physical assets that are either (i) kept for sale regularly, (ii) being made for sale, or (iii) made available for sale. All products, including raw materials, in-process goods, finished goods, shops, and spare parts, need inventory. James H. Greene has mentioned that the inventory consists of "movable business articles that are eventually expected to enter the trade flow" (Amir, 2023). A company's capacity to stay in business and expand is highly reliant on the goods and services it offers, since poor inventory management practices result in fewer clients and less money coming in. Material availability, utilization, management, and acquisition must all be coordinated as part of inventory control. Inventory control is an umbrella term for a variety of related processes, the fundamental purpose of which is to guarantee the timely and accurate location, amount, and quality of all relevant inventory. Furthermore, the inventory management system will influence the profitability of the organization in some way, shape, or form due to its close relationship with the production function. Because they represent a significant portion of the organization's short-term investments, a company's inventories are a valuable resource. So, it makes sense to figure out how much inventory to invest in based on how well the business does and how much value it generates. The goal of inventory management is to minimize storage costs without sacrificing quality of service to customers or the ability to keep operations running smoothly by determining the optimal amount of manufactured goods, work-in-progress, raw materials, and other activities to keep on hand (Bhutto, 2018).

Optimal stock levels of these items are the goal of inventory management. The term "inventory management" is used in the logistics industry to describe the process of improving the operations involved in processing and clearing goods. It also includes determining how many warehouses are necessary and where to put them, in addition to coordinating with procurement and sales services. How well a company handles its inventory, accounts payable and receivable, and other financial transactions determines how profitable it is. From a liquidity and profitability perspective, this is of the utmost importance. An opportunity for funds to be invested in idle assets arises when working capital is not adequately managed (Ahmed, 2022). This would reduce the company's liquidity, making it difficult for it to invest in assets like machinery and facilities that could potentially generate profits. It would hurt the company's ability to make money. Many people associate stocks—which are seen as significant parts of current assets—with speculative capital.

It is critical to have an effective system for managing stock in order to avoid spending money that is unnecessary. If a company doesn't keep track of its inventory well, it will face serious problems with its sustainability in the long run, and it might even go out of business. With better inventory management, a company can drastically cut down on the amount of inventory it has on hand. Working capital includes inventory as one of its components. A company's success or failure is heavily dependent on how well it handles its inventory. Not only does accurate inventory tracking and management help with liquidity issues, but it also increases profits (Dakhlallh, 2020). Keeping track of inventory helps keep production and sales connected. To guarantee the security of their products during transportation and storage, businesses must always have an inadequate quantity on hand. It is generally preferable to invest as little as is practically possible in stocks and other kinds of inventory since they are assets that are not being used and require expenditures to

be maintained. There must never be a shortage of supply; rather, there must never be an excess of or deficit of what is actually needed. After deducting additional expenses, a company's profitability is still negatively affected by inadequate inventory, which hinders its ability to function efficiently.

In order to succeed operationally, businesses need to make sure they have enough inventory on hand. More stringent inventory control is positively correlated with improved financial performance for businesses, according to most experts. The correct inventory levels, a management response to market demand, are determined by the production schedule (Shittu, 2023). In spite of inventory's status as a current asset, the expense of keeping it in pristine condition while it awaits conversion into sales is substantial. Both a shortage of inventory and an excess of it can cause sales to dry up and expenses to rise. The relationship between modern information system equilibrium, inventory cost reduction, and production and sales efficiency has been the primary focus of prior research on inventory management tactics and optimal inventory levels. Nowadays, inventory management is a widely studied and used concept in the corporate sector. Supply chain management, lean manufacturing, buyer-seller information exchange, and inventory movement optimisation are all incorporated into this idea. When a business keeps enough of each product on hand to boost its net profitability, it can meet or surpass customer expectations. A company strategy that aims to encourage efficient inventory management should be the first component of effective inventory management (Nobakht, 2021). In addition to competent software users, high-quality hardware and software must be available. Having just the right amount of an item on hand is key to effective inventory management, which aims to keep production and sales running smoothly, cut down on holding costs, and boost customer service quality.

The effectiveness of any company may be greatly impacted by financial management, which includes the crucial elements of inventory and operational accruals management. Effective inventory and operational accrual management guarantees that businesses maintain the necessary stock levels and accurately reflect revenues and expenses, both of which are critical for resource allocation and decision-making. For instance, prior research has highlighted how inventory management techniques, such just-in-time (JIT) systems, can reduce surplus stock and, as a result, save money (Brown & Williams, 2018). Similarly, reducing financial misstatements and improving financial transparency can be achieved by efficient operational accruals management, particularly in relation to revenue recognition and expense matching (Smith et al., 2019).

The purpose of accruals in accounting, as stated by Dechow (1994), is to make it easier to track a company's performance over time. Because of this, accountants "accrue" a company's revenue when they track the value of goods and services provided to customers over time. The expected monetary gain from these shipments is the basis for this decision (Wenfang, 2020). There is usually a discrepancy between the amount of money earned and the amount of money received in any given accounting period. This is because some cash receipts may happen in periods that follow or that precede this one. In order to fix cash transactions for the current period that have timing issues, accountants document the accrual of income. Costs are also calculated by accountants as the sum of all the resources used to make a product or provide a service. The anticipated monetary value of the used resources is the basis for this process. When there is a discrepancy between the dates of an expense and its payment, accountants use expenditure accruals to smooth out the numbers. Thus, accounting profits are defined as the amount by which accruals-based revenues are less than accruals-based expenses. Profit is the monetary value that a company is believed

to have created as a result of the sale of goods and services to consumers during a certain accounting period. Earnings are a measure of financial success (Ghyasi, 2017).

To bring a company's income and expenses in line with the periods in which they occur, adjustments are made to the financial statements. These adjustments are done separately from cash flows. Essential to financial reporting are these changes, which are called operational accruals. The way a company handles its operational accruals is a major component in determining its claimed profitability. Accruals are significant because they can show not only the timing of transactions but also management's judgements and estimates, which affects the portrayal of financial performance. That is why it is crucial for everyone involved in a company's operations, including managers, analysts, and investors, to fully grasp how operational accruals affect profits. An in-depth analysis of this link may provide useful information about a company's operational efficiency (Shah, 2024). Because they provide a more accurate picture of a business's continuing operations, operational accruals are essential tools for reducing income fluctuations. Reason being, they look at things from a more distant, more distant future. On the flip side, manipulation of accruals can also affect reported earnings, which influences market values and how investors perceive the company. The impact of accrual management practices on a company's profitability is conditional on a variety of factors. Business dynamics, regulatory climate, corporate governance structures, and management incentives are all examples of such factors. To investigate the link between operational accruals and their company's profitability, one must possess a profound grasp of both accounting principles and the actual dynamics of business in such a situation (Alkurdi, 2023).

A company's financial statements normally contain a wide variety of transactions. Operational accruals, sometimes called working capital accruals, describe these types of

transactions. This type of transaction includes things like accounts payable, receivable, inventory, and prepaid charges. Key purposes of accruals include providing a more accurate picture of a company's continuing activities and reducing volatility in cash flows. The accounting process would not be complete without accruals. When sales are finalized and accounts receivable are accumulated, revenue is recorded, regardless of whether the payment from customers has been received or not. Additionally, accounts payable accruals will record expenses as incurred regardless of whether or not the suppliers have received payment for their services. The key to effective management of operational accruals is to be both cautious and opportunistic (Aguinis, 2020). Conservative accrual rules, on the one hand, may lead to more reliable and open financial reporting. Reason being, they make it less likely that results will be manipulated to inflate profitability. Contrarily, aggressive accrual methods can control reported earnings, which can appease investors and even give the impression to stakeholders that the company is doing well financially. Operational accruals have several potential avenues for impacting a company's bottom line. At their most basic level, accruals impact net income, a key metric for evaluating a company's performance (Zhang, 2021).

An improved picture of a business's financial health over time can be obtained with accrual accounting, which records income and expenses in the periods when they are generated or expended, instead of when funds are transferred. The reason behind this is that with accrual accounting, both income and expenditure are recorded in the same period. The reliability of reported earnings and, by extension, investors' impressions of a company's profitability, are both affected by the quality of accruals, which can differ greatly (Wati, 2022). A high-quality accrual is one that fairly represents economic transactions and is based on reasonable assumptions and forecasts. A company's underlying financial situation can be changed by aggressive accounting procedures, which include early revenue recognition or

excessive discretionary accruals, which can result in low-quality accruals. The handling of operational accruals may also have far-reaching effects on investor confidence and the firm's worth. The cost of capital goes down and a company's value goes up when its accrual methods are explicit and conservative because investors see them as less risky and more reliable. However, investors and regulators may be more watchful of companies that use aggressive accrual management tactics, which could hurt their credibility and make it harder for them to get funding.

In the dynamic landscape of financial management, the interplay between inventory and operational accruals management emerges as a critical determinant of firm profitability. The accessibility of money was higher in the years that were prior to the crisis regarding finances in 2008. The firms do not look far for the capital in order to fund growths and the goals were to increase the sales that were quite common (Kasozi, 2017). The financial crisis outbreak has influenced the overall economy of the world. There were number of organizations that were coming across facing new difficulties while others have to fight for their presence in the environment with highly minimized liquidity. It is further observed that the since the money supply is drying up, there is an increase in the significance of streamlining operations and gathering every penny that is probable. The outcome of changing the business environment forced the organizations to turn their attention towards reducing cost and asset management. Inventory and Operational Accruals Management is defined as the process of business that assists the companies to make efficient use of their current assets and optimize cash flows (Hagberg & Johansson, 2014). It is concerned with ensuring short-term monetary obligations and expenses that could be met and also participates in long-term goals of the business. Management of Inventory and Operational Accruals is recognized as the vital topic for CFOs and other executives. It is identified that the trade-off among liquidity and profitability. The main purpose of Inventory and

Operational Accruals Management is that the assets should be aligned so that their optimal potential is realized and leads towards reducing waste. Directing focus towards Inventory and Operational Accruals Management is evident to be famous during recession and same kind of patterns in shifting attention is recognized at earlier crisis (Ponsian, 2014). On the other hand, profitability is defined as the rate of return on investment where if there is an unjustifiable over investment in the present assets this would adversely impact on the rate of return on investment (Alarussi & Alhaderi, 2018). Though, the main goal is the management of Inventory and Operational Accruals is to control current financial resources of the organization where the balance is maintained among profitability of the organization and the risks that is linked with profitability. In light of the study by (Tsuruta, 2019) the idea of Inventory and Operational Accruals Management is usually explained with regards to profitability. As one of major objectives of Inventory and Operational Accruals Management is to increase the profitability and make it enticing over time in effective economic climate. Some of the participants states that Inventory and Operational Accruals Management is solely a way for the management of short-term.

However, both industries have seen a change in recent years toward more dynamic and technologically driven methods. More accurate and effective inventory management systems have resulted from businesses being able to automate the tracking of their inventory and demand forecasts thanks to innovation in artificial intelligence and machine learning (Johnson & Zhang, 2021). New techniques like block chain and real-time data analytics have made financial reporting more accurate and timely, which has made it possible to manage operational accruals more effectively (Nguyen et al., 2020). Few studies have looked at these topics' combined effects on company profitability, though, as the majority of the literature has focused on them independently.

The need for a more comprehensive approach to comprehending how inventory and operational accruals management methods contribute to a firm's financial success is indicated by this gap in the literature. Although the effects of accruals management and

inventory management on profitability have been studied independently, their combined effects have received less attention. This study attempts to close that gap by examining how, in light of recent technology advancements, both sides of successful management might together increase a company's profitability. Furthermore, this study embarks on a sectorial analysis within the Pakistan Stock Exchange (PSX), seeking to unravel the complicated relationship between these two components and their collective impact on company performance.

However, In the context of accruals management, enhancements in real-time data analysis and blockchain technology have changed how businesses identify revenue and handle operational accruals, particularly in sectors with intricate interactions like banking and e-commerce (Nguyen et al., 2020). This study has geographic relevance because it focuses on businesses in developing nations, especially Pakistan, where contemporary technology usage is still in its infancy. There is a lot of room for development through efficient inventory and accruals management in Pakistan, where businesses deal with issues such restricted access to cutting-edge technologies, ineffective inventory management procedures, and intricate financial reporting systems. This study's primary goal is to examine various inventory management techniques and operational accruals of industries listed on the Pakistan Stock Exchange (PSX), offering insight into the tactics and difficulties businesses encounter when handling their finances. Based on empirically supported analysis, this paper offers sector-specific insights to help PSX stakeholders improve their financial decision-making processes.

1.2 Problem Statement

Several reasons have been suggested for the fact that firms have not been able to attain targeted profitability, the most prominent reason being the poor management of inventories

and operational accruals passively. Literature has described the ineffective inventory and accruals management as a primary source of compromised financial profitability. Indeed, according to Akinlo (2012), efficiency in managing a firm's inventories and operational accruals can significantly alter its liquidity and profitability. Ineffective management in these areas can lead to wasteful operations, making it difficult for firms to meet their financial obligations in a timely manner. This, in turn, may result in firms being unable to supply customers with the necessary products or services, further straining their profitability. Lamberson (1995) emphasized the importance of proper management of inventory and operational accruals for overseeing a firm's profitability. Research also indicates a strong negative relationship between profitability and inventory days, accounts receivable days, and the cash conversion cycle (Deloof, 2003; Rahman & Nasr, 2007), while a positive relationship exists between profitability and accounts payable days.

In the context of listed non-financial firms in the Pakistan Stock Exchange (PSX), a gap in the literature persists regarding the impact of managing inventory and operational accruals on profitability. While some studies have explored this topic in Pakistan, the focus ranges from cement to textiles or presents broad overviews that do not have sector-specific insights. Further, the influence of inventory and accruals management on profitability in a diversified set of non-financial firms listed on the PSX needs more research. The gap is very important because the business environment of Pakistan is changing constantly due to shifts in the global economy, changes in regulatory environments, and sectoral developments. The dynamics of managing inventories and accruals might, therefore be different from the results obtained from the previous studies.

To ensure the applicability of the conclusions, one needs to think about the current trends and data available, since business in Pakistan has been impacted significantly by the world

economic shift, regulatory changes, and industry progress. The problem statement currently does not have any statistical evidence such as data from reports or case studies that can fortify the argument. Another gap that is prevalent in the current literature is non-financial manufacturing firms listed on the PSX. Most research is focused on particular industries; thus, understanding the effect of inventory and accruals management on profitability by sectors is quite unexplored. This study attempts to fill this gap by exploring the impact of inventory and operational accruals management on the profitability of non-financial manufacturing firms listed on the PSX, offering sector-specific insights and practical recommendations for stakeholders.

1.3 Research Gap

Earlier studies conducted in the domain of inventory and accruals management has not been adequately able to address the prevailing situation in the manufacturing sector of Pakistan. The time frame considered for this study caters to the inimitable circumstances prevailing in Pakistan such as Power outages, high cost of Power, Socio, Political and Economic unrest and others. Thus the issue of the impact of Inventory and Operational Accruals Management on the profitability Pakistan Stock Exchange requires more research from non-financial companies (Ahmed, 2020). However, some researchers have found relationships that do not suggest a negative association between Inventory, Operational Accruals Management elements such as accounts receivable and profitability (Amir, 2023). More analysis is required for this this knowledge gap to find out those underlying variables that lead to the profits of the Pakistani non-financial sectors (Naz, 2023). When it comes to companies listed on the Pakistan Stock Exchange, they will have significant advantages thanks to the elimination of this knowledge gap since decision-makers and finance managers will obtain crucial insights to improve Inventory and Operational Accruals Management plans and thus, the company's profitability.

