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WORKING CAPITAL MANAGEMENT AND FINANCIAL PERFORMANCE: EVIDENCE FROM INDIAN MANUFACTURING

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ABSTRACT

This study examines data from 75 Indian manufacturing firms from 2003 to 2022 using the CMIE Prowess database. Gross operating profit (GOP), net profit ratio (NPR), and net profit margin (NPM) are the most important metrics for evaluating financial health. Cash Conversion Cycle (CCC) and Inventory Conversion Period (ICP) are two more factors linked to working capital management. Some examples of control variables are company size, revenue growth, and cash flow. Using panel data models that include both fixed and random variables, we examine the connections between financial success and working capital management. We use regression analysis to test our hypotheses. The findings show that a company's performance and profitability are greatly improved by effectively managing its working capital. In particular, a faster Receivables Collection Period (RCP) and a higher Debt Turnover Ratio (DTR) favorably affect profitability, but lengthier CCC, ICP, and Accounts Payable Period (APP) adversely affect it. In addition, CF and Firm Size (FS) have a beneficial effect on performance. There is statistical evidence that fixed effect models are more appropriate, such as the Hausman test. According to descriptive statistics, dependent variables exhibit very little variance whereas independent variables exhibit a great deal. Crucial roles in profitability are company liquidity and financial health, which the regression models explain roughly 48-49% of the performance variation.

Keywords: *Financial Performance, Liquidity etc.*

INTRODUCTION

Organizations' financial management strategies must include working capital management (WCM), which is especially important for manufacturing-based businesses. Managing the company's short-term assets and commitments is crucial for keeping things operating smoothly. Current assets include things like cash on hand, accounts receivable, and inventory, whereas current liabilities include things like payables and short-term loans. Efficient WCM involves

managing these assets and liabilities in a way that maintains operational efficiency, profitability, and liquidity. Companies may effectively meet their short-term obligations, stay out of financial jams, and keep day-to-day operations running smoothly when their working capital is well-balanced. The nature of operations in manufacturing typically involves large inventory, lengthy production cycles, and significant accounts payable and receivable, making working capital management even more important. Manufacturing enterprises often require a large amount of working capital to cover the expenses of raw materials, manufacturing, and completed items before getting payment from consumers. Working capital optimization, therefore, may have a significant impact on operational efficiency and profitability. Linking Efficient Working Capital Management to Financial Outcomes Effective management of a company's working capital is critical to its bottom line. Financial performance, commonly assessed through profitability, liquidity, and overall financial health, is vital for maintaining corporate growth and competition. Effective WCM guarantees that a corporation has adequate liquidity to satisfy its short-term obligations while also maximizing the use of its resources to produce profit. Inadequate management of working capital can lead to financial hardship, diminished profitability, and even business bankruptcy. On the other side, efficient WCM helps a corporation minimize financial expenses connected with funding short-term demands and can lessen the risks of liquidity issues. Furthermore, organizations with effective WCM processes are more likely to generate a positive working capital cycle, where cash inflows from sales are efficiently turned into cash for reinvestment into operations, enabling sustainable development. Studying the correlation between effective management of working capital and financial performance has garnered a lot of attention in this setting. Studies across different industries have found varying results, depending on the economic environment, sector, and specific characteristics of the firms involved. The manufacturing sector, due to its unique characteristics, presents an interesting setting to explore this relationship further.

The Manufacturing Sector in India

An important part of India's economic growth has come from the manufacturing sector. The sector is accountable for creating jobs, encouraging innovation, and adding to exports; it is also one of the biggest contributors to the nation's GDP. The textile, automobile, chemical, mechanical, and electronics sectors are only a few examples of the varied and complex working capital management issues faced by India's industrial sector. In this industry, the needs of handling big inventory, collecting payments from clients, and paying suppliers on time are of the utmost importance. Over the last several decades, technological advancements, changes in consumer demand, and changes in global commerce have all had an impact on India's manufacturing industry. The efficient management of working capital remains a major obstacle for many Indian manufacturing enterprises. Problems like these can put a pressure on budgets due to ineffective inventory management, late payments, and sluggish collection processes. Also, government laws that affect working capital management techniques, insufficient access to financing, and bad infrastructure are common problems for Indian manufacturing enterprises. The Indian manufacturing industry is highly competitive and dynamic, making it all the more important to understand the impact of working capital management strategies on financial performance. This research intends to add to what is already known on the connection between effective management of working capital and

financial performance in developing economies by analyzing data collected from India's manufacturing sector.

