THE IMPACT OF WORKING CAPITAL MANAGEMENT ON THE PROFITABILITY OF MANUFACTURING FIRMS IN PAKISTAN

SIBGHATULLAH

Abstract

This study has successfully delved into the relationship between working capital management and textile companies' profitability on the Pakistan Stock Exchange. Over a comprehensive five-year analysis from 2017 to 2021, the researchers focused on key components of working capital management, namely Accounts Payable Period (ACP), Inventory Conversion Period (ICP), Accounts Payable Period (APP), and Cash Conversion Cycle (CCC). Return on Assets (ROA) is a robust variable determining the company's profitability. The study provides a significant negative relationship between ACP and ICP with ROA, emphasizing the importance of efficient management. +A significant positive relationship is identified between APP and CCC, with ROA suggesting an increase in these variables for profitability.

Keywords: Working Capital Management, Profitability, Textile Firms, Pakistan.

1. INTRODUCTION

The textile sector is fundamental in planning, producing, and distributing yarn, fabric, and apparel, utilizing natural and synthetic raw materials. In Pakistan, cotton textile and apparel manufacturing constitute the most prominent industries, contributing to approximately 65% of the country's exports and employing nearly 45% of the workforce (PJBF 2021). According to the global textile industry factsheet for 2020, Pakistan is the fourth-largest textile-producing country, accounting for 3.6% of the global textile output and ranking ninth in exports. In 2018 alone, the sector contributed $8.0 billion to the global market (WTO-2018). As a significant industrial sector, the textile industry is pivotal in Pakistan's economic growth, leveraging its abundant local raw materials and showcasing substantial comparative advantages in resource utilization. Over the years, the industry has undergone significant expansion and transformation, evolving into one of the most advanced sub-sectors. With the potential for increased raw cotton production, substantial opportunities exist for horizontal and vertical expansion in the domestic production of textiles and related goods (The Annual Report on Performance of Textile Industry 2020-21).

Financial managers are tasked with critical decisions encompassing short-term and long-term financing strategies. The significance of these decisions cannot be overstated, as they shape the financial management policies of the firm, influencing its strategic direction and shareholder value. In the context of the textile industry in Pakistan, effective corporate finance practices are essential for navigating the complexities of this dynamic sector and ensuring sustained growth and competitiveness. In summary, the intricate interplay between the textile sector's economic significance and the critical role of corporate finance underscores the pivotal importance of strategic financial management in driving the success and sustainability of textile businesses in Pakistan.

1. LITERATURE REVIEW

Working capital, a fundamental concept in financial management, revolves around the notion of current assets, representing the portion of funds that circulates within the normal course of business operations (Chad, 2012). It embodies the resources required to meet the day-to-day operational expenses of a business (Haq, 2011). This encompasses various short-term assets, including cash, short-term securities, accounts receivables, and stocks, as articulated by Brigham (2016). Working capital is distinct in that it represents liquid assets, not fixed.

Hoagland (2010) defines working capital more formally, characterizing it as the difference between the book value of current assets and liabilities. This calculation offers a practical measure of a company's financial health, gauging its ability to cover short-term obligations. Kafeel (2020) emphasizes that any increase in funds that enhances current assets and, consequently, working capital benefits a business.

The equation that considers current assets as the company's working capital encapsulates a simplified understanding of working capital, as highlighted by Mill (page 56). This straightforward approach allows a quick assessment of a company's financial liquidity and ability to manage its short-term commitments.

Working capital is a dynamic and crucial aspect of financial management, reflecting the fluid resources that facilitate a business's day-to-day functioning. Scholars' perspectives contribute to a holistic understanding of the multifaceted nature of working capital in corporate finance.

Working Capital Management is a strategic business approach designed to enhance a company's effective governance by efficiently overseeing and utilizing its current assets and liabilities to maximize their beneficial utilization (Alicia, 2023). This methodology ensures optimal operational efficiency utilization of a company's resources and obligations (Zubairi, 2011). Working Capital Management is crucial in facilitating the effective use of a company's current assets and liabilities, contributing to its overall operational strategy.

Furthermore, Working Capital Management is a vital business technique that empowers corporations to judiciously define the utilization of current assets while maintaining adequate cash flow to meet short-term objectives and obligations (Taulia, 2023). This approach is instrumental in balancing assets and liabilities in the short term, enabling businesses to sustain their day-to-day operations seamlessly.

The multifaceted nature of Working Capital Management involves intricate decision-making to ensure that a company's financial resources are managed prudently, contributing to its overall operational efficiency and financial health. As these perspectives emphasize, it encompasses the regulation of current assets and liabilities and the broader goal of sustaining cash flow and meeting short-term objectives.

The Cash Conversion Cycle (CCC), also called the cash process, is a crucial metric in measuring working capital efficiency. It illustrates the duration it takes for a company to convert cash into inventory and back into cash through the sales process. This metric is instrumental in assessing the efficiency of a company's cash flow management and provides insights into the time it takes for the entire working capital cycle. A shorter CCC indicates that a company spends less time with its money tied up in accounts receivable and inventory, enhancing liquidity and operational efficiency (Syeda, 2021).

Calculating the Cash Conversion Cycle involves estimating the days a firm takes to convert its inventory into cash following a sale to a customer (Feldman, 2022). This metric is valuable for assessing the effectiveness of a company's working capital management strategy, providing a tangible measure of the time it takes for an initial cash investment in the company to be recovered in the form

of sales proceeds.

A company's Cash Conversion Cycle is a key indicator of the efficiency and effectiveness of its cash utilization throughout the entire operational and sales process. The shorter the CCC, the more adept a company is at swiftly converting its investments into cash inflows, contributing to improved liquidity and financial performance.

The Average Collection Period is a significant financial metric representing the average number of days a company requires to acquire and convert its accounts receivable into cash. This metric indicates the efficiency of a company's credit and collection processes, providing insights into the time it takes to collect customer payments and convert those receivables into actual cash inflows (Zutter, 2021).

In essence, the Average Collection Period measures a company's duration of collecting earnings that its customers owe regarding accounts receivable (Knaur, 2013). This period is crucial for assessing the effectiveness of a company's credit management practices and its ability to promptly convert credit sales into cash, thereby impacting liquidity and cash flow.

The Average Collection Period is the average number of days a company must collect cash payments from customers who made purchases on credit terms (Hamid, 2017). This metric aids in understanding the efficiency of a company's credit policies, highlighting how quickly it can turn its accounts receivable into actual cash.

In summary, the Average Collection Period is a vital financial indicator that illuminates the efficiency of a company's credit and collection processes. It offers valuable insights into the company's cash conversion cycle and overall liquidity management. A shorter average collection period is generally favorable, indicating that a company can promptly convert its credit sales into cash.

The Average Payment Period is a key financial metric representing the average number of days a company takes to settle its outstanding dues with its suppliers. This metric is crucial for assessing a company's efficiency in managing its payment obligations. It provides insights into the time it takes for the company to honor its commitments to suppliers (Narahari, 2005).

In practical terms, the Average Payment Period is a calculation that assists corporations and businesses in understanding the average number of days it takes to pay suppliers for credit purchases. This metric is essential for evaluating a company's ability to meet its financial obligations to suppliers promptly and efficiently (Narahari, 2005).