1.4 Research Questions

RQ_1: What is the impact of Inventory management on firm's profitability of manufacturing firms from different sector listed in PSX.?

RQ_2: What is the impact of Operational Accruals management on the firm's profitability of manufacturing firms from different sectors listed in PSX?

1.5 Research Objectives

The main objective of this research is to find out the impact of Inventory and Operational Accruals Management and Firm's profitability. The objectives of this research are:

1. To signify the impact of Inventory management on firm's profitability of manufacturing firms from different sector listed in PSX.
2. To signify the impact of Operational Accruals management on firm's profitability of manufacturing firms from different sector listed in PSX.

1.6 Significance of Study

The study holds significance for company management and corporate stake holders to address the inventory and accruals management. The study provides policy guidelines enabling concerned stakeholders and policy makers to extract the impact of good inventory management and accruals management practices as they hold impact on firm profitability.

This study, which focuses on non-financial firms listed on the Pakistan Stock Exchange, examines the impact of managing Inventory and Operational Accruals Management on the profitability in Pakistan. The investors, analysts, and business leaders are all keen in Inventory and Operational Accruals Management since it is crucial to the firm's profitability and overall success. The present research offers substantial insight regarding

the processes of Inventory and Operational Accruals Management across a particular setting by concentrating on non-financial firms in Pakistan. Due to the fact that firms acquire cash and sell equities on the Pakistan Stock Exchange, it makes for an exceptional setting for investigating the link among Inventory and Operational Accruals Management and profitability. They can make beneficial investment selections if they are aware of the connection among Inventory and Operational Accruals Management and profitability. The findings of the research realise the importance Inventory and Operational Accruals Management to many stakeholders.

The benefits of this study include learning something new which is important for different institutions, authorities, and other stakeholders. One of the major advantages, therefore, is enhanced financial performance, since the study establishes the empirical fact of the links between inventory and operational accruals and profit, which could be used to improve the financial performance outcomes by better inventory and operational management practices. This research can be helpful for investors and analysts in taking proper strategies towards their investments in non-financial firms enlisted in Pakistan Stock Exchange. Policymakers can also benefit by coming up with better policies and frameworks on how best to manage inventory and operational accruals in order to come up with a strong and competent manufacturing sector that is financially rewarding. Moreover, the research can act as a guideline/yardstick of every firm to check their inventory and operational accrual management against intended findings in the current research. The results can be helpful useful to business practitioners in developing idealistic plans which effectively link inventory and operation decisions with the key strategic objectives of profitability and sustainability. Thus, it becomes possible to identify new factors influencing profitability and further develop the topic of research on the interrelation between inventory and operational accruals. Finally, some suggestions are made regarding the extension of the

study methodologies and findings to other sectors and Secondly, the fact that this study has narrowed down its focus to non-financial firms means that its methodologies and findings can be generalized for the purpose of gaining a wider perspective of inventory and operational management practices.

1.7 Theoretical Background

1.7.1 Cash Conversion Cycle Theory

The Cash Conversion Cycle (CCC) theory is a crucial component of working capital management and plays a significant role in financial performance. This theory focuses on the time span between the outlay of cash for the purchase of inventory and the collection of cash from sales of the finished goods. The CCC is a comprehensive measure of the efficiency with which a company manages its working capital, highlighting the interplay between inventory management, accounts receivable, and accounts payable. Essentially, the CCC encompasses the three main components are the Receivables Collection Period, which is the time required to collect money from customers, the goods Conversion Period, which is the time required to sell goods, and the Payables Deferral Period, which is the time permitted to pay suppliers. Efficient management of the CCC can lead to improved liquidity, reduced financing costs, and enhanced profitability. Conversely, a prolonged CCC can strain a firm’s cash flows, necessitating external financing, and potentially increasing financial risk. Therefore, companies strive to optimize their CCC to maintain financial health and operational efficiency.

1.7.2 Financial Flexibility Theory

Financial Flexibility Theory underscores the importance of a firm's ability to respond to unexpected opportunities and challenges by maintaining adequate liquidity and access to capital. This theory posits that financial flexibility allows firms to navigate economic

fluctuations, invest in new projects, and seize strategic opportunities without being overly reliant on external financing sources. Financial flexibility is achieved through prudent cash management, maintaining reserve borrowing capacity, and managing the balance between debt and equity financing. Firms with high financial flexibility can absorb shocks, such as economic downturns or sudden increases in operating costs, without jeopardizing their long-term stability. Additionally, these firms can take advantage of investment opportunities that may arise unexpectedly, thereby fostering growth and competitive advantage. The ability to adapt to changing circumstances without incurring prohibitive costs or risking solvency is a hallmark of financially flexible firms. In essence, financial flexibility enhances a firm's resilience and strategic agility, providing a buffer against uncertainty and enabling sustained value creation for shareholders. This theory is particularly relevant in dynamic and uncertain market environments, where the capacity to swiftly and effectively respond to changes is a critical determinant of corporate success.

1.8 Structure of Thesis

This thesis is structured comprising of five chapters as follows:

The introduction is covered in detail in this chapter, along with the variables' background, problem statement, research objective, questions, and topic significance. The second chapter conducts a thorough literature review of all the variables, discussing the variables' relationships with one another, formulating hypotheses based on those relationships, and discussing the theory that underpins the research model. The third chapter covers methodology, which covers the nature and type of research, the methods or tools used during research, how a researcher collects, analyzes, and reports the data, how a researcher chooses sampling size and unit, and how to choose both.

Fourth chapter involves results about demographic analysis, descriptive statistics, reliability and correlational analysis.

Fifth chapter entails the discussion and conclusion, discuss hypothesis, elaborate findings, and describe implications then limitation and future indications recommended.

CHAPTER 02

LITERATURE REVIEW

In this research describe the empirical studies “Inventory and Operational Accruals Management for Firm Profitability-A Sectoral Analysis of PSX in context of Pakistan. So in this study we will able to conduct that inventory and operational accruals management for firm profitability and many scholars research on this and suggested a different opinions.

2.1 An Overview of the Literature Review

The critical importance of Inventory and Operational Accruals Management in determining a firm’s profitability has long been acknowledged in corporate finance literature. Numerous researchers have discovered a strong connection between Inventory and Operational Accruals Management and firm’s profitability (Nazir & Afza, 2009) The true state of this relationship's direction is still a question, yet. The fact that researches were carried out in various contexts, different nations, and under various economic conditions could be one cause for this reciprocal association, which eventually results in different outcomes.

Balal, Alavi & Raza (2023) The importance of free cash flows in assessing the firm profitability of businesses listed on the Karachi Stock Exchange is examined in this article. To ascertain if free cash flows were essential to the profitability of companies listed on the KSE, descriptive statistics were used. As of March 7, 2015, there were 580 businesses listed on the KSE, making up the population. Information was gathered from KSE's audited annual reports and financial statements of businesses over a five-year period (2010–2014). The quantitative data was analyzed using a regression model. According to the research, free cash flow has a significant and positive relationship with a company's profitability. This demonstrates that free cash flows are an essential prerequisite for a company's profitability. Therefore, the study comes to the conclusion that while excessive free cash

flows lead to more agency problems, which in turn lead to more owner-management conflict and ultimately worse business performance, free cash flows actually improve business performance.

In the 4.0 education era, Hasibuan et al. (2023) discover how the principal's transformational leadership style enhances teacher effectiveness. The study used Google Scholar to find national and international journal papers as part of a literature review methodology. The findings of the literature research demonstrated that the principal's leadership style significantly affects the teachers' performance. The following could be demonstrated to be impacted by a shift in a principal's transformational leadership style in order to improve teachers' performance in the 4.0 era: 1) Principals encourage optimism, drive, and a sense of success in order to realize a shared future goal; 2) Principals serve as role models for school attendance. The ones who are able to lead a team in the act of spreading knowledge and ideas about approaches to learning by using information technology; 3) they inspire performance, competencies, and self-improvement through the school community.

However, the literature in the context of Pakistan, When the pandemic really struck, it was the largest health crisis of the twenty-first century, impacting business performance and placing them in a difficult position as uncertainty increased. It investigates how the COVID-19 pandemic has affected a company's financial performance and attempts to determine how environmental, social, and governance (ESG) performance may affect this relationship. The statistical analyses that are offered include descriptive statistics, a correlation matrix, a fixed effect regression, and a robust regression using a GMM model. These analyses are based on a large international panel dataset that includes nine G20 nations that was taken from the Thomson Reuters EIKON database between 2016 and 2021. The results demonstrate the sharp decline in financial performance brought on by the pandemic, yet ESG is able to mitigate it. As a result, during a pandemic, businesses with prior experience in ESG initiatives are least affected. In order to lessen the influence of COVID-19 on financial performance during a crisis, corporate directors turn to preserving

ESG performance as one of the successful solutions. This is because meeting stakeholder requests improves a company's performance during crises. This study demonstrates that following ESG guidelines reduces adverse financial effects during times of crisis. Although putting ESG policies into place is costly, it benefits businesses financially and pleases stakeholders.Theoretically, we guided the theoretical lens to research through crisis and stakeholder theories to explain events (Al Amosh khatib, 2023).

On the other hand, Inventory and Operational Accruals Management and firm's profitability are reported to have a favorable association by According to recent research by (Baños-Caballero et al., 2014). This section examines the relationship between working capital requirements and financing techniques between 1997 and 2012. The generalized two-step approach of moments estimator is employed. We have shown that having a suitable financing plan in place improves a company's performance. However, this study also looks for any changes in the relationship between performance and working capital requirements financing during a financial crisis. Finally, we observe that this relationship is contingent upon the firm's financial flexibility. The findings are intriguing to researchers and managers alike since they demonstrate that managers should be aware of both the investments being made and the financing methods for working capital requirements. As far as we are aware, this is the first study to examine the effects of a company's financing strategy on its success when it comes to funding its working capital needs.

Furthermore, Enqvist et al. (2014) state. A renewed emphasis on working capital policies has resulted from the current economic downturn of 2007–2008. In this study, we use a sample of Finnish listed companies spanning 18 years to investigate the impact of economic cycles on the working capital–profitability connection. We discover that during economic downturns as opposed to booms, the business cycle has a more noticeable effect on the working capital–profitability link. Our overall results show that active working capital management matters should therefore be added to the lists of items under firms' financial

planning, even though the need to effectively collect accounts receivable and manage inventory increases during economic downturns.

(Fujii and Kawai,2012). Additionally, during a crisis, there is a stronger negative correlation between excess Inventory and Operational Accruals and firm's profitability.

It is possible to draw the conclusion from the material that has been presented above that in order for businesses to fulfill their capital requirements and pay interest on the capital that they have borrowed, they require considerable sums of external financing during their initial, growth, and decline transition periods. Growth enterprises, on the other hand, generally have access to external finance that is both simpler and less expensive than that of startups. As a result, organizations who are just beginning their operations, expanding, or experiencing a decline can suffer a negative impact on their financial sustainability if they make excessive investments in inventory and operational accruals. As a result of the surplus of cash that is kept in earnings, the apparent severity of this negative influence is diminished for businesses that are on the rise. As a result, the surplus funds that are invested in inventory and operational accruals might not have a significant impact on the profitability of such businesses.

Research on the textile enterprises of Pakistan was conducted by (Raheem Anser, 2013) They found that the cash conversion cycle, or CCC, and the profitability of the company had a deep and inverse relationship. Considering that every business organization is concerned with preserving and increasing profitability, the cash conversion cycle is one of the metrics most frequently used to analyze and evaluate the risks and rewards arising from liquidity management. In this situation, they have to consider every aspect that affects profitability. This study examines the impact of the cash conversion cycle on the profitability of manufacturing sector companies that are listed on the Pakistani Karachi

Stock Exchange. The study's particular research goals are to quantify the effect of the cash conversion cycle on manufacturing companies' profitability and examine the body of literature about the cycle's role in improving return on equity and assets. Scholars and industry professionals will find the study's findings useful for controlling and formulating policies. Return on equity and return on assets are the profitability metrics used in this study to describe the dependent variables. The study's control variables are the debt ratio and business size. The cash conversion cycle is considered an explanatory or independent variable. The financial statement data used in this study spans five years, from 2007 to 2011. The findings showed that manufacturing firms had a tolerable average cash conversion cycle, a high average return on equity, and a low average return on assets. After controlling for data heteroskedasticity to reduce the impact of outliers, regression results revealed a significantly inverse relationship between cash conversion cycle and both return on equity and return on assets, meaning that the lower the cash conversion cycle, the higher the profitability as determined by return on equity and return on assets. Therefore, in order to increase the profitability of manufacturing sector firms, the period for collecting receivables and selling inventories must be shortened, and the payment term must be extended. According to the study, manufacturing organizations should accurately forecast and assess their cash flows. so that the long run and short run cash inflows and outflows can be properly identified to timely sort out the cash.

Bhutto et al. (2018). This study aims to investigate the relationship between working capital management and the financial performance of businesses. The non-financial sector that was listed on the Pakistan Stock Exchange (PSX) between 2010 and 2015 is the one we have selected. Fifty PSX-listed companies have been selected as a sample. Secondary data comes from the State Bank of Pakistan's (SBP) publication "Financial Statement analyses of Non-financial sector listed in Pakistan stock exchange 2010-2015." Additionally, we used the

purposive sampling technique to choose the selected manufacturing companies in Pakistan. Furthermore, as data analysis techniques, we have employed Pearson correlation and multiple regression. In this study, working capital management is the independent variable and financial performance is the dependent variable. Independent variables such as average payment period (APP), inventory turnover (ITO), cash conversion cycle (CCC), and average collection period (ACP) have all been calculated using proxies. Financial performance is represented as a dependent variable by return on equity (ROE), return on assets (ROA), and earnings per share (EPS). The results indicate that while APP and ITO are very significant and have a negative impact on the performance measure, the two independent variables, CCC and ACP, have significantly improved ROA. Third, it was discovered that whereas APP and ITO have a negative influence on EPS, CCC has a negative and considerable impact on ROE. Fourth, it is shown that ACP has a favorable effect on ROE and EPS. The multiple regression data shows that Pakistani manufacturing companies' financial performance is in line with WCM. The management's working capital requirements will be met by this study, which will enhance the business's overall performance. Additionally, the study's specific implications for Pakistani manufacturing companies are critical to their growth and improved financial outcomes. the impact that operational accruals and inventory control have on a company's profitability. They investigated the effects of inventory and operational accruals management on the performance of different PSX industry branches. The researchers found a correlation between cash conversion cycle and business performance, which supported the hypothesis that businesses with less stringent cash cycles will be more profitable.

Sheikh, Ahmed and Rafique (2016). This study looks at the effects of various working capital strategies on the performance of textile companies listed on the Pakistan Stock Exchange Limited between 2008 and 2015. Key working capital metrics include the cash

conversion cycle, average inventory age, average collection period, average payment period, current asset ratio, and net working capital. Both book-based (like gross profit margin, net profit margin, basic earning power, and return on assets) and market-based (like Tobin's Q) metrics are used to assess how working capital affects performance. To enable pertinent analysis, textile businesses have been divided into three sectors: textile weaving, textile spinning, and textile composites. The outcome demonstrates a direct correlation between the cash conversion cycle and the current asset ratio and market-based and book-based performance criteria for each industry. The average inventory age and net working capital are positively correlated with each other, with the exception of textile weaving. In every industry, the average collection and payment periods were inversely correlated with the performance. The performance of textile enterprises is greatly impacted by working capital measures; yet, the observed associations only partially align with the reasons offered in the finance literature, indicating the need for theoretical improvement. discovered that the company's liquidity, as shown by the current ratio, is significantly more significant than its profitability. They came to the conclusion that this increases the company's profitability. Through a strikingly positive correlation between profitability and the cash conversion cycle, they were able to achieve a notable rise in profitability and, consequently, profits. Effective inventory and operational accruals management can boost a company's profits.

