# Cash Conversion Cycle and its Impact upon Firm Performance: an Evidence from Cement Industry of Pakistan

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**Abstract**
**Purpose:** The basic objective of this study is to examine the relationship between cash conversion cycle (CCC) and performance of cement industry of Pakistan.
**Design/methodology/approach:** The study used the sample of 16 firms selected from cement industry of Pakistan for the period of six years from 2007 to 2012. The correlation and regression analysis are used to examine the relationship between cash conversion cycle (CCC) and firm's performance i.e. return on assets (ROA).
**Findings:** In order to find out the relationship between cash conversion cycle (CCC) and firm's performance the current study examines the impact of different component variables of cash conversion cycle (CCC) which includes receivables collection period (RCP), inventory conversion period (ICP) and payables deferral period (PDP). The findings of the study shows negative relationship between firms cash conversion cycle and profitability.
**Originality/value:** Most of the studies on management of current assets and current liabilities are with reference to developed economy but fewer are with reference to developing economies like Pakistan. In this study we used cash conversion cycle as measure of current assets and current liability and contribute to the literature by analyzing the impact of cash conversion cycle on firm's performance and validating the findings of previous studies.
**Research Limitation:** The sample of the study is based on cement industry of Pakistan, so the results of the current study cannot be generalized to the other manufacturing industries. The current study used only cash conversion cycle as a liquidity measures and ignoring the traditional measures for testing of liquidity position.

**Keywords:** Conversion cycle (CCC), Return on assets (ROA), Cement industry, Performance

**Paper Type:** Research Paper

## Introduction

In contemporary global and competitive environment, the sustainability remains dependable on the ability and success of financial management function. In the financial market it became a challenge for a financial manager that how to respond the dynamics of financial markets (Padachi, 2006). The survival of a firm not only depends on how one can efficiently and effectively pursue for its financing and investing opportunities in national and international financial markets' but also how one is managing the financial and operational affairs of the firm.

The long run survival can only be possible through efficient management of cash conversion cycle including receivable collection period, inventory conversion period and payable deferral period (Weinraub & Visscher, 1998). The efficient use of funds along with efficient operations management is the critical area of financial affairs of a firm.

According to Jose and Stevens (1996) cash conversion is a comprehensive measure related with the management of account receivables, management of inventory as well as the management of account payables. The importance of the management of current assets and short term liabilities cannot be ignored in any organization. Researchers all over the world discuss this issue in detail in the perspective of different economies. As far as dev eloping countries are concerned, management of current assets i.e. inventories and account receivables and management of short term liabilities are considered as a life blood for organization.

The cash conversion cycle is a result of time taken by the firm for their collection from receivables and time required to convert raw material into finished goods after subtracting the time taken by the firm to pay its current obligation (Deloof, 2003; Lazaridis & Tryfonidis, 2006). The sum of inventory conversion time and the time required to collect amount from customers define the firms operating cycle (Uyar, 2009). The concept of operating cycle become deficient due to ignoring the time dimension of current liability commitments which is useful for cash flow measurement and liquidity requirement of the firm (Richards & Laughlin, 1980).

Cash conversion cycle is a comprehensive performance measure used for reviewing the ability of companies in managing their capital. Cash conversion cycle indicate the efficiency of management of current assets. Shorter the time of cash conversion allows the firms to generate more sales from the amount invested, which shows that business utilized their resources for generating maximum profit (Moss & Stine, 1993).

Cash conversion cycle for a manufacturing company can be defined as a function of [days of accounts receivable + days of inventory – days of accounts payable] (Deloof, 2003; Lazaridis & Tryfonidis, 2006). The receivable collection period measures the average number of days from the sale of goods on credit to collection from account receivables. It is calculated as [(account receivables/sales) *365]. The inventory conversion period contain the time required for the conversion of raw material into finished goods. It is calculated as [(inventory/cost of goods sold*365]. The payable deferral period is the average time needed to purchase goods on credit and final payment for them. It is calculated as [(account payable/cost of goods sold) *365].