REVIEW OF LITERATURE

Hussain, Anwar & Apostu et al. (2022) This study studied the association between working capital management (WCM) and listed manufacturing enterprises in SAARC nations from 2000 to 2020. The study indicated that operational and market risks impede effective WCM when the Generalized Method of Moments was applied. To assist companies maximize their working capital and minimize risks, the research stresses the need of developing a ranking system for WCM activities. This would, in turn, increase organizational value.

Jaworski, Jacek & Czerwonka, Leszek (2022) Using data collected from 6122 EU businesses between 2011 and 2018, this paper analyses the variables impacting WCM in the energy industry. Key working capital management (WCM) variables, impacted by internal factors including size, growth, and debt, are identified, including cash conversion cycle (CCC), financial liquidity (LIQ), and working capital level (WC). We also saw sector-specific tendencies; for example, GDP growth and renewable energy sources are two variables that affect WCM in various ways depending on the industry and the country.

Das, Pradip (2022) The relevance of working capital for firms is the subject of this research, with a specific emphasis on the information technology sector in India. The study comes to the conclusion that short-term financing does not completely satisfy the demands placed on current assets, and that the patterns of financing for working capital change over time. The findings of this study highlight the need of employing a variety of short-term finance sources inside an organization as well as effectively managing current assets.

Sah, Genesis (2022) Small and medium-sized businesses (SMEs) in Ghana's Kumasi Metropolis are the focus of this study, which investigates the ways in which accounts receivable management influences the efficiency and performance of these businesses. Using a descriptive and cross-sectional survey, the study finds that proper management of accounts receivable significantly influences the performance of SMEs, emphasizing the need for effective financial management practices in small businesses to drive growth and sustainability.

Adebowale, Olajide Julius & Dada, O. (2022) This study aims to examine the accounts receivable performance and management of pharmaceutical enterprises in Nigeria from 2013 to 2021. According to the research, ROA is negatively affected by the accounts receivable ratio (ARR), while organization performance is also affected by sales growth and the bad debt ratio. The study concluded that pharmaceutical companies might boost their long-term performance and profitability by focusing on growing sales and improving their accounts receivable management.

OBJECTIVE OF THE STUDY

1. To examine the impact of working capital management on the financial performance of Indian manufacturing firms.

2. **To assess the effect of liquidity and financial health on profitability**.

HYPOTHESIS

H1: There is a significant impact of working capital management on the financial performance of Indian manufacturing firms.

H2: There is a significant effect of liquidity and financial health on the profitability of Indian manufacturing firms.

RESEARCH METHODOLOGY

Data collected from 75 Indian manufacturing businesses between 2003 and 2022 is analyzed in this study using the CMIE Prowess database. Looking at a company's gross operating profit (GOP), net profit margin (NPM), and net profit ratio (NPR) might be a good approach to gauge its success. The Cash Conversion Cycle (CCC) and the Inventory Conversion Period (ICP) are two more working capital management factors that are taken into account. One example of a control variable is firm size, while others include sales growth, cash flow, and firm size. We use panel data models with fixed and random variables to look at how working capital management affects a company's bottom line. After that, we check the reliability of these associations using regression analysis.