In another study, the net profitability was found inversely proportionate to the short-term cyclicality and policies on Inventory Management and operational accrual and that it can in turn contribute to firm’s profitability. Inventory & Operational Accruals Management was linked to Profitability of non-financial companies listed on the PSX by the research conducted how relationships between suppliers and firms as well as between firms and customers influence working capital management performance in purchasing and marketing channels. Based on data from listed manufacturing companies between 2016 and

2017, the study analyses how supply chain management influences working capital performance. Findings reveal that the inefficiency of working capital is brought about by the delayed payments in purchasing channels. The relationship between supplier concentration and working capital cycle This suggests that diversification and centralization are "U-shaped," meaning they both have drawbacks. The study also found a negative correlation between bank relationships and leverage and working capital turnover in both channels, as well as a negative "U-shaped" relationship between working capital cycle and customer focus in marketing channels. The implication of such practice is, it improves working capital performance via supply chain and channel management by Iqbal and Hayat (2020).

Inam et al. (2021) conducted research on food and personal care segments of the PSX. Their findings suggested that efficient Inventory and Operational Accruals management are the key drivers of an increase in profitability since they Profitability and the cash conversion cycle were strongly positively correlated. A study is carried out to determine the effect of the cash conversion cycle (CCC) on the "Food and Personal Care Product" industry listed on the Pakistan Stock Exchange. The outcomes of the first five years of the lathe's performance are recorded from 2011 to 2015. There are businesses in the category, but only 14 of them have comprehensive five-year data accessible. Panel data analysis was used to arrive at the results. To determine the liquidity position regarding financial performance, eight hypotheses have been formulated and put to the test. One of the four related hypotheses regarding ROA, the dependent variable, is accepted, whereas the other three—the AAR and AI hypotheses—are not. Although CCC is retested using ROA to validate the regression model's findings, the null hypothesis is still accepted. Two of the four hypotheses concern the dependent variable, ROE, and have been accepted. AI and AAR theories are proven false. However, the other two theories that relate to AAP and CCC are recognized.

Comparing CCC to ROE validates the alternative explanation. The results clearly demonstrate that when ROE is the dependent variable, there is a negative relationship between the firm's performance and the liquidity impact (CCC).

Toušek et al. (2023) Working capital management is becoming increasingly important due to the current slow economic growth, which has resulted in worsening access to funds and unpredictable customer payment behavior. This article examines the impact of investing in working capital, which includes cash, accounts payable, inventories, and accounts receivable, on the performance of businesses in both cyclical and non-cyclical industries in the Czech Republic. The underlying dataset primarily consists of business data from 2010 to 2018 for 293 businesses. Although CCC is retested using ROA in order to validate the findings of the regression model, the null hypothesis is accepted. Two out of the four hypotheses relate to the dependent variable that is ROE and have been accepted. AI and AAR theories are proved false. However, the other two theories that relate to AAP and CCC are recognized. Comparing CCC to ROE validates the alternative explanation. The results thus clearly indicate a negative relationship when ROE is the dependent variable and the liquidity impact of firm performance (CCC).

The firm's investment and finance plans are what carry out the potential to make profits. The firm's capacity to manage debt will be inversely correlated to its ability to make a profit. This is so because the firm's inability to turn a profit comes at the expense of the greater liquidity. The firm will experience a decline in liquidity when it wants to boost profitability. Prosperity levels for owners are indicated by high values; nevertheless, investors' focus on value rather than profit level impacted the firm's prosperity levels for both investors and shareholder owners. One of the main objectives of a company is to achieve Maximum revenue from business endeavors Companies are founded not only to

maximize profits but also to foster the prosperity of all parties involved in the business' operations, such as stakeholders and shareholders, in order to raise the company's worth. Thus, this study looks at how leverage and working capital management affect a company's value on the Indonesia Stock Exchange. The quantitative study's foundation is secondary data from Indonesia's Central Bureau of Statistics for the years 2016–2020. The data's time series regression was supported by the econometric program EVIEWS-10. The findings demonstrate that working capital management significantly and favorably affects firm value.

Firm value is also adversely and significantly impacted by leverage. Additionally, profitability moderates the relationship between working capital and business performance. Furthermore, profitability has no moderating effect on the relationship between leverage and business performance. To sum up This study has identified the factors that influence firm value and found that leverage has no effect on business value. The findings of the study can be used to inform investment decisions. This measures the ability of the company's assets to generate a return on investment in those assets (Ilham et al. 2022).

According to Khubaib and Alnaim (2023) investigation. The research hypothesis was tested using data from 78 separate manufacturers listed on the Saudi Stock Exchange. For the years 2017–2021, the pertinent data was culled from the yearly reports and Data stream's database. A fixed effects model multiple regression analysis found that an inventory turnover ratio and the quantity that might be suppressed were major factors in determining a company's profitability. Keep in mind that the problems with managerial accounting in Malaysia are directly related to the study's findings. On top of that, they help managers enhance the sustainability of the industrial sector and offer policy suggestions to decision makers. There hasn't been any comparable research until now, and this study fills that void by being the first to look at this connection and the impact of COVID-19 among Saudi

companies.

Using a sample of sixty-eight small and medium-sized firms located in the province (wilaya) of Algeria, this study aimed to investigate the connection between effective management of working capital and profitability, according to Bouadam and Maiza's (2022) research. The panel data model was employed to ascertain the validity of the hypothesis. The components were shown to be statistically significant because inventory management and return on assets (ROA) are directly related. In the financial industry, where borrowers and lenders interact, free cash flows and financial performance are of particular interest to academics, according to a study by Komal from 2022. Reliable and efficient financial performance is crucial to the long-term viability of the banking industry. In order to maintain fiscal stability, this is essential for every nation. The relationship between free cash flows and the stability of the banking system is examined in this study using data collected from the actual world. The study's regression analysis showed that free cash flows significantly impacted the financial success of the banking industry from 2011 to 2020, for better or worse. Having a leg up on the competition can be possible for financially stable banks in the financial industry. Therefore, it is imperative that lawmakers and senior management devise strategies to maximize stockholder value by making the most of free cash flows.

Without effective inventory management, many companies would fail. That is why upper management needs to focus on it completely and examine it thoroughly. Golas (2020) states that financial performance, as determined by return on operating assets, is favorably correlated with improved inventory management efficiency. This is explained by the study's application of panel regression models. (Return on Audit). Inventory is a key macroeconomic indicator that impacts economies worldwide, and statistics indicate this. An increase in economic growth has historically been linked to "a decline in the

inventories-to-sales growth rate." Frye (2022). Inventory is used by a wide range of companies, sectors, and supply chains. "If businesses integrate order processing into their inventory management system, they will see a 25% increase in productivity, a 20% increase in space utilization, and a 30% improvement in usage efficiency with their stock utilization." 2019. Reviewing pertinent research on fundamental inventory practices is a necessary first step before delving into particular strategies for inventory management and their impact on profitability. We may lay the groundwork for our chat by reviewing these stages.

Liang (2015) investigated the use of accruals in monitoring a company's development across time. It turns out that profit quality may be assessed using a variety of business metrics, including company size, profits, sales standard deviation, operational cycle time, absolute quantity of accruals, cash flows of accruals, and profits. Taking the listed companies of China's A-share markets from 2004 to 2011 as a sample, this paper will research the influence of ultimate controlling stake on earnings conservatism from the perspective of cash flow right deviating from control right, or two rights deviation. Based on the above theoretical foundation, the main findings of the research are that: (1) The ultimate controlling shareholder deviation of two rights is very frequent; (2) The ultimate controlling stake accounting is generally conservative in nature, and the two rights deviation reduces earnings conservatism; and (3) The nature of equity right owned by the ultimate controlling shareholder plays a significant role in determining earnings conservatism. Listed State-Owned-Enterprises, for instance, have much greater levels of conservatism when accounting compared with Non-SOEs.

Gunny (2010) discovered that cash dividends provide details about future profits, following the evidence of the message and information content hypotheses. Companies that distribute

dividends have a better correlation between their current earnings and their future profits compared to those who do not. The more dividends given out, the stronger this correlation becomes. There are two types of earnings management: accruals management and real activities manipulation (RM). Accruals management is the practice of using GAAP accounting choices to hide actual economic performance, while RM is when managers change the timing or structure of operations, investments, or financing transactions to affect reported earnings. Schipper (1989) defined earnings management as a purposeful intervention in financial reporting to obtain personal gain, which would also include RM. This paper examines the relationship of RM with earnings-related benchmarks and its eventual impact on subsequent operating performance. In contrast to accruals management, which does not have any direct implications for firm-level operations, RM directly changes firm operations to enhance earnings for the period.

According to Cohen shown in 2000 that individuals can profit from taking advantage of these links when market efficiency is insufficient, thanks to the negative relationship between accruals and stock returns. These individuals demonstrated that these issues haven't wasted the past ten years. However, due to the high cost of information and the volume of transactions, using accruals slows down everyone.

The Controlling Costs to Maximize Profits" explained how regular inventory checks can guarantee effectiveness, speedier client order processing, and better use of existing resources. Thus, Reviews of inventory should be done through an auditing team of managers who have jobs about materials planning acquisition, handling and storage. The article explains how to measure the success of material handling using a few simple ratios. Inventory fill represents the proportion of total inventory that consumers have ordered, materials handling/labor shows the proportion of work that goes into moving items, and

storage space usage shows how efficiently a business uses its storage space (Prempeh, 2015). With these figures, companies can see whether their material handling is getting better or not. If you want to know how to maximize your company's profits through better order fulfillment and inventory optimization. In order to maintain long-term client relationships and short-term profitability, Yang (2017) states that using inventory classification methods and regularly monitoring inventory expenses are crucial. An easier audit, a lower stock on hand due to an increased inventory turnover rate, and the ability to fill limited inventory space with more lucrative commodities are all compelling arguments in favor of inventory organization. For instance, a company will be stuck paying for 1,000 units of a product for years to come if monthly sales are barely 10 units. This assumes the product will remain functional and up-to-date for an extended period of time. Managers can prevent a drop in productivity and revenues by identifying slow-moving products through routine audits and establishing an effective system for sorting inventory.

Classifying items has many advantages when it comes to efficient management. With the help of an automated inventory management system, you can streamline your operations, pay more attention to what matters most, and increase precision, velocity, and efficiency by handling what is less critical. Cavinato (2000) examined thirteen distinct types of inventory and how they can be handled by a company's warehouse or retail locations. This is what Cavinato means when he talks about stockpiles: completed goods, WIP, goods with resale potential, and spare parts. In inventory management, risk identification and hierarchy enable mapping and the creation of a plan of action to regulate, reduce, or even eliminate hazards. Finding and assessing the significance of the primary issues that arise in a metal production chain is the major goal of the current study. The Analytic Hierarchy Process method, which was utilized to develop this research, is based on this premise and arranges information in a hierarchical sequence. As a result, it would identify the optimal approach

to risk management. The study's overall conclusions demonstrate that every department in the business carries some level of risk and is particularly focused on inventory management, which enables the business to promptly monitor its expenses. gaining a better understanding of the approach used by the companies to manufacture at the lowest possible cost. Hazards Excessive consumption, category-demand: material handling, category-stock deviations, and suppliers' delays (category-supply). Excessive consumption was identified as the most critical risk in the demand category, supplier delays were identified as the highest risk in the supply category, and inventory risk divergence received the highest percentage in the material handling category when compared to other issues (Sales, 2020).

Companies with lower debt ratios and higher interest expense ratios tend to have superior accruals, according to Francis et al. (2005). Their research shows that both mandatory and voluntary accruals contribute significantly to understanding profit shifts, but that mandatory accruals are more crucial. We provide comprehensive sample evidence on whether the loan and equity markets impounded information about the quality of earnings. Eight proxies for earnings quality are examined: four of them use the modified Jones technique to predict aberrant accruals, one uses a factor analysis of the other seven, and three are based on the Dechow and Dichev [2002] approach, which links working capital accruals with cash flows. All eight metrics show that companies with lower quality earnings have higher costs of capital: positive loadings on an earnings quality factor added to one-factor and three-factor asset pricing regressions, larger industry-adjusted earnings-price ratios, higher realized costs of debt, and larger equity betas.

According to Chambers (2011), investors make educated guesses about the duration of accruals and cash flows, but their efforts do not reflect in the pricing. Consequently, although some organizations see the long-term durability of accruals as more plausible,

others do not. According to research on the topic of accruals valuation by Francis et al. (2008), accruals pertaining to receivables have a greater impact on market pricing compared to other types of accruals.

The relationship between stock returns and accruals, cash flow, previous profit, and components is examined. Most of the firms nowadays have implemented their policies, sometimes called "clawbacks, which enable boards to recover previously paid compensation paid to executives after financial misstated reports have been filed with the financial bodies. We conclude that clawback has significantly been realized through reduced financial statements and enhanced the investors' reliance on earnings reporting. The effect is coupled by the fact that some of these firms use a replacement for managing accruals through real transaction management (e.g., cut R&D expenses), especially those with high incentives to attain short-term profit goals (companies with high growth or with transient institutional owners). In that respect, the net level of earnings management does not decrease over time following clawback adoption. Finally, we establish that while real transaction management in the short run increases the three-year profitability and stock performance of clawback adopters, such an improvement turns around three years later. Conclusion: clawbacks may have unexpected consequences for a subset of firms whose managers are under greater pressure to meet earnings goals (Chan, 2015).

Accruals and stock returns are positively correlated, according to the research. However, cash flow is not a very reliable indicator of stock returns. Those in cash flow that are considered normal, whether positive or negative, tend to persist longer than those that are considered abnormal. To determine the average return on profit-based profitability measurements,

Yan et al. (2019) state that the authors looked into how cash flow was used. Since the stock price and compensation are impacted if quarterly profit targets are not met, managers strive to meet them. We offer a periodic review inventory model under a chance constraint that is essential to one's requirement to fulfill some profit target with a set probability while maximizing expected profit in order to understand how these could affect a retailer's procurement decision. While inventory models use cash-basis accounting, accrual accounting is used to report company profitability. They've both been incorporated. Due to the complexity of the optimal policy under accrual accounting, which involves a state-dependent disposal policy, we concentrate on the class of strategies in which Within each period, the amount disposed of increases in the remaining inventory after demand has occurred, and we show that the optimal policy evolves to become an order-up-to level and a dispose-down-to level in each period (these values may depend on the constraint in that period and all subsequent ones, so one effect of every constraint is far-reaching). We also derive the optimal policy under cash-basis accounting for the infinite horizon stationary case and find that it is dependent on both state and demand, even in this "easy" case. We examine the effects of chance constraints on the best procurement choices and profits for both accounting schemes, and we show perverse behavior under the cash-basis accounting scheme.