Viadya (2019) further elaborates that the Average Payment Period refers to the average time a company takes to settle its financial obligations concerning credit-based equipment purchases from its suppliers. This aspect of working capital management is critical for maintaining positive relationships with suppliers, managing cash flow effectively, and ensuring the continued availability of credit terms

from suppliers.

The Average Payment Period is an important metric that provides insights into a company's payment practices and ability to manage financial commitments to suppliers. A shorter average payment period may indicate a company's efficiency in meeting its obligations promptly, contributing to positive supplier relationships and effective working capital management.

The inventory conversion period is a term used to describe the time it takes for a company to transform its inventory into sales revenue. As (Kane, 2022) explains, this involves accounting for lost or damaged inventory during the process. (Shrivastava, 2017) Interprets the inventory conversion period as the duration it takes for a company to convert its inventory into sales, including the time it takes for new inventory to be purchased and transformed into finished products that can be sold. In simpler terms, the inventory conversion period measures the time between acquiring new inventory and generating revenue from the sale of finished products.

Profit is the money a company receives when its total revenue goes beyond its total expenditures. (Tamplin, 2023) The surplus of total income over total cost during a particular period. (Macfarquhar, 2010) Profit suggests the earnings an individual or business takes home after all the costs are paid. Profit refers to what is left of earnings after all business expenditures are paid. It suggests that a profit is generated when income exceeds expenses. A company's profit goes to the owners, who then determine whether they need to take the cash for themselves or reinvest it in the corporation. (Ridner, 2020).

Profitability, a crucial financial metric, indicates an institution's ability to generate profit relative to its expenses. A company's profitability is a key measure that illustrates how efficiently it can convert its resources and efforts into financial gains. Companies that exhibit higher profitability can achieve a greater proportion of profit from their expenditures compared to less-efficient counterparts, which may incur higher costs to achieve the same level of profit (Gartner, 2019).

In essence, profitability is when an entity realizes a profit, denoting a situation where the total income generated surpasses the total expenditures incurred during a specified reporting period (Bragg, 2018). This financial metric provides valuable insights into a company's financial health and efficiency by assessing its ability to generate a positive net income.

Friedman (2016) defines profitability as a company's capacity to utilize its resources effectively, producing revenues that exceed its expenditures. It encapsulates the corporation's ability to generate profits from its operations, reflecting the overall success of its business strategies and operational efficiency.

Profitability is a fundamental measure that gauges a company's financial success by evaluating its ability to generate profits over its expenditures. A profitable entity can efficiently manage its

resources and operations to achieve financial gains, contributing to its long-term sustainability and growth in the competitive business landscape.

Return on Assets (ROA) is a significant financial ratio that provides insights into a corporation's profitability of its total assets. This metric is instrumental in assessing the efficiency with which a firm utilizes its assets to generate net earnings (Hargrave, 2016). ROA is a profitability measure that evaluates a company's ability to leverage its assets effectively to generate higher net earnings.

Return on Assets gauges a firm's proficiency in managing its assets to create profits by establishing a relationship between earnings and the assets responsible for generating those profits (Munir, 2019). This metric is crucial for investors, analysts, and stakeholders as it shows how well a company utilizes its assets to generate returns.

Feldman (2022) reinforces that ROA is a key operational efficiency and profitability indicator. ROA measures how effectively a company deploys its assets to achieve financial success by comparing net earnings to the total assets employed in generating those earnings. A higher ROA generally indicates that a company generates more earnings per unit of assets, signifying efficient asset utilization.

Return on Assets is a valuable financial metric that assists in evaluating a company's ability to generate profits by efficiently using its assets. It is a key tool for stakeholders and analysts to assess a corporation's financial health and operational efficiency.

"The average collection period is the typical measure of time it takes for a business to gather its receivables, and the Return on assets (ROA) measures the benefit of a business corresponding to its all-out resources. This ratio indicates how well an organization performs by comparing the benefit (net income) it produces to the capital it invested in assets.

Although various researchers have studied ACP and its relation with the profitability component ROA in detail, the dispute remains unsolved: whether helpful and creative management of working capital affects profitability positively or negatively. Some intellectuals think that it is valuable.

WCM plays a significant and vital role in a company's profitability, and the relationship between WCM and profitability is positive. However, some believe there is a negative impact between profitability and WCM (Khan, 2020).

Evaluated the relationship between profitability and WCM by choosing eight

For six years, manufacturing firms were used as a sample from the Karachi Stock Exchange (Pakistan Stock Exchange). The research showed that ACP has a significant and inverse relation with ROA. (Raisa, 2017) examined the association between WCM and company productions of 50 companies enlisted in the Bucharest stock exchange. An inverse relation of ACP with ROA was

identified. (Nasar, 2007) A study on WCM and profitability was conducted, and a strong negative relationship was found between the working capital management's ACP and the firm's ROA.

Deloof (2003) examined Belgian firms using correlation and regression analysis techniques. Their practical study found a significant negative connection between ROA and ACP. Similarly, writers in another of their studies also ascertain a negative relationship between ROA and ACP. On the other hand, Gill (2010) found a positive connection between ACP and ROA. However, the literature demonstrates positive and negative relations between WCM and profitability.

(Naskar, 2016) utilized data from 311 Indian firms from 1996 to 2010. After using different tools and procedures, he ascertained a positive affiliation between Firm ACP and ROA.

The study indicates that several days' account receivables are positively related to a firm's ROA. (Asaduzzaman, 2014). (Alvarez, 2021) evaluated the thought of WCM on the profitability of nine manufacturing enrolled forms on (the NSE) Nairobi stock exchange from 2009 to 2011. The finding of the statement depicted a significant but strong and inverse association between ACP and ROA. (Makori, 2013) indicated the influence of WCM on the productivity and profitability of five manufacturing firms in Kenya for ten years.

The research acknowledged a negative link of ACP with a firm's ROA. Research conducted by. (Vahid, 2012) Observing the impact of WCM on the profit of 50 different enterprise undertakings enlisted on the Tehran stock exchange (TSE) from (2006 to 2009) The study's conclusion indicated ACP estimates have a significant and negative association with ROA. (Bagh, 2016) Investigated the impact of WCM. Firm size, leverage, and age heeding the performance of 50 manufacturing concerns enrolled in (KSE) Karachi stock exchange from 2005 to 2014. The consequences showed that the component of WCM, the Average collection period (ACP), positively impacts ROA. (Hamad, 2014) evaluated the association between profitability and WCM in Iran's stock exchange. They utilized the annual data of Iranian companies for the period 199807. They determined that there is a substantial relationship between ACP and ROA. (Samiloglu,2008) Studied the outcome of WCM on the firm's profitability of enlisted companies in the Istanbul stock exchange for ten years (1997-2008). The empirical finding of the study shows that ACP is inversely associated with a firm's ROA

H_1: There is significant positive impact of ACP on ROA

The Average Collection Period (ACP) measures the typical time it takes for a business to collect its receivables. At the same time, Return on Assets (ROA) gauges a business's profitability relative to its total assets. The relationship between these two factors, specifically whether effective Working Capital Management (WCM) positively or negatively impacts profitability, has been the subject of extensive research and debate.

