

**The Moderating Role of Corporate Governance on the Relationship between Working Capital Management and Firm Performance: An Empirical study on Emerging Economy of Pakistan**

Muhammad Aslam<sup>1</sup>, Rana Tanveer Hussain<sup>2</sup>, Muhammad Asif<sup>3</sup>

<sup>1</sup> School of Commerce and Accountancy Minhaj University Lahore, Pakistan

E.mail: [aslam.sca@mul.edu.pk](mailto:aslam.sca@mul.edu.pk)

<sup>2</sup> School of Business and Management Science Minhaj University Lahore, Pakistan

E.mail: [ranatanveerh@mul.edu.pk](mailto:ranatanveerh@mul.edu.pk)

<sup>3</sup> Inland Revenue Service Academy, Federal Board of Revenue, Lahore, Pakistan, E.mail:

[asifch.76@gmail.com](mailto:asifch.76@gmail.com)

**Abstract**

The study aims to identify the link between working capital management and firms' financial performance using corporate governance as an interacting factor. Cement sector of Pakistan is selected for the study where fifteen cement companies are sampled for study, listed in Pakistan Stock Exchange. The secondary figures are collected from annual reports, data portal of Pakistan stock exchange and the state bank of Pakistan analysis for the period of 10 years from 2006 to 2015. Net profit margin is used as a proxy of financial performance treating as dependent variable. Cash conversion cycle has been used as proxy for working capital management which was treated as independent variables. Corporate governance index was operationalized as moderating variable, while sales & debt to assets ratio were used as control variables. Ordinary least square, including both fixed & random effects regression models were applied to investigate the connection between dependent, independent and moderating variables. The Hausman test was also used to verify which effect was good fit to our research model, and as per Hausman test results for fixed effects regression was more reliable for this model of study. The results show that working capital management has a negative but significant relation with net profit margin. Corporate governance has a negative but insignificant relation with net profit margin. Interaction of working capital and governance has positive but significant relations with net profit margin of listed cement corporations in Pakistan which supports our hypothesis that the moderation of corporate governance positively and significantly effects the connection of working capital management and firm's financial performance.

**Keywords:** Net Profit Margin, Working Capital Management, Corporate Governance Index, Moderation Variables.

**Introduction**

This study empirically examines the moderating impact of corporate governance components on the relationship of working capital management and financial performance of listed cement companies in Pakistan stock exchange for the period from 2006 to 2015. Working capital management is referred to as debt utilization of firm's current assets and current liabilities, which is a key job of daily basis management accounting practices and needs wakeful musing.

Management of a firm's current assets and current liabilities is immensely pertinent for attaining the goals of the organization. Short term liquidity belongs to working capital management are

uncomplicated to originate, it is a practical issue that how it belongs to performance of the firm. Every organization irrespective of its size, business nature and business objectives require enough working capital for its operations so that its operations can be done efficiently and effectively and for this, efficient working capital management is needed. Efficient working capital management is very important for industries, especially for manufacturing industry where a huge part of total assets consist of current assets. It represents the liquidity and performance of the firms. Working capital is the most significant element of the firm's performance so that it is considered as the life blood for firms. Higher level of working capital is not beneficial as well as lower level of working capital is not an ideal planning. An ideal level of working capital consists of higher profits in terms of net profit margin, return on assets and return on equity. For firm's survival and for the purpose of maintaining liquidity, profitability and solvency working capital is fundamental. If the liquid assets of the firm are higher, then there are lower chances for the firm to getting out of cash. All the working capital elements which include accounts receivable, accounts payable, inventory and cash play an important role in the firm's performance and also play a crucial role in the maximization of shareholder's wealth which is the main goal of every business firm. cash conversion cycle is considered a basic and major determinant for the performance of working capital. Cash conversion cycle deals with the firm's net working capital management, because working capital management deals with the management of account receivables, inventory management, and the management for use of trade credit. There are many studies have been conducted which highlight the current assets and current liabilities of the firm which include receivables, payables and inventories. Achchuthan & Kajanathan (2013) emphasize that to ensure the efficiency of working capital management is the responsibility of firms so as to ensure a tradeoff among liquidity and profitability for prevention of bankruptcy. According to this view working capital management is viewed as the most important function of corporate governance. Firms should focus to achieve the best level of efficiency of working capital management through corporate governance practices because working capital management is most important factor for maintaining solvency, liquidity and profitability of firms.