Investment strategies can be effective with large sums of money if the company pays out large dividends to its shareholders. The impact of cash and accruals on earnings trend and stock return projection over the long period was the focus of the study. The most robust relationship between future stock returns and the longest-lasting component of buyer and income cash was observed. The relationship between operational cash flow, profit and its components, the predictability of profit, and the longevity of reported gains were examined by Sadidi (2011). Despite hopeful forecasts, their findings revealed the market's reaction to

the increase in business cash flow. By breaking down profits into their cash and accruals components, Mazar Yazdi et al. (2007) were able to use these figures to predict future changes in company cash flows. Their research suggests that the two parts of profit and loss reveal conflicting data regarding the direction of working capital in the future. Compared to the profit model, the cash flow and accruals models performed better in terms of future prediction. Investigating the predictive power of operating cash flows, accruals, and operating profit in the presence of specific time delays was the focus of Afshar (2012).

There is a robust relationship between a company's earnings and its future cash flows from operations. Galdi et al. (2021) looked examined the numbers that buyers and managers used to estimate the profit margins of various companies. Prior research reveals that managers have been engaged in overproducing inventories just to increase earnings at the current period, although this comes with a heavy economic cost of overproduction. SFAS 151 restricted the fixed costs that can be capitalized into inventories in periods of low production by charging a penalty for underproduction in the form of expensing of unallocated overhead. As we discuss later, underproduction usually follows overproduction, and by focusing on identifying normal capacity SFAS 151 can inadvertently characterize overproducing firms as underproducers in later periods. In this paper we argue that SFAS 151 makes overproduction less attractive. We find that the adoption of SFAS 151 reduced the likelihood of using overproduction to meet earnings targets, which challenges the hypothesis that SFAS 151, by accident, promoted overproduction.

According Hayat et al., (2022). They found that all firms, no matter how large or little, have the same overarching objective: to maximize profits and satisfy investor preferences through the efficient allocation of resources and the implementation of well-defined

departmental roles. It was difficult for business executives to live up to these expectations of investors, according to several early studies. The purpose of this research was to examine how the adoption of responsibility accounting practices has altered the profitability reporting practices of publicly traded companies in Pakistan. This study employed an ex-post facto research strategy. The study utilized the quick ratio, operational costs, cost of sales, and cash conversion cycle as important accounting indicators. A control variable was the firm's size. Profit before taxes, return on equity, income per share, and return on assets were all metrics used to measure a company's profitability. Up to June 30, 2021, all companies listed on the PSX were considered part of the study's population. In order to test the study's theory, this was done. From each industry's 38 top-ranked companies, 35 were selected for the study using a stratified and intentional selection process. Data for new sectors prior to 2017 was unavailable, and three additional sectors were added thereafter. Data used to compile the sample was collected between 2011 and 2021. The information used in the study was culled from publicly traded firms' annual reports as well as the PSX website following the report of the auditors' examination. Data analysis in this study made use of both descriptive and inferential statistics. The study utilized a panel least squares model with either a fixed or random effect. Supporting the random effect idea are the findings of the Haussmann test research. The results of the random effect model are presented in the study. Findings indicate that RA variables significantly impact pretax profit since the firm's P value in PSX has remained below 0.05 throughout the study's duration. There was also no significant correlation between company size, cash conversion duration, and PBT, according to the study. F-Stat=3.469, AdjR2=.0.145, and p=0.000 were also discovered. Both with and without a control variable, the study's outcomes—including ROA and EPS—indicate that the conduct is not statistically significant.

Jehan, Ashfaq, and Rashid (2021) state that as a result of the increasing instability of the global economy, companies have reevaluated their financial capacities and tactics for managing revenue. It is now often acknowledged that organizations have the challenge of navigating unanticipated changes in various aspects, both internal and external to the company, all at once. From 2000 to 2016, this study aims to analyze 400 non-financial listed firms' discretionary accrual management and how it was affected by macroeconomic uncertainty and firm-specific risk. By taking a wide variety of indicators for each form of uncertainty, this study provides strong empirical evidence supporting the significance of both macroeconomic and idiosyncratic uncertainties. Both kinds of uncertainty have a negative effect on discretionary accruals, according to empirical studies. The findings show that, in Pakistani enterprises, idiosyncratic risk is less influential on accrual management than macroeconomic uncertainty.

Finding out whether accruals earnings management (AM) and real earnings management (REM) are interchangeable in a Pakistani context is the goal of Said (2021). We also take a look at how national-level political risk affects earnings management. We achieved our specific aims from 2007 to 2019 by using a panel sample of 197 Pakistani enterprises. In order to measure Attentional Mechanisms (AM), we use the Jones (1991) and modified Jones (1995) models, and for Rapid Eye Movement (REM), we use the Roychowdhury (2006) model. We analyzed the data using ordinary least squares (OLS) regression with time and business fixed effects, along with simultaneous equation modeling. According to the numbers, managers don't differentiate between AM (Asset Management) and REM (Resource-based Environmental Management). A decline in the associated cost of REM (AM) causes a decline in the firm's preference for AM (REM). Even more so, the data show that national-level political risks boost actual REM but barely affect AM.

According to Ibrahim et al. (2020), the study categorized accruals into three types: financial, non-trading, and trading, based on their relative predictability. Predicting future financial flows using these buckets was the goal. Additionally, the study looks at how the global financial crisis affected the relationship between accruals and expected future cash flow. The research draws on a total of 9060 observations, collected annually from 453 different organizations between 1999 and 2018. From 1999 to 2018, the sample period covers data from the 2008–2009 financial crisis, the years leading up to the crisis (from 1999 to 2007), and the years following the crisis (from 2010 to 2018). The study used Ordinary Least Squares (OLS) to test hypotheses on the relationship between accruals, disaggregated accruals, and cash flow prediction. It is clear from the results that trade accruals had little to no effect on the predicted cash flows. On the other hand, large accruals were discovered in the following categories: financial, non-trading, and aggregated.

The study paper aims to examine the impact of several components of the DuPont model on firm profitability (1) independently and (2) in the presence of different macroeconomic circumstances, according to Ahmed (2019). Included in this group are financial leverage, the profit margin, and the turnover of total assets. We collected financial data from five separate industries in Pakistan's economy between 2011 and 2017: concrete, compost, fossil fuel, and electricity. These industries were characterized and united around these period. Items such as inflation, interest rates, GDP and exchange rates are monitored, some even labeled macroeconomic variables. The question of linear and GMM (generalized method of moment) method is to be asked to apply the Dubont model (the use of financial ratios) for the purpose of this research. According to the findings of the research mentioned, the profit margin is the leading factor which mattered across all the sectors of the Pakistan economy than all other factors calculated by the DuPont profitability analysis model. It is therefore logical for the company's leadership to be the first thing to give due attention to

macro issues, while the microeconomic characteristics such as profitability should also be adjusted accordingly.

The study tries hard to analyze the accrual and cash flow dynamics on company profits, according to Sheraz (2017). It will also illustrate why this would effectively assist the investors who could draw future earnings guidance from earnings components of non-financial companies listed at Pakistan stock exchange (PSX). This research topic is about 100 non-financial based businesses from twelve industries. The sample period 2001-2014 includes fourteen years, year 1,372 observation made for this research is derived from companies' year end reported data. The stock universe was derived by capping the market capitalization of the listed companies. At the moment the existing process for estimation, which is accrual and cash flow and their persistence is controlled using both the Mishkin (1983) test and hedge-based portfolio test. Furthermore, this enlighten previous earning components, that is cash flow and accrual, which could result in transforming the future earnings later as well. The present profits are statistically significant and adequately explain the results of the future profits, as shown by the Mishkin test. When compared to cash flow, earnings accumulation is a weaker factor in earning persistence. Because of the market's undervaluation of accrual and cash flow components of earnings, the results go against Sloan's predictions (1996). The Mishkin test and the results of the hedge-based research both show that it is not feasible to generate extraordinary profits in the market by building arbitrage portfolios. Findings indicate that there is no accrual irregularity on the Pakistan Stock Exchange. The findings provide useful information for analysts and fund managers whose concentration is on creating arbitrage portfolios with the aim of producing anomalous returns.

Mwangi (2016) asserts that the primary objective of inventory management is to achieve equilibrium between the conflicting corporate concerns of minimizing stock or inventory levels. However, the majority of managers perceive inventories as an unavoidable burden rather than a valuable resource that requires careful management. They fail to consider the potential cost savings that could be achieved through effective stockpile management. Some businesses neglect inventory management, resulting in insufficient stock levels that ultimately disrupt or impede production. Ultimately, this diminishes productivity of the business. The purpose of this study is to determine how inventory management affects the cash flows and profits of distribution companies owned by Kenyan Breweries Limited that deliver beer in Nairobi County. The research project was carried out using a descriptive study methodology based on census data. Those who worked in the six breweries that Kenya Breweries Limited operated in Nairobi County were chosen as participants. A census was conducted based on the count of six people. The study utilized secondary data obtained from a data collecting sheet that was distributed to six companies over a span of ten years, from 2006 to 2015. The data was analyzed using statistical tools commonly employed in the social sciences, utilizing regression models that rely on ordinary least squares. The study revealed a robust correlation between the operational cash flows and inventory management of Kenya Breweries' beer distribution firms in Nairobi County. The study revealed that inventory management significantly impacts the operational cash flows and overall profitability of Kenya Breweries' beer distribution enterprises in Nairobi County, Kenya. The study recommended that Kenya Breweries Ltd.'s management in Nairobi County implement just-in-time and material need planning as efficient strategies for managing their inventory.

Nikolaev and colleagues (2016) examined the concept of "accruals," which refers to the non-cash components of earnings. They illustrate modifications made to cash flows to

provide a profit metric that is not overly reliant on the timing of cash inflows and outflows. A prior investigation has identified two peculiar phenomena: a decrease in accruals and an increase in projected returns in relation to profitability. We demonstrate that assessing running profitability in terms of cash, excluding accruals, yields superior results compared to alternative measures of profitability. When calculating the range of average returns, both accruals and cash-based operating success are included. To enhance the profitability of a strategy, an investor can focus solely on including investment options that have a cash-based operating profitability component. It is preferable to only include a profitability component that incorporates accrual, rather than adding both an accruals element and a profitability factor.

The literature on Inventory and Operational Accruals Management (IOAM) and its impact on profitability presents several gaps. First, conflicting results across different economic contexts and regions, such as positive versus negative correlations in countries like Pakistan and Indonesia, highlight the need for deeper investigation into the reasons behind these variations. In addition, some studies focus on specific sectors such as textiles or energy, while industry-specific research is missing in other non-financial sectors. The role of economic cycles, especially during crises, has been addressed in some studies, but more exploration is needed into how businesses adapt their IOAM practices during turbulent periods like the COVID-19 pandemic. Notable in this paper is the unexplored potential of long-run sustainability of profitability benefits. Although the short-run benefits of efficiency are discussed time and again, there is minimal research on working capital efficiency concerning accounts receivable and payable apart from inventory. In addition, the study will identify the nexus between technological innovations and managerial improvements such as artificial intelligence and automation and IOAM and profitability. Comparative studies are also limited regarding cultural, regulatory, and economic

differences in IOAM across regions and countries. Such studies may provide useful insights into how local factors influence profitability outcomes. The gaps in this regard would help improve the understanding of the role of IOAM in firm performance and profitability.

2.2 Key Variables of Study

2.2.1 Inventory Management

Inventory management encompasses all the activities necessary for the supervision and regulation of the flows of materials and goods into and outside of a company's inventory (Anisere,2021). It is basically comprised of three main parts: keeping proper inventory, reordering the new stock, and improving the storage facility to make sure various types and volumes of products are available all the time. The manager should oversee product storage including monitoring of inventory turnover period, which stands for tracking the stock levels in and out of the company. The inventory turnover period in a nutshell reflects an approximate time during which the goods in keeping are usually sold and replaced within a given period of time, thus revealing the level of a company's inventory management.

H_1: There is a significant impact of Inventory Management on Firm's Profitability.

H_{1a}: There is a negative impact of Inventory Turnover Period on ROA.

H_{1b}: There is a negative impact of Inventory Turnover Period on ROE.

H_{1c}: There is a negative impact of Inventory Turnover Period on EBIT.

2.2.2 Operational Accruals Management

The proper accounting accruals management consists of the recognition, in a company's financial statements, of expenses and revenues for the periods that the expenses were incurred or revenues were earned and in money value, currency type or banks (Cohen, 2008). The latter method individuals a company to cultivate financial statements which depict the real financial position and operations. According to the operational accrual, this activity involves regularly recording financial metrics as well as improving the timing of cash flows in the business. Here are the definitions of three key metrics within operational

accruals management: Here are the definitions of three key metrics within operational accruals management:

a. **Average Collection Period:** The average number of days it takes for a businessman to obtain payment from clients for goods or services given can be shown by this statistical ratio. Divide accounts receivable by average first-quarter sales to get the figure. If the average collection duration is getting shorter, it means that accounts receivable collection is happening quickly.
b. **Average Payment Period:** The average number of days that a business typically takes to pay for the goods and services that its suppliers offer is known as the average payment period. For the purpose of calculating the formula, the accounts payable are divided by the average daily purchases. Because of the rise in cash flow, the average payment term has been extended, which implies that payments to suppliers will be delayed. This is because the cash flow has increased.
c. **Cash Conversion Period:** T Therefore, the term "cash conversion period" describes how long a company can use these enormous resources or cash inventories that are then invested within its businesses in order to readily convert them into cash flows from sales (Yan, 2019). The number of days that elapse between the time the financial institution is obligated to make a payment and the time it receives the funds is calculated by subtracting the average payment period from the average collection period. A shorter cash conversion period is indicated by a higher working capital turnover, which suggests better working capital and investment management that may result in a more efficient conversion into cash.

H_2: There is a significant impact of Operational Accruals Management on Firm's Profitability.

H_{2a}: There is a negative impact of Cash Conversion Period on ROA.

H_{2b}: There is a negative impact of Cash Conversion Period on ROE.

H_{2c}: There is a negative impact of Cash Conversion Period on EBIT.

H_{2d}: There is a negative impact of Average Collection Period on ROA.

H_{2e}: There is a negative impact of Average Collection Period on ROE.

H_{2f}: There is a negative impact of Average Collection Period on EBIT.

H_{2g}: There is a positive impact of Average Payment Period on ROA.