The length of cash conversion cycle is used to measure the impact of accounts receivable, inventories and payments to supplier on the firm's profitability, cash conversion cycle assist in measuring the performance and current assets management of the firm's (Uyar, 2009). Firms experiencing a shorter time span of cash conversion cycle will be able to increase the profitability by managing its credit policy and increasing its inventory levels, while firms having a relatively large length of cash conversion cycles should focus on

reducing the investment in the components of working capital. No doubt that larger cash conversion cycle damage the profitability as well as the future prosperity of any organization (Shin & Soenen, 1998).

Moss and Stine (1993) asserted that the analysis of cash conversion cycle give more explicit insights for efficient management of firm's short term assets and liabilities that will assure about the proper level of liquidity needs. In general, current assets are the important component of the firm total assets. Investment in fixed assets can be reduce through renting or leasing, whereas the current assets cannot be finance through renting or leasing policies. The higher level of investment in current assets may increase the liquidity position, but on the other hand connected with the opportunity cost of funds (Howorth & Westhead, 2003). Thus, management of current assets especially account receivable and inventories require reduction of unnecessary fund investment in order to reduce the cost of financing. In this study an attempt is made to look into the efficient management of account receivable, inventories and account payable using cash conversion cycle of cement industry of Pakistan.

Cement industry of Pakistan plays a vital role in socio-economic development and considered as extremely important segment of industrial sector. The development and growth of cement industry is rightly considered as a sign for economic activity. In 1947 at the time of independence, Pakistan had only 4 cement plants. On the other hand, in the year 2013, 24 firms were operating in cement sector of Pakistan.

Developing economies like Pakistan are generally faced with a problem of ineffective utilization of resources (Afza & Nazir, 2008). Capital is to be considering the scarcest of productive resources in such emerging economies. Productive system can be promoted through proper utilization of available resources which increase the growth rate as well as improve the productive system. Investors put their resources in a business for getting some positive return which depends upon the efficient management policies. Current study, generally, is focusing on how to a firm can efficiency and affectivity use its short term funds that may result in high surplus or revenues or performance and particularly liquidity in receivables, inventories and payables, which constitutes a cycle "liquidity cycle" or cash conversion cycle.

**Literature Review**

In order to find out the relationship between profitability and cash conversion cycle Shin and Soenen (1998) analyzed the data of some American firms for the period of 1975 to 1994. The findings of their study show that profitability and cash conversion cycle are inversely related with each other. Due to strong negative relationship between these two variables profitability can be enhanced by reducing the period of cash conversion cycle. Furthermore, the study conducted by Jose and Lancaster (1996) on 2,718 US firms over the period 1974 to 1993 shows the negative relationship between account receivable, inventory and return on assets.

In addition to that Lazaridis and Tryfonidis (2006) conducted study on 131 listed companies of Athens Stock Exchange for the period 2001- 2004 and also find a negative relationship between cash conversion cycle and profitability. Similarly, the study of Garicia and Solano, 2007 shows negative relationship between cash conversion cycle and profitability of the firms operated in Spain.

The study of Deloff (2003) in the context of Belgian firms reveals that cash conversion cycle and its components average collection period in days, inventory conversion period in

days and payable deferral period in days have inverse relationship with profitability of Belgian firms for the period of 1992 to 1996.

In the context of developing economies the study of Zariyawati (2009) on Malaysian firms during the period 1996 to 2006 reveals that there is a negative relationship between profitability and cash conversion cycle. On the other hand, Dong and Su (2010) also reported the same relationship between profitability and cash conversion cycle for the period 2006-2008 for the form listed in Vietnam Stock market.

In Pakistan, the study of Rehman and Nasir (2007) find out the result of 94 listed companies on Karachi Stock Exchange for 1999 to 2004 to investigate the trend of Pakistani firms' practices of current assets and current liability, including account receivable, inventory, account payable and their relation with performance of that company. In his study they were used cash conversion cycle, components of cash conversion cycle, current ratio, net operating profit and the size of the company as variables. Regression and Pearson's correlation result showed a negative relationship between the components of cash conversion cycle and the firm's profitability of 94 selected companies. According to the findings of study it is clear that financial manager increased shareholder wealth by reducing the period of cash conversion cycle length. Another study was conducted in Malaysia by Rahim and Anwar which certify the findings of Rehman and Nasr.

