

# IMPACT OF WORKING CAPITAL MANAGEMENT ON PROFITABILITY: EMPIRICAL EVIDENCE FROM INDIAN TEXTILE INDUSTRY

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## ABSTRACT

*Working capital is an important part of the capital of firm which helps to carry out day to day activities. This study attempts to examine the effect of working capital on profitability in the Indian Textile Industry. Variables used in this study include Return on Assets and Return on Equity for profitability and Debtor's Collection Period (DCP), Inventory Holding Period (IHP), Creditor's Payment Period (CPP), Cash Conversion Cycle (CCC) and Current Ratio (CR) for working capital management. The data analysis was carried out for top 10 textile industries listed in National Stock Exchange of India for a period of 5 years between 2012 and 2016. The research methodology used in this study is descriptive statistics, correlation analysis and regression models. The results show that there exists a significant correlation between the profitability and working capital variables, for instance, there exists a negative correlation between Return on Assets and Debtor's Collection Period (DCP), Inventory Holding Period (IHP), Creditor's Payment Period (CPP) and Cash Conversion Cycle (CCC). Textile being one of the major sectors in India, the aim of this paper is to provide some useful recommendation to the people handling this particular department in the industry.*

**Keywords:** Textile, Working Capital Management, Profitability, India, Return on Asset, Return on Equity, Cash Conversion Cycle, Correlation, Regression

## **INTRODUCTION:**

Working Capital Management is an important component of Corporate Financial Management. It shows us the relationship between Current Assets and Current Liabilities. The ultimate objective of any firm is profit and wealth maximization but at the same time preserving the liquidity of the firm is an important objective too, hence, proper balance between the short term assets and current liabilities helps us to minimize the working capital requirement of any firm and maximize its revenue.

A firm needs to be efficient in managing Working capital in order to increase its cash flows and eventually decreasing its dependency on external financing. The working capital determines the liquidity of a firm which is important for the day-to-day operations in order to meet demand and increase its profitability. A firm should effectively manage its working capital in order to maintain its risk and profitability and indeed help maximize shareholders value. Also, in-efficient management of the working capital may increase risk of indebtedness even if the company is maintaining its profitability. The profitability of a firm indicates the financial gains that a firm gives and the ability of the firm to earn profits. There are many variables that indicate the profitability of a firm like Return on Assets, Return on investment and Return on Equity. Therefore, it becomes essential to study the relation between working capital and profitability.

The Indian Textile sector provides the largest employment in India and contributes almost 14% to the exports by the country. In order to maintain its position the sector needs to provide high quality products at economical cost and it also plays important role in the Indian Industrial sector. The sector has future potential due to high demand in the Indian Market and international demand; hence this study is important to understand the association between working capital and profitability in the textile Industry. The study will help firms make certain important decisions such as decision on inventory levels or the credit period that the firm can give its debtors in order to clear their bills, so that the profitability of the firm increases and many more crucial determinations. Therefore the study aims to answer whether there is relationship between Working Capital and Profitability with the help of certain variables which are the two subjects of this study.

## **LITERATURE REVIEW:**

Various studies on listed firms in many countries have been performed to study the impact of a firm's working capital management on its profitability; different studies employ different variables and techniques to study this impact. Some of them are as following:

Md. Asaduzzaman and Tabassum Chowdhary (2014) have examined the nature and extent of the relationship between Working Capital Management and profitability of Bangladeshi Textile Companies, alongside exploring the joint impact of different components of working capital management on profitability. For this study and quantitative analysis along with multiple regressions has been done to analyze the data using deductive approach. The data was collected from Chittagong Stock Exchange (CSE) in Bangladesh for 21 companies for a period of 5 years (2008-2012). It was found that working capital management and profitability is positively correlated in the Bangladeshi textile companies. It was further found that inventory of number of days, number of day's accounts receivables and conversion period are positively correlated with a firm's profitability but the numbers of day's accounts payable are negatively correlated.

Mohammad Morshedur Rehman (2011) study was designed to show the Profitability and Working capital position of textile industries in Bangladesh, correlation between them and whether the profitability is affected by Working Capital Management. Data was obtained for 9 sample textile companies (Size of company and availability of information was considered before selection of these companies) in Bangladesh for a period of 3 years (2005-2008). The study is based on both primary and secondary research whereas primary data was collected through a questionnaire with an object to know the real practices in the textile industry and for secondary research; the author relied on Annual reports and official records of the selected companies. The collected data was analyzed and interpreted with the help of different financial

ratios like Return on Investment, Return on Total Assets etc. and statistical tools like Mean, Standard Deviation, Correlation Co-efficient etc. It was observed from the study that there exists a positive correlation between working capital and profitability in the textile industry in Bangladesh but the overall position is not satisfactory.

