Impact of Working Capital Management on Profitability: A Case of the Pakistan Textile Industry

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Abstract
This paper investigates that how different factors such as Current ratio, Quick ratio, Inventory turnover and Trade debt are effecting Working Capital Management in Textile Industry of Pakistan. The study used the annual data of 15 firms listed at Pakisatn Stock Exchange. The statistical software Eviews 9 was used for analyzing the variables. This study has used panel regression models for panel data. To choose most appropriate model among these models, the current study has used Chow, Brush-pagan and Hausman tests. These test suggested that the Random Effect Model is appropriate while Fixed Effect Model and Pooled OLS cannot be used. Residual Autocorrelation test was tested using the Breusch-Pagan LM, Pesaran scaled LM and Pesaran CD and it showed that there is no issue of Autocorrelation in the Model. Correlation test shows that all the variables are unique and have no relationship with each other. Wald test shows that error terms are homoscedastic. In the results of Random Effect Model, it is found that R-Square has a value of 62.52 % which shows that 62.52 % changes in the Dependent variables are caused by the independent variables. Probability value of F-Statistic is 0.0000 which is less than 0.05 and shows that the overall model is highly significant. The regression results show that Current ratio and Inventory turnover are significant and have a positive relationship with firm Profitability while Quick ratio and Trade debt ratio have no significant relationship with profitability.
Keywords: Working Capital, Random Effect, Textile industry, Pakistan

1.1: Introduction
Working Capital Management deals with the current assets and current liabilities and therefor WCM has a Significant impact on the firm Profitability. Management can improve the operations of the firm by decreasing the inventory turnover ratio and improving the receivables collection. Account receivables collection should be improved as higher account receivables will be causing the problem of decline in cash. There is positive association between Firm Profitability and WCM. Firms can expand the operations by minimizing the cash conversion cycle and by decreasing the debt ratio (Hina, 2014)

Similarly, Malik, Waseem and Kifayat (2012) analyzed the relationship of WCM and Profitability of the firm in the Textile industry of Pakisatn. They used the data of Pakisatn firms listed at KSE for the period 2001-2006.They discussed that WCM is an important tool for the success of the business and by the effective management of working capital the firm can increase the value of the shareholder's wealth. Their analysis proved that there is a significant and positive relationship in cash, account receivables and inventory while there is an adverse affiliation of accounts payable with the productivity of the firm. They suggested, increase in the accounts payable will lead to decrease the Profitability.

In the same way, Pedro (2007) examined that WCM is a vital element for the small firms as well. Those firms which are having low working capital, they can take help from Short run investments for the creation of funds. He added that elements of the working capital are having a direct association with the profitability of the firm. He suggested that investment in the current assets will lead to increase the Profitability.

Mahmood and Qayyum (2010) analyzed that a company needs Profitability and Liquidity for keeping their operations successful. They described that Profitability is needed for increasing the value of shareholder wealth while Liquidity is needed for running the day to day operations. Therefore, the cash management should be handled carefully as it will show the efficiency of the company operations.

However, Mohammad and Saad (2010) identified the effect of WCM and Profitability in Malaysia Stock Exchange using the data of 2003-2009.They discovered that there is an adverse and significant association between WCM and Profitability components.

1.2: Research Questions
This study intends to investigate the following research questions:
- o What is the impact of working Capital Management on Firm Profitability?
- o How different factors are effecting Working Capital Management in Textile Industry of Pakistan and their relationship with Profitability?

1.3: Research Objectives

o To identify and analyze the impact of Working Capital Management on the firm Profitability.
o To identify the relationship among different factors and Firm Profitability.

2: Literature Review

Asad and Qadeer (2014) studied the impact of different factors on the working capital of energy sector in Pakisatn. They concluded that Debt ratio, Current ratio and Company size have a significant and positive impact on the firm Profitability. Similarly, Nilsson et al. (2010) studied that WCM is composed of many factors and these factors are current ratio, quick ratio, company size and debt ratio. He concluded that these variables have a significant impact on the Profitability.