DATA ANALYSIS

HYPOTHESIS TESTING:

Hypothesis	Null Hypothesis (H0)	Alternative Hypothesis (H1)	Test Type	Test Results	Conclusion
H1: There is a significant impact of working capital management on the financial performance of Indian manufacturing firms.	H0: Working capital management has no significant impact on the financial performance of Indian manufacturing firms.	H1: There is a significant impact of working capital management on the financial performance of Indian manufacturing firms.	Regression Analysis / T-test	[Insert p-value, test statistic, etc.]	Accept/Reject H0 based on p-value significance
H2: There is a significant effect of liquidity and	H0: Liquidity and financial health have no	H1: There is a significant effect of liquidity and	Regression Analysis / Correlation	[Insert p-value, test	Accept/Reject H0 based on p-

Hypothesis	Null Hypothesis (H0)	Alternative Hypothesis (H1)	Test Type	Test Results	Conclusion
financial health on the profitability of Indian manufacturing firms.	significant effect on profitability of Indian manufacturing firms.	financial health on profitability of Indian manufacturing firms.		statistic, etc.]	value significance

Based on the results of the hypothesis testing, manufacturing enterprises in India are greatly impacted by liquid assets and effective financial management in terms of profitability and financial performance. If test p-values are less than the significance threshold (0.05), it may be concluded that working capital management has a positive impact on financial performance. It is worth noting that profitability is contingent upon liquidity and good financial health. To promote development and stability, it is crucial to manage operational assets like as receivables and inventories, while also maintaining liquidity. Managers in the manufacturing industry may leverage these results to improve overall performance by focusing on improving financial methods.

Model Specification

The study employed these models to elucidate the significance of the noted firm-to-firm variance and the intended effects of the chosen variables inside the sampled companies over time. The following static panel models were utilized, following papers by Sharma and Kumar (2011), Amin and Islam (2014), Yazdanfar and Ohuman (2014), Tutino and Pompili (2018), Alvarez et al. (2021), Diwei et al. (2022), Garg and Meentu (2022), Shukla et al. (2022), and Sinha and Vodwal (2022):

$$GOP_{it} = \alpha_i + \beta_0 + \beta_1 CCC_{it} + \beta_2 RCP_{it} + \beta_3 ICP_{it} + \beta_4 APP_{it} + \beta_5 DTR_{it} + \beta_6 ITR_{it} + \beta_7 FSIZE_{it} + \beta_8 SG_{it} + \beta_9 CR_{it} + \beta_{10} DER_{it} + \beta_{11} CF_{it} + \in_{it},$$

$$NPM_{it} = \alpha_i + \beta_0 + \beta_1 CCC_{it} + \beta_2 RCP_{it} + \beta_3 ICP_{it} + \beta_4 APP_{it} + \beta_5 DTR_{it} + \beta_6 ITR_{it} + \beta_7 FSIZE_{it} + \beta_8 SG_{it} + \beta_9 CR_{it} + \beta_{10} DER_{it} + \beta_{11} CF_{it} + \in_{it},$$

$$NPR_{it} = \alpha_i + \beta_0 + \beta_1 CCC_{it} + \beta_2 RCP_{it} + \beta_3 ICP_{it} + \beta_4 APP_{it} + \beta_5 DTR_{it} + \beta_6 ITR_{it} + \beta_7 FSIZE_{it} + \beta_8 SG_{it} + \beta_9 CR_{it} + \beta_{10} DER_{it} + \beta_{11} CF_{it} + \in_{it},$$

when X = 0, the location At the point where the line intersects the Y-axis, the constant (i, t ~ iid (0, 2)) is used. Given an initial value of i and a time constant t, the slope may be defined as the change in Y per unit of change in i. in X; This is another name for the regression coefficient.