Several researchers have explored this relationship, and the findings have been varied. Khan

(2020) highlighted the ongoing dispute within the academic community regarding the impact of WCM on profitability. Some argue that effective WCM positively influences profitability, while others believe a negative correlation exists.

For instance, a study by Raisa (2017) focusing on manufacturing firms from the Karachi Stock Exchange found a significant and inverse relationship between ACP and ROA. Similarly, Nasar (2007) identified a strong negative relationship between ACP and ROA. Deloof (2003) examined Belgian firms and reported a significant negative connection between ROA and ACP. Conversely, Gill (2010) found a positive connection between ACP and ROA.

Naskar (2016) analyzed data from 311 Indian firms and ascertained a positive association between Firm ACP and ROA. Asaduzzaman (2014) found that several days' account receivables positively relate to a firm's ROA. On the other hand, Alvarez (2021) evaluated the impact of WCM on nine manufacturing firms listed on the Nairobi Stock Exchange and discovered a significant but strong and inverse association between ACP and ROA. Makori (2013) indicated a negative link between ACP and a firm's ROA in the context of Kenyan manufacturing firms.

Vahid (2012) observed the impact of WCM on the profit of 50 different enterprise undertakings listed on the Tehran Stock Exchange and concluded that ACP has a significant and negative association with ROA. Bagh (2016) investigated the impact of WCM on 50 manufacturing concerns enrolled in the Karachi Stock Exchange, revealing a positive impact of ACP on ROA. Hamad (2014) evaluated the association between Profitability and WCM in the Karachi Stock Exchange, finding a positive impact of ACP on ROA.

In light of these varied findings, H1 suggests a significant positive impact of ACP on ROA. The empirical evidence from different studies contributes to the ongoing discourse on the relationship between Working Capital Management and profitability, with implications for businesses and financial decision-makers."

The Inventory Conversion Period (ICP) is a vital metric that provides insights into a company's inventory management efficiency by measuring how swiftly it transforms its stock into sales and revenue. This metric is instrumental in gauging the effectiveness of a company's inventory control practices and its ability to optimize resource utilization.

On the other hand, Return on Assets (ROA) represents a key financial metric that evaluates a company's efficiency in leveraging its assets to generate income. It offers a snapshot of the company's proficiency in converting its various assets into profits, providing stakeholders with a comprehensive understanding of the overall effectiveness of the company's asset utilization strategies. ROA is a crucial indicator for investors and decision-makers as it helps assess the company's ability to generate returns from its asset base, ultimately contributing to evaluating its financial performance. Together, these

metrics, ICP and ROA, offer valuable insights into different facets of a company's operational and financial efficiency.

Various studies have scrutinized the relationship between the Inventory Conversion Period (ICP) and Return on Assets (ROA), yielding diverse outcomes. Some research findings suggest a significant positive impact of ICP on ROA, indicating that a shorter ICP positively influences a company's profitability. Conversely, other studies propose a significant negative impact, implying that a prolonged ICP may negatively affect ROA.

Several factors influence the intricacies of the relationship between ICP and ROA, including the company's size, financial performance, and the industry in which it operates. These contextual elements contribute to the complexity of understanding how ICP affects a company's overall profitability as measured by ROA. Additionally, working capital management emerges as a critical determinant in shaping the dynamics between ICP and ROA. Efficient working capital management can enhance profitability, thereby positively influencing ROA.

While existing studies provide valuable insights, further research is needed to comprehensively understand the nuanced relationship between ICP and ROA and the specific impact of working capital management on this association. As the business landscape evolves, continually exploring these dynamics becomes imperative for refining financial strategies and optimizing operational performance. Wang's (2018) reference underscores the ongoing quest for a deeper comprehension of these intricate relationships in the realm of financial management.

Several studies have explored the impact of the Inventory Conversion Period (ICP) on Return on Assets (ROA), showcasing diverse findings. A study by Hussain (2021) focusing on 126 manufacturing companies listed on the Dhaka Stock Exchange (DSE) from 2012 to 2017 identified a significant positive relationship between ICP and ROA. This suggests that a shorter ICP was associated with higher profitability, as measured by ROA.

Contrastingly, Riaz (2019) adopted a non-probability convenience sampling model to analyze data from 30 firms listed in the KMI-30 index over five years (2010-2014). The results of this study revealed a negative relationship between ICP and ROA, suggesting that a prolonged ICP was linked to lower profitability.

Khan (2020) delved into the impact of working capital management on firm profitability in Pakistan, utilizing a sample of 5 telecom companies over five years (2013-2017). Regression and correlation analyses revealed a negative relationship between ICP and ROA. This implies that a longer ICP negatively affected the profitability of the telecom companies in the sample.

These studies underscore the variability in findings regarding the relationship between ICP and ROA, emphasizing the need for context-specific investigations and recognizing the influence of

industry dynamics, company size, and other factors on this relationship. As the quest for a deeper understanding continues, such research contributes valuable insights for financial decision-makers and scholars in the field.

A study (Ngendakumana, 2015) focused on seven quoted brewery firms from 2010 to 2016. They used purposive sampling and found a positive relationship between Inventory Conversion Period (ICP) and Return on Assets (ROA). This indicates that an increase in ICP was associated with increased ROA for these brewery companies. However, as with any study, it is important to consider the sample size limitations and the selection method when interpreting the results.

In a study (Olaoye, 2019), the researchers examined six conglomerate companies listed on the Nigerian Stock Exchange from 2006 to 2017. They used the Inventory Conversion Period (ICP) to measure Return on Assets (ROA) and found a significant negative correlation between them.

H_2: There is a significant negative impact of ICP on ROA

The impact of the Inventory Conversion Period (ICP) on Return on Assets (ROA) has been examined in various contexts, presenting divergent findings. A study by Ngendakumana (2015) focused on seven quoted brewery firms from 2010 to 2016. Utilizing purposive sampling, the study revealed a positive relationship between ICP and ROA. This implies that an increase in the inventory conversion period was associated with increased Return on assets for the brewery companies studied. However, it is crucial to acknowledge the sample size limitations and the selection method when interpreting these results.

Conversely, Olaoye (2019) investigated six conglomerate companies listed on the Nigerian Stock Exchange from 2006 to 2017. Using the Inventory Conversion Period (ICP) as a measure of Return on Assets (ROA), the study identified a significant negative correlation between the two. This implies that a longer ICP was linked to a decrease in ROA for the conglomerate companies in the sample.

Hence, hypothesis H2 posits a significant negative impact of the Inventory Conversion Period (ICP) on Return on Assets (ROA), aligning with findings from Olaoye's study. These varied outcomes underscore the importance of considering industry-specific dynamics, sample characteristics, and other contextual factors in interpreting the relationship between ICP and ROA.

The average payment period (APP) is a metric that permits a business to perceive the average amount of time it requires to pay its vendors. Return on assets (ROA) indicates how a business overlooks assets and resources while creating profit. Working capital management

(APP) and profitability (ROA) have direct associations with each other (Rashmi, 2021)

(Khan, 2018) Express the association between profitability and WCM by choosing eight manufacturing firms as a sample from the Karachi Stock Exchange (Pakistan stock exchange) for six-

year intervals. The findings indicated that APP positively correlates with the firm's ROA. This implies that delaying the payment to creditors enhances the company's operations.