Dr. K. Senthikumar and Dr. A. Sengottaiyan (2015) studied the trends of efficiency of Working Capital utilization of the various selected textile companies in India. 20 Companies were selected out of a total of 750 companies which were listed at Centre for Monitoring Indian Economy (CMIE) database on the basis of Net Asset Value exceeding Rs 1,000 crore. The study covers a period of 15 years from 1997 to 2011. The study was based on secondary data; data was collected from published annual reports from CMIE PROWESS database and other publications such as Stock exchange official directory, Economic times, Financial Times, RBI Bulletin and other periodical journals. Three different indices Performance Index (PI), Utilization Index (UI) and Efficiency Index (EI) were calculated for analysis and alongside ratio techniques and simple statistical tools were also used. The study has strongly concluded that profitability in terms of profit margin is significantly affected by decline in days in accounts receivables, days in accounts payable and cash conversion cycle in textile industry, therefore, concluding that working capital variables have considerable impact on return on assets of textile firms.

Sidrah Rizwan and Faiza Maqbool Shah, (2015), aimed to study the impact of working capital management on a firm's performance in textile spinning companies of Pakistan listed in the Karachi stock Exchange. A sample of 10 companies had been utilized for this research that covers a period of 7 years, from 2008 to 2014. The study has selected Return on Equity (ROE) and Return on Assets (ROA) as the dependent variable for profitability and as for Working capital management- Account receivable turnover (ARTO), Account payable turnover (APTO) and Inventory Turnover had been selected as the independent variable. The tools used to analyze the results were Spearman's Correlation and Linear Regression Analysis. The study found a weak negative correlation of ROA and ROE with ARTO, APTO and Inventory Turnover on the contrary the Hypothesis showed that statistically there exists no relationship between Working Capital Management and Profitability in a Firm (except inventory turnover with ROA). The study also suggested that in order to increase profitability, the firms should follow particular norms to reduce Inventory Turnover.

Malik Muhammad, Waseem Ullah Jan and Kifayat Ullah (2007), in their research aimed to investigate the relationship between the components of working capital and profitability of a firm. The data collected was secondary in nature from listed firms in the Karachi stock exchange. The sample size was 25 companies, with data for the period 2001-2006. The dependent variable in the study was Profitability while the independent variables were Cash, Accounts Receivable, Accounts Payable and Inventory. The methodology used to show the relation is Panel Data Methodology and the tools used to conduct the research were Correlation and Regression Analysis. The results showed a Positive relationship between the Profitability and cash, Inventory and Accounts Receivable while it showed a weak negative correlation with Accounts Payable. This shows that Working Capital Management is important with respect to Profitability of a Firm in the Textile Industry of Pakistan.

Agrim Aggarwal and Rahul Chaudhary (2015), in their Research paper aimed to study the effect of Working Capital on the Profitability in Indian Firms. The companies chosen as sample were listed In the Bombay Stock Exchange and the sample size was 364 companies which were selected based on certain criteria's. The study was based on data of period April 2010 to March 2014. In order to conduct the research Gross Operating Profit Ratio was taken as the dependent variable and average inventory conversion period, cash conversion cycle, debtors collection period and creditors payment period were taken as the independent variables. The results found using regression and correlation analysis showed a negative correlation between the Gross operating Profit Ratio and Debtors collection period, cash conversion period and inventory conversion period, while it showed a positive relation with creditor's payment period. This shows that quick cash conversion period, quick inventory conversion period, smaller debtor collection period and longer creditor's payment period is favourable in Indian firms and that the type of industry also affects the profitability.

Vandana Kotak's and Dr. Abhay Panda's research on impact of working capital on liquidity and profitability in the cotton textile industry in India (2015) states that the working capital management policy of a firm depends on its size and age. New firms require maintaining large stocks of inventory in order to keep the stock from running out and also spend lots of money on lucrative discounts to lure customers. On the other hand, older larger firms can buy raw materials on credit basis and enjoy favourable credit terms. By applying the two-way ANNOVA technique they found the value of 'F' ratios of different sized and aged companies that proved that there exists a significant difference in the working capital management policy of different sizes and aged companies. By considering the correlation between the current and quick ratios and the gross surplus ratio which measures overall profitability, they also proved that higher the liquidity or liquid asset, lesser is the profitability. Sound liquidity to certain extent increases profitability, beyond that it reduces profitability.