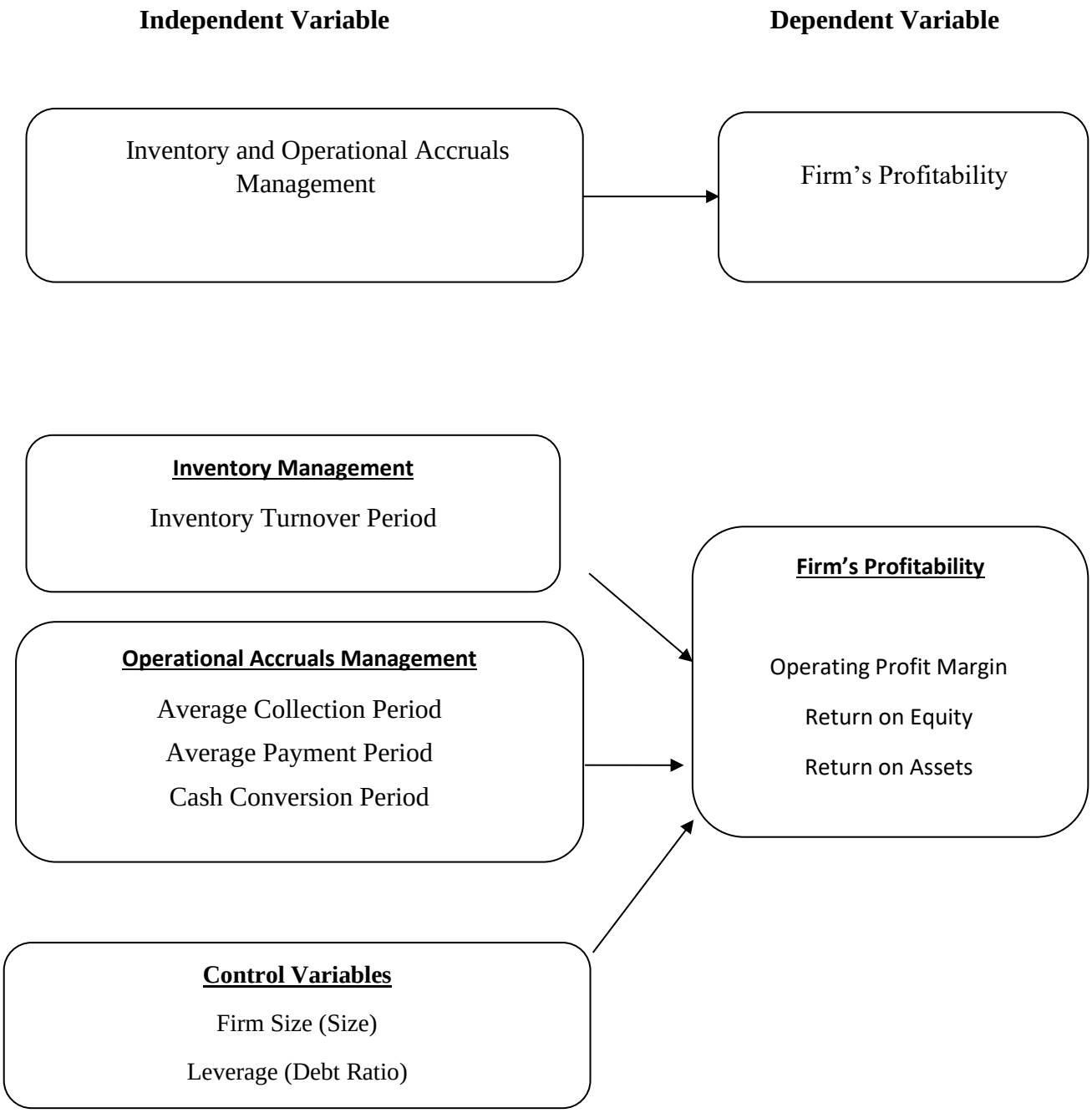
H_{2h}: There is a positive impact of Average Payment Period on ROE.

H_{2I}: There is a positive impact of Average Payment Period on EBIT.

2.2.3 Firm Profitability

A firm's profitability means the extent that the company can achieve income that is higher than its spending and investments (Golas, 2020). It is mostly expressed through quantitative measures, including but not limited to the net income, return on investment (ROI) and return on equity (ROE). In general, it is a measure of a firm's success that takes into account the funds a company has invested and how it uses those funds to create revenues and increase capital (making profits).

2.2.4 Conceptual Framework



The conceptual framework of this research excavates the detailed relationships between accruals and inventory management of profitability; on the other hand, firm size and leverage are the significant control variables in modeling. At the center of this framework are the most important metrics such as Inventory Turnover Period (ITP), Average Collection Period (ACP), Average Payment Period (APP), and Cash Conversion Period (CCP), which altogether reflect the operations effectiveness in terms of payment procedures, credit and debt recovery, and a firm's ability to turn an inventory investment in financial profit. These data metrics act as the independent variable, of which they cover many diverse Inventory and Operational Accrual Management aspects. While the study is carried out simultaneously, it is dependent on a wide range of the variables, such as Operating Profit Margin (OPM), Return on Equity (ROE) and Return on Assets (ROA), that give us information on how the firm operates relative to its operational, capital, and total assets performance, respectively. This study intends to highlight the role that Inventory and Operational Accruals Management plays in determining the firm's performance by scrutinizing the above-mentioned indicators. Taking in the multi-faceted relational aspect of the firms into consideration, this study also entertains firm size and leverage (Debt Ratio) as control factors. The size of the enterprise and the credit level are the crucial factors that can affect the management and operating capital as well as overall financial results or end result. Through controlling these variables the research is designed to reveal the independent impact of these approaches and Inventory and Operational Accruals Management on the company performance.

The research framework was developed through the identification of key variables impacting working capital management in manufacturing firms, specifically focusing on supplier-firm and firm-customer relationships and their effects on purchasing and marketing channel performance. Working capital management performance in both

channels is considered as dependent variables while the relationships are independent variables. The theoretical lens draws on agency theory (Jensen & Meckling, 1976), detailing how the agency conflict between suppliers, customers, and firms would generate impacts on operational decisions and working capital management. It also draws on transaction cost economics (Williamson, 1981), which focuses on the costs of managing such relationships and optimal working capital management. These theories provide a conceptual background for grasping the impact of supplier and customer relationship dimensions on financial outcomes. The hypotheses are developed based on these theories, with transaction cost economics guiding the notion that an optimal number of suppliers improves working capital management, and agency theory suggesting that a firm's focus on customers impacts the efficiency of working capital management in marketing channels. This framework ensures that the study aligns both theoretically and empirically, offering a clear path to test the relationships between independent and dependent variables.

This study is aimed at unveiling the hidden relations among the stock exchanges, Pakistan Stock Exchange and the overall business environment in our country using its variety of methods. Through the accounting of the detailed information on Inventory and Operational Accruals Management as factors of firm size, leverage, and profitability indicators, the research intends to add the missing link between financial performance and the dynamics of the Pakistani market through the mechanism of accountancy and finance.

It can be argued that the inventory turnover period has more relevance in being used over metrics such as DIO or the carrying cost of the inventory ratio. This is because it has direct relevance in judging the effectiveness of inventory management related to the cycles of sales and production. It gives an understandable and practical measurement of the ability of a firm to sell and replace its inventory, hence representing its operating performance.

According to Wagner and Winkler (2015), the inventory turnover ratio is often regarded as the most reliable indicator of the efficiency of the firm's inventory management because it relates the level of inventory with sales and effectiveness of the operations. On the other hand, day inventory outstanding calculates the average number of days inventory stays in the system before being sold and can be impacted by seasonality or external business cycles, so it is less consistent as an indicator of operational efficiency. Further, although the inventory carrying cost ratio measures the expense of holding inventory, it is not a measure of how efficiently inventory is managed or how the inventory impacts working capital. On the other hand, the period of inventory turnover provides a direct relationship between inventory handling and performance, which would make it the better choice for studies on the management of working capital. As Raheman and Nasr (2007) pointed out, a focus on inventory turnover ensures that the study emphasizes operational efficiency, making it a more relevant and practical metric for evaluating inventory management performance.

2.3 Theoretical Framework

2.3.1 Financial Flexibility Theory

The organization's ability to adapt to unanticipated requirements and opportunities is demonstrated by the financial flexibility it possesses. Rapp, Schmid, and Urban (2014) describe financial flexibility as the ability of a company to acquire and restructure its capital in the most efficient and cost-effective manner possible. This ability is referred to as the company's financial flexibility. According to Bergant (2015), the term "financial flexibility" refers to the capacity and effectiveness of a business system to capitalize on commercial opportunities without jeopardizing its financial stability. In its most basic form, this comprises making use of rational economic and financial prospects. In order for a firm

to take advantage of prospective opportunities and efficiently respond to unforeseen circumstances, it is necessary for the company to keep a sufficient level of cash reserves. According to Brigham and Houston (2001), the management of the company acknowledges that two essential factors that have a considerable influence on the long-term success of the company are ensuring stable operations and preserving an adequate supply of capital.

Financial flexibility refers to a firm's ability to adapt and respond to changes in its financial situation and market conditions. It involves the firm's capacity to access and manage different sources of financing, such as debt and equity, in order to meet its financial needs and pursue investment opportunities. Financial flexibility takes into account the following considerations: leverage, payout policy, hedging strategies and handling risks. Some financial flexibility theories are prevailing and theory of investment with endogenous leverage as well as trade-off theory of debt are the most important. The term also entails the concept of keeping debt or equity ratios in doable amounts for buying securities and credits. The organizations focus and aim to enhance their financial flexibility, which gives them the chance for undertaking profitable projects, curtailing financial distress and improving the quality of capital structure decisions. Per the financial flexibility concept, the firms can easily acclimatize to an evolving market phenomena and take up any arising opportunities if they have higher liquidity (Pendar et al., 2019). Financial flexibility is defined as the property a company may have to raise money quickly and make good use of it. The concept of financial flexibility could be achieved in the setting of this situation through such approach: “The Significance of Managing Inventory and Operational Accruals on firms' Profitability in Pakistan”.

Stock and operational profit accruals control whose explosive power is often neglected and then researched by Chalmers et al. (2020) make a foundation that can be used to improve

profitability in firms. Furthermore, this point is highly applicable for the non-financial companies that are listed on the Pakistan Stock Exchange where the judicious management of existing debts, which incorporates accounts receivable and short-term loans in addition to the management of present assets, which consists of cash, inventories, and receivables, becomes critical for financial performance of the company (Aqsa, 2012). Therefore, those entities in the banking industry who have healthy levels of working cash reserves are in the advantageous position of being able to immediately address any obligations, finance operational contingencies, and take advantage of the favorable opportunities in the marketplace.

The ability of companies to promptly respond to changes in customer requirements and shifting industry dynamics is the key characteristic of firms with deep financial cushion and smart inventory management. Enterprises that are able to controller the accounts payable and receivable are in a position to negotiate favorable payment terms with suppliers as well as clients, which in turn helps to achieve adequate cash flow and strengthen their overall financial position, as emphasized by Aguinis et al. (2020). Cash flow management which is a reliable partner to profitability tells the importance of financial discipline to the development and sustainability of businesses. Besides, the prudent utilization of cash reserves ensures that firms can circumvent the higher costs of external capital financing and hence decreases the financial expenses and boosts profits according to Powells and Fells (2019). Through avoiding costly equity offerings and reducing excessive debt, organizations maintain a healthy financial condition and more importantly, they support sustainable growth and create value. This brings into perspective the strong interplay between the prudence in financial matters, the efficiency of operations and the strategic allocation of the resources that determine the financial performance and resilience of the firms in a volatile market.

Primarily, the company that are able to effectively manage its physical inventory as well as operational accruals can then hope to generate gains in terms of profitability and financial stability that are the characteristics of the business sector in contemporary times. By taking a multi-pronged approach to financial management including suitable cash management, wise inventory control and logical debt management, firms improve the competitiveness of those firms, are better placed to deal with market shocks and thereby, convert the emerging opportunities into real value for stakeholders and shareholders. Through inventory and operational accruals management, firms gain control over their basic activities and can embark on profit-added projects, invest into ambitious visions as well as propagate in favorable economic environments that improve both the organization's income and share value, as observed by Hayajneh and Yassine (2011). This strategic planning approach, particularly, allows the non-financial firms which are listed on the Pakistan Stock Exchange to not only improve the financial strength of them but also gives them flexibility to address the challenges or changes in the market situations promptly as a result of the ready availability of the capital and timely identification of the opportunities which are in the market and exploiting them on prospect through effective utilization of reserves.

Through skillful adherence to such principles as careful levels of stock management and operational accruals, businesses can maximize their resource allocation by using financial capital in aims that bring substantial profits and yield a return on investment over the long term for the whole stakeholder community. Since firms actively adopt such proactive and decisive position for management of financial options, it is inevitable for them to become ready in facing challenges of volatile markets, identifying the new emerging opportunities as well as mitigating risks. Therefore, it becomes favorable for firms to keep growing and becoming more profitable. Additionally, proper cash reserves ornamental of inventory and payables accruals management remain a paramount factor in inventory and utter operations,

which are highly critical for improving liquidity and making firms thoroughly watertight to turbulence and variations in the market. Such an increase in liquidity is not only a cheaper source of funding but also allows this organized investment to be put in unproven ventures that in turn eventually become a source of incremental revenue streams and, over the long term, a larger shareholder worth. Thus, symbiosis between inventory and operational accruals management as well as profitability for non-financial entities tells us that the importance of sound financial management should be kept in mind by entities in Pakistan. Through the cultivation of a culture of financial responsibility, the implementation of innovative inventory management procedures, and the creation of a vibrant operating environment, companies can unveil new growth prospects, build competitiveness, as well as deliver lasting value, thus, strengthening their position as mature and dynamically-oriented entities operating in the changing global business environment.

2.3.2 Cash Conversion Cycle Theory

The cash conversion cycle (CCC) is a useful way to figure out how much working capital is needed for things like buying, making, and selling things. The number of days that the amount of sales minus the cost of goods bought can be used to figure out how much credit or financing is needed to meet present obligations and stay in business.

The cash conversion cycle (CCC) theory is formed from integral parts that, altogether, impact the financial situation of a firm. All these elements consist of cash collection, stocks management, and bill payment respectively. Receivables management handles the collection of overdue payments from clients and in so doing, ensures that the days between the outstanding sales credit and the inflow of the cash securities are minimized. Inventory management concentrates on establishing optimal inventory levels at the minimum holding cost. Yet balancing this with a consistent supply of products to meet customer demand is a

major challenge. Payables administration implies managing finances with suppliers through payment schedules arranged in a way that results in more efficient cash management with a view to reducing associated financing costs. Altogether, these elements form the first step of the CCC theory, showing the main issues regarding trade working capital management, that can help companies to raise their profits and improve the operational efficiency as well.

Oseifuah (2016) demonstrates the cash conversion cycle (CCC) theory which helps non financial companies in better asset management, i.e. inventory, operating expenses and accruals that are related to return on investment. This theory underlines that a firm can be classified as a profit-maker only if it manages efficiently and effectively three main elements, namely receivables, inventory, and payables. Through the effective management of these components, sellers manage to minimize the transition period of their investment in inventory into cash because they are able to make sales faster as emphasized by Agyemang & Asiedu (2013). Reductions in the cash conversion cycle introduce a range of positive effects that dramatically improve financial governance and market standing. The one important factor that will lead to a reduction in the business's dependence on outside financing can make the organization even stronger from the standpoint of liquidity. Thus, faster inventory-turnover helps increase the company's capital and assets, which in turn are used for more lucrative businesses or debt reduction leading to a higher profitability. Also, reserve feature encourages the firm to take more risk, dynamic adaptation to economic uncertainties in the economy and spotting growth opportunities poses a deep impact on the business to be successful and sustainable.

On the other hand, the efficient inventory and accruals management by the firms helps them make the optimal inventory level sound, as shown by Enqvist et al. (2012). Through

reduction of excessive stock and its replacement by a supply quite comparable with the demand, firms can wipe out storage costs and expenses on the operations of facilities, leading to efficiency and cutting expense levels. This quick inventory management is both effective for the resource allocation and the leaner, more agile organizational structure, which is leading to the innovation and adaptability in the organizational structure when the market finds something new. Also, the management efficiency concerning payables and receivables suppliers is a key factor in shaping the company's profit landscape. Strengthening credit policies and speeding up reminders of receivable collections may be the first moves towards achieving the agility in cash flow conversion. In a nutshell, this means the money cycle speed and overall financial performance will improve. Similarly, maintaining friendlier credit arrangements with distributors and a tight control on payables management would also be key to managing cash flow and profitability as well as underscore how they are connected in general terms of the operational structure. Specifically, the implementation of such strategies results in better

liquidity and profitability of the firm as well as its firm position in the market. The firm can set up an appropriate system of functional processes that will form a basis of resilience, innovation, and sustained growth by linking them with the main business objectives. This approach will set the company for long-term success amid a shifting business world.