Karaduman, Akbas, Caliskan, and Durer, (2011) suggested the management for the account receivable, inventory and account payables is to be considered the most important decision for financial manager because of their impact on the firm's value and overall profitability of the firm.The findings of the study concluded that the profitability of the firms may be improved by reducing the time period for cash conversion cycle.

Teruel and Solano (2007) conducted a study on current assets and current liability including the issues for account receivable, inventory and account payables of 8872 firms of Spain for the period of 1996 to 2002. They used ROA as a measure of firms profitability and average collection period, inventory conversion period, payable deferral period and cash conversion cycle as independent and firm size, sales growth as a control variables. The result of the study revealed inverse relationship between the Spanish firms' profitability and average collection period, inventory conversion period. It means that larger will be the collection and inventory conversion period lesser will be the firms profitability. He also suggested that shorter cash conversion cycle enhanced the profitability of the firms.

Profitability of the firm is negatively related with cash conversion cycle (Padachi, 2006). According to the findings of Gill, Biger and Matur (2010) profitability of the firms correlated with collection of accounts receivables, slow collection of accounts receivables related with low profitability. The result indicates negative relationship between account receivable and profitability. The finding indicates that slow collection of account receivables correlated with low profitability. Managers can create value by reducing their inventories and the number of days for which their accounts are outstanding (Teruel & Solano, 2007).

Manufacturing firms had higher level of liquidity due to higher level of accounts receivable and inventories (Soenen, 1993). Cash conversion cycle and its components determine the efficient level of account receivable and inventory; and manager can improve the firm profitability by managing the period covered by the cash conversion cycle, it can be achieved by keeping optimal level for each of the components of cash conversion cycle (Dong & Su, 2010). The result of correlation and regression analysis

shows strong inverse association among the amount investing in account receivable, inventory and the firm's performance (Shin & Soenen, 1998).

Receivable collection period affect the firm's cash conversion cycle in a positive manner, higher time of collection period will increase the length of cash conversion cycle (Teruel & Solano, 2007). The receivable collection period represents the length (in days) of period consumed to collect the credit sales proceed (Moss & Stine, 1993). The average collection period or receivables collection period correspond to the average time in days for which business has to wait before its receivables are converted into cash. The inventory conversion period is a result of the time taken by the firm to convert his inventory into sale of finished goods; inventory conversion period has a major impact on the length of cash conversion cycle. Consistent with the studies such as Raheman and Nasr (2007) and Deloof (2003) the inventory conversion period information was used for making firms inventory policy.

The length of payable deferral period plays an important role in the formation of cash conversion cycle. Higher payment period will reduce the firms cash conversion and lower payment period will expand the firms cash conversion cycle (Lazaridis & Tryfonidis, 2006).The extent (in days) of time the company is able to defer its payments on its variety of supply purchases is called payable deferral period (Moss & Stine, 1993). Speeding up collection and slowing down payments are the basic principle of effective management of account receivable and payables, this principle of working capital concern with the concept introduced by Hong (2008) i.e. cash conversion cycle, give more explicit insights for efficient management of firm's short term assets and liabilities that will assure about the proper level of liquidity needs.

Cash Conversion Cycle measure the levels of current assets and current liability of the firms (Uyar, 2009). Cash conversion cycle is a result of receivable collection period, inventory conversion period and payable deferral period (Dong & Su, 2010). Components of cash conversion cycle such as collection of account receivable and average inventory period negatively impact the firms' profitability (Teruel & Solano, 2007). According to the findings of Gill, Biger and Matur (2010) profitability of the firms correlated with collection of accounts receivables. Inventory conversion period has a major impact on the length of cash conversion cycle. Consistent with the studies such as Raheman and Nasr (2007); Teruel and Solano (2007); and Deloof (2003) the information about inventory conversion period was used for making firms inventory policy (Lazaridis & Tryfonidis, 2006).