Hina Agha's objective of research (2014) was to find out if there is any relation between profitability and working capital management. Return on Assets (ROA) has been taken as the dependent variable and Creditors turnover ratio, debtor's turnover Ratio, Inventory turnover ratio and Current ratio have been taken as the independent variables. A Correlation Matrix has been used to show the relationship between the dependent and independent variables. It shows a positive strong relationship between ROA and ITO, ROA and DTO and a moderate relationship between ROA and CTO. Thus, by increasing inventory turnover and debtor's turnover and decreasing creditor's turnover ratios, the company can increase its profitability.

Dr Asha Sharma's analysis (2014) on working capital management and its effect on profitability on the steel industry in India. Pearson's Correlation analysis is used to find the relation between two variables i.e.; Gross working capital and fixed assets, gross working capital and sales, gross working capital and total assets to measure efficiency. Gross working capital to EBIT ratio has been used to measure profitability. She concluded that if there is good coordination and management of working capital, the companies' efficiency can improve. This in turn shows that effective use of assets can improve earning capacity and profitability.

The objective of Dr. Arega Seyoum's, Tadele Tesfay's and Tadesse's research paper (2016) was to examine and analyze the impact of working capital management on the profitability of food complex manufacturing companies operating around Addis Ababa from 2009 to 2013. The results provided proof that the Cash Conversion Cycle, as a measure of working capital management, negatively affects Return on Assets. A negative relationship between the Receivables Collection Period, strong negative relation of Inventory Conversion Period, Payment Deferral Period and profitability was also found.

Jyoti Mahato and Udaykumar Jagannathan (2016) studied the impact of working capital management on profitability for the Indian telecom sector. Return on Assets, Average Collection Period, Inventory Conversion Period, Average Collection Period, Cash Conversion Cycle, Debt Ratio, Current Ratio, and Firm Size were taken as variables. Statistical tools such as, Regression analysis, multiple regression analysis, Correlation analysis, T test, F test and analysis of variance (ANOVA) and Descriptive Analysis are used. The result of study shows that there is significant relationship between profitability and working capital management. The correlation analysis shows that ROA has negative relationship with ACP, ICP, CCC and Current ratio.

Sumaira Tufail studied (2013) the impact of working capital management on profitability of textile sector in Pakistan. Data for six years (2005-2010) of 117 out of 164 textiles companies in Pakistan was selected for the study. Panel data methodology was used in this study since the study consisted observations in a time series manner. A significant positive relationship was found between working capital financing policy and profitability. The study also found a negative relation between profitability and degree of aggressiveness of working capital financing policy. The study also found a significant relationship between liquidity and profitability.

Prof. Chinta Venkateswara and Ramchandran Azhagaiah (Dec 2010) analyzed trend and pattern of efficiency of working capital management for firms of cotton textile in India. The key indicators used for the same purpose were Performance Index (PI), Utilization Index (UI), and Efficiency Index (EI). For the purpose of analysis the selected firms are classified into three size categories i.e.

"Small", "Medium" and "Large" based on average assets. The study reveals that Linear Growth Rate (LGR) of PI, UI and EI in respect of WC efficiency for small size firms is significant while that of for medium size firms, the trend of UI alone is significant. The trend of PI, UI and EI for large size firms is insignificant. On the whole, despite the positive growth in PI, the WCM efficiency of overall firms is found to be not encouraging because the constant factors are declining, which shows that the fixed components of WC are more than the varying components of the WC.

Debasish Sur and Sk Mujibar Rahaman (Dec 2014) analyzed profitability status of the 18 selected companies in the Indian textile industry during the period 2002-03 to 2011-12. The study showed that fixed assets management, inventory management and receivables management of the companies made notable contribution towards improving their overall profitability during the study period. Therefore, the textile industry in India should, in addition to the efficient management of fixed assets, inventory and receivables, also focus on the management of cash, and loans and advances with a view to strengthening their profit earning capability. Moreover, in the present competitive global market conditions, the firms should periodically review and reorient their strategies to achieve their value maximization objective in the post-liberalization regime.

Azhagaiah and Gejalakshmi (2007) carried out a study for examining the efficiency of working capital management of 30 selected companies in Indian textile industry during the period 1995-96 to 2005-06. This study concluded that the efficiency of managing current assets of the companies under study was one of the contributory factors towards enhancing their profitability.