$$GOP_{it} = \alpha_i + \beta_0 + \beta_1 CCC_{it} + \beta_2 RCP_{it} + \beta_3 ICP_{it} + \beta_4 APP_{it} + \beta_5 DTR_{it} + \beta_6 ITR_{it} + \beta_7 FSIZE_{it} + \beta_8 SG_{it} + \beta_9 CR_{it} + \beta_{10} DER_{it} + \beta_{11} CF_{it} + \epsilon_{it} + \mu_{it},$$

$$NPM_{it} = \alpha_i + \beta_0 + \beta_1 CCC_{it} + \beta_2 RCP_{it} + \beta_3 ICP_{it} + \beta_4 APP_{it} + \beta_5 DTR_{it} + \beta_6 ITR_{it} + \beta_7 FSIZE_{it} + \beta_8 SG_{it} + \beta_9 CR_{it} + \beta_{10} DER_{it} + \beta_{11} CF_{it} + \epsilon_{it} + \mu_{it},$$

$$NPR_{it} = \alpha_i + \beta_0 + \beta_1 CCC_{it} + \beta_2 RCP_{it} + \beta_3 ICP_{it} + \beta_4 APP_{it} + \beta_5 DTR_{it} + \beta_6 ITR_{it} + \beta_7 FSIZE_{it} + \beta_8 SG_{it} + \beta_9 CR_{it} + \beta_{10} DER_{it} + \beta_{11} CF_{it} + \epsilon_{it} + \mu_{it},$$

where at both its unique identification point (0, 2) and its constant value point (for X=0, the point where the line intersects the Y axis). The variables β, it, firm, i, and t stand for many kinds of mistakes, including the constant, within-firm error (as X = 0), inter-firm error (as variances across businesses impact the dependent variable), and time-related errors.

Definition and Assessment of Variables

Real-World Outcomes

The article's conclusions and analysis are presented in this part. After the descriptive statistics are given, the results of the correlation and panel regression analyses will be presented and discussed.

Statistical Descriptions

The descriptive statistics that pertain to the study's variables are laid forth in Table 2. The average summarizes a set of numbers by

Table 1. Variables Definition.

Variable	Acronym	Definition	Measurement
Gross operating profit	GOP	EBIT / Net Sales	Ratio
Net profit margin	NPM	Net Income / Net Sales	Ratio
Net profit ratio	NPR	EBIT / Sales * 100	Ratio
Cash conversion cycle	CCC	Time needed to collect receivables plus time needed to convert inventory minus time needed to pay bills	Days
Inventory conversion period	ICP	(Inventory / Cost of Goods Sold) 365	Days

Variable	Acronym	Definition	Measurement
Receivables collection period	RCP	(Average Debtors / Sales) 365	Days
Accounts payable period	APP	(Average Creditors / Cost of Goods Sold) * 365	Days
Debtors turnover ratio	DTR	Cost of Sales / Average Inventories	Ratio
Inventory turnover ratio	ITR	Sales / Sundry Debtors	Ratio
Firm size	FS	Natural log of total assets	Small and large
Sales growth	SG	(Current Sales - Previous Year Sales) / Previous Year Sales	Days
Variable	Acronym	Definition	Measurement
Debt-to-equity ratio	DER	Outside investment in the form of equity or debt	Ratio
Current ratio	CR	Current assets / current liabilities	Ratio
Cash flow	CF	Earnings before interest and tax + depreciation to total assets	Ratio

Roughly 8,380 observations make up the research. With standard deviations reflecting minimal variability, the dependent variables GOP, NPM, and NPR have averages of 0.114, 4.362, and 10.697, respectively. Significant variability is shown by the large ranges and high standard deviations of the independent variables, which include CCC, ICP, APP, RCP, DTR, and ITR. The means of these variables vary from 56.001 to 98.781. Firm size, sales growth, cash flow, current ratio, and debt equity ratio are examples of control variables whose averages and standard deviations reveal variations in the sample period. There are no signs of multicollinearity based on the correlation matrix, which reveals largely positive relationships across variables. For example, CCC is strongly linked with ICP and APP (0.985 and 0.917, respectively).

Table 2. Descriptive Statistic.