The empirical studies that examine the association between the firms' profitability and liquidity showed a significant and negative relation between profitability and the length of cash conversion cycle (Eljelly, 2004; Jose, 1996;). Another research conducted over 22,000 public companies indicated a negative relation between cash conversion cycle and profitability for more than 75% of the companies (Hutchison, 2007).

The shorter period of cash conversion cycle associated with high return on assets because it improves the efficiency of account receivables, inventories and account payables. A shorter period of cash conversion cycle is a result of quickly processes of inventory, conversion of receivable into cash and slows down cash payments to account payables, which improve the profitability of the firm (Gentry, 1990).

Cash conversion cycle is negatively related to return on asset and return on equity. There is no significant difference in the cash conversion cycle on the basis of period, but it differs on the basis of sector and firm size (Peel & Wilson, 1996). Business success heavily depends on the effective management of receivables, inventory, and payables (Filbeck & Krueger, 2005).

Many researchers from time to time have tried to explain the components of cash conversion cycle, whereas Deloof (2003) suggested that number of days accounts receivable, accounts payable and inventories are the major components of cash conversion cycle and the cash conversion cycle as a comprehensive measure of current assets and current liability. Vishnani and Shah (2007) examined the impact of current assets and current liabilities on Indian electronic industry performance. The finding of the study confirmed negative relation between receivables collection period with firm performance while the payable deferral period has positive relation with firm performance.

Gill (2011) measure the impact of firm size and requirement of current assets and current liabilities on firm performance in Canada. The result shows that efficient management of receivables, inventories and payables create the higher profits.

Samiloglu and Demirgunes (2008) used a sample of selected listed manufacturing firms of Istanbul stock exchange for the period of 1998 to 2007. The results of the study show negative relations between receivable collection periods, inventory conversion period with firm's profitability.

A study based on 75 manufacturing firms listed on Istanbul stock exchange for the period 2002-2009 indicate negative relationship between cash conversion cycle and firm performance (Vural, Sokmen & Cetenak, 2012).

Mathuva (2009) investigate the relationship between cash conversion cycle and its components with firms profitability of 30 Kenyan listed firms covering the period from 1993-2008, finds a significantly inverse relationship between receivable collection period and profitability. Falope and Ajilore (2009) found negative relationship between firm's profitability and cash conversion cycle which is used as a measure of liquidity of non-financial Nigerian firms for the period 1996-2005.

**Methodology**
The population of this study was based on cement manufacturing units operating in Pakistan. The data was analyzed for the period of 2007-2012. The data was collected from the members firms of APCMA (All Pakistan cement manufacturers association), some firms with missing data are excluded. For the purpose of the study data was obtained from the income statements and balance sheets, which include sales, cost of goods sold, receivables, inventory, payables, total assets and net profit. These data are used to calculate return on assets, the receivable collection period, the inventory conversion period, the payable deferral period and the cash conversion cycle.

As already discussed in the literature cash conversion cycle for a manufacturing firms can be calculated as a function of [days of accounts receivable + days of inventory – days of accounts payable] (Deloof. 2003; Lazaridis & Tryfonidis, 2006). In this study we hypothesize that shorter period of cash conversion cycle improves the financial performance of the firms.

In order to investigate the relationship between cash conversion cycle and firms profitability we use the following regression.

$$ROA_{it} = \alpha_o - \alpha_1 CCC_{it} + \alpha_2 Size_{it} + \alpha_3 Lev_{it} + \alpha_4 Sgrow_{it} + u_{it}$$

Return on assets (ROA) used as proxy as dependent variable for profitability and cash conversion cycle (CCC) as independent variable. For the purposes of data analysis three statistical procedures are used, descriptive statistics, correlation coefficients and multiple regressions. Descriptive statistics are used to determine mean and standard deviation for

each variable. In this study correlation coefficients are used to determine the strength of association between two variables.

**Discussion and Analysis**

Table 1, 2, and 3 shows the results of cash conversion cycle, receivable collection period, inventory conversion period, payable deferral period, return on assets and other control variables for cement industry of Pakistan. For the purpose of data analysis three statistical procedures are used in the study, including descriptive statistics, multiple regressions and Pearson correlation coefficients. Descriptive statistics check variables for normality distribution and also use to find out the mean and standard deviation of each variable. The Pearson correlation helps us to determine the association between dependent and independent variables. A multiple regression analysis includes independent variable and measures the single variable result in order to determine the effect of individual independent variable on model.

