

The Relationship between Working Capital Management and Profitability: A Case Study of Tobacco Industry of Pakistan

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Abstract

Firms can use working capital management which is one of the essential determinants to influence their profitability. The main theme of present study is to investigate the relationship between working capital management and profitability of Tobacco Industry of Pakistan. This study is based on secondary data collected from financial statements of selected companies of Tobacco Industry of Pakistan for the period of 2005-2014. For data analysis, both descriptive and inferential statistics were used. Correlation analysis is used to check the relationship between the variables, while multiple regression analysis is used to examine the effects of working capital management on profitability of firms. The result reveals that there is a strong negative relationship between variables of working capital management and profitability of Tobacco Industry of Pakistan. This means that as the cash conversion cycle increases, it will lead to declining of firm profitability and managers can create a positive value for shareholders by reducing the cash conversion cycle at optimal level. The study concludes that managers can create value for shareholders by managing the working capital well designed and implemented, and by keeping each components of it at optimal level.

Keywords: Working Capital Management, Profitability, Tobacco Industry, Pakistan.

JEL Classification Codes: G29, G39, L25.

1. Introduction

The concept of working capital (WC) was first developed by Karl Marx, however in rather diverse shapes and was termed as "variable capital" (Bhattacharya, 2009). Later on Guthman and Dougall (1948) noted that current assets less current liabilities are known as working capital (WC) and their analysis was elaborated by Park & Gladson (1963). Working capital is considered to be an important part of short term financial management. Long term financial management frequently attains more consideration, whereas most of the studies (e.g. Jose, Lancaster, & Stevens, 1996; Deloof, 2003; Raheman & Nasr, 2007) have founded that short term financial management also has a clear effect on company performance.

A company asset is divided into two distinct areas, fixed assets and current assets. Firm fixed assets are comprised of equipment and plants, while current assets are considered to be WC of a company. Company current assets are those assets which are expected to convert into cash within one year. These assets include short term marketable securities, receivables and inventories of raw materials, and finished goods of a company. An essential difference between a company fixed capital and WC is that, WC components such as number of days accounts receivable (AR), number of days inventory (INV) and number of days accounts payable (AP) can be increased or decreased in small level, while fixed assets are generally purchased as a whole. WC has also an importance that it is easily convert its components into other assets (Mao, 1976; Levy & Sarnat, 1995).

Raheman & Nasr (2007) argued that working capital management is considered a key element of financial management, because it directly effects on firm performance and liquidity. Working capital keeps attention on current assets and current liabilities of firm. Similarly, Haq et al. (2011) also viewed that working capital management (WCM) is the essential decision taken by the financial managers. It is an important part of financial decision making and directly affects firm performance.

Smith (1980) argued that WCM plays a significant position in company performance as well as risks and for its value as well. Lamberson (1995) noted that WCM is considered to be one of the critical issues in the firm, so it is a big challenge for financial managers to recognize the key aspects of working capital and its reasonable level for a company. According to

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Lamberson (1995), if financial managers identify the positions and determinants of WC, they can minimize risk and maximize profitability of the firms. Filbeck & Krueger (2005) argued that the importance aim of WCM is to keep the best balance among each components of working capital. To obtain achievement in a firm, it mostly depends on talent and skill of the financial managers to handle AR, INV and AP effectively.

The major aims of the present research are as below:

- To analyze a relationship between WCM and profitability of Tobacco Industry of Pakistan.
- To check the effects of WCM components on profitability of Tobacco Industry of Pakistan.
- To dig out how Tobacco Industry of Pakistan manages cash, account receivables, inventory, and account payables of their organization.

2. Literature Review

For firms' profitability it is important to organize and manage their WC efficiently. Different studies have been conducted on the relationship between WCM and profitability of firms. Previous studies related to the present study are as below:

WCM is defined the management of current assets and current liabilities. WCM is also essential for getting shareholders value. Moreover management of WC has significant effects on profitability and liquidity of company that studied in different nations (Shin & Soenen, 1998). Shin & Soenen (1998) observed WCM and its negative effects on corporate profitability. They used a COMPUSTAT sample of 58985 firms for the period of 1975-1994. The net trade cycle (NTC) was used as a measure of WCM. They check WCM and its effects on corporate profitability by using correlation and regression analysis. Based on their findings, they suggested that decreasing of firms NTC is a suitable way to make better value of shareholders. Deloof (2003) studied the relationship between WCM (measured through CCC, AR, AP and INV) and profitability measured by gross operating profit. He used a sample of 1009 Belgian companies for the period of 1992-1996 and established a strong negative relationship involving WCM as well as profitability. For data analysis he used correlation and regression analysis. Based on results, he suggested that to decrease the AR and INV managers could create shareholders value to a best level.