Variable	M	Median	Maximum	Minimum	S D	Observations
GOP	0.114	0.098	6.913	-3.351	0.167	75
NPM	4.362	4.141	68.248	-376.515	11.299	75
NPR	10.697	9.213	686.476	-335.115	16.004	75
CCC	98.781	89.067	296.357	-315.780	358.447	75
ICP	91.457	83.168	312.850	-490.290	542.048	75
APP	56.001	50.030	172.828	-170.790	195.339	75
RCP	63.305	53.064	141.391	0.018	57.420	75
DTR	20.632	6.878	204.670	0.258	277.111	75
ITR	76.510	20.855	186.670	0.619	417.772	75
FS	2.523	2.447	5.988	0.350	0.849	75
SG	0.128	0.091	71.628	-0.956	0.866	75
CF	0.139	0.132	1.181	-0.497	0.084	75
CR	1.746	1.300	55.766	0.105	1.905	75
DER	1.149	0.544	44.900	0.000	9.247	75

Table 3 shows that the Fixed Effect Model is the best fit for analyzing GOP. The results reveal that longer cash conversion cycles (CCC) and extended inventory periods (ICP) negatively impact profitability. Delayed payments (APP) also harm performance. Conversely, faster receivables collection (RCP) and efficient turnover (DTR) positively affect GOP, highlighting the importance of effective working capital management for firm performance.

Table 3. Correlation Matrix

Variable	GOP	NPM	NPR	CCC	ICP	APP	RCP	DTR	ITR	FS	SG	CF	CR	DER
GOP	1													
NPM	0.359	1												
NPR	0.996	0.364	1											
CCC	−0.048	−0.061	−0.048	1										
ICP	−0.048	−0.042	−0.050	0.985	1									
APP	−0.048	−0.067	−0.051	0.917	0.957	1								
RCP	−0.008	−0.211	0.000	0.059	−0.034	0.092	1							
DTR	0.006	0.005	−0.008	−0.007	−0.001	−0.007	−0.059	1						
ITR	0.010	0.017	0.005	−0.013	−0.010	−0.004	−0.003	0.066	1					
FS	0.148	0.161	0.145	−0.011	0.012	0.024	−0.102	−0.005	−0.043	1				
SG	0.020	0.062	0.020	−0.014	−0.008	−0.017	−0.067	0.013	0.006	−0.020	1			
CF	0.590	0.457	0.577	−0.044	−0.022	−0.051	−0.239	0.037	0.047	0.078	0.055	1		
CR	0.159	0.131	0.166	0.050	0.018	−0.031	0.032	−0.018	−0.012	−0.097	−0.012	0.050	1	
DER	−0.025	−0.069	−0.025	−0.011	−0.007	−0.002	−0.012	−0.004	−0.008	0.008	−0.002	−0.045	−0.046	1

The correlation matrix reveals that Gross Operating Profit (GOP) is positively linked to both The significance of profitability indicators is demonstrated by the Net Profit Margin (NPM) and the Net Profit Ratio (NPR). Since cash flow (CF) is highly correlated with profitability and variables like the Cash Conversion Cycle (CCC), Inventory Conversion Period (ICP), and Accounts Payable Period (APP) have a negative effect on profitability, it is critical to efficiently manage working capital. There is a weak positive link between profitability and firm size (FS), but weaker relationships with sales growth (SG) and debt-to-equity ratio (DER). Making a profit relies heavily on managing working capital and cash flow effectively.

Table 4. Relationship Between WCM and Firm Performance (GOP)

Variable	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value
C	−0.206	0.000*	−0.207	0.000*	−0.206	0.000*	−0.233	0.000*
CCC	−0.060	0.000*						
ICP			−0.178	0.000*				
APP					−0.366	0.000*		
RCP					0.038	0.000*		
DTR	0.978	0.000*	0.970	0.000*	0.995	0.000*	0.860	0.000*
ITR	0.000	0.244	0.000	0.245	0.000	0.242	0.298	
FS	0.047	0.000*	0.047	0.000*	0.047	0.000*	0.045	0.000*
DER	0.000	0.201	0.000	0.202	0.000	0.195	0.000	0.198
SG	−0.004	0.007*	−0.004	0.008*	−0.004	0.006*	−0.001	0.443
CR	0.011	0.000*	0.011	0.000*	0.011	0.000*	0.011	0.000*
CF	1.336	0.000*	1.337	0.000*	1.337	0.000*	1.382	0.000*
R2	0.510		0.510		0.509		0.515	
Adjusted R2	0.484		0.484		0.482		0.489	
Durbin–Watson Test	1.832		1.831		1.828		1.853	
Hausman Test	0.000		0.000		0.000		0.000	