The descriptive statistics for collective variables are presented in table 1. According to the descriptive statistics the companies average period of credit granted to the customers is 15 days (maximum value 172) while the companies takes an average period of 31 days to paid the creditors (maximum value 97). Companies take an average period of 29 days to convert the inventory into sales (maximum value 159). The average value of return on assets is .0291 having a maximum value .40 and minimum value -.23 which is due to the net loss of some of the selected companies used for the study. Overall the average period of cash conversion cycle is 23 days (maximum value 163).

Table 1: Descriptive Statistics

| Variables | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|
| RCP | 96 | .10 | 172.70 | 14.6581 | 31.68240 |
| ICP | 96 | 4.28 | 159.20 | 29.2019 | 23.13090 |
| PDP | 96 | .34 | 97.50 | 30.9852 | 23.59243 |
| CCC | 96 | .05 | 163.22 | 23.6184 | 32.17697 |
| ROA | 96 | -.23 | .40 | .0291 | .10266 |
| Valid N (listwise) | 96 | | | | |

The relationship between firm's profitability of cement industry and cash conversion cycle and its component variables was investigated using Pearson correlation coefficient. The correlation coefficient -.351, -.237, -.218 and -.307 showing negative relation between return on assets and receivable collection period, inventory conversion period, payable deferral period and cash conversion cycle respectively.

The return on assets which are used as dependent variable has significant negative relation with receivable conversion period, inventory conversion period, and Payable deferral period and cash conversion cycle, which means that negative change in receivable collection period, inventory conversion period, payable deferral period, cash conversion cycle, cause to negative change in return on assets.

Result also shows a negative relation between return on assets and cash conversion cycle of firms operating in cement sector of Pakistan. Which means that shorter will be the period of cash conversion cycle more will be the firm's profitability. The results are

consistent with the study conducted by (Karaduman; Uyar, 2009). Firms operating efficiency largely concern with reducing the time of Cash conversion cycle (Moss & Stine, 1993).

Table 2

| Variables | RCP | ICP | PDP | CCC | ROA |
|---|---|---|---|---|---|
| RCP | 1 | | | | |
| ICP | .161 | 1 | | | |
| PDP | .173 | .848** | 1 | | |
| CCC | .687** | .620** | .502** | 1 | |
| ROA | -.351** | -.237* | -.218* | -.307** | 1 |

*\*\*.Correlation is significant at the 0.01 level (2-tailed)*
*\*.Correlation is significant at the 0.05 level (2-tailed)*

Cash conversion cycle has a negative relation with the performance of the firm's operating in cement industry of Pakistan as measured by return on assets. The findings are similar with the findings of the previous studies conducted by Karaduman (2011), Zariyawati (2009) and Dong and Su (2010). Regression model is used to test the hypothesis i.e. cash conversion cycle of cement industry of Pakistan has a negative relation with firms profitability which is measure through return on assets. In regression model cash conversion cycle is used as independent variable and return on assets as a dependent variable.

Table 3: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .383 | .147 | .116 | 1.9397101 | .147 | 4.695 | 4 | 109 | .002 | 1.160 |

a. Predictors: (Constant),**GROWTH,CCC,DEBT,SIZE**
b. Dependent Variable: **ROA**

R and $R^2$ given in the above model summery table are coefficient of correlation and coefficient of determination respectively. The value of R shown in the above model summery table suggested that 0.383 or 38% correlation exists between dependent (return on asset) variable and independent (constant, size, leverage, growth, cash conversion cycle) variables and the value of $R^2$ is 0.147 or 15% which shows that 15% variation in return on assets is cause of constant, size, leverage, growth and cash conversion cycle. In simple we can say that $R^2$ shows 15% explanatory power of independent variables. The

value of adjusted R-square which is 0.116 or 12% also shows the explanatory power of these variables in determining the return on assets after taking residual and error term. The value of Durban Watson is used to find out the autocorrelation between the independent variable used in the model. There is no autocorrelation exists in the regression four as the value of Durban Watson is "1.160", because Durban Watson computed < Durban Watson 2.00 or above.