Lazaridis and Tryfonidis (2006) studied WCM and its negative effects on profitability. WCM was measured through CCC whereas profitability was measured by gross operating profit. The data was collected from 300 companies of Athens Stock Exchange which later on decreased to 131 firms for a period of 2001-2004. They recommend that through managing the CCC properly and handling its each element properly managers can create value for their firms to a best level. Padachi (2006) observed the impact of WCM on profitability of 58 Mauritian small manufacturing firms. WCM was measured through AR, AP, INV and CCC, whereas profitability was measured through

return on total assets. His findings indicated negative effects of AR and AP on firm performance. Moreover, he showed negative relation between profitability and CCC. He suggested that managers be able to maximize firm performance through reducing their WC cycle.

Raheman & Nasr (2007) studied WCM and its effects on profitability of 94 Pakistani companies of Karachi Stock Exchange for 1999-2004. WCM was measured through CCC, inventory turnover in days, average payment period, average collection period and current ratio, while profitability was measured through net operating profit. They suggested that an increase in CCC minimize firm profitability and a decrease in CCC managers could maximize shareholders value to a best level. Garcia-Teruel & Martinez-Solano (2007) examined WCM and its negative effects on profitability of 8872 SMEs Spanish companies for 1996-2002. They used ROA as a measure of profitability and AR, INV and AP as a measure of WCM. They also suggested that by decreasing the CCC firms could make worth for their shareholders.

Samiloglu & Demirgunes (2008) studied WCM and its effects on performance of manufacturing companies of Istanbul Stock Exchange for 1998-2007. They used CCC, AR and INV as a measure of WCM, while ROA as a measure of profitability. They also used financial assets, firm size, leverage and firm growth as control variables. Their findings indicated that accounts receivable, leverage and inventory period have strong negative effect on profitability of Turkish companies. Further, CCC, firm size and financial assets indicated no significant effects on firm profitability. Moreover, leverage also showed negative effects on firm profitability, while firm growth indicated positive effects on firm profitability. Falope and Ajilore (2009) studied WCM and its effects on profitability of 50 companies of Nigerian Stock Exchange. They found negative relationship between WCM (measured through CCC, AR, AP and INV) and profitability (measured by net operating profit). Moreover, they indicated no important changes of the effects of WCM between small and large companies.

Based on previous literatures on WCM, it has been concluded that by decreasing CCC a company can maximize its profitability (e.g. Deloof, 2003; Shin & Soenen, 1998; Lazaridis & Tryfonidis, 2006). Previous studies have found a strong negative relationship between CCC and firm profitability. Based on these findings, it has been indicated that shareholders value can be created by decreasing AR and AP to an optimal minimum stage.

3. Research Methodology

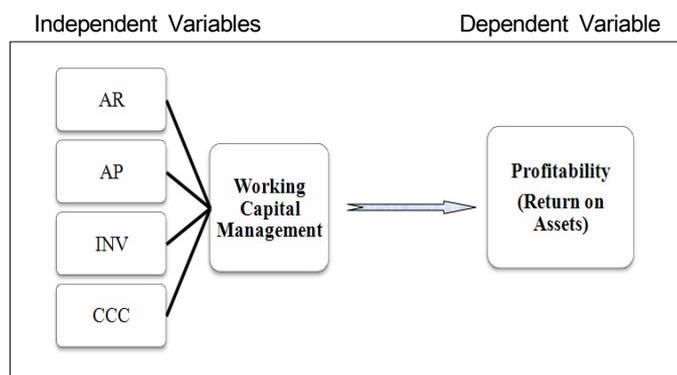
This empirical study of the Tobacco Industry is conducted by analyzing audited financial statements. The study could be defined as archival research (Secondary data). Archival data is defined as data, for which the original purpose for gathering was not academic research, and the approach has been criticized because of uncritical usage of databases where

scholars have an easy access (Moers, 2007). In this study this problem is tackled by using only official financial statements and annual reports instead of databases. In case of a group, consolidated financial statements were used. All the financial statements used in the study have been collected from public sources: from firms web sites and some have been found in the Karachi Stock Exchange database during 2005-2014, which is free of charge and where many Pakistani companies publish their financial reports. This ensures that all data of companies is collected similarly.