#### **OBJECTIVE OF THE STUDY:**

The objective of the study is to examine, analyze and evaluate the impact of working capital management on the profitability of Textile industries (general) in India over a period of 5 years from 2012 to 2016. The specific objectives of the study are as follows:

- To study the background, characteristics, growth and development of the Indian Textile Industry.
- To determine the nature and extent of relationship between working capital management and profitability in the Indian Textile Industry and statistically infer it.
- To examine the impact of debtor's collection period, inventory holding period, creditor's payment period, cash conversion cycle and current ratio on profitability position of Indian Textile industries by considering Return on Assets & Return on Equity.
- To suggest some measures for improvement in working capital management.

#### **RESEARCH METHODOLOGY:**

##### **Type of Data:**

Secondary data has been used for this study; therefore a non-survey method has been used because the accounting information required for this study is easily obtainable from the published annual reports and various other financial market related websites.

##### **Source of Data:**

The textile companies were selected from [www.moneycontrol.com](http://www.moneycontrol.com), after which, secondary data has been collected from the annual reports of these companies which is reliable since these reports are both legally audited and published. Moreover, an extensive literature review was also done by searching different libraries online.

##### **Period of the Study:**

The study covers a period of 5 years of selected companies from 2012 to 2016 and an accounting year of the company consists of 12 months from 1st April to 31st March accordingly. The reason for restricting to this particular time period is to depict the current scenario and show the latest trends in the Indian Textile Industry.

##### **Sample Size:**

Top 10 Indian Textile (general) companies were selected, representing approximately 90% market share on the basis of market capitalization which are listed on any recognized Indian Stock Exchange.

**Selected Variables and Computations:**

The collected data has been analyzed and interpreted with the help of different financial ratios as shown below; along with it for evaluation of profitability and working capital management of selected companies different statistical tools like Correlation Co-efficient Analysis, Regression Analysis, Multiple regression analysis, T Test, F test, Analysis of Variance (ANOVA) and descriptive analysis have been used.

**Table 1**

Variables	Abbreviation	Measurement
<b>Dependent Variable</b>		
Return on Assets	ROA	(Net Income/ Total Assets) * 100
Return on Equity	ROE	(Net Profit for Equity Shareholders/ Equity Share Capital + Reserve & Surplus) * 100
<b>Independent Variable</b>		
Debtor's Collection Period	DCP	(Average Debtors/Net Credit Sales)* 365
Inventory Holding Period	IHP	(Average Stock/Cost of Goods Sold)* 365
Creditor's Payment Period	CPP	(Average Creditors/Net Credit Purchases)* 365
Cash Conversion Cycle	CCC	DCP + IHP – CPP
Current Ratio	CR	Current Assets/ Current Liabilities

**Source:** Secondary Data

**SCOPE/ LIMITATIONS OF THE STUDY:**

- a) The study covers only 10 selected Indian Textile firms which are listed only on any recognized Indian stock exchange; however there are a large number of textile firms which are operating in the unorganized sector which may reflect a significant impact of working Capital on profitability and hence modify the actual results of this study.
- b) The study is based on secondary data only and is limited to one sector.
- c) The findings of this study is limited to only general textile companies, however, textile companies are divided into composite, weaving, spinning, processing among various other parts.

**HYPOTHESIS OF THE STUDY:**

- a) H0: There is no relationship between ROA and Debtors Collection Period.  
 H1: There is relationship between ROA and Debtors Collection Period.
- b) H0: There is no relationship between ROA and Creditors Payment Period.  
 H1: There is relationship between ROA and Creditors Payment Period.
- c) H0: There is no relationship between ROA and Inventory Holding Period.  
 H1: There is relationship between ROA and Inventory Holding Period.
- d) H0: There is no relationship between ROA and Cash Conversion Cycle.  
 H1: There is relationship between ROA and Cash Conversion Cycle.
- e) H0: There is no relationship between ROA and Current Ratio.  
 H1: There is relationship between ROA and Current Ratio.
- f) H0: There is no relationship between ROE and Debtors Collection Period.  
 H1: There is relationship between ROE and Debtors Collection Period.
- g) H0: There is no relationship between ROE and Creditors Payment Period.  
 H1: There is relationship between ROE and Creditors Payment Period.
- h) H0: There is no relationship between ROE and Inventory Holding Period.  
 H1: There is relationship between ROE and Inventory Holding Period.
- i) H0: There is no relationship between ROE and Cash Conversion Cycle.  
 H1: There is relationship between ROE and Cash Conversion Cycle.
- j) H0: There is no relationship between ROE and Current Ratio.  
 H1: There is relationship between ROE and Current Ratio.