## Conclusion

The findings of researchers regarding effects of cash conversion cycle on firm's performance are different. Some of the findings concluded that the management of current assets and current liabilities has effect on the organization's performance. While some researchers concluded that it does not lead to enhance the organization's performance. But recently new problem was raised worldwide in the field of financial management with the concept of current assets management and its effect on the business performance. Now a day's researcher emphasis on management of current assets and current liabilities for getting maximum output for improving the performance of the firm in this competitive world. According to the researcher point of view and findings cash conversion cycle is a comprehensive and effective measure for the assessment of liquidity, which is the management of companies' current assets and current liabilities.

Receivable collection period are used to indicate the efficiency of a firms that how quickly they convert their outstanding receivables into cash. The results of the study show that receivable collection period has a negative relation with return on assets. It means that firm's profitability can be increased by reducing the time granted to the customers for credit sales of goods.

Inventory conversion period which is used as measure for the efficiency that how quickly the material converted into saleable products. The results of the companies operating in cement industry of Pakistan confirm significant negative relation with return on assets. It is concluded that if the firm is able to hold the inventory for shorter period or reduce the inventory conversion period can improve the profitability by speeding up the production process.

The result of the study shows that profitability of the companies operated in cement industry influenced by the length of cash conversion cycle. On the basis of negative correlation between cash conversion cycle and return on assets it is concluded that higher length of cash conversion cycle reduces the firms' profitability and smaller length of cash conversion cycle enhance the firms' profitability. The findings of the study are similar to the previous researches conducted by Dong and Su (2010); Garcia and Solano (2007); Lazaridis and Tryfonidis, (2006) and Zariyawati (2009). These findings suggest that efficient management of current assets and current liabilities as measured by cash conversion cycle can positively increase the profitability of the firm's.

## References

Afza, T. & Nazir, S. M. (2008), "Working capital approaches and firm's returns in Pakistan", *Pakistan Journal of Commerce and Social Sciences,* Vol.1 No.1, pp. 25-36.

Deloof, M. (2003), "Does working capital management affect profitability of Belgian firms", *Journal of business Finance and Accounting,* Vol. 30 No. 3&4, pp. 573-587.

Dong, H. P. & Su, J. T. (2010), "The relationship between working capital management and profitability: a Vietnam case", *International Research Journal of Finance and Economics,* Vol. 49, pp. 59-67.

Eljelly, A. M. A. (2004), "Liquidity profitability trade off: an empirical investigation in an emerging market", International *Journal of Commerce and Management*, Vol. 14 No. 2, pp. 48-61.

Filbeck, G. & Krueger, T. (2005), "Industry related differences in working capital management", *Mid-American Journal of Business,* Vol 20 No.2, pp. 11-18.

Falope, O. & Ajilore, O. (2009), "Working capital management and corporate profitability: evidence from panel data analysis of selected quoted companies in Nigeria", *Research Journal of Business Management,* Vol. 3 No. 3, pp. 73-84.

Gentry, J. A. Vaidyanathan, L. R. & Wai, H. (1990), "A weighted cash conversion cycle", *Financial Management,* Vol. 19No. 1, pp. 90-99.

Garcı́a-Teruel, J. P. & Martı́nez-Solano, P. (2007), "Effects of working capital management on SME profitability", *International Journal of Managerial Finance,* Vol.3 No.2, pp. 164-177.

Gill, A. Biger, N. & Matur, N. (2010), "The relationship between working capital management and profitability: evidence from the United States", *Business and Economics Journal, (http://astonjournals.com/bej*), pp. 1-9.

Gill, A. (2011), "Factors that influence working capital requirement in Canada", *Economics and Finance Review,* Vol. 1 No. 3, pp. 30-40.

Hong-Mei, C. (2008), "Establish credit system in enterprises to strengthen the management of accounts receivable", *Management Science and Engineering, Vol. 2 No. 1, pp.* 97-100.