"(Gomas, 2013). Working capital is significant in making any company profitable or non-profitable. (Ahmed, 2017) Establish a strong connection between the employment of legal working strategies and procedures and a firm's success variable (ROA). (Bano, 2015) Found a relationship between the APP and the R of a firm. (Davoudi, 2013) Reveal that there is a negative impact between APP and ROA; Smith &Sell (1990) found a strong relationship between working capital management's component and ROA of profitability. (Hadiza, 2019) conducted a study of 204 KSE-listed companies to examine the relationship between management strategies related to APP and ROA and found a positive relationship. (Nasr, 2007) conducted a study on WCM and Profitability and found a dominant negative relationship between APP and ROA. (Kumar, 2011) used data from 311 Indian companies for the period. After correlating different methods and techniques, he ascertained a positive association between Firm APP and ROA.

(Deloof, 2003) analyzed Belgium companies, utilizing correlation and regression calculation. Their empirical research organizes a significant negative relationship between APP and ROA. On the other hand, (Gill, 2010) examined firms and found a positive relationship between APP and ROA. (Bagh, 2016) Examined the impact of WCM and profitability considering the performance of 50 manufacturing concerns enrolled in (the KSE) Karachi stock exchange from 2005 to 2014. The consequences indicated that the Account payable period (APP) significantly negatively impacts ROA. (Makori, 2013) Indicated the impact of WCM and profitability of five manufacturing companies in Kenya for ten years. The study realized a positive connection between APP and the firm's ROA. (Maria, 2012) Evaluated the impression of WCM on the profitability of nine manufacturing enlisted companies on the (NSE) Nairobi stock exchange from 2009 to 2011. The paper's outcome illustrated a significant but influential and inverse association between APP and ROA. (Baveld, 2012) Implied in their study that APP has negatively connected with ROA."

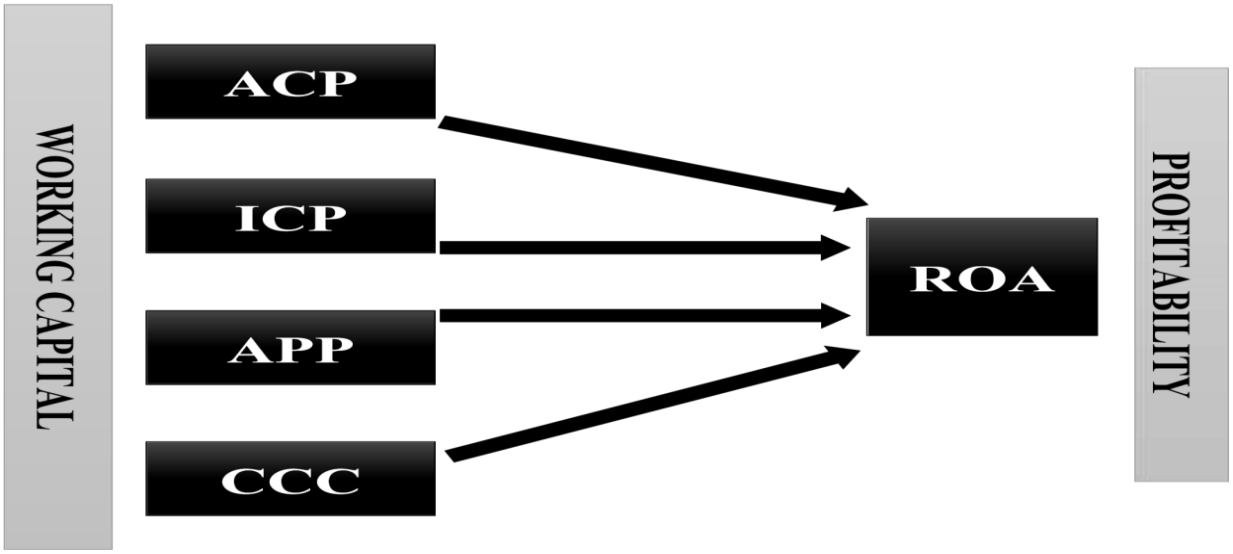
The article examined the inverse association between APP and ROA, which may affect low gross profit margins and is rapidly linked with improvement in APP. According to Alvarez (2021), There is a positive relationship between APP and ROA.

H_3: There is significant positive impact of APP on ROA

H_4: There is significant negative impact of CCC on ROA

2.6 CONCEPTUAL MODEL

2.6 Conceptual Model



2.7 HYPOTHESIS

H_1	"There is a significant negative impact of ACP on the ROA of the Textile Industries of Pakistan."
H_2	"There is a significant negative impact of ICP on the ROA of the Textile Industries of Pakistan."
H_3	"There is a significant positive impact of APP on the ROA of Textile Industries of Pakistan."
H_4	"CCC has a significant positive impact on the ROA of the Textile Industries of Pakistan."

2.8 VARIABLES OF THE STUDY

The formula and abbreviations used to measure all the variables are presented below.

Table 01: Variables of the study

S. NO	VARIABLE NAME	ABBREVIATION	FORMULA
INDEPENDENT VARI ABLES			
1	**ACP**	**"Average Collection Period"**	**"Account Receivable / Net Sales × 365"**
2	**ICP**	**"Inventory Conversion Period"**	**"Inventory / Cost of Goods Sold × 365"**
3	**APP**	**"Average Payment Period"**	**"Account Payable / Purchases × 365"**

4	**CCC**	**“Cash Conversion Cycle”**	**“ACP + INV – APP”**
DEPENDENT VARIABLES			
5	**ROA**	**“Return on Asset”**	**“Net Income / Total Assets”**

2. METHODOLOGY

The research methodology crafted for this study serves as a systematic framework to delineate the research objectives effectively. Comprising several integral components, this methodology encompasses delineating data collection methods, identifying the variables under scrutiny, sample size specification, selecting pertinent statistical models, and applying appropriate research analysis tools. Each of these components plays a pivotal role in facilitating a comprehensive examination of the impact of working capital management on profitability through empirical data analysis. By meticulously orchestrating these methodological elements, the study provides a robust foundation for empirical investigations that contribute valuable insights to understanding the intricate relationship between working capital management practices and profitability.

Research Design

The central objective of this study was to discern the intricate relationship between four critical facets of working capital management—namely, Accounts Receivable Management, Inventory Management, Accounts Payable Management, and the Cash Conversion Cycle—and the overarching metric of profitability, as gauged by Return on Asset (ROA). Focusing specifically on the manufacturing industry within Pakistan, this research embraced a quantitative approach to unravel the cause-and-effect dynamics between these fundamental components. The quantitative methodology chosen aligns with the overarching goal of establishing a robust understanding of how variations in working capital management practices contribute to or impact the profitability of manufacturing firms in the Pakistani context. By delving into these specific dimensions of working capital management, the study sought to provide nuanced insights contributing to the broader understanding of financial dynamics within Pakistan's manufacturing sector.