**RESULTS AND FINDINGS:**

**Descriptive Analysis:**

**Table 2**

Variable	Mean	Median	SD	MIN	MAX
ROA	4.489	4.542	1.039	2.787	5.492
ROE	8.6	7.967	1.488	7.447	11.061
DCP	104.999	96.205	39.706	65.141	160.57
IHP	95.717	95.071	6.377	88.273	103.883
CPP	97.039	98.602	15.789	71.47	111.075
CCC	103.676	104.928	34.565	54.812	151.841
CR	1.894	1.847	0.364	1.377	2.345

**Source:** Primary Data

The above table gives us the descriptive statistics of all the dependent and independent variables used in this research. ROA and ROE are both dependent variables over here which are the main profitability indicators. ROA of a company shows how efficiently the company uses its assets to earn returns. The average ROA is measured to be 4.48 with a standard deviation of 1.03 which indicates that the volatility of ROA. The minimum return on assets the sampled firms earn on an average is 2.787 and the maximum is 5.42. ROE on the other hand shows the efficiency of a company to earn revenue per unit of equity. The average return on equity was found to be 8.6 and having a standard deviation of 1.48. The minimum return on equity that the sampled firms can earn on an average is 7.447 and the maximum is 11.601.

DCP, IHP, CPP, CCP and CR are taken as the independent variables which are the measure of working capital management. The average debtor’s collection period was found to be 104.9 which mean that the average number of days a debtor takes to pay the samples firms is 104.9 days and the standard deviation of DCP is 39.7. The average of creditor’s collection period was found to be 97.03 having a standard deviation34.56.The average Inventory holding period is 95.7 days which indicates that the mean time the firms take to sell its inventory is 95.7 days and the inventory holding period ranges from a minimum period of 88.27 days to a maximum of 103.88 days. The cash conversion period on an average is 103.676 days which means that the average time the firms in the sector take to convert resources into cash is 103.676 days, the cash conversion period ranges from 54.81 days to 151.84 days. The Current ratio was calculated at 1.89 having a standard deviation of 0.36.

**Correlation Analysis:**

**Table 3**

	ROA	ROE	DCP	IHP	CPP	CCC	CR
ROA	1						
ROE	0.766323	1					
DCP	-0.2334	-0.23749	1				
IHP	-0.41312	-0.52345	-0.08635	1			
CPP	-0.30175	-0.15212	0.797219	-0.07322	1		
CCC	-0.30379	-0.50164	0.619518	0.53952	0.182349	1	
CR	0.399229	0.105496	-0.01849	-0.21081	-0.02035	-0.13282	1

**Source:** Primary Data

Prior to the regression result, it is important to check the correlation between various variables on which the analysis is based. Pearson’s correlation grid is used to check the relationship between variables.

The above table shows the correlation between the selected variables of Working Capital and Profitability. Correlation coefficient signifies the change in one variable due the change in the other variable that is the relationship between the two variables. The ROA shows a negative correlation with DCP. This means that earlier the Debtors pay the bills, the more the company is efficient in converting its credit sales and thus increasing profitability. A low DCP would also mean that the company is able to renew its inventory due to higher availability of cash and thus the ROA would increase. The results also show a negative correlation between the ROA and the IHP, which shows that if the inventory holding period is shorter, it would mean higher profitability. A negative correlation between the ROA and CCP means the lower the Creditors payment period the higher the Return on Assets. A low creditors Payment period would mean that the companies are able to pay their creditors faster thus attracting business, therefore increasing sales and eventually the return on assets. The cash conversion cycle indicates the time a firm takes to convert its resources to cash, by collecting cash from its debtors and sales of inventory and paying of its creditors for raw material.

The results show a negative correlation between the ROA and the CCC, which means the faster the company recovers cash the more the return on assets. This negative correlation shows that the companies in this sector are efficient in investing in resources in order to increase sales and are able to recover the cash thus having higher profitability. There is a positive correlation between the ROA and CR as shown in the table below. A higher current ratio indicates that the companies in the sector have enough current assets to pay off its current liabilities thus attracting more business and therefore higher return on assets.