Corporate governance is the set of policies, people, laws, regulations and reporting of corporate business entities. Cadbury (1999) stated that "Corporate governance is linked with carrying the stability among financial and social objectives and among personal and public objectives the goal is to bring into line as practically as likely the curiosity of persons, companies and humanity." The corporate governance practices state the allocation of rights and duties between the distinctive members of the company like shareholders, managers, board and other stakeholders and puts the processes and systems for decision making. Effective corporate governance is a basic key for economic development.

Corporate governance has immense contribution in economic development and economic growth of nations due to this it has become topical issue. Many well performing companies have failed because of absence of good corporate governance. Many literatures stated that good corporate governance has a positive and significant impact on the financial performance of the companies OECD (2009). Corporate governance practices play a major role in economic stability at both micro and macro levels as these practices provide appropriate environment for economic growth, economic development and for the welfare of the society, due to this the major focus of international institutions is on the issues at micro as well as macro levels, because the importance of corporate governance practices is at both corporate and country levels. Corporate governance provides the path for determining the goals and objects of firm and provides the means for attaining these goals and objectives.

A. Shleifer & R. Vishny (1997) defined the concept of corporate governance as "dealing with the

ways in which suppliers of finance to corporations assures themselves of getting a return on their investment”. Good corporate governance increases investor assurance and good will, ensure transparency, responsibility, accountability and fairness. Gompers, Ishii, & Metrick (2003) stated that good corporate governance increases the profitability and value of firms. Claessens, Djankov, & Fan(2002) described that good corporate governance is beneficial for firms because it provides greater financing, give the better performance, decreases the cost of capital which all is favorable for stakeholders. Donaldson (2003) stated that good corporate governance is very much important for increasing the market liquidity and confidence of investor. According to Frost, Gordon, & Hayes (2002) “improvements in corporate governance practices contribute to better disclosures in business reporting in turn can facilitate grater market liquidity and capital formation in emerging markets”.

The intention of this research is to study the effect of working capital management on firm performance with the moderating role of corporate governance. This research will highlight the impact of corporate governance practices and working capital management on the performance of Cement sector in Pakistan which will help of these industries to implement the good corporate governance practices for the improvement of working capital management and for enhancing the performance of these industries in terms of Net Profit Margin.

### **Literature review**

Hailu & Venkateswarlu (2016) empirically proved the impact of working capital management on firm’s profitability: evidence from manufacturing companies in eastern Ethiopia. They proved that there is significant negative relationship of ARD and CCC on ROA while INV has positive relationship with ROA and AP has insignificant negative relationship with ROA. Niresh (2012) examined the working capital management and financial performance of manufacturing sector in Sri Lanka. Performance is measured in terms of return on assets and return on equity while working capital is measured in terms of cash conversion cycle, current assets to total assets and current liabilities to total assets. He found that cash conversion cycle and performance has no significant relation relationship.

Bhatia & Srivastava (2016) found the impact of working capital management on performance emerging markets in India. The results represent negative relationship between working capital management and firm’s performance. Konak & Güner (2016) empirically found the impact of working capital management on firm performance of SMEs. The study represents that there is a negative relationship between net margins and short term debt turnover days and cash conversion cycle. MuhammadSabo, Rabi, K/Wambai, Bello & Ahmad (2015) examined the effect of working capital management on profitability in Nigerian Food product firms. They found that Average collection period, current ratio, and size of the firm are positively related with profitability while inventory turnover and average payment period have negative relation with profitability.

Shin & Soenne (1998) tests the relationship of working capital management and firm performance on sample of firms listed in New York stock exchange. The results show that there is a significant negative relationship between cash conversion cycle and firm’s profitability.

Padachi (2006) Measures how working capital management affects firm’s performance on small manufacturing firms. The results show that higher investment in inventories and receivables lower the profitability and there is a negative relationship between cash conversion cycle and firm’s profitability. This paper is very helpful for managers while taking decisions on working capital management.

Eljelly (2004)Measures the relationship of firm’s profitability and liquidity while working capital is considered as indication of firm liquidity. The study was conducted on a sample 929 joint stock companies listed in Saudi Arabia. Current ratio and cash conversion cycle is used for liquidity. The study shows there is significant and negative relationship between profitability and

liquidity which is measured by current ratio and significant positive relationship between profitability and liquidity measured by cash conversion cycle. Autukaite & Molay (2011) Examined that cash management as an important part of working capital management. They find out the relationship between cash holding, working capital and firm's value separately. French listed has taken as a sample of study. The relationship of working capital management and cash holding should not underestimate by managers and the relationship of working capital management and firm value not directly shown.