Data Collection

This study uses secondary data to investigate the interplay between working capital management and textile companies' profitability. The data, spanning five years from 2017 to 2021, was meticulously gathered from the official websites of the firms under scrutiny and the Pakistan Stock Exchange (PSX). A sample size comprising 10 textile companies was strategically selected for a thorough analysis, and the research methodology employed leverages the power of panel data to extract nuanced insights.

A primary objective of this research is to discern the variables exerting a substantial influence on a company's profitability within the textile industry. The variables were strategically categorized toe

variables to explore the intricate relationship between working capital. The dependent variable under scrutiny in this study is Return on Assets (ROA), a critical metric for assessing a company's profitability. Complementing this, the independent variables encompass the Average Collection Period (ACP), Inventory Conversion Period (ICP), Average Payment Period (APP), and Cash Conversion Cycle (CCC). The careful consideration of these variables aims to unravel the multifaceted dynamics at play, providing a comprehensive understanding of how working capital management impacts the financial success of textile companies over the specified timeframe.

Sample Size

This study includes 10 firms listed on the Pakistan Stock Exchange (PSX) from 2017 to 2021.

Empirical Model

This study aims to evaluate the impact of Working Capital Management (WCM) on the profitability of textile companies. The following empirical model is used to achieve this goal:

S. No	TEXTILE FIRMS
1	"Kohinoor Textile Mills Limited"
2	"Quetta Textile Mills Limited"
3	"Nishat Mills Limited"
4	"Gul Ahmed Textile Mills Limited"
5	"Gadoon Textile Mills Limited"
6	"Ghazi Fabrics International Limited"
7	"Tata Textile Mills Limited"
8	"Crescent Textile Mills Limited"
9	"Suraj Cotton Mills Limited"
10	"Din Textile Mills Limited"

$$ROA_{it} = a_0 + a_1(ACP)_{it} + a_2(ICP)_{it} + a_3(APP)_{it} + a_4(CCC)_{it} + e_{it}$$

In this model, ROA (Return on Asset) is the dependent variable that represents the size of the company's profitability. α0 represents the constant term in the model.

ACP (Average Collection Period), ICP (Inventory Conversion Period), APP (Average Payment Period), and CCC (Cash Conversion Cycle) are the independent variables that represent the components of WCM. α1, α2, α3, α4 represent the coefficients of the independent variables in the model. εit is the error term.

Research Analysis Tools

Unlike previous studies that primarily relied on conventional descriptive statistical tools such as measures of central tendency and dispersion to analyze their data, this study took a more nuanced approach by employing the Hausman specification test. The Hausman specification test aimed to assess and identify the most suitable model for analyzing the data. The results of the Hausman specification test played a pivotal role in guiding the analytical methodology employed in this study. Subsequently, the study opted for a panel data regression model as the chosen analytical tool, acknowledging its effectiveness and appropriateness in capturing the complexities and dynamic relationships within the dataset. This methodological choice reflects a commitment to ensuring the robustness and reliability of the analytical framework, aiming to extract meaningful insights from the data and contribute to the depth of understanding in the field under investigation.

3. RESULTS AND DISCUSSION

Table: 1

Dependent Variable (ROA): Panel Least Squares: $(n = 50)$

Cross Sections Included = 10 with 5 Periods

Coefficients	Coefficients Value	SE	t-Values	P-Values
a_0	2.9315	1.290	2.2714	0.0280
a_1	4.426	1.178	3.7521	0.005
a_2	4.432	1.1782	3.7611	0.0005
a_3	-4.450	1.1782	-3.772	0.0005
a_4	-4.448	1.1781	-3.772	0.0005
R^2 = 0.2892				

The significance level is 1%, 5%, and 10%, respectively.

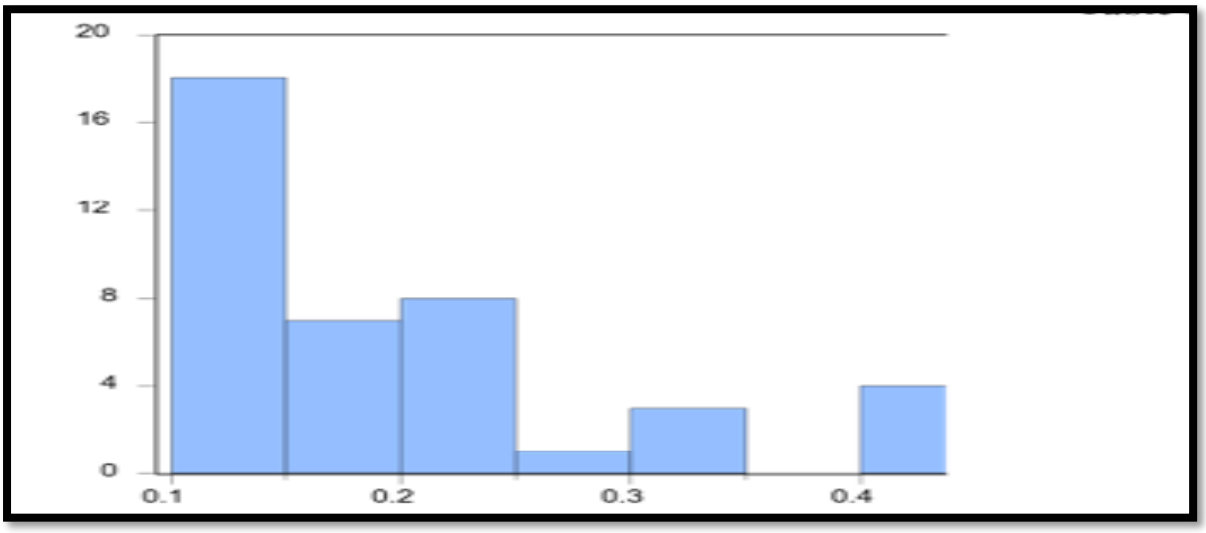
The outcomes of the model show that the association between the dependent variable (Profitability component) ROA and independent variables (Working capital management proxies), such as ACP, ICP, APP, and CCC, are statistically significant. The ACP and ICP are positively significant. If ACP increases increases by one unit (day), ROA will increase by 4.426528 percent, keeping the other factors constant. The chances of error in the occurrence of this value is .0005, which is very low. The increase in one unit of ICP leads to an increase in ROA by 4.433424 percent. At the same time, APP and CCC are negatively significant. If APP increases by one unit (day), the ROA will decrease by 4.450188 percent.

In the same way, the increase of one unit in CCC leads to a decrease of 4.448014 percent in ROA. The p. value of all the proxies is less than .05 (5%). We reject the null hypothesis and accept the alternative

at a 5% significance level. The R-Square shows that independent variable components (ACP, ICP, APP, CCC) will forecast a 28% actual value of a dependent variable (ROA), and adjusted R-Square shows the independent variable components (ACP, ICP, APP, CCC) cumulatively determines 22% of the dependent variable (ROA). The prob of F-statistics is .004, which is less than .05. Therefore, we conclude that the combined effect of the model is significant. The value of (Fstatistic) goodness of fit ratio is 4.38, which indicates that regression explains a significant proportion of variation in ROA. The Durbin-Watson stat results show that the data set is positively co-related.