The table shows a negative correlation between ROE and DCP, IHP, CCP and CCC. The correlation between ROE and DCP indicates that the faster the debtors pay the bills; the company is able to increase production due to availability of cash thereby increasing sales and thus increasing the Return on Equity. The negative Correlation between ROA and IHP indicates that the lower the Inventory holding period the higher will be the Return on Equity. Low inventory holding period indicates the companies are able to make faster sales of its goods thus making the firms more profitable, therefore the negative relation shows the efficiency of the sector. There is negative correlation between the ROE and CCP shows that the firms are being able to pay off their creditors faster thus attracting more customers and therefore higher profitability. There is also a negative correlation between the ROE and the CCC which means that the sector is systematic in converting their resources in final products and sales and creating cash availability for operations thus making them more profitable. There is a positive correlation between the CR and ROE which shows that, as the current ratio increases the Return on equity increases because the firm is efficient in its operations.

**Regression Analysis:  
 Relationship between ROA and DCP**

**Table 4**

<b>Summary Output</b>				
<b>Regression Statistics</b>				
Multiple R	0.2334			
R Square	0.05448			
Adjusted R Square	0.03436			
Standard Error	5.77975			
Observations	49			
<b>ANOVA</b>				
	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>
Regression	1	90.4598	90.4598	2.70792
Residual	47	1570.06	33.4056	
<b>Total</b>	<b>48</b>	<b>1660.52</b>		

	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>
Intercept	5.185	0.97934	5.2944	3.09E-06
DCP	-0.0083	0.00507	-1.6456	0.10652

**Source:** Primary Data

In the above table we can see that the coefficient value of the independent variable (DCP) is negative. Thus, there exists a negative relationship between ROA and DCP. An increase in the DCP by one day will decrease the ROA by 0.0083.

The P-value is 0.106, which is greater than the significance level of 0.05. Thus, we will accept the null hypothesis and reject the alternate hypothesis. There is no relationship between ROA and DCP.

**Relationship between ROA and IHP:**

**Table 5**

<b>SUMMARY OUTPUT</b>				
<b>Regression Statistics</b>				
Multiple R	0.413120972			
R Square	0.170668937			
Adjusted R Square	0.153023595			
Standard Error	5.412990095			
Observations	49			
<b>ANOVA</b>				
	df	SS	MS	F
Regression	1	283.3993661	283.3994	9.672181
Residual	47	1377.121703	29.30046	
<b>Total</b>	<b>48</b>	<b>1660.521069</b>		
	Coefficients	Standard Error	t Stat	P-value
Intercept	7.521443794	1.287909805	5.840039	4.70E-07
IHP	-0.033495666	0.010770266	-3.11001	0.003176

**Source:** Primary Data

In the above table we can see that the coefficient value of IHP is negative, and hence we can conclude that there is a negative relationship between ROA and IHP. The coefficient value also indicates that as the IHP increases by 1 day the ROA would decrease by 0.033.

The p-value is 0.00317, which is less than the significance level of 0.05. And hence we reject the null hypothesis and accept the alternate hypothesis. There is a negative significant relationship between ROA and IHP. The R squared value of 0.17 indicates that 17% of the changes in ROA can be predicted from the changes in IHP.

**Relationship between ROA and CPP:**

**Table 6**

<b>SUMMARY OUTPUT</b>	
<b>Regression Statistics</b>	
Multiple R	0.301749
R Square	0.091052
Adjusted R Square	0.071713
Standard Error	5.666863
Observations	49

<b>ANOVA</b>				
	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>
Regression	1	151.1943	151.1943	4.708148
Residual	47	1509.327	32.11333	
<b>Total</b>	<b>48</b>	<b>1660.521</b>		
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>
Intercept	5.977047	1.11343	5.368138	2.40E-06
CPP	-0.01714	0.007897	-2.16983	0.035109

Source: Primary Data

In the above table we can see that the value of coefficient of CPP is negative, hence there exists and negative relationship between ROA and CPP. An increase in the CPP by one unit will decrease the ROA by 0.0171.

The p-value is 0.035, which is less than the significance level of 0.05. Thus, we reject the null hypothesis and accept the alternate hypothesis. There is a negative significant relationship that exists between ROA and CPP. The R square value is 0.09 which states that 9% of the changes ROA can be predicted with the changes in CPP.

**Relationship between ROA and CCC:**

**Table 7**

<b>SUMMARY OUTPUT</b>				
<b>Regression Statistics</b>				
Multiple R	0.303787824			
R Square	0.092287042			
Adjusted R Square	0.072974			
Standard Error	5.663012678			
Observations	49			
<b>ANOVA</b>				
	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>
Regression	1	153.2445778	153.2446	4.778483
Residual	47	1507.276492	32.06971	
<b>Total</b>	<b>48</b>	<b>1660.521069</b>		
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>
Intercept	5.820191367	1.061362567	5.483698	1.61E-06
CCC	-0.014624292	0.006690057	-2.18597	0.033833

Source: Primary Data

In the above table, we can see that the coefficient value of CCC is negative and hence this shows there is a negative relationship between ROA and CCC.