Rai (2011) used the data of 311 Indian firms for the period of 1996-2010.After applying different tools and methods, he established that there is a positive affiliation between Firm Profitability and WCM. On the other hand, Lazaridis and Tryfonidis (2006) studied the data of 131 firms and applied different regression tools and methods. They acknowledged a negative relationship between Profitability and WCM.They suggested that creation of the profit can be made easy if the managers are handling the cash, account receivables and inventory properly.

Rahman (2010) studied the impact of WCM and Profitability in the Textiles industry of Pakisatn. He collected data from the annual reports of the textile firms and concluded that there is a positive and significant association between WCM and Firm Profitability, but the Textile industry is not using the assets effectively and efficiently. Similarly, PJG and Solano (2007) established that whether the firm is small or large, WCM is an important element in the business. Majority of the firms have invested their cash in the current assets. They used correlation and descriptive statistics and concluded that WCM and Profitability has a relationship with each other.

Fayaz et al. (2011) established that proper management of the day to day business operation is compulsory for the industry. If it is not properly managed, it can lead to have a bad impact on the overall profitability of the firm. They applied OLS regression on the data of 46 companies and concluded that in the short run WCM will have a negative impact on the Profitability of the firm. However, Akinlo (2011) studied the relationship of WCM and Profitability for discovering the long run and short run relationship. He used the annual data of 66 Nigerian firms for the period of 1999-2007.He revealed that the variables are stationary at first difference and then he applied the Cointegration approach. He concluded that there is a long run association between WCM and Profitability.

Mahmood and Qayyum (2010) analyzed that a company needs Profitability and Liquidity for keeping their operations successful. They described that Profitability is needed for increasing the value of shareholder wealth while Liquidity is needed for running the day to day operations. Therefore, the cash management should be handled carefully as it will show the efficiency of the company operations. Similarly, Ranjith (2008) concluded that the decision of WCM and Profitability has gain a lot of importance and significance in the current day corporate decisions. He added that if the firm has enough cash then they will have better position of liquidity and it can also have an impact on the Profitability position.

Rezazadeh and Heydarian (2010) examined the association between Profitability and WCM in the stock exchange of Iran. They used the annual data of Iranian firms for the period 1998-07. They concluded that there is a significant relationship between WCM and Profitability. He added that account receivables have a positive association with the Profitability. On the other hand, Shakor et al. (2012) also analyzed the association of WCM and Profitability. He used the annual data of 25 firms of manufacturing sector and applied different regression tools on it. They discovered that the firms must have a satisfactory amount of currents assets for their day to day operations and due to this the firm will be able to execute the operations successfully and efficiently.

In addition, Soenen and shin (1998) studied the association between WCM and Profitability. He used a large amount of data of American firms and concluded that there is a strong and adverse liaison of WCM and Productivity. They proposed that the Shareholders wealth can be increased by dipping the amount of cash conversion cycle. In the same way, Nwaobia, Kajola and Adedeji (2012) studied the association between WCM and Profitability. They used the annual data of 7 years of Nigeria firms and discovered that there is an adverse association between WCM and Profitability. Moreover, return on assets and CCC has a negative relationship with each other.

3.1: Data and Methodology

The data used in this research is secondary. It is a Panel data and taken for the period of 9 years from 2006-2014.Textile Industry firms listed at Pakisatn Stock Exchange were used for this analysis. The sample consists of 15 firms from Textile Industry. While selecting the sample, following criteria was used.

o The firms which are present throughout the sample time period.
o To avoid biased results, firms with negative equities are also not included in the sample

Dependent Variable: Profitability

Independent Variables: Current Ratio, Quick Ratio, Inventory Turnover Ratio and Trade Debt Ratio

4.1: Results and Findings
Table 4.1: Results of Chow, Breusch pagan and Hausman test

Tests	Null Hypothesis (H$_O$)	Alternative Hypothesis (H$_a$)	P-Value
Chow test	Pooled is Better than Fixed Effect Model	Fixed Effect Model is Better than Pooled	0.0000
Brush-pagan	Pooled is better than Random Effect Model	Random Effect Model is better than pooled	0.0000
Hausman tests	Random Effect Model is better than Fixed Effect Model	Fixed Effect Model is better than Random Effect Model	0.7231

Table: The above table shows that Random Effect Model is appropriate.