Based on research methodology, the present study used secondary data method because the important purpose of present study is to analyze the relationship between WCM and profitability of tobacco industry of Pakistan. The data were obtained from the audited financial statements of Tobacco Industry of Pakistan. These financial statements were obtained from the following firms:

- Pakistan Tobacco Company (www.ptc.com.pk)
- Philips Morris (Lakson) Tobacco Company (www.philipmorrispakistan.com.pk)

3.1. Theoretical Framework



<Figure 1> Theoretical Framework

3.2. Dependent Variable

The present study used ROA as a dependent variable. ROA indicates the success of firms in generating income from its existing funds. It is mostly employed to examine the income creation of firm profitability. It is related with the net income after tax in income statement to the assets in balance sheet of firms. A greater ratio of ROA indicates successful management and best opportunity for future development of company. ROA reproduces control of expenses, operating decisions, selling, over buying and management of assets (Brealey, Myers, & Allen, 2006; Oliver & English, 2007; Hatten, 2008).

3.3. Independent Variables

The present study employed to analyze the relationship between WCM and profitability of Tobacco Industry of Pakistan. Therefore, components of WCM were used as independent

variables.

3.3.1. Number of days accounts receivable (AR)

It is the standard duration of time that a firm takes in acquiring money from its customers (Garcia-Teruel & Martinez-Solano, 2007).

3.3.2. Number of days accounts payable (AP)

It is the standard durations of time that a company takes to do payments to their suppliers (Garcia-Teruel & Martinez-Solano, 2007).

3.3.3. Number of days inventory (INV)

It is the standard durations of time that a company held in its stock (Garcia-Teruel & Martinez-Solano, 2007).

3.3.4. Cash conversion cycle (CCC)

Keown et al. (2002) defined that CCC which also known as cash gap is the sum of AR and INV less AP. Jose et al. (1996) indicated that CCC is the gap between money pays out for its capital and money received from its sales of goods. CCC is mostly active in nature because it brings balance sheet and income statement simultaneously to make a measure with time. A company CCC may be positive or negative. Positive result indicates duration of time that a firm should borrow or tie up capital as until payment from customers. Negative finding shows the duration of time that a firm has to get money from product sale before it should give to its sellers (Hutchinson, Farris, & Anders, 2007).

3.4. Hypotheses

A hypothesis is a plan that is practically tested. It is also an experimental statement which shows association and relationship among the variables (Zikmund, 1997). Hypotheses of present study were created on the basis of previous studies in relation between WCM and profitability.

- <H1> There is a negative relationship between the AR and profitability.
- <H2> There is a negative relationship between the INV and profitability.
- <H3> There is a negative relationship between the AP and profitability.
- <H4> There is a negative relationship between the CCC and profitability.

4. Data Analysis and Results

4.1. Descriptive Statistics Showing Mean & Standard Deviation

Table 1 showed mean and standard deviation of Tobacco Industry of Pakistan for a period of 10 years from 2003-2012.

These statistics showed that mean of ROA was 16.8% of the total assets whereas its standard deviation was 13.5%. These figures indicated profitability value for divergence from mean to both sides by 13.5%. The maximum value of ROA was 0.39 whereas the minimum value was -0.04. Table 1 further indicated that average of CCC was 122 days whereas its standard deviation was 96 days. Similarly maximum time of CCC was 318 days whereas the minimum time was 6 days. The number of days accounts receivable average was a single day whereas its standard deviation was as well a single day. The minimum time for firm to obtain its money from accounts receivable was within a single day whereas the maximum time for this purpose was 3 days. The mean of number of days accounts payable was 14 days whereas its standard deviation was 8 days. The minimum time for company to pay their suppliers was a single day whereas the maximum time for this purpose was 33 days. The average time to sell the inventory was 136 days, whereas its standard deviation was 101 days. The minimum time taken by a company was 5 days in order to sell inventory whereas the maximum time for this purpose was 329 days.

<Table 1> Descriptive Statistics showing Mean & Standard Deviation

	ROA*	AR**	INV**	AP**	CCC**
Mean	.167	1.031	135.612	14.449	122.194
Std. Deviation	.135	1.055	100.790	7.964	95.953
Minimum	-.040	.000	4.630	1.170	6.250
Maximum	.390	2.790	328.730	33.190	318.140

*. Dependent Variable
 **. Independent Variables

4.2. Correlation Analysis between WCM Components and Firms Profitability

The data was analyzed by using Pearson Correlation Analysis. The present study examined the relationship between WCM and profitability of tobacco industry of Pakistan. Thus, Pearson Correlation Analysis was applied to check the association between the component of WCM used as independent variables and profitability used as dependent variables. The result of correlation analysis was showed in table 2.