The p-value is 0.0338, which is less than the significance level of 0.05. So we reject the null hypothesis and accept the alternate hypothesis, a negative significant relationship exists between ROA and CCC. The R square value of 0.092 indicates that 9.2% of changes in ROA can be predicted from changes in CCC.

**Relationship between ROA and CR:**

**Table 8**

<b>SUMMARY OUTPUT</b>				
<b>Regression Statistics</b>				
Multiple R	0.399229			
R Square	0.159383			
Adjusted R Square	0.141498			
Standard Error	5.449695			
Observations	49			
<b>ANOVA</b>				
	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>
Regression	1	264.6596	264.6596	8.911344
Residual	47	1395.861	29.69918	
<b>Total</b>	<b>48</b>	<b>1660.521</b>		
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>
Intercept	2.157348	1.063089	2.02932	0.04811
CR	1.134502	0.380044	2.985187	0.004488

**Source:** Primary Data

In the above table, we can see that the coefficient value of CR is positive and hence it shows a positive relationship between ROA and CR.

The p-value is 0.00448, which is less than the significance level of 0.05 and hence we reject the null hypothesis and accept the alternate hypothesis. A positive significant relationship exists between ROA and CR. The R square value of 0.159 indicates that 15.9% of the variance ROA can be predicted from the variance in CR.

**Relationship between ROE and DCP:**

**Table 9**

<b>SUMMARY OUTPUT</b>				
<b>Regression Statistics</b>				
Multiple R	0.237489422			
R Square	0.056401226			
Adjusted R Square	0.036324656			
Standard Error	14.54923667			
Observations	49			
<b>ANOVA</b>				
	<b>df</b>	<b>SS</b>	<b>MS</b>	<b>F</b>
Regression	1	594.6746804	594.6747	2.809306
Residual	47	9948.97352	211.6803	
<b>Total</b>	<b>48</b>	<b>10543.6482</b>		
	<b>Coefficients</b>	<b>Standard Error</b>	<b>t Stat</b>	<b>P-value</b>
Intercept	10.70202826	2.465263729	4.341129	7.49E-05
DCP	-0.021393449	0.012763838	-1.6761	0.10036

**Source:** Primary Data

In the above table, the coefficient value of DCP is negative and hence a negative relationship exists between DCP and ROE. An increase in DCP by one day will decrease the ROE by 0.021. The p-value is 0.1003, which is greater than the significance level of 0.05. Hence, we accept the null hypothesis and reject the alternate hypothesis. No relationship exists between ROE and DCP. The R square value is 0.056 which indicates that 5.6% of variations in ROE can be predicted from variations in DCP.

**Relationship between ROE and IHP:**

**Table 10**

SUMMARY OUTPUT				
<b>Regression Statistics</b>				
Multiple R	0.523451094			
R Square	0.274001048			
Adjusted R Square	0.258554262			
Standard Error	12.76187602			
Observations	49			
ANOVA				
	df	SS	MS	F
Regression	1	2888.97066	2888.971	17.73839
Residual	47	7654.67754	162.8655	
<b>Total</b>	<b>48</b>	<b>10543.6482</b>		
	Coefficients	Standard Error	t Stat	P-value
Intercept	18.70679222	3.036426258	6.160793	1.54E-07
IHP	-0.106945065	0.025392397	-4.2117	0.000114

**Source:** Primary Data

In the above table, the coefficient value of IHP is negative and hence a negative relationship exists between ROE and IHP.

The p-value is 0.00011, which is less than the significance level of 0.05, hence we reject the null hypothesis and accept the alternate hypothesis. There exists a negative significant relationship between ROE and IHP. The R square value indicates that 27.4% changes in ROE can be predicted from the changes in IHP.

**Relationship between ROE and CPP:**

**Table 11**

SUMMARY OUTPUT				
<b>Regression Statistics</b>				
Multiple R	0.152116344			
R Square	0.023139382			
Adjusted R Square	0.002355114			
Standard Error	14.80344605			
Observations	49			
ANOVA				
	df	SS	MS	F
Regression	1	243.9735036	243.9735	1.113312
Residual	47	10299.6747	219.142	
<b>Total</b>	<b>48</b>	<b>10543.6482</b>		
	Coefficients	Standard Error	t Stat	P-value
Intercept	10.58700801	2.908594278	3.639905	0.000677
CPP	-0.021767131	0.020629689	-1.05514	0.296757

**Source:** Primary Data

In the above table, CPP has a negative coefficient value; therefore a negative relationship exists between ROE and CPP. An increase in CPP by one day will decrease the ROE by 0.0217.