Barine (2012) Conducted a study on sample of 22 listed companies in Nigerian stock exchange from 8 different economic Standard deviation means of population techniques and t-test are used to analyze the relationship between variables on working capital management and firm performance. They show that there is significant positive relationship between working capital management and performance of the firms. Ukaegbu (2014) Conducted a research about the significance of working capital management in determining the profitability of a firm in the African continent. The results show that there is positive relationship between firm's size and profitability, the firms can grow in its size can increase their profitability.

Jamil, Ani & Shubiri (2015) examine the effect of working capital management efficiency on the performance of listed companies in Muscat Securities exchange. The study is an explanatory study and the research design is non-experimental. The results are significant by using cash conversion cycle and net working capital with net operating profit and insignificant with other variables by using regression analysis. Raza (2015) measured the impact of working capital management on the profitability of oil sector in Pakistan. Cash conversion cycle and average payables have positive relationship with gross operating profit while other variables have negative relationship with gross operating profit.

Iqbal (2016) examined the impact of working capital management with the profitability of textile industry in Pakistan. For the confirmation of hypothesis different descriptive statistics, correlation coefficient and regression are used The results showed that there is negative relationship with each other. Wembe (2013) Conducted a research on the effects of working capital management with performance of Kenya Ports Authority firms. Cash conversion cycle, accounts receivable turnover, accounts payable turnover and inventory turnover are used for working capital management and performance is measured by net profit margin. The results showed that there is significant relationship between these variables.

Aytac, Hoang, Lahiani & Michel (2016) measured the impact of working capital management on profitability of wine firms in France. The results showed that there is no significant relationship between working capital management and profitability of wine firms in France. The data is measured through two step GMM estimated method. Hoang (2015) Examined the relationship of working capital management on the profitability of listed manufacturing firms in Ho Chi Minh stock exchange. Working capital management included cash conversion cycle, net trade cycle, average collection period, average inventory period, average payment period, while profitability is measured in terms of return on assets The results showed that is significant negative relationship between working capital management and profitability. The findings suggested that the managers should use net trade cycle instead of cash conversion cycle.

Egide, Olweny & Peter (2016) Conducted a research to find out the relationship between working capital management and organizational performance. The results showed that there is significant negative relationship between working capital management and organizational performance. Khan, Rasheed, Ahmed & Rizwan (2016) Found the impact of working capital management on firm financial performance of 38 non-financial sector firms of Pakistan. The results of this study showed that there is significant relationship between working capital management and financial performance of the firm. Nejad, Bandarian & Ghatebi (2015) examined the effect of working capital management on the profitability of companies listed in

Tehran stock exchange. The results indicate that there is significant inverse relationship between working capital management and profitability of listed firms in Tehran stock exchange. Rizwan & Shah (2015) conducted a research to analyze the impact of working capital management on the performance of textile spinning sector in Pakistan listed in Karachi stock exchange. The results indicate that there is very weak negative relationship between working capital management and performance of textile spinning sector firms in Pakistan. Amer, Jaser, & Qasim (2014) expressed the relationship of corporate governance and performance of listed firms in Abu Dhabi stock exchange. Tobin's Q score and return on assets are used as performance of the firm on the other hand corporate governance was taken as institutional ownership, governmental ownership, board size and audit quality. The results indicate that there is significant relationship between corporate governance mechanism and firm performance (except audit quality).

Tachiwou (2016) examined the impact of corporate governance on the financial performance of the firms listed in West African Monetary Union. The results indicate that board member and board size have positive and relationship with firm performance, CEO status has positive and insignificant relationship with firm performance. Ownership concentration has positive relationship with return on assets but negative relationship with profit margin. Amba (2013) examined the relationship of corporate governance and firm's financial performance in Bahrain bourse. This study found that CEO duality, proportion of non-executive directors, have negative relationship with return on assets while board members, chairman of audit committee and institutional ownership have positive relationship with return on assets.