2.4 Summary of Operationalization of Variables

The definition of the variables given is as follows:

Table 2.1. Operationalization of Variables

Variable	Formula	Abbreviation
Return on Assets	Earnings before Interest and Tax + Depreciation/ Total Assets (Jewell, 2011)	ROA
Return on Equity	Net profit after taxes / Shareholders' equity (Anwar, 2019)	ROE
Operating profit Margin	EBIT/ Net Sales (Kusuma, 2021)	OPM
Inventory Turnover Period	Inventory/Cost of Goods Sold × 365 days (Rahayu, 2023)	ITP
Average Collection Period	Account Receivables/Net Sales × 365 days (Ndum, 2021)	ACP
Average Payment Period	Account Payables/Net Purchases × 365 days (Ndum, 2021)	APP
Cash Conversion Period	ITP + ACP – APP (Tan, 2019)	CCP
Firm Size	Natural Logarithm of Sales/ Log of total assets (Baker, 2004)	Size
Leverage (Debt Ratio)	Total Liabilities / Total Assets (Chen, 2015)	DR

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Research Philosophy

The researcher collects data objectively, other studies have already checked findings. The results are derived on the basis of analysis; the researcher did not interpret results without analysis. Additionally, employ positivist philosophy to test the relationship between variables and verify the cause-and-effect relationship. Thus, the positivist philosophy was used in this study to examine the connection between business profitability and the management of inventory and operational accruals.

3.2 Research Approach

The deductive method of research was used in the present investigation. The creation of hypothesis according to current theories and previous research is a part of an approach known as deductive reasoning (Casula et al., 2021). To create research hypotheses that can be evaluated based on the gathered data, the investigators in this instance was go through pertinent research on managing working cash and revenue. The approach known as deductive that offers researcher a structure for the examination and comprehension of information and enables an organized examination of the connections between factors.

3.3 Research Method

A quantitative approach is developed from a positivist philosophy, which emphasizes observable, objective realities that can be measured and quantified. This philosophy underpins the belief that empirical evidence, derived from systematic observation and measurement, is the most reliable foundation for knowledge. The technique used in this thesis follows the requirements of a quantitative research approach for the fulfillment of

the purposes of this study. This method is particularly effective if objective data are to be gathered, which can be measured and subjected to statistical analysis, providing a precise and quantifiable means of understanding relationships and assessing theories. Gathering objective data is the main purpose of this study, and the most effective way to achieve that is through using quantitative approaches. This method allows for the collection of numerical data from company documents, providing a concrete and precise way to assess various financial metrics and performance indicators. Quantitative data, with its inherent ability to be transformed into statistical forms, lends itself to rigorous analysis, enabling researchers to identify patterns, correlations, and causal relationships within the data Creswell, J. W. (2014).

One of the key reasons for selecting a quantitative research method is the nature of the data involved. In this study, numerical data from company financial statements and other documents are crucial for analyzing the impact of inventory and operational accruals management on firm profitability. The quantitative method facilitates the collection of large datasets, which are necessary for conducting robust statistical analyses. This method ensures that the data collected is not only comprehensive but also reliable, minimizing the potential for bias that can occur with more subjective, qualitative methods Zikmund, W. G., (2013).

Furthermore, quantitative methods are particularly suitable for hypothesis testing. In this research, several hypotheses related to inventory management, operational accruals management, and their impact on profitability need to be tested. The quantitative approach allows for the use of statistical tests to determine whether there are significant relationships between these variables. By employing techniques such as regression analysis, correlation analysis, and other statistical tools, the research can provide empirical evidence to support

or refute the hypotheses. Additionally, the quantitative approach provides a strong foundation for addressing the research questions. For instance, understanding the impact of the inventory turnover period on operating and financial profitability requires precise measurement and analysis of financial data across multiple firms. Similarly, evaluating the effects of the average collection period, average payment period, and cash conversion period on profitability involves detailed quantitative analysis. The use of numerical data ensures that the findings are based on objective measurements rather than subjective interpretations. All of the above reasons behind selecting the quantitative research method.

3.4 Nature of Data

The research data was quantitative in nature. The financial data about managing Inventory and Operational Accruals as well as profitability of non-financial Firms registered on the Pakistani Stock Exchange is relevant to the current study. Financial documents such as accounts receivable and payable, and cash flow reports, that shed light on the firm's profitability, and make up a significant portion of the information.

3.5 Sample

The sample consists of 100 non-financial firms listed on the Pakistan Stock Exchange, selected based on the availability of complete data relevant to the research variables. Manufacturing firms were included due to their significant reliance on inventory management, a key component of this study, while service sector firms were excluded as they typically lack substantial inventory. This sample size ensures broad representation of the manufacturing sector, aligns with the study's objectives, and provides reliable data for analyzing the impact of inventory and operational accruals management on firm profitability.

Table 3.1. Number of manufacturing firms selected from different sectors of Pakistan

Industry	Sample Firms
Cement	5
Chemical	15
Sugar & Allied Industries	10
Fuel & Energy	7
Tobacco	1
Automobile	7
Textile	45
Food & Personal Care Products	7
Paper, Paperboard and Products	3
Total	100

A total of 100 firms have been selected as the sample of the study reflecting a proportional representation from each sector of the PSX.

3.6 Sources of Data

The data was acquired from the Balance sheet analysis of Joint Stock Companies by State Bank of Pakistan. Missing data was obtained from the annual reports of the firms downloaded from the websites of the firms. The period covered was 2014 to 2023. The sample includes firms from different Sectors.

3.7 Research Technique

The Panel Data Analysis was used for this investigation. Utilizing statistical techniques to examine and analyze statistical data is a component of quantitative data analysis (Mohajan, 2020). The analysis of the links among Inventory control, Operational accruals and profitability indicators was conducted by a multiple statistical methodology. This strategy provides a robust and impartial method for conducting a thorough study and obtaining valuable outcomes.

3.8 Data Analysis

For this research the data sets were analyzed by suitable statistical methodologies. Moreover, the data was summarized with the help of descriptive statistics. Descriptive statistics such as mean, median, standard deviation, and variance are employed as a tool to present a general idea about the data set by Mishra et al. (2019).

3.8.1 Panel Least Square

The Panel Least Squares (PLS) method is a widely used econometric technique for estimating linear relationships in panel data, which includes observations across both time and entities (e.g., individuals, firms, or countries). It combines cross-sectional and time-series data, leveraging variations in both dimensions to improve estimation efficiency. The PLS method assumes a constant slope coefficient across entities and time, while allowing for entity-specific or time-specific intercepts. A typical PLS model is represented as:

$$Y_{it} = \propto + \beta X_{it} + \in_{it}$$

where yity_{it}yit is the dependent variable for entity I, at time t, X_{it} represents the independent variable(s), α\alphaα is the intercept, β\betaβ is the slope coefficient, and

uitu_{it}uit is the error term. Panel least squares can be estimated using fixed effects (FE) or random effects (RE) models, depending on the structure and assumptions about the unobserved heterogeneity.

3.8.2 Hausman Test

The Hausman Test is a statistical test used to decide between the Fixed Effects (FE) and Random Effects (RE) models in panel data analysis. The FE model assumes that unobserved individual-specific effects (cic_ici) are correlated with the independent variables, while the RE model assumes no such correlation. The Hausman Test examines whether the RE model's assumptions hold by comparing the consistency of coefficients between the two models.

3.8.3 Fixed and Random Effect Model

The Fixed effect model given as follows:

$$Y_{it} = \propto + X_{it}\beta + C_i + \in_{it}$$

where C_i is an entity-specific effect, and$\in_{it}$ is the error term.

The random Effect model is given as folwos:

$$Y_{it} = \propto + X_{it}\beta + (C_i + \in_{it})$$

where $(C_i + \in_{it})$ forms the composite error term.

The null hypothesis (H0H_0H0) of the Hausman Test is that the RE model is appropriate (C_i uncorrelated with X_{it}), and rejection implies the need to use the FE model. The test

statistic is based on the difference in estimated coefficients and their variances between the FE and RE models.

3.9 Models of the Study

The basis of this research is Panel Data Analysis, which combines cross-sectional and time-series data. Thus, the model of this study is structured for analysis as follows:

- Financial Performance = f (Inventory Management, Receivables Management, Payables Management, Cash Management, Firm Size, Leverage)

The empirical model of the current study that was used to test the impact of Inventory and Operational Accruals Management on the profitability of non-financial firms listed on PSX is presented below:

1st Model:

$$ROE_{it} = \propto_0 + \propto_1 ITP_{it} + \propto_2 ACP_{it} + \propto_3 APP_{it} + \propto_4 CCP_{it} + \propto_5 Size_{it} \propto_6 DR_{it} + \varepsilon_{it} \text{ (i)}$$

2nd Model:

$$ROA_{it} = \propto_0 + \propto_1 ITP_{it} + \propto_2 ACP_{it} + \propto_3 APP_{it} + \propto_4 CCP_{it} + \propto_5 Size_{it} + \varepsilon_{it} \text{ (ii)}$$

3rd Model:

$$OPM_{it} = \propto_0 + \propto_1 ITP_{it} + \propto_2 ACP_{it} + \propto_3 APP_{it} + \propto_4 CCP_{it} + \propto_5 Size_{it} \propto_6 DR_{it} + \varepsilon_{it}$$ (iii)

- ROE: Return to Equity
- ROA: Return on Assets
- OPM: Operating Profit Margin

- ITP: Inventory Turnover Period
- ACP: Average Collection Period
- APP: Average Payment Period
- CCP: Cash Conversion Period
- Size: Firm Size
- DR: Debt Ratio
- α_0 is Intercept
- α_i is Coefficient
- ϵ represents error term

CHAPTER 04

DATA ANALYSIS AND RESULTS

This section is organized into three parts. First, we explain dataset of manufacturing firms using descriptive statistics. Secondly, we describe the results of the correlation and thirdly, Panel Data Regression analyses for the three regression models employed in the study are reported along with the interpretation and discussion.

4.1 Descriptive Statistics

Table 4.1. Descriptive Statistics

	ROA	ROE	OPM	ITP	ACP	APP	CCP	SIZE	DR
Mean	7.307461	13.92722	10.99062	67.48136	51.55896	47.26480	55.93316	9.961104	0.535433
Median	5.885000	12.84186	8.955256	62.96370	39.48235	37.36402	46.68456	9.898502	0.540341
Maximum	44.98000	68.21000	85.99526	198.7914	255.6176	210.2965	210.2965	11.89315	1.396053
Minimum	-21.2605	-48.93	-371.224	10.22816	10.00520	10.16787	-40.7111	8.084959	0.017419
Std. Dev.	7.810030	15.58696	16.16058	36.37389	40.43565	32.17058	37.48885	0.579652	0.203910
Sum	7307.461	13927.22	10990.62	67481.36	51558.96	47264.80	55933.16	9961.104	535.4334
Sum Sq. Dev.	60935.56	242710.4	260903.3	1321737	1633407	1033911	1404008	335.6604	41.53785
Obs	1000	1000	1000	1000	1000	1000	1000	1000	1000

Note: *ROA = return of assets, ROE = return of Equity, OPM = Operating profit margin, ITP = Inventory Turnover period, ACP = Average collection period, APP = Average payment period, CCP = Cash Conversion period, Size = the natural logarithm of sales, DR = Leverage = the debt ratio. All variables are estimated for an annual cycle.*

The above table describes that ROA (Return on Assets) and ROE (Return on Equity) have positive averages, indicating that, on average, firms are generating returns from their assets and equity. ROE is generally higher than ROA, reflecting that equity returns tend to be greater than asset returns for these firms. Operating Profit Margin (OPM) shows a high average, suggesting that, on average, firms have a strong operating profit relative to sales.

Inventory Turnover Period (ITP), Accounts Receivable Collection Period (ACP), Accounts Payable Period (APP), and Cash Conversion Period (CCP) measure different aspects of the firm's efficiency in managing its working capital. The average values for these periods

suggest typical operational timelines, but the high variability indicates some firms operate with significantly different efficiencies.

The standard deviations for most financial metrics are quite large, highlighting substantial variation around the mean values. This suggests that there is a wide range of performance and operational efficiency among firms. OPM has particularly high variability, indicating that operating profit margins can differ drastically between firms.

SIZE and DR (Debt Ratio) exhibit distributions closer to normal, meaning these variables tend to follow a more symmetric and predictable pattern.

A summarized view of the sampled data for Pakistani manufacturing firms listed on the PSX throughout 2014-2023. This concise summary helps in understanding the overall dataset through key statistical measures, including minimum, maximum, mean, and standard deviation values for each variable.

4.2 Correlational Analysis

The following table reports the correlation statistics of the obtained data followed by the interpretation

Table 4.2. Correlational Analysis

	ITP	ACP	APP	CCP	SIZE	DR	ROA	ROE	OPM
ITP	1								
ACP	-0.241	1							
APP	0.325	0.357	1						
CCP	0.447	0.254	-0.113686	1					
SIZE	-0.04	0.235	0.274	-0.114	1				
DR	0.215	-0.198	0.319	0.21	0.151	1			
ROA	**-0.287***	**0.325***	**-0.214***	**-0.345***	**0.228172***	**-0.378561***	**1**		
ROE	**-0.311***	**0.412***	**0.359***	**-0.374***	**0.273072***	**-0.195***	**0.773***	**1**	
OPM	**-0.227***	**-0.117***	**-0.31***	**0.354***	**0.291659***	**-0.377***	**0.504657***	**0.457***	**1**

***Note:** (*) represent statistical significance at the 10%, where ROA = return of assets, ROE = return of Equity, OPM = Operating profit margin, ITP = Inventory Turnover period, ACP = Average collection period, APP = Average payment period, CCP = Cash Conversion period, Size*

= the natural logarithm of sales, DR = Leverage = the debt ratio. All variables are estimated for an annual cycle.

The discussion and interpretation of the correlational analysis presented in Table 4.2. This table shows the correlation coefficients between various financial and operational metrics. From -1, which means a perfect negative correlation, to +1, indicating a perfect positive correlation, every coefficient represents the magnitude and direction of the linear relationship between two variables.

ITP has a moderate positive correlation with CCP (0.447) and a small positive correlation with APP (0.325). This indicates that as the inventory turnover period increases, the cash conversion period tends to increase, and there is a weak association with the accounts payable period. ITP shows a negative correlation with ROA (-0.287) and ROE (-0.311), suggesting that a longer inventory turnover period is slightly associated with lower returns on assets and equity.

ACP shows a moderate positive correlation with APP (0.357), indicating that firms with longer accounts receivable periods tend to have longer accounts payable periods. ACP shows a positive correlation with ROA (0.325) and ROE (0.412), suggesting that a longer Average Collection Period is slightly associated with Higher returns on assets and equity.

APP has a small negative correlation with CCP (-0.114) and negligible correlations with other profitability metrics, indicating weak associations between the accounts payable period and the cash conversion period or profitability.

CCP has a moderate positive correlation with ITP (0.447) and weak negative correlations with ROA (-0.345) and ROE (-0.374), implying that an increase in the cash conversion period is associated with slightly lower returns.

SIZE (firm size) shows a moderate positive correlation with ROA (0.228), ROE (0.273), and OPM (0.292), suggesting that larger firms tend to have better returns and higher profit margins. It has weak correlations with other operational metrics, indicating that firm size is more strongly associated with profitability than with specific operational periods.