Table 2 revealed the relationship between number of days account receivable and return on assets (ROA). It also indicated that coefficient of correlation was 0.151 and its significance value was 0.525 that indicated a small positive relationship between AR and ROA, which was statistically insignificant. N represented the number of observation. Table 2 also represented correlation between the INV and ROA. The results indicated significant and negative relationship between the INV and ROA. Moreover, coefficient of correlation was -0.673** and its significant value was 0.001 that showed high significant relationship between the variables.

<Table 2> Correlation Analysis between WCM and Profitability

		ROA	AR	INV	AP	CCC
ROA	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	20				
AR	Pearson Correlation	.151	1			
	Sig. (2-tailed)	.525				
	N	20	20			
INV	Pearson Correlation	-.687**	-.017	1		
	Sig. (2-tailed)	.001	.942			
	N	20	20	20		
AP	Pearson Correlation	-.568**	-.331	.634**	1	
	Sig. (2-tailed)	.009	.155	.003		
	N	20	20	20	20	
CCC	Pearson Correlation	-.673**	.020	.698**	.579**	1
	Sig. (2-tailed)	.001	.933	.000	.007	
	N	20	20	20	20	20

**.. Correlation is significant at the 0.01 level (2-tailed).

Table 2 further indicated relationship between the number of days account payable and return on assets (ROA). It also showed significant and negative effects of AP on return on assets of tobacco industry of Pakistan. Moreover, it also indicated that coefficient of correlation was -0.568** and its significance value was 0.009 that showed highly significant result.

Finally, table 2 showed relationship between the CCC and ROA, which indicated highly significant and negative correlation between CCC and ROA. Moreover, coefficient of correlation was -0.673** and its significant value was 0.001 that showed high significant relationship between the variables.

4.3. Multiple Regressions Analysis

Pearson Correlation Analysis just shows relationship between the variables that whether it is statistically significant or not, but it doesn't identify causes from consequences. Therefore, Multiple Regression Analysis was used to examine the effects of WCM components on profitability of firm.

4.3.1. Regression Analysis: AR verses ROA

This regression analysis tested the first hypothesis of the study and hypothesis was "There is a negative relationship between the number of days accounts receivables and profitability". It used AR as independent variable and ROA as dependent variable. Results of regression analysis were presented by table 3.

<Table 3> Model Summary & Regression Coefficient

Model Summary						
R		.151 ^a				
R-Square		.023				
Adjusted-R-Square		.012				
Durbin-Watson		1.910				
F-Statistics		.420				
Regression Coefficient						
Model	UnStandardized Coefficient		Standardized Coefficient	T Value	Significance	
	Beta	Std. Error	Beta			
1	(Constant)	.148	.043		3.403	.003
	No. of days Accounts Receivable	.019	.030	.151	.648	.525
Dependent Variable: ROA Independent Variable: AR						

Table 3 showed R as a coefficient of correlation and R square as a coefficient of determination. It further revealed that R value was 0.151 which meant that there was 15% correlation existing between the AR and ROA. Similarly the R² value was 0.023 which indicated 2% of variation in return on assets due to AR. Moreover, adjusted R square also known as coefficient of multiple determinations value was 0.012. Table 3 also showed Durban Watson that is used to find out autocorrelation between the independent variables. Its value was 1.91 that was below Durban-Watson 2.00 or above, which showed no autocorrelation between the independent variables.

4.3.2. Beta and P Value

Beta value also known as coefficient of regression shows relationship between dependent and independent variables. P value shows significance level of regression coefficient. If P value is greater than 0.05 then null hypothesis is accepted, whereas if P value is less than 0.05 then the research hypothesis is accepted and null hypothesis is rejected. The significance level of model was examined through F Statistics and Profitability. Table 3 indicated that profitability value of model was greater than 0.05 and F Statistics was 0.420, which indicated that model was statistically insignificant. It also stated that regression coefficient of AR was 0.019 and coefficient of correlation was 0.151, which indicated small positive insignificant relationship between AR and ROA.

4.3.3. Regression Analysis: INV verses ROA

This regression analysis tested the second hypothesis of the study and hypothesis was "There is a negative relationship between the number of days inventory and profitability (ROA)". This regression used number of days inventory as independent variable and ROA as dependent variable. Results of regression analysis were presented by table 4.