The p-value of 0.296 is greater than the significance level of 0.05. Thus we accept the null hypothesis and reject the alternate hypothesis. There exists no relationship between ROE and CPP

**Relationship between ROE and CCC:**

**Table 12**

SUMMARY OUTPUT				
Regression Statistics				
Multiple R	0.50164466			
R Square	0.251647365			
Adjusted R Square	0.235724969			
Standard Error	12.95685714			
Observations	49			
ANOVA		df	SS	F
Regression		1	2653.28129	15.80462
Residual		47	7890.36691	
<b>Total</b>		<b>48</b>	<b>10543.6482</b>	
	Coefficients	Standard Error	t Stat	P-value
Intercept	14.7291095	2.428375839	6.065416	2.14E-07
CCC	-0.06085187	0.015306714	-3.9755	0.000241

Source: Primary Data

In the above table, CCC has a negative coefficient value and hence a negative relationship exists between ROE and CCC.

The p-value is 0.00024064, which is lesser than the significance level of 0.05. Hence, we reject the null hypothesis and accept the alternate hypothesis. There exists a negative significant relationship between ROE and CCC. The R square value of 0.25 indicates that 25% of the variations in ROE can be predicted with changes in CCC.

**Relationship between ROE and CR:**

**Table 13**

SUMMARY OUTPUT				
Regression Statistics				
Multiple R	0.105496173			
R Square	0.011129442			
Adjusted R Square	-0.009910357			
Standard Error	14.89416798			
Observations	49			
ANOVA		Df	SS	F
Regression		1	117.344926	0.528971
Residual		47	10426.30327	
<b>Total</b>		<b>48</b>	<b>10543.6482</b>	
	Coefficients	Standard Error	t Stat	P-value
Intercept	7.041045464	2.905450785	2.423392	0.01928
CR	0.755429225	1.038670679	0.727304	0.470647

Source: Primary Data

In the above table, we can see that CR has a positive coefficient value; hence a positive relationship exists between ROE and CR.

The p-value is 0.4706, is greater than the significance level of 0.05, thus we accept the null hypothesis and reject the alternate hypothesis. No relationship exists between ROE and CR.

## CONCLUSION:

Working Capital plays a vital role in the organizations operations, enhancing profitability and reducing the risk of insolvency. The aim of the study was to establish a relationship between the Working capital and Profitability in the Indian Textile Industry. After having conducted the analysis, the results imply that there exists a relationship between working capital and profitability. According to the correlational analysis there exists a weak negative correlation between the profitability variables, ROA and ROE and the working capital ratios DCP, IHP, CCP and CCC. There is a positive relation between ROA and ROE and the working capital the variable CR. The Regression analysis was used to check a significant impact on profitability. The results show that IHP, CPP, CCC and CR have a significant impact on profitability as compared to DCP whereas IHP and CCC have a significant impact on ROE as compared to CR, CPP and DCP. Therefore, the ability of the firm to continuously operate in longer period will depend on how firms deal with investment in working capital management as shortage of it may lead to lack of liquidity and result in loss of production, sales and also goodwill. The following has been concluded as per the table shown below which can help the industry to identify the areas where they can focus for better performance.

**Table 14**

Variable	Correlation with Profitability		Significance	
	ROA	ROE	ROA	ROE
Debtor's Collection Period	Negative	Negative	Low	Low
Inventory Holding Period	Negative	Negative	High	High
Creditor's Payment Period	Negative	Negative	High	Low
Cash Conversion Cycle	Negative	Negative	High	High
Current Ratio	Positive	Positive	High	Low

**Source:** Primary Data

## RECOMMENDATIONS/ SUGGESTION:

- In order to finance working capital needs companies should try to consider implementing effective working capital management policies as discussed in this paper and not rely on traditional sources of finance such as borrowing from bank
- Industry should focus more on their inventory management study and avoid over stocking of inventory and try to maintain good relations with supplier
- The industry should also try to improve on reducing their cash conversion cycle, hence; they should focus on developing and implementing effective CCC strategies which is both interrelated and coordinated.
- Another suggestion for future research is to focus on sources of working capital and to ensure an optimal capital mix in order to ensure maximum liquidity and also try to study the non-listed companies alongside other sectors within the industry.

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