DR (Debt Ratio) has a strong negative correlation with ROA (-0.379) and ROE (-0.195), suggesting that higher debt levels are associated with lower returns on assets and equity. DR has a small positive correlation with ITP (0.215) and APP (0.325), indicating weak associations with operational periods. ROA and ROE are strongly positively correlated (0.773), meaning firms with higher returns on assets also tend to have higher returns on equity. ROA and OPM are moderately positively correlated (0.505), suggesting that higher operating profit margins are associated with higher returns on assets. ROE and OPM also have a moderate positive correlation (0.457), indicating that higher profit margins are associated with better returns on equity.

Operational Metrics: Inventory turnover, accounts receivable, accounts payable, and cash conversion periods show varying degrees of correlation, mostly weak to moderate, with some relationships like the positive correlation between inventory turnover and cash conversion period, and between accounts receivable and accounts payable, indicating interconnectedness in operational efficiency metrics.

Firm Size and Profitability: Larger firms tend to have better profitability indicators (ROA, ROE, and OPM), highlighting the potential advantages of size in financial performance. Debt Ratio Impact: Higher debt levels are negatively correlated with profitability metrics, suggesting that increased leverage may adversely affect financial returns. Overall, this correlation analysis reveals several meaningful relationships between operational metrics,

firm size, and profitability, while also highlighting weaker and more nuanced connections between certain variables.

4.3 Panel Data Analysis

The following section covers the Panel data Analysis. The results are reported followed by the interpretation and discussion of results. The table 4.3 presents the results from a Panel Least Squares regression analysis using a Common Effect Model for the period 2014-2023. The model examines how various variables influence three financial performance metrics: Return on Assets (ROA), Return on Equity (ROE), and Operating Profit Margin (OPM). Each variable's coefficient, probability value (p-value), R-squared, and F-statistic significance are provided.

Table 4.3. Panel Data Analysis – Common Effect Model

Method: Panel Least Squares, Common Effect Model						
	ROA_Model-1		**ROE_Model-2**		**OPM_Model-3**	
Variables	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**
C	-14.122	0.000	-34.224	0.0000	-41.118	0.0000
ITP	-0.134	0.004	-0.091	0.017	-0.042	0.016
ACP	-0.127	0.011	-0.070	0.023	-0.027	0.014
APP	0.074	0.035	0.088	0.051	-0.022	0.043
CCP	-0.054	0.027	-0.062	0.06	0.070	0.174
SIZE	2.774	0.000	5.2174	0.000	9.0351	0.000
DR	-12.014	0.000	-11.207	0.000	-11.316	0.000
R-squared	0.381		0.287		0.245	

Prob(F-statistic)	0.0000	0.0000	0.0000

For the Operating Profit margin, the negative coefficients for the constant term across all models are statistically significant, indicating that when all other variables are zero, the intercept values for ROA, ROE, and OPM are negative. This may suggest a base level of loss or deficit before accounting for other explanatory variables.

For Inventory Turnover Period, a negative coefficient indicates that an increase in the Inventory Turnover Period is associated with a decrease in ROA, ROE, and OPM. The negative impact is statistically significant across all performance metrics, suggesting that a longer inventory turnover period tends to reduce overall profitability and efficiency.

Similar to ITP, a longer ACP is associated with decreased ROA, ROE, and OPM. This indicates that longer collection periods from receivables negatively affect profitability and return metrics. The effects are statistically significant, highlighting the importance of efficient accounts receivable management.

APP's coefficients show mixed results. The coefficient for ROA and ROE is not statistically significant, suggesting that the accounts payable period does not significantly impact these metrics. However, APP has a significant negative effect on OPM, indicating that longer payable periods might reduce operating profit margins, though its overall impact is less pronounced.

CCP negatively affects ROA and ROE but positively impacts OPM. The statistically significant negative relationship with ROA and ROE suggests that an extended cash conversion period can reduce returns on assets and equity. The positive effect on OPM

indicates that a longer CCP may increase profit margins, which could reflect improved management of cash flows despite overall lower returns.

Firm size has a positive and statistically significant impact on ROA, ROE, and OPM. This suggests that larger firms tend to have better profitability and efficiency metrics. The positive coefficients indicate that growth in firm size is associated with increased returns and profit margins.

A high debt ratio is negatively associated with ROA, ROE, and OPM. The coefficients are statistically significant, indicating that higher levels of debt adversely affect profitability and operating margins. This negative relationship suggests that increased leverage can lead to lower returns and reduced operating efficiency.

The R-squared values indicate that the model explains a moderate portion of the variability in the financial metrics. For ROA and ROE, the model explains about 28-38% of the variation, suggesting that other factors not included in the model may also significantly influence these returns. For OPM, the model explains approximately 25 % of the variation, showing a somewhat better fit. F-statistics indicate that the models are statistically significant overall, suggesting that the independent variables jointly have a significant impact on the dependent variables.

The panel least squares analysis provides insights into how various operational and financial variables impact ROA, ROE, and OPM. Key findings include the negative effects of longer inventory turnover and accounts receivable periods on profitability metrics, the mixed effects of the accounts payable period, and the generally positive impact of firm size on financial performance. The debt ratio negatively affects all metrics, emphasizing the adverse effects of high leverage. Overall, the models fit the data moderately well, indicating

that while significant relationships are identified, other factors might also influence the financial performance metrics.

4.3.2 Hausman Test

The following table describes the Hausman Test for validating the Fixed or random effect in the Panel Data Analysis:

Table 4.4. Hausman Test

Correlated Random Effects - Hausman Test

	ROA		ROE		OPM	
Test Summary	**Chi-Sq. Statistic**	**Prob.**	**Chi-Sq. Statistic**	**Prob.**	**Chi-Sq. Statistic**	**Prob.**
	5.1145	0.3542	4.7956	0.4231	51.2271	0.0000

The results show that with ROA and ROE as Dependent Variables, the Random Effect prevails while for OPM the Fixed Effect is prevalent.

4.3.3 Random and Fixed Effects Results

The following table describes the Random and Fixed Effect results in the Panel Data Analysis:

Table 4.5. Random Effects and Fixed Results

	Random Effect Model				Fixed Effect Model	
	Sample: 2014 2023					
	ROA		ROE		OPM	
Variable	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**	**Coefficient**	**Prob.**
C	-13.145	0.004	-42.114	0.000	-122.231	0.000
ITP	-0.120	0.095	-0.017	0.045	-0.073	0.014
ACP	-0.103	0.011	-0.015	0.031	-0.064	0.000
APP	0.078	0.041	0.075	0.071	-0.014	0.037
CCP	-0.018	0.002	-0.098	0.025	0.030	0.141
SIZE	2.7845	0.000	6.354	0.000	18.884	0.000
DR	-24.671	0.000	-13.112	0.000	-25.155	0.000

R-squared	0.317	0.254	0.447
Prob(F-statistic)	0.0000	0.0000	0.0000

The above table presents the results from both Random Effect and Fixed Effect models for the period 2014-2023, examining how various variables influence three financial performance metrics: Return on Assets (ROA), Return on Equity (ROE), and Operating Profit Margin (OPM). The results include coefficients, p-values, R-squared values, and the probability of the F-statistic.

The negative coefficients for the constant term indicate a baseline level of loss or deficit before considering the other variables. All constants are statistically significant, suggesting a robust baseline impact on each financial metric. A longer Inventory Turnover Period negatively affects ROA, ROE, and OPM. The negative impact is statistically significant for all metrics, indicating that an extended period for inventory turnover is associated with lower profitability and efficiency. These results are following the previous study, Samiloglu, F., & Demirgunes, K. (2008).

Longer Accounts Receivable Collection Periods are associated with lower ROA, ROE, and OPM. The impact is statistically significant across all metrics, highlighting the detrimental effect of delayed collections on profitability. These results following the Ali, S., & Ali, M. (2021). APP has mixed effects. While the coefficients for ROA and ROE are not statistically significant, the negative coefficient for OPM is significant, suggesting that a longer accounts payable period may reduce operating profit margins. CCP negatively impacts ROA and ROE but has a positive but non-significant effect on OPM. The negative relationship with ROA and ROE implies that a longer cash conversion period might be detrimental to returns on assets and equity. These findings related to Deloof, M. (2003).

Firm size positively impacts ROA, ROE, and OPM significantly. Larger firms tend to achieve better returns and higher profit margins, reflecting economies of scale and potentially greater market power. A higher debt ratio negatively impacts ROA, ROE, and OPM significantly. Increased leverage is associated with reduced returns and profit margins, highlighting the risks of high debt levels on financial performance. These results are related to Akoto, R. K., & Dadson, I. (2019).

The R-squared values indicate that the models explain a varying proportion of the variance in the financial metrics. The model explains about 25-50% of the variation in OPM, while the explanations for ROA and ROE are lower, suggesting that other factors might also significantly affect these metrics. **F-statistic** for all metrics indicates that the models are statistically significant, meaning the variables collectively have a meaningful impact on ROA, ROE, and OPM. Both models provide valuable insights into the factors affecting ROA, ROE, and OPM. They highlight the significant negative impact of longer operational periods and higher debt ratios on profitability, while firm size positively affects financial performance.

The table delineates the outcomes of both the Random Effect and Fixed Effect models applied to the period 2014-2023, exploring the impact of various explanatory variables on three key financial performance metrics: Return on Assets (ROA), Return on Equity (ROE), and Operating Profit Margin (OPM). These results are following the previous stdies, Samiloglu, F., & Demirgunes, K. (2008). The results are detailed through coefficients, p-values, R-squared values, and the probability associated with the F-statistic. The negative coefficients for the constant term suggest a baseline level of loss or deficit prior to the influence of other variables. The statistical significance of these constants across all models indicates a robust and consistent baseline impact on each financial metric. The

Inventory Turnover Period (ITP) is observed to have a statistically significant negative effect on ROA, ROE, and OPM. This indicates that an extended inventory turnover period is associated with decreased profitability and operational efficiency.

Similarly, longer Accounts Receivable Collection Periods (ACP) are significantly linked to lower ROA, ROE, and OPM. This significant negative relationship underscores the adverse effect of delayed collections on overall profitability.

The Accounts Payable Period (APP) exhibits mixed effects. While the coefficients for ROA and ROE are not statistically significant, the negative coefficient for OPM is significant. This suggests that extended accounts payable periods may negatively impact operating profit margins. The Cash Conversion Period (CCP) shows a negative effect on both ROA and ROE, although its impact on OPM is positive but not statistically significant. The negative association with ROA and ROE implies that a longer cash conversion period could detract from returns on assets and equity. These results are following the previous studies Lazaridis, I., & Tryfonidis, D. (2006).

Firm Size (SIZE) consistently demonstrates a significant positive effect on ROA, ROE, and OPM. Larger firms are associated with enhanced returns and higher profit margins, reflecting the benefits of economies of scale and potentially increased market power. The Debt Ratio (DR) reveals a significantly negative impact on ROA, ROE, and OPM, indicating that higher leverage is associated with diminished returns and reduced profit margins, thus highlighting the financial risks associated with elevated debt levels.

The R-squared values suggest that the models account for varying proportions of the variance in the financial metrics. Specifically, the models explain approximately 25-50% of the variation in OPM, whereas the explained variance for ROA and ROE is lower,

implying that additional unobserved factors may significantly influence these metrics. The F-statistic values for all metrics indicate that the models are statistically significant, affirming that the explanatory variables collectively exert a meaningful impact on ROA, ROE, and OPM. The next section concludes and provides policy implications based upon the obtained results. These findings are related to Huang, L., & Song, F. M. (2020).

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study provides a systematic overview of the relationship between performance indices of firms and several integrating and composite aspects in the Pakistani manufacturing sector. The correlation and regression analysis suggested several interesting things regarding the performance and its determinant factors, in which the firms' size (FSIZE) as well as the debt ratio (DR) oriented out as the most significant factors.

From the data, it is apparent that firm size (SIZE) remains an influential positive factor in determining company performance in terms of ROA and ROE. The regression models inform that, the greater firms are, the greater the returns on assets and equity are: this can be seen through the positive sign in the coefficients of SIZE and the desirable p-value outcomes. Thus, this observation fits the theoretical framework of economy of scale whereby organizations operating under large-scale production units reap the benefits of cost reduction per unit and thus improve their profitability. Moreover, there are likely to be higher financial constraints which are common in smaller firms; however, large firms have potentially differentiated access to funding and therefore can make more strategic investments. In addition, the assertiveness of buyers generated by large firms also implies the development of enhanced competitive advantages, arising in result of better financial outcomes.

It is here that economies of scale can be realized; as the firm expands, it is able to bring the fixed costs over a larger number of units, therefore reducing the per unit cost of production. This has made their cost of capital to be lower as compared to the firms in the smaller category thus contributing to the higher average value of the ROA and ROE recorded in

this category of firms. Also, many larger firms are already well-organized along with already developed reputation and customer base which makes the revenue more predictable. These firms may also benefit from getting preferred orders to get supplied from their suppliers and creditors which leads to their stability and better performance.

On the other hand, the debt ratio, calculated as the total debt of the firm divided by total assets, which indicates the level of debt financing in relation to total assets, reduces the values of both ROA and ROE. This negative relationship simply means the notion of hierarchy where possibility of profitability is limited by indebtedness. It is widely appreciated that costs of debt, including the cost of interest, are costly as they reduce net income and consequently the return on both assets and equities. They indicated that the level of debt is a determinant of financial risk, which means that firms with higher levels of debts have more uncertainty regarding the impact of economic events and interest changes. For instance, debt in general raises the probability of default and portfolio volatility, which decreases investment and limits business resilience, thereby affecting profitability.

One major implication of the findings is that while the use of debt to finance investment may indeed enhance the level of the firm's profitability, it is also associated with significant cost in the form of reduced ROA and ROE, which shows what firms need to consider when relying on debt as a source of financing for growth initiatives. On the one hand, it must be admitted that, in order to finance development and improvements to its operations, debt is advantageous; on the other hand, reliance on debt is also disadvantageous and can result in financial issues. Companies with a great deal of debt have a portion of the income to pay for their debts, which may reduce the profits to be report to shareholders and invest into organization.

However, the findings are quite different when operating profit margin (OPM) and debt ratio (DR) are considered collectively. The correlation calculation also shows that there is a positive and statistically significant relationship between DR and OPM which is an evidence that firms with high levels of debt generally have high operating margins. The fact is that this seems rather paradoxical and could be explained in several ways. This suggestion is that high-debt firms exhibit extraordinary measures in cost management to be certain that they achieve sufficient operating income to service their debts. Such firms may pay significant attention to productivity, both at the core business process level as well as at an organizational level for identifying and eliminating redundancies with an aim of increasing operating margins.

Also, the level of leverage may put pressure on the high-debt firms in ensuring that they record high level of sales revenue in order to offset for the high cost of debts. This pressure can make these firms to up their sales, look for ways to increase quality of their product, market the product aggressively resulting into increased operating margin. The readers should understand that the aforementioned metrics were aimed at evaluating a firm's operating profitability under conditions of high interest-bearing obligations, which show the company's efficiency and effectiveness on operational level. However, it also increases the possibility of wrong in high leverage as operating margins may become a bit difficult to maintain in the face of economic difficulties or rising competitory force.

Secondly, a fact established by the research is that there are especially sharp shifts in the financial or operational figures of firms, according to the measures of the descriptive statistics. The high standard deviations for Operating Profit Margin (OPM) and Cash Conversion Cycle (CCC) may be attributed to the high variance present in this particular sample. That is why, based on the results of the analysis, it can be concluded that the

performance of the selected organizations varies within a significant range and these organizations have different levels of operational efficiency.