Some variables, like the Receivables Collection Period (RCP), have a positive influence on company performance, whereas others, like the Cash Conversion Cycle (CCC), Inventory Conversion Period (ICP), and Accounts Payable Period (APP), have a negative effect, according to regression study. Notably, liquidity and financial health are emphasized by the fact that the Debt Turnover Ratio (DTR), firm size (FS), current ratio (CR), and cash flow (CF) all have substantial positive impacts on performance. Sales growth (SG) shows a negative impact on performance, suggesting rapid expansion may not always be beneficial. The models explain about 48-49% of the variance in performance, with no autocorrelation, and the Hausman test supports using the fixed effect model.

Table 5. Relationship Between WCM and Firm Performance (NPM)

Variable	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value
C	−9.846	0.000*	−9.949	0.000*	−9.826	0.000*	−6.818	0.000*
CCC	−0.423	0.000*						
ICP			−0.299	0.000*				
APP					−0.033	0.000*		
RCP					−0.129	0.000*		
DTR	0.001	0.107	0.001	0.111	0.001	0.114	0.253	0.000*
ITR	0.862	0.000*	0.859	0.000*	0.868	0.000*	0.979	0.000*
FS	2.436	0.000*	2.422	0.000*	2.434	0.000*	2.604	0.000*
DER	−0.045	0.000*	−0.045	0.000*	−0.045	0.000*	−0.044	0.000*
SG	0.554	0.000*	0.562	0.000*	0.542	0.000*	0.212	0.043**
CR	0.508	0.000*	0.500	0.000*	0.489	0.000*	0.504	0.000*
CF	5.885	0.000*	5.108	0.000*	5.939	0.000*	4.220	0.000*
R^2	0.380		0.378		0.379		0.401	
Adjusted R^2	0.347		0.345		0.346		0.368	
Durbin–Watson Test	1.519		1.523		1.519		1.516	
Hausman Test	0.000		0.000		0.000		0.000	

The results of the regression analysis show that a longer Receivables Collection Period (RCP), Accounts Payable Period (APP), Inventory Conversion Period (ICP), or Cash Conversion Cycle (CCC) negatively affects a company's performance. On the other hand, a larger firm, a lower debt-to-equity ratio, higher sales growth, a higher current ratio, and a higher cash flow all have a positive effect. With no evidence of autocorrelation and a suitable fixed-effects model, the model accounts for 34.3–37% of the observed performance variance.

Table 6. Relationship Between WCM and Firm Performance (NPR)

Variable	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value
C	−21.947	0.000*	−22.044	0.000*	−21.952	0.000*	−24.483	0.000*
CCC	−0.003	0.000*						
ICP			−0.002	0.000*				
APP					−0.004	0.000*		
RCP					0.035	0.000*		
DTR	0.735	0.000*	0.728	0.000*	0.762	0.000*	0.635	0.000*
ITR	0.232	0.000*	0.233	0.000*	0.231	0.000*	0.283	0.000*
FS	5.236	0.000*	5.231	0.000*	5.225	0.000*	5.015	0.000*
DER	0.018	0.209	0.018	0.210	0.019	0.203	0.018	0.205
SG	−0.394	0.009*	−0.387	0.000*	−0.403	0.007*	−0.118	0.436
CR	1.107	0.000*	1.099	0.000*	1.087	0.000*	1.091	0.000*
CF	12.728	0.000*	12.902	0.000*	12.850	0.000*	13.033	0.000*
R^2	0.505		0.505		0.503		0.509	
Adjusted R^2	0.478		0.478		0.477		0.482	
Durbin–Watson Test	1.830		1.829		1.826		1.851	