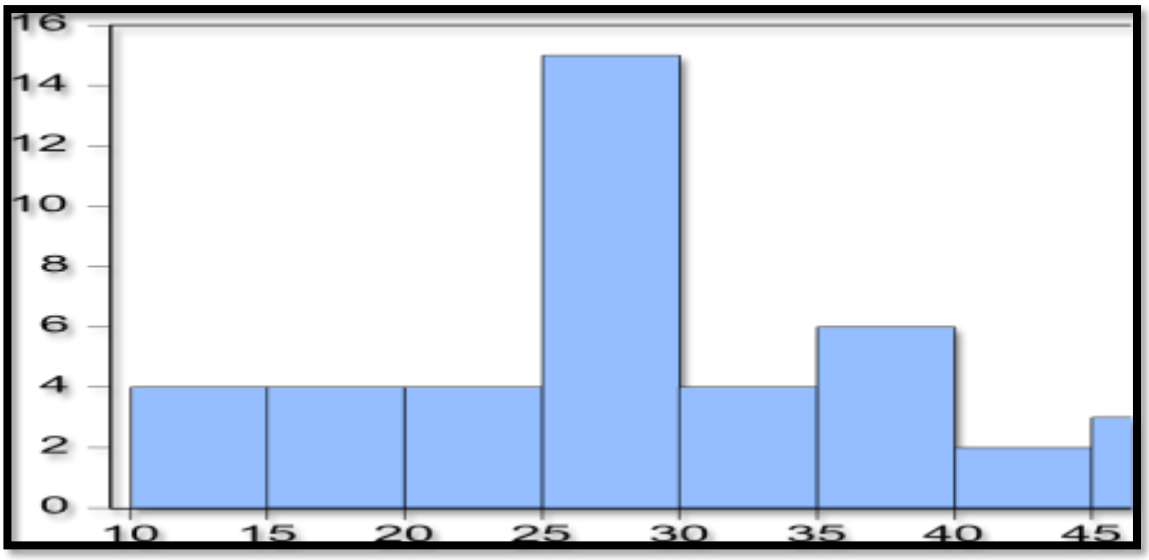
The following tables explain the descriptive statistics of 10 Pakistani textile manufacturing companies, containing 50 observations for the five years from 2017 to 2021.

Graph: 01 Mean and Average value of data



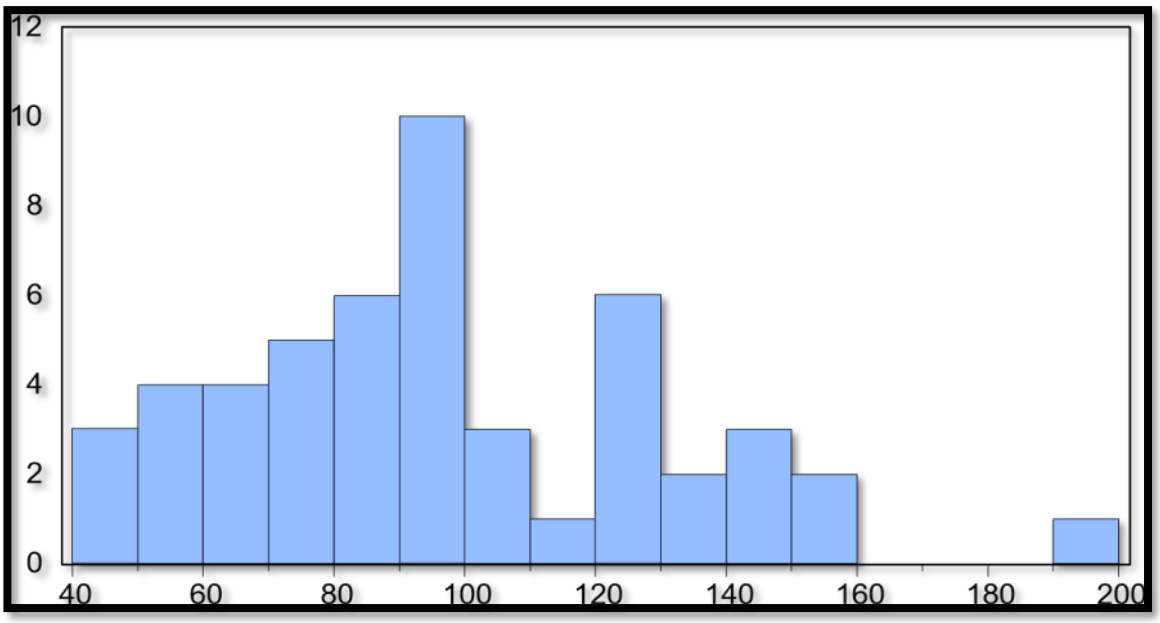
Graph 1 shows that the data's mean, or average, is 265800. The range of the data is from .100000 to 700000. The standard deviation of the data is 185528. The data is positively skewed, meaning it has a long tail on the positive side of the mean. The data has a leptokurtic shape, meaning it has a peaked shape with a higher peak than a normal distribution.

Graph 02: Average Collection Period



Graph 2 shows that the firm collects cash from customers for sales in an average of 34 days. The data is spread out, with a standard deviation of approximately 17 days. The longest it takes the firm to collect its receivables is 77 days. The data is unevenly distributed, with more values towards the lower end of the range. The data has a peaked shape, with a higher peak than a typical distribution.

Graph 03: Inventory Conversion Period



Graph 3 shows that the firm's inventory is sold on average in 96 days. The data is spread out, with a standard deviation of approximately 33 days. The longest it takes the firm to sell its inventory is 192 days. The data is unevenly distributed, with more values towards the higher end of the range. The data has a peaked shape, with a higher peak than a typical distribution.