<Table 4> Model Summary & Regression Coefficient

Model Summary						
R		.687 ^a				
R-Square		.472				
Adjusted-R-Square		.442				
Durbin-Watson		1.870				
F-Statistics		16.075				
Regression Coefficient						
Model	UnStandardized Coefficient		Standardized Coefficient	T Value	Significance	
	Beta	Std. Error	Beta			
1	(Constant)	.293	.038		7.610	.000
	No. of days Inventory	-.033	.007	-.687	-4.009	.001
Dependent Variable: ROA Independent Variable: INV						

Table 4 showed R as a coefficient of correlation and R square as a coefficient of determination. It further indicated that R value was 0.687 which meant that there was 68% correlation existing between the INV and ROA. Similarly, R² value was 0.472 which indicated 47% of variation in return on assets due to number of day's inventory. Moreover, it also showed the adjusted R square was 0.442, which showed 42% explanatory power of independent variable.

Table 4 also showed Durban Watson which was used to find out autocorrelation between the independent variables. Its value was 1.87 which was less than Durban-Watson 2.00 or above, which showed no autocorrelation between the independent variable.

4.3.4. Beta and P Value

The significance level of model was examined through F Statistics and Profitability. Table 4 showed that profitability value of the model was less than 0.01 and F Statistics for regression was 16.07, which meant that model was statistically significant. Moreover, it also indicated that regression coefficient of INV was -0.033 and its coefficient of correlation were -0.687 which indicated highly significant negative relationship between the INV and ROA. Consequently, it is concluded that a company has negatively effect on its profitability, if they take more time in selling their inventory.

4.3.5. Regression Analysis: AP verses ROA

This regression analysis tested the third hypothesis of study and the hypothesis was "There is a negative relationship between the number of day's accounts payable and profitability (ROA)". It used AP as independent variable and ROA as dependent variable. Results of regression analysis were presented by table 5.

<Table 5> Model Summary & Regression Coefficient

Model Summary						
R		.568 ^a				
R-Square		.323				
Adjusted-R-Square		.285				
Durbin-Watson		1.89				
F-Statistics		8.570				
Regression Coefficient						
Model	UnStandardized Coefficient		Standardized Coefficient	T Value	Significance	
	Beta	Std. Error	Beta			
1	(Constant)	.307	.054		5.687	.002
	No. of days Accounts Payable	-.010	.003	-.568	-2.927	.009
Dependent Variable: ROA Independent Variable: AP						

Table 5 showed R as a coefficient of correlation and R Square as a coefficient of determination. It also indicated that R value was 0.568 which meant that there was 56% correlation existing between the AP and return on assets (ROA). Further it showed that R² value was 0.323 which indicated 32% of variation in return on assets due to number of days accounts payable. Moreover it also showed the adjusted R square was 0.285 that indicated 28% explanatory power of independent variable. Table 5 also showed Durban Watson which is used to find out autocorrelation between the independent variables. Its value was 1.89 which was less than Durban-Watson 2.00 or above, which shows no autocorrelation between the independent variables.

4.3.6. Beta and P Value

The significance level of model was examined through F Statistics and Profitability. Table 5 showed that profitability value of model was less than 0.01 and F Statistics for regression was 8.57, which meant that model was statistically significant. Moreover, it also indicated regression coefficient of AP was -0.010 and its coefficient of correlation were -0.568 which revealed significant negative association between the AP and ROA. Consequently, it is concluded that a company could increase their profitability by lengthening the time period of payment.

4.3.7. Regression Analysis: CCC verses ROA

This regression analysis tested the fourth hypothesis of the study and the hypothesis was "There is a negative relationship between the CCC and profitability (ROA)". It used CCC as independent variable and ROA as dependent variable. Results of regression analysis were presented by table 6;

<Table 6> Model Summary & Regression Coefficient

Model Summary						
R		.673 ^a				
R-Square		.452				
Adjusted-R-Square		.422				
Durbin-Watson		1.90				
F-Statistics		14.876				
Regression Coefficient						
Model	UnStandardized Coefficient		Standardized Coefficient	T Value	Significance	
	Beta	Std. Error	Beta			
1	(Constant)	.284	.038		7.503	.003
	CCC	-.031	.010	-.673	-3.857	.001
Dependent Variable: ROA Independent Variable: CCC						

Table 6 showed R as a coefficient of correlation and R Square as a coefficient of determination. It revealed that R value was 0.673 which meant that there was 67% correlation existing between the CCC and ROA. It also indicated that R² value was 0.452 which showed 45% of variation in ROA due to CCC. Further, it showed adjusted R Square was 0.422 that indicated 42% explanatory power of independent variable. Table 6 also showed Durban Watson which is used to find out autocorrelation between the independent variables. Its value was 1.90 which was less than Durban-Watson 2.00 or above, which showed no autocorrelation between the independent variable.