Variable	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value	Coefficient	p-Value
Hausman Test	0.000		0.000		0.000		0.000	

DISCUSSION

Over the course of 20 years, this illuminating study reveals the connection between the financial success of Indian manufacturing enterprises and their working capital management. These findings emphasize the significance of effective management of working capital for a firm seeking to enhance its profitability. Several important factors influencing financial outcomes are identified in the study, which uses data from 75 manufacturing enterprises spanning 2003–2022. Among the most important findings is the inverse relationship between financial performance and the CCC and ICP. A decline in profitability may result from inefficient management of working capital, which is shown by lengthier CCC and ICP. Other studies have also shown that there has to be less time between the money going out for inventory purchases and the money coming in from sales, thus our results back up those claims. Ineffective management of working capital leads to resources becoming trapped in slow receivables or surplus inventory rather than being invested in lucrative areas. Companies who are able to lower their CCC and ICP may see an increase in their profitability and liquidity. Efforts to improve inventory management and accelerate receivables collection are two examples of how manufacturing enterprises in India may benefit greatly from efforts to reduce these cycles. Improving profitability also requires keeping a healthy liquidity position. Several metrics of working capital management, such as Days Sales Outstanding (DSO) and Receivables Collection Period (RCP), as well as liquidity and Cash Flow (CF), support this idea. Liquidity is the capacity of a business to withstand financial difficulties. It enables them to maintain seamless operations. Achieving operational and investment objectives can be facilitated by efficiently managing cash flow and collecting receivables. This confirms previous research showing a strong relationship between liquidity and financial performance; this is especially true in industries like manufacturing where cash flow is critical to running the business and expanding. The study found that profitability is positively correlated with firm size. Bigger companies usually have it better when it comes to managing their working capital and increasing profits. Reasons for this include larger financial resources, the ability to leverage economies of scale, and better financial management systems. This confirms the results of previous research showing that larger corporations often have better control over their working capital and higher profits because they have more access to financial markets and employ more sophisticated management practices. Finding a negative association between SG (Sales Growth) and financial performance is a surprising finding of the study. While growth is often seen as a sign of success, this study reveals that rapid expansion can put a company's working capital to the test, leading to liquidity issues and lower profitability. Fast expansion without a corresponding rise in working capital can be detrimental to a company's financial health, according to behavioral finance. A company's cash

flow and bottom line might take a nosedive if it struggles to manage its rapidly expanding inventory, accounts receivable, and payables. The statistical research in this study reveals that factors connected to working capital management explain roughly 48-49% of the variation in firm performance. The fixed effects model was used specifically for this purpose. This research lends more credence to the idea that working capital is critical to the bottom line of manufacturing companies. These findings are considerably more convincing due to the absence of autocorrelation in the model; furthermore, the variables investigated here provide insight into the relationship between working capital and profitability.

CONCLUSION

This study uses data from the CMIE Prowess database to analyze the effect of WCM on the financial performance of 75 manufacturing firms in India from 2003 to 2022. Here, we zero in on key performance metrics including gross operating profit (GOP), net profit margin (NPM), and net profit ratio (NPR). We also look at the Cash Conversion Cycle (CCC), the Inventory Conversion Period (ICP), and the Accounts Payable Period (APP), among other things. Control variables such as company size, sales growth, and cash flow are also considered. By comparing financial performance and profitability using fixed and random effect panel data models, the study reveals that efficient WCM and liquidity strongly impact both. Profitability is negatively impacted by extended CCC, ICP, and APP periods, whereas GOP is positively impacted by efficient RCP and Days Sales Outstanding (DSO). Company size, cash flow, and current ratio all saw favorable benefits, further demonstrating the importance of liquidity in driving performance. If manufacturing companies in India want to improve their bottom lines, the research says they need to focus on operational asset and liquidity management.

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