Graph: 04 Average Payment Period

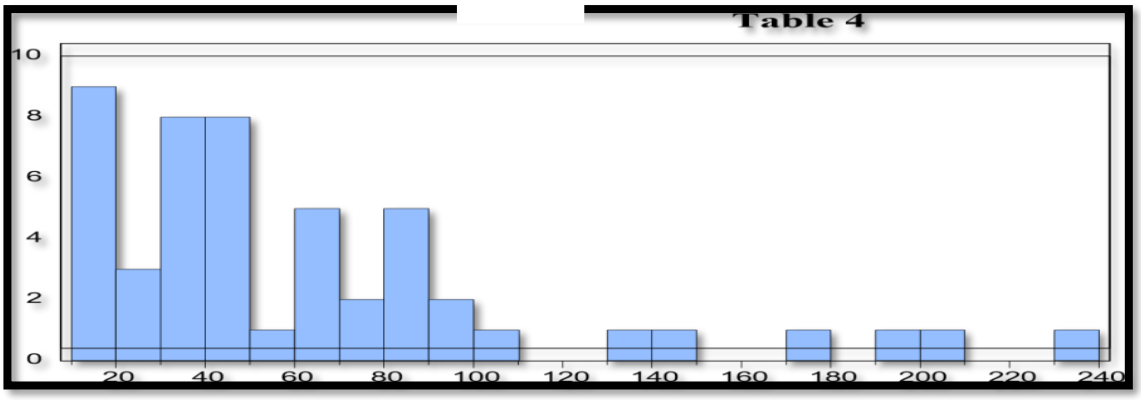
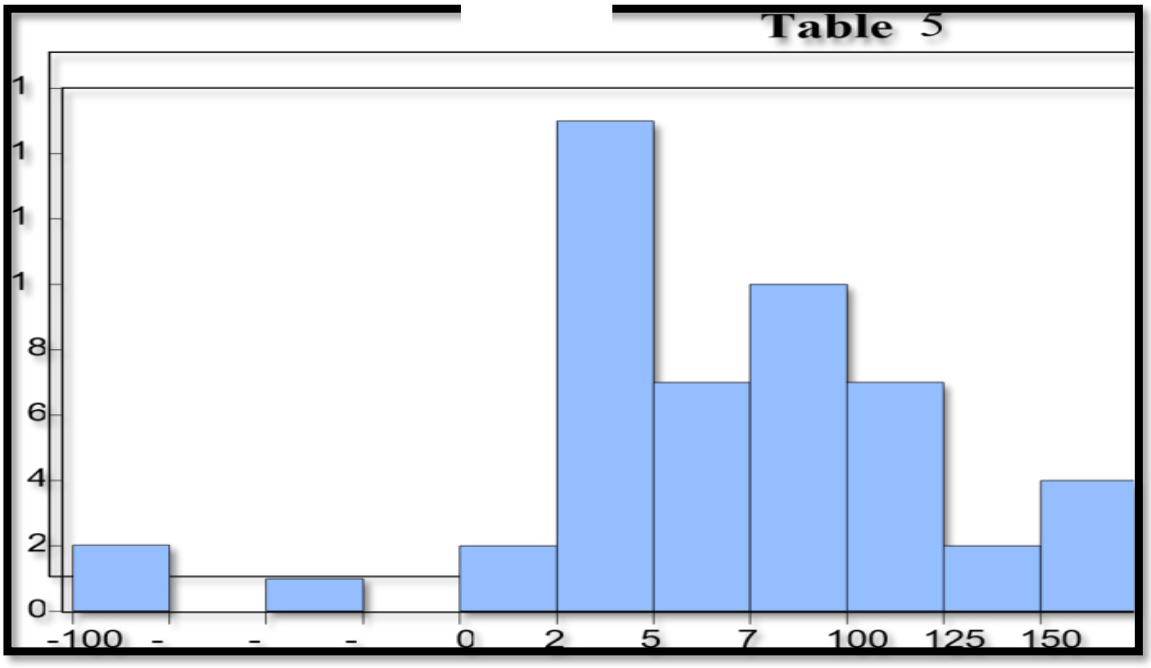


Table 4 shows that the firm pays its bills in an average of 63 days. The data is spread out, with a standard deviation of approximately 52 days. The longest it takes the firm to pay its bills is 234 days. The data is unevenly distributed, with more values towards the higher end of the range. The data has a peaked shape, with a higher peak than a typical distribution.

Graph 05: Cash Conversion Cycle



Graph 5 indicates that the firm takes 67 days to complete its cash conversion cycle (collecting cash from sales). The data is spread out, with a standard deviation of approximately 54 days. The longest it takes the firm to complete its cash conversion cycle is 167 days. The data is unevenly distributed, with more values towards the lower end of the range. The data has a peaked shape, with a higher peak than a typical distribution.

4. CONCLUSION AND RECOMMENDATION

"The primary objective of this study was to explore the connection between working capital

management and profitability, focusing on the textile industry and other sectors in Pakistan. Recognizing the critical importance of efficiently managing working capital for the seamless operation of businesses, the research centered on 10 textile firms listed on the Pakistan Stock Exchange from 2017 to 2021.

The study analyzed the relationship between working capital management and profitability by examining four key components: Average Collection Period (ACP), Inventory Conversion Period (ICP), Average Payment Period (APP), and Cash Conversion Cycle (CCC). The dependent variable under consideration was Return on Assets (ROA), a crucial metric for measuring a company's profitability.

The study's findings revealed a negative correlation between ACP ICP and ROE, suggesting that reducing these components leads to increased profitability. Conversely, a positive relationship was observed between APP and CCC with ROA, indicating that increasing these elements leads to decreased profitability.

The study's results align with previous research conducted by various scholars, including Deloof (2003), Shah et al. (2018), Riaz et al. (2019), Bagh et al. (2016), Ahmed et al. (2017), Rehman and Nazr (2007), Qureshi (2014), Tufail et al. (2013), Chowdhury et al. (2018), and Lazaridis and Tryfonidis (2006), emphasizing the consistent correlation between a company's profitability and its account payable and inventory days.

The research concluded that effective working capital management significantly contributes to a company's financial success. Consequently, the study recommends that textile company managers in Pakistan focus on enhancing their Cash Conversion Cycle (CCC) and Average Payment Period (APP) to foster increased profitability.

Moreover, future studies are encouraged to delve deeper into the relationship between working capital management and profitability within the textile industry in Pakistan. These studies should explore additional factors influencing profitability, contributing to a more comprehensive understanding of the subject.

The study suggests there is potential for improvement in working capital management in Pakistan. Future research endeavors could enhance the scope by increasing the number of companies considered, extending the analysis period, and incorporating a broader range of variables. Furthermore, it is recommended that manufacturing firms in Pakistan seek guidance from knowledgeable professionals to effectively navigate the complexities of working capital management, ultimately contributing to their financial success.

In addition to the recommendations based on the study's findings, several considerations and potential areas for further exploration exist in the context of working capital management and its

impact on financial success in Pakistan.

While the study focused on the textile industry, future research could extend its scope to other sectors within Pakistan. Each industry may have unique dynamics, and understanding how working capital management influences profitability in various sectors could provide valuable insights for tailored financial strategies.

Recent global events have highlighted the importance of resilient supply chains. Investigating the relationship between working capital management and supply chain resilience could be crucial, especially considering disruptions caused by the COVID-19 pandemic.

Considering the potential impact of government policies on working capital management, future research might explore how regulatory changes or economic policies influence the financial success of businesses in Pakistan. Understanding the broader policy landscape could aid in developing more informed financial strategies.

In conclusion, there is a vast landscape for further exploration in understanding the intricate relationship between working capital management and financial success in the Pakistani business context. By addressing these additional considerations, researchers can contribute a more holistic understanding of the factors influencing effective financial management in the country."

Reference

Ahmed, (2017). Impact of working capital management on profitability: A study on textile companies in Bangladesh

Aleem, (2017). Impact of Working Capital Management on

Profitability: A Case of the Pakistan Textile Industry Research Journal of Finance and Accounting

ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol.8, No.21, 2017

Alicia, 2023. Working capital management explained. How it works

Alvarez, 2021. Working capital management and profitability: Evidence from an emergent economy

Asaduzaman, 2014 Effect of Working Capital Management on Firm Profitability: Empirical Evidence from Textiles Industry of Bangladesh. Research Journal of Finance and Accounting ISSN 2222-1697 (Paper) ISSN 2222-2847 (Online) Vol.5, No.8, 2014

Asif Iqbal and Zhuquan Wang (2018) Effect of Working Capital Management on Profitability

5th International Conference on Key Engineering Materials and Computer Science (KEMCS 2018)

Bagh, (2016). The Impact of Working Capital Management on Firms Financial Performance: Evidence from Pakistan International Journal of Economics and Financial Issues, 2016, 6(3), 1097–1105.