4.3.8. Beta and P Value

The significance level of model was examined through F Statistics and Profitability. Table 6 indicated that profitability value of model was less than 0.01 and F Statistics for regression was 14.876, which meant that model was highly significant. Moreover, it also revealed regression coefficient of CCC was -0.031 and its coefficient of correlation were -0.673 which stated highly significant negative association between CCC and ROA. Consequently, it is concluded that a company can increase their profitability, if they decrease time period of CCC.

5. Conclusions and Recommendations

5.1. Conclusions

The findings of present study indicated negative relationship between WCM (measured through INV, AP and CCC) and profitability (measured through ROA) of Tobacco Industry of Pakistan for the period of 2005-2014. It is related with the previous studies i.e. Deloof (2003) and Raheman & Nasr (2007) who have also established a negative association between WCM (measured by INV, AP and CCC) and performance of

firms. Furthermore, present findings also showed a small positive relationship between AR and ROA of Tobacco Industry of Pakistan that was statistically insignificant. The findings of present study showed negative relationship between CCC and return on assets of tobacco industry of Pakistan. It means that if the time duration of CCC is longer, its profitability would be smaller. Hence, the present study recommended that managers could maximize the worth of shareholders by decreasing the time duration of CCC to a reasonable lowest stage.

The results of present study also indicated that INV has negative effects on profitability of tobacco industry of Pakistan. It revealed that by decreasing INV firms can improve the profitability. The findings further indicated that number of days accounts payable (AP) has also a negative effect on profitability, which observe that firms will have more profitability if they wait longer to pay their bills. Finally, it is also indicated that AR has small positive effects on profitability of tobacco industry of Pakistan, which was statistically insignificant.

5.2. Implications of the Study

The present study implicated that to obtain better profit for firm; managers must improve the effectiveness of WCM. Moreover, regression analysis revealed that there was a negative relationship between CCC and firm performance. Therefore, it is important for managers to seek out some better solutions to decrease the CCC as well as to increase profitability of firms.

$$CCC = AR + INV - AP$$

From above equation of CCC, it is recommended that a firm can decrease its CCC by given points;

Decreasing inventory time in which goods are held. To minimize INV, it is essential for managers to improve control process and to obtain delivery of raw materials exactly from suppliers when they are needed in production process.

Quick collection of accounts receivable is mostly based on the term and condition of operating business. Therefore managers must seek a suitable solution as by offering discounts to customers who pay earlier and by charging interest on accounts that pay late.

Slow payment of bills. In order to paying bills more slowly, managers need to build effective cash management that not only concerns with quick collection of cash and receivables but also focus to slowing payment of cash to the suppliers.

5.3. Recommendations

This study has the following recommendations; This study recommended that managers could make worth for shareholders by decreasing INV, CCC and increasing AP. It is recommended that managers should give more consideration to the entire phases of WCM components, particularly the inventory period, collection period and payable period. Because proper management of inventory, payables and receivables can

increase the firm performance. It is recommended that managers should create policies for the entire parts of WCM which include inventory, collection and payment policies. It is recommended that managers should compare performance of WC with competitors and other firms in order to get the target for development. It is recommended that management of WC components should be in cooperation. It means that components of WC should be in reasonable balance with each other. It is recommended that firm WCM must be corresponding by one responsible person.

5.4. Limitations of the Study

This study has the following limitations; The present study could not cover the overall components of WCM, but is limited only to the specific components. The time period for this study is short compared to some of previous findings on the association between WC Mand profitability, e.g. Deloof (2003) and Shin & Soenen (1998). The study is based on secondary data obtained from the Tobacco Industry of Pakistan, therefore quality of the study depends purely on accurateness, consistency and excellence of secondary data. Estimation and measures with regard to the origin of data might influence results.

The recommendations for future research are as follow; Researchers should take all sectors of the economy rather than random selection, because WC is vary across the industries. It suggested for researchers that each component of WC should be paid attention individually for its position in the firm, industry and economy. This attempt would produce formulation of some sort of theory. The scope of future research may be extended to the other components of WCM which is not covered in this study.

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