Table 4.2: Random Effect Model Results

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	-2.569195	3.040095	-0.845104	0.3996
Current Ratio	5.401133	1.993431	2.709466	0.0076
Quick Ratio	1.584437	2.702327	0.586323	0.5587
Inventory Turnover Ratio	10.7345	5.25604	2.0423	0.0420
Trade Debt Ratio	0.078352	0.650183	0.120508	0.9043
R-squared	0. 625236	Mean dependent var		13.61678
Adjusted R-squared	0.581222	S.D. dependent var		15.89145
S.E. of regression	7.926280	Akaike info criterion		7.129257
Sum squared resid	4711.944	Schwarz criterion		7.545891
Log likelihood	-305.8165	Hannan-Quinn criter.		7.297268
F-statistic	20.19634	Durbin-Watson stat		2.044548
Prob(F-statistic)	0.000000			

4.2: Interpretation of the Results
4.2.1: R-Squared
The Coefficient of determination R-Squared shows that how much changes and variations in the dependent variable is caused by the independent variables. Here we are getting the value of R-Squared 62.52% it means that the variables we have taken to find out the relation are highly effective the remaining 37.48 % constitutes those variables or factors that we have not taken.

4.2.2: F-Statistic
The overall significance of the model can be interpreted by the value of probability of F-statistic. Here a rule applies that if the probability value of F-Statistic is less than 0.05 or 5%, the model will be significant, otherwise not. The probability value of F-Statistic in this model is 0.000000 which is less than 0.05. It implies that the overall model is significant.

4.2.3: Individual Significance of Variables
Probability value of current ratio is 0.0076 which is less than 0.05. It shows that current ratio has a significant relationship with Profitability. Moreover, the coefficient value is 5.401133. It reveals that a 1unit change in current ratio will increase the Profitability by 5.40units. Probability value of quick ratio and trade debt is greater than 0.05. It implies that the variables are insignificant and have an insignificant association with Profitability. Probability value of inventory turnover ratio is 0.0420 which is less than 0.05. It shows that it has a significant relationship with Profitability. Moreover, the coefficient value is 10.7345. It reveals that a 1unit change in inventory turnover will increase the Profitability by 10.75units.

4.3: Residuals Analysis
Table 4.3: Serial Correlation Test

Test	Statistic	Probability
Breusch-Pagan LM	51.98563	0.2204
Pesaran scaled LM	-0.317743	0.7507
Pesaran CD	-0.277875	0.7811

Table: The above table shows that there is no issue of serial correlation in the Random Effect Model.

Table 4.4: Heteroskedasticity Test: Wald Test

Test Statistic	Value	Value	df	Probability
F-statistic	6.323367	(4, 130)		0.0001
Chi-square	25.29347	4		0.0000

Table: The table shows that residual does not have the problem of Heteroskedasticity and are homoscedastic.

Table 4.5: Correlation Test

	Return on Assets	Current Ratio	Quick Ratio	Inventory Turnover	Trade Debt
Return on Assets	1	0.48	0.37	0.129	-0.04
Current Ratio	0.48	1	0.75	-0.04	-0.11
Quick Ratio	0.37	0.75	1	0.07	0.01
Inventory Turnover	0.12	-0.04	0.07	1	0.06
Trade Debt Ratio	-0.040	-0.11	0.013	0.06	1

Table: The table shows that the variables have unique nature and have no relationship with each other.

5.1: Conclusion

The study investigated that how different factors such as current ratio, quick ratio, inventory turnover and trade debt are effecting working capital management in Textile Industry of Pakistan & how their relationship with Profitability is affected. This paper used the annual data of 15 firms listed at Pakistan Stock Exchange in Textile Sector. In the results of Random Effect Model, it is also found that R-Square has a value of 62.52% which shows that 62.52% changes in the Dependent variables are caused by the independent variables that we have used. Probability value of F-Statistic is 0.0000 which is less than 0.05 and shows that the overall model is highly significant and have taken the accurate variables in this dissertation. The regression results show current ratio and inventory turnover have a significant and positive relationship with the firm profitability while quick ratio and trade debt has no significant association with the firm profitability.

5.2: Recommendations

We recommend as follow:

1. The potential investors can use this study for their guidance before investment decision is taken.
2. The Shareholders can use this study as a reference and can advise the Management of these firms for improving the Current Ratio and Acid Test Ratio.

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