A major lesson drawn from OPM is the large standard deviations which depict the firm heterogeneity in terms of their ability to make profits given their structures. This variability in OPM's implies that while some firms generate handsome profits through efficiency, having lean operations and minimal overhead costs, other firms run enlarged operations with very low efficiency, thereby reporting low operational margins. This variability is important because it reveals varying strategies and managerial capabilities in different organisations, sub-industries, and distinctive industry and market contexts.

The changes in OPM allow for key differences due to industry differences, competitive forces and internal capabilities and capacity to manage change. Higher OPMs may also suggest that the firms are more competitively positioned via dominant products, efficient cost control, and excellent positioning in the market. Such firms are in a position to set higher prices that are acceptable to consumers and at the same time bear lesser overhead costs, thus making high profit margin. Meanwhile, players with lower OPMs possibly operate in highly competitive industries, use expensive inputs or have low levels of operational efficiency that contribute to costliness and thus lower profit per dollar of sales.

Likewise, the important dispersion of variance in the Cash Conversion Cycle (CCC) means that there can be a large discrepancy in the effectiveness of working capital management. The CCC entails the time taken by the firm to transform some of its resources such as inventory and receivables into cash, and the formula revealing that when the value of this cycle is low, then the management of cash is efficient. The shorter the CCCs of the firms, the faster the cycle of turning inventory and receivables into cash, which helps in improving

the liquidity of the firms and reduce the direct financing. This efficiency can be vital for sustaining the firm's operational flow and guaranteeing it financial solvency.

On the other hand, firms having longer CCC indicate that a firm has some problems in managing its working capital. Longer cycles from the summarized table mean that the cash is takes a long time to be received after sales by these firms which poses some liquidity problems and hence, they have to look for other funding methods. This situation may result in the company incurring higher interest costs and risks to its financial profile thereby lowering the overall profit. CC recognition shows that there are the most significant differences between the firms, which reflect various approaches to organization's inventory management, credit policies, and supplier relationships. Organizations that can control these aspects of operation possess competencies that would enable them to address issues of cash flows and in turn. The variation in CCC also provides an indication of the disparity in industry conditions as well as business strategies assumed by the sample companies. For instance, companies in industries that deal with fast-moving consumer goods items are likely to have a shorter CCC because they turn over the inventories very fast and they also collect their receivables speedily. On the other hand, favorable indicators that relate to industry include long production cycle and long credit period together explain long CCCs among firms established in industries with such characteristics. It is therefore important to understand these factors when seeking to analyze the meaning of variability in CCC across the construction industry.

This variability in OPM and CCC is important as the information derived from it reveals periods of sustained revenue and profitability in firms. In line with this theory, companies that have good operation management coupled with efficient cash management are likely to yield high operating profit margins and improved liquidity status. These firms can

usetheir earnings to expand the growth opportunities for their businesses, become more competitive, and increase their shareholder value. While levered companies have greater earning growth, lower operational efficiencies and issues with liquidity can negatively impact profitability and lead to financial distress.

Furthermore, the variation in the parameters is evident to support that call for sensitized management plans. The first direction of the company affairs that firms need to consider involves undertaking a consequent examination of their operational and financial characteristics to enable the adoption of suitable steps that help bring efficiency and functionality improvements that must also sustain, serve, and bolster efficiency and profitability. For instance, firms with a low OPM could aim to cut costs, optimize customer relations, or introduce new products or work on improving their quality in order to increase their profit margins. Likewise, firms with long CCCs may employ activities such as improving inventory turn over, repairing credit standards, or extending supplier credit to gain better cash management.

Therefore, the regression analyses performed in the study provide indirect, yet rich and dense information about the interdependent and intricate nature of the tested operational efficiency and financial performance variables in contexts of the manufacturing organisations operating in Pakistan. In pursuing these relationships, the analysis identifies how specific operational activities impact those important financial variables, enabling better decision and planning in the management of organisational resources.

The two regression analyses highlight the most important result of the study: the negative correlation between the ITP and both ROA and OPM. The inventory turnover period gives the average time taken to sell an item of stock in a particular business. Holding costs rise as TI increases since inventory remains in storage for longer periods, which takes the

following implications on firms' profitability. Using CVA efficiency as the measure of financial performance, negative coefficients for the ITP imply that stock accumulation is unhealthy to a firm's performance. The following factors can be attributed to the above mentioned reasons.

Firstly, the costs of holding inventory increase with the length of time spent holding the inventory. These costs include the cost of holding the inventory, overseas insurance and the cost of capital tied up in the inventory. Bearing in mind that inventory ages over time, this means that there is increased likelihood of obsolescence in industries where the kind of product sold experiences fast turnover or in industries where there are constant technological advancements. Slow-moving or outdated products may have to be liquidated at some nominal or even incurred as a cost, affecting profits. Moreover, the longer inventory periods may suggest weak supply chain management or problems in product manufacturing, thus the firm cannot quickly replenish its stockpile and meet the market demands effectively.

However, it is also important to state that TO and its relationship with both ROA and OPM is not as powerful for all the firms. Depending on the type of the studied regression model, the coefficient for the ITP variable is less significant, meaning that, maybe, the deleterious impact of holding inventory beyond a certain period may not be as severe in all settings. The variation of the levels could be blamed on differences in industrial processes, type of product and inventory control measures. The vulnerability of certain firms to the downsides of long inventory period may also be managed through good inventory management systems and practices. Also, there are some companies that might be working in industries where longer inventories periods are common practices and part of strategies rather than detrimental to the financial operation of those firms.

The analysis also investigates the CCP coefficients that are equally an important measure of its operational performance. This is the time taken to transform the firm's inventories and receivables into cash and is referred to as CCP. The CCP is a central process in the trading cycle and requires proper management to ensure adequate financial margins and liquidity. Thus, it is found that most of the coefficient estimation based on CCP is relatively low which indicates that CCP might not be exerting a huge direct impact on ROA and OPM although there could be other mediating factors affecting these profitability measures.

These are the possible factors that have left CCP as an insignificant aspect is many models. First, profitability can be dependent on many factors and it remains questionable whether or not the impact of CCP is direct or influenced by such factors as increased sales or cost-reducing measures and economic conditions. Though shorter CCP reflects higher operational efficiencies and better control over the liquidity than the company with longer CCP but it will not translate into better profitability if other managerial variables are not managed well. For example, assume that a firm has a short CCP but high production costs or a low demand from consumers in the marketplace; such a firm would still likely to post poor profits.

Furthermore, the existence of the industry context indicates that various factors influence the association between CCP and financial performance. When inventory turn over is high and receivables periods are relatively low in certain industries, the CCP will be less so it can be harmful in providing a benefit. On the other hand, in industries with long Cycle time or FSCs where firms make sales on longer credit terms, managing CCP becomes even more of an issue. The findings of the regression analysis indicate that it is important to investigate whether or not CCP has the ability to increase or decrease the profitability in some other

operational or financial conditions because the above analysis shows that CCP's influence might be masked or highlighted in certain conditions.

The results indicate that there is a significant interconnection between effectivity and efficiency indicators and firm outcomes, which is not always characterised by a direct positive association. The results also provide evidence that introducing OI metrics, such as inventory turnover period and cash conversion period, for analyzing operational performance instructively supplement traditional measures of profitability, as these measures are conditioned by numerous factors, including industry specificity, managerial practices, and macroeconomic environment. This is why firms need to shift towards a performance management perspective which views performance within a wider framework that focuses not only on the operational, but also on the financial performance of a company in order to make meaningful conclusions about the factors which influence it.

5.2 Theoretical Contribution

The findings of this study have important theoretical implications to the field of financial management and especially in operational efficiency. First, it contributes to the existing literature because it investigates the consequences of both inventory and operation management on the Pakistani manufacturing firm's profitability in an empirical study. Moreover, by selecting a developing country as the context for the study, this research contributes to the extant literature by providing insights on the impact of operational management practices on financial performance in various economy conditions. Secondly, the study offers a detailed look at how different forms of operational metrics including ITP, ACP, APP, and CCP affect profitability measures ranging from ROA, ROE, to OPM with the results showing how these different aspects affect financial performance in varied manner. This approach provides the user with a theoretical understanding that gets to the

details of how well inventory and accrual management have been managed. Further, the study implies that firm size and debt ratio be adopted as moderators in the context of operational management and profitability as both played a pertinent role and these variables should be included in the subsequent theory models to analyse future financial performance.

5.3 Practical Contribution

From a practical perspective, this research provides useful recommendations for managers and policymakers still interested in increasing firm profitability through better inventory and operational accrual management. The results therefore hold imply for managers perhaps the most significant insight; that proper management of inventory turnover periods is crucial and avertable. Based on the study, the improvement of inventory management processes by using sophisticated systems and technologies can have a positive impact regarding the financial status of companies. Also, there is need to put efforts towards formulating credit policies for controlling the average collection and payment days so that there may be better cash flow and little or no external funding. To the policymakers, therefore the research offers a necessary underpinning for the development of paradigms and policies that foster optimal inventory and operational management working standards. Through the utilisation of proper management tools, policy makers can stand to assist in enhancement of the management status of the manufacturing industries financially and competitively. In light of the objectives of the study, the following are the practical implications of the research findings that can help firms design systems, processes and procedures to support strategic management and drive sustainable profitability.

5.4 Recommendations

Based on the data several recommendations can be made to enhance the profitability of manufacturing firms listed on the Pakistan Stock Exchange through improved inventory and operational accruals management. Firstly, firms should focus on optimizing their inventory management practices. By carefully monitoring and managing the inventory turnover period, companies can significantly influence their operating and financial profitability. Efficient inventory management ensures that firms maintain an optimal level of inventory, avoiding excess stock that ties up capital and incurs holding costs, as well as minimizing stockouts that can disrupt production and sales. Therefore, implementing advanced inventory management systems and techniques such as just-in-time (JIT) inventory, demand forecasting, and regular inventory audits can help firms achieve better control over their inventory turnover period, thus enhancing their operating profit margins and overall financial performance.

In addition to inventory management, the management of operational accruals plays a crucial role in determining the profitability of firms. It is recommended that firms closely monitor and manage their average collection period (ACP) to ensure timely collection of receivables. A shorter ACP improves cash flow and reduces the risk of bad debts, thereby positively impacting operating profitability. Firms should implement effective credit control policies, regularly review customer creditworthiness, and employ robust invoicing and follow-up processes to shorten the collection period. Similarly, the management of the average payment period (APP) is vital for maintaining good supplier relationships and optimizing cash flow. Firms should negotiate favorable payment terms with suppliers while ensuring that payments are made within agreed terms to avoid late payment penalties and maintain supplier goodwill. Extending the payment period can provide temporary liquidity, but firms must balance this with maintaining positive supplier relationships.

Moreover, firms should pay attention to the cash conversion period (CCP), which measures the time taken to convert inventory and receivables into cash. A shorter CCP indicates effectively managing working capital, which enhances profitability and liquidity. To achieve this, firms should streamline their production processes, reduce lead times, and enhance coordination between procurement, production, and sales departments. Implementing technology solutions such as enterprise resource planning (ERP) systems can facilitate better integration and visibility across the supply chain, thus reducing the cash conversion cycle.

Overall, by focusing on these key areas—inventory turnover period, average collection period, average payment period, and cash conversion period—firms can significantly improve their operational and financial profitability. Continuous monitoring and analysis of these metrics, combined with strategic initiatives to optimize them, will enable firms to achieve better financial health and competitive advantage. Furthermore, training and development programs for staff involved in inventory and accruals management can enhance their skills and knowledge, leading to more effective implementation of these recommendations. In conclusion, the alignment of inventory and operational accruals management with profitability goals is essential for the sustainable growth and success of manufacturing firms in the dynamic market environment of Pakistan.

5.5 Future Research Suggestions

Future researchers should further explore several crucial areas to enhance and extend information that currently exists. First, research should identify how sector-specific factors affect the nature and efficiency of inventory and operational accrual management practices observed in the sample. Liquidity and inventory management can be critical in different industries, and its operation cycle, market necessities, and standards may append alteration

in the manifestation of ITP, ACP, and APP. Using cross-sectoral comparisons, the authors were able to obtain findings that factorized can be used to give individual recommendations to manage the technology, consumer goods and industrial manufacturing sectors more effectively. In addition future researchers could focus on the impact of technological enhancement and digitization in improving inventory and operational accrual management. Subsequently, for the organizations that are at an early stage of using technologies such as artificial intelligence, machine learning or blockchain to enhance the accuracy of inventory, improve demand forecasts and accountability in supply chain, there are some questions that require answers. Investigations could establish the relationship between the implementation of these technologies and the operating financial consequences and the extent to which the gains derived could cover the costs of investment.

It is essential to investigate the impact of the macroeconomic factors on the relationship between inventory and accrue management and that of profitability which among other things can help to develop constructive conclusions. There are certain contingencies to management practices to which the effectiveness of the practices may be sensitive which include economic cycles, inflation rates, and changes to consumer behaviors. Follow up, company studies over time during economic cycle can help to know as how outside economic conditions affect the nature of inventory and accrual. Also, more research should be conducted in the area of the relationship between corporate governance and managerial practices, particularly about the inventory and operational accrual. Analyzing how leadership management and organisational culture and the incentives it offers to its employees impact these practices shall give a broad view on the determinants of firm profitability. Real-life examples of how some companies were able to improve their inventory and accrual controls and eliminate weaknesses in the system could be studied to produce best practices.

Therefore, future research should examine how sustainability practices affect inventory and operational accruals. Given heightened concerns for environmental and social sustainability, it is imperative to establish how sustainable logistics reduce waste and enhance resource utilization in supply chain management with a view to determining its impact on firm's profitability. It is also possible to develop a theory that would focus on improved financial performance by looking at how firms that adopt sustainability practices in inventory and accrual management perform in comparison to those that do not.

5.6 Concluding Section

In light of the findings of this study, it can be deduced that managerial and operational accrual management of inventory is a significant factor that increases firm profitability, especially in the manufacturing industry. The results show that when working with the ITP model it is possible to predict the changes of ROA, and when working with the OPM model – the changes of OPM depending on ITP. Organizations that effectively control their inventories by ensuring that the average time taken to turn them over is large, are likely to make larger profits. This is because cycles of inventory holding decrease the holding costs, reduces of risk of obsolescence thus making the operational efficiency and financial performance to be excellent. Another factor that goes along the operating accrual management is the average collection period (ACP) and average payment period (APP) by which a firm can be affected drastic. Although the research revealed that the extent to which these variables influences overall profitability as measured by the models is relatively less, the analysis shows that they influence the cash conversion cycle (CCP) and / or liquidity. Management of receivables or, in other words, accounts receivables and payables make the process of cash flow steadier, which in turn, is determining for certain level of liquidity and for proper functioning in the majority of cases. Companies that effectively manage, through accounting estimates, their operational net operating accrual position conceptualization

have improved control over their cash generation and utilization processes and hence improve on the ability of the firm to generate high profitability outcomes without relying much on external funds. Consequently, the study has shown that firms should aim at fine-tuning their inventory management and their operational accruals so as to attain superior financial performance. In this way the above-named aspect of the operations of the firms can be managed effectively with the aim of decreasing the overall costs, enhancing the amount of cash flow and finally concluding with higher efficiency and profitability. It was also established that effective implementation of the objectives is highly dependent on the use of advanced and efficient inventory management systems and proper credit policies. It is suggested that in future studies, the approaches for accelerating the various aspects of these relationships within sectors, as well as external factors, be investigated in greater detail, thus offering better guidance to firms that may desire to increase their profitability by improving their operational practices.

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