Baghiyan, (2013). Impact of working capital management on management performance.

Bano, (2015). Working Capital Management Matters Profitability of Textile Sector: With GLS Model.

International Journal of Economics and Empirical Research. 3(11), 543549.

Basit, (2016). Impact of Working Capital Management on Firm" 's profitability: A case study on Consumer Products Firms in Malaysia

Baveld, M. (2012). The impact of working capital management on the profitability of public-listed firms in the Netherlands during the financial crisis. University of Twente.

Bellouma. (2011). The Impact of Working Capital Management on Profitability: The Case of Small and medium-sized Export Companies in Tunisia. *Management International/Geston Internacional* , 15(3), 71-88.

Bragg, (2018). Influence of working capital management on firm "s performance.

Brigham, (2016). Working capital management and firm performance in emerging economies: evidence from India 2016.

Davoudi (2013) Studied the relationship between working capital management and the profitability of listed companies on the Tehran stock exchange. Business Management Dynamics Vol.2, No.7, Jan 2013, pp.01-08

Deloof, (2003). Does working capital management affect the profitability of Belgian firms?

Eljelly,2020 effects of working capital management on the Firm "s profitability

Fazal, B. A. (2020). Impact of Globalization on Industrial Sector Growth in Pakistan. *Pakistan Journal of Economics Studies*, 24–45.

Feldman, (2022). Endogenous dynamic concentration of the active fund management industry

Friedman, (2016). Does working capital management affect profitability

Gartner, 2019. The role of working capital inefficient growth

Gill, 2010 The relationship between working management and profitability: Evidence from the United States

Gill et al., 2010 The relationship between working capital management and profitability: Evidence from the United States.

Gitman, (2012). Principles of Managerial Finance, (2012)

Gitman, L. (1994). Principles of Managerial Finance 7th edition London. *Harper Collins*, 646–652. Gomes, D. (2013). How does working capital management affect firms' profitability?: Evidence from Portugal, Instituto Superior de Economia e Gestao.

Hadiza, (2019). The Effect of Inventory Conversion Period (ICP) on Return on Net Assets (ROA): Evidence from Conglomerate Firms in Nigeria. Hummingbird Publications Journal of Mgt. Science & Entrepreneurship HP JMSE 2019 © December 2019 Vol. 19 No. 7

Hamad, A. A. (2014). Impact of Working Capital Management on firm's profitability. *Arabian Journal of Business and Management*. 23) Anwar et al., (2014). Effect of Working Capital

Management of the Firm's Profitability.

Hamid, (2017). Relationship between working capital management and profitability.

Haong, 2105. An empirical study on mergers and acquisitions in the manufacturing sector in Pakistan Haq, 2011. The relationship between working capital management and profitability: A case study of the cement industry in Pakistan

Hargrave, (2016). Integrating dialectical and paradox perspectives on managing contradiction in organizations

Henok, (2015). Working capital management and firm "'s profitability: Evidence from manufacturing S.C in Addis Ababa, Ethiopia

Hoagland, (2010). Labor availability in an integrated agriculture system

Hussain, 2021. Macroeconomic factors, working capital management, and firm" s performance- A static and dynamic penal analysis

Iqbal, 2014 IMPACT OF WORKING CAPITAL MANAGEMENT ON FIRM'S

PROFITABILITY: EVIDENCES FROM TEXTILE SECTOR OF PAKISTAN Arabian Journal of Business and Management Review (Nigerian Chapter) Vol. 2, No. 5, 2014

Jason Fernando (2022) Return on Equity (ROE) Calculation and What It Means

Jason Fernando (2022) Investopedia Return on Equity (ROE) Calculation and What It Means J.S Mill, page 56 Working capital management

Kafeel, (2020). Working Capital Management and Firm "s profitability: Dynamic Penal Data Analysis of Manufacturing Firms

Kane, (2022). The impact of the corporate life-cycle on the value-relevance of disaggregated earnings components

Khan, (2020). The impact of working capital management on firm profitability in Pakistan

Knaur, (2013). Working capital management and firm "'s profitability

Krger, 1994 Impact of working capital management on firm "'s performance: Evidence from large taxpayer printing firms in Addis Ababa Ethiopia

Ketema, 2018. Impact of working capital management on firm "s performance : Evidence from large taxpayer printing firms in Addis Ababa Ethopia

Kumar, 2011 Effect of working capital management on firm profitability: Empirical evidence from India

Makori, 2013 Working capital management and firm’s profitability

Mathura, 2010 Working capital management and financial performance

Macfarquhar, 2010. Big banks draw profits from micro loans to poor

Munir, 2019. The working capital management and profitability analyisis on the leading dairy food

industries in Indonesia

NARAHARI, 2005. Dynamic pricing models for electronic business

Naskar, 2016 Working capital management and Firm" s profitability: study of listed companies in India

(Ngendakumana, 2015), J. G. (2015). The impact of working capital management on profitability of smart bags limited manufacturing firms in Zimbabwe. British journal of economics, management and trade 6(2),106-112,2015.

Olaoye, (2019). Working capital management and firm "'s profitability: evidence from quoted firms on the Nigerian stock exchange

Pakistan Textile Journal. (2022). Retrieved from

Qayum, (2017). Impact of working capital management on profitability: A case of the Pakistan textiles industry

Raisa, (2017). Impact of working capital management on profitability: Evidence from listed companies in Qatar

Rashmi, (2021). Credit risk management and performance of commercial banks

Rehman and Nasr, 2007. Working capital management and profitability-case of Pakistani firms

Riaz, 2019. The impact of CCC and WC on the profitability of the KMI-30 index

Ridner, 2020. Working capital management and profitability of cement manufacturing firms

Saad, 2010. Relationship between working capital management and profitability

Samiloglu, D. (2008). The effect of working capital management on firm profitability: Evidence from Turkey. *International Journal of Applied Economics and Finance*, 2(1), 44–50.

Srivastava, (2017). Bayesian analysis of the working capital management on corporate profitability evidence from India

True Templin, 2023. BSc, CEPF (2021) Finance Strategists

Tauli, (2023). Creating a more effective working capital strategy

Tufail and Khan, 2015 Impact of working capital management on profitability of textile sector of Pakistan.

Temtime, Z. T. (2016). Relationship between working capital management, policies, and profitability of small manufacturing firms. *Walden University and Doctoral Studies Collection*.

Touvila. (2022). Working capital management

Tryfonidis, L. a. (2006).Impact of liquidity and profitability ratios on profit growth in firms in Nigeria. *European Journal of Accounting, Auditing and Finance Research*, 3(10), 97114.

Vahid, (2012). The impact of working capital management policies on the firm" 's profitability and value: evidence from Iranian company

Viadya, (2019). Determinants of profitability of capital-intensive firms in the Indian capital market

Yakubu 2017, The impact of working capital management on corporate performance: Evidence from listed non-financial firms" s in Ghana

Yusoff, K. A. (2018). The relationship between working capital management and firm performance. *advanced science letters*, 24(5), 3244-3248.

Zubairi, (2011). Impact of Working Capital Management and Capital Structure on Profitability of Automobile Firms in Pakistan

Zutter, (2021). Does working capital management impact an enterprise's profitability? Evidence from selected Nigerian firms