Hutchison, P. D. Farnis, M. T. & Anders, S. B. (2007), "Cash to cash analysis and management", *The CPA Journal,* Vol. 77 No. 8, pp. 42-47.

Howorth, C. & Westhead, P. (2003), "The focus of working capital management in UK small firms", *Management Accounting Research,* Vol. 14 No. 2, pp. 94-111.

Jose, M. L. Lancaster, C. & Stevens, J. L. (1996), "Corporate returns and cash conversion cycles", *Journal of Economics and Finance,* Vol. 20 No. 1, pp. 33-46.

Karaduman, H. A. Akbas, H. E. Caliskan, A. O. & Durer, S. (2011), "The relationship between working capital management and profitability: evidence from an emerging market", *International Research Journal of Finance and Economics,* Vol. 62 No.6, pp. 61-67.

Lazaridis, & Tryfonidiens. (2006), "Relationship between working capital management and profitability of listed companies in the Athens stock exchange", *Journal of Financial Management and Analysis,* Vol. 19 No.1, pp. 26-35.

Moss, J. D. & Stine, B. (1993), "Cash conversion cycle and firm size: a study of retail firms", *Managerial Finance,* Vol. 19 No. 8, pp. 25-34.

Mathuva, D. M. (2009), "The influence of working capital management components on corporate profitability: a survey on Kenyan listed firms", *Research Journal of Business Management,* Vol. 3 No. 1, pp. 1-11.

Peel, M. J. & Wilson, N. (1996), "Working capital and financial management practices in the small firm sector", *International Small Business Journal,* Vol. 14 No. 2, pp. 52-68.

Padachi, k. (2006), "Trends in working capital management and its impact on firm's performance: an analysis of Mauritian small manufacturing firms", *International Review of Business Research Papers,* Vol. 2 No. 2, pp. 45 -58.

Rehman, A. & Nasr, M. (2007), "Working capital management and profitability – case of Pakistani firms", *International Review of Business Research Papers,* Vol. 3 No.1, pp. 279-300.

Richards, V. D. & Laughlin, E. J. (1980), A cash conversion cycle approach to liquidity analysis. *Financial Management*, pp. 32-38.

Shin, H. H. & Soenen, L. (1998), "Efficiency of working capital management and corporate strategy", *Financial Practice and Education, Fall-Winter,* Vol. 8 No. 3, pp. 37-45.

Soenen, L. A. (1993), "Cash conversion cycle and corporate profitability", *Journal of Cash Management,* Vol. 13 No. 4, pp. 53-58.

Samiloglu, F. & Demirgunes, K. (2008), "The effect of working capital management on firm profitability: evidence from Turkey", *International Journal of Economics and Finance,* Vol. 2 No. 1, pp. 44-50.

Uyar, A. (2009), "The relationship of cash conversion cycle with firm size and profitability an empirical investigation in Turkey", *International Research Journal of Finance and Economics,* Vol. 24 No. 1, pp. 186-193.

Vishnani, S. & Shah, B. (2007), "Impact of working capital management policies on corporate performance an empirical study", *Global Business Review,* No.8, pp. 267-281.

Vural, G. Sokmen, G. A. & Cetenak, H. E. (2012), "Affects of working capital management on firm's performance: evidence from Turkey", *International Journal of Economics and Financial Issues,* Vol. 2 No. 4, pp. 488-495.

Weinraub, H. J. & Visscher, S. (1998), "Industry practice relating to aggressive conservative working capital policies", *Journal of Financial and Strategic Decision,* Vol. 11 No. 2, pp. 11-18.

Zariyawati M. A. Annuar, M. N. & Abdul Rahim A. S. (2009), "Effect of working capital management on profitability of firms in Malaysia", *Journal of Modern Accounting and Auditing,* Vol. 5 No. 11, pp. 47-54.

**To cite this article:**

Yasir, M. Majid, A., & Yousaf, Z. (2014). Cash Conversion Cycle and its Impact upon Firm Performance: an Evidence from Cement Industry of Pakistan. *Global Business and Management Research: An International Journal*, 6(2), 139-149.