Kamau & Basweti (2013) examined the impact of corporate governance on financial performance of the financial institutions in Sri Lanka. According to results the components of corporate governance have significantly effect on performance of the financial institutions in Sri Lanka but board size and audit committee have positive effect and meetings frequency have negative relationship with performance. Cheema & Din (2013) empirically found the impact of corporate governance mechanism on the performance of cement industry in Pakistan. The results indicate that corporate governance have positive impact on performance of cement sector firms in Pakistan.

Zhang (2011) examined the relationship between corporate governance and firm performance in 100 Mauritian companies. According to results corporate governance variables have significant effect on performance of 100 Mauritian companies. Velnampy (2016) found the impact of corporate governance on the performance of firms listed in Sri Lanka. The results indicate that there is an impact of corporate governance on return on assets and return on equity while the impact of corporate structure is higher than the board structure. Finally, the results show a positive and significant relationship between corporate governance and firm's performance variables. Manaseer (2012) examined the impact of corporate governance on the performance of Jordanian banks. As proxy of corporate governance (Board size, board composition, CEO status, and foreign ownership) variables were used and as proxy of firm performance (return on assets, return on equity, profit margin, and earnings per share) used. The results indicate that there is a positive relationship between number of outside directors, foreign ownership and firm performance while board size, CEO duality have negative relationship with firm performance. Ahmed & Hamdan (2015) empirically found the impact of corporate governance on firm performance of listed financial companies in Bahrain stock exchange. Overall results shown that corporate governance mechanism have positive impact on firm performance of financial companies listed in Bahrain stock exchange. Yilmaz & Buyuklu (2016) examined the impact of corporate governance on the financial performance of firms in Turkey. According to results corporate governance indicators have significant and positive relationship with firm performance indicators (except independent board members and leverage).

Zabria, Ahmadb & Wahc (2016) empirically proved the relationship of corporate governance practices and firm's performance evidence from top 100 listed companies in Malaysia. It was concluded that there is significant weak negative relationship among Board size and ROA but insignificant on ROE while there is no relationship among board independence and performance. Tornyeva & Wereko (2012) examined the corporate governance and firm performance relationship of insurance sector of Ghana. and this is positively associated with firm's financial performance. Azeem, Hassan & Kouser (2013) determined the impact of quality corporate governance on firm performance. The results show that there was significant impact of quality corporate governance on performance.

Achchuthan & Kajanathan (2013) empirically proved corporate governance practices and its impact on working capital management in Sri Lanka. It was concluded that there is a significant impact of corporate governance on current liabilities to total assets while cash conversion cycle and current assets to total assets are not influenced by corporate governance. Kamau & Basweti (2013) examine the relationship between corporate governance and working capital management efficiency in Kenya. They have found that there is no significant relationship between corporate governance and working capital management efficiency.

Many studies have been conducted to identify the impact of working capital management on firm's performance, and the impact of corporate governance on firm's performance separately, but any study yet not have been conducted to identify the impact of working capital management on firm's performance keeping corporate governance as moderating variable.

### **Research Methodology**

This study discovers the relationship of WCM with profitability taking CG as moderating variable based on the data during 10 years period from 2006 to 2015 on 15 cement corporations listed in Pakistan Stock Exchange (PSE). Cement industry is selected because it is fastest growing sector in Pakistan. Data has together from annual reports & financial analysis by State bank of Pakistan. Ordinary least square fixed and random effect both regression models have been used for discovering the relations between variables.

The study uses net profit margin as dependent variable. Explanatory variable of the study entails working capital management with the moderation of corporate governance perspective. Sales and debt to assets are proxied for control variables. Detail measurement of all variables is given in table 1.

**Table 1: Measurement of variables**

<b>Variables</b>	<b>Method of computation</b>
NPM (Net profit margins)	Net Profit / Sales.
<b>Working Capital Management</b>	
CCC (Cash conversion cycle)	Average Collection Period + Inventory Turnover – Average payment period
ACP (Average collection period)	(Average accounts receivables/sales) *365
INVT (Inventory turnover)	(Average inventory/Cost of goods sold) *365
APP (Average payment period)	(Average accounts payable/Cost of goods sold) *365

<b>Corporate Governance Index</b>	
BSZ (Board size)	Number of Directors
CEO Duality	If exist 1 and if not exist 0
NED	Number of executives directors
<b>Control Variables</b>	
Sales	Log of sales
Debt to Assets	Total debt / Total Assets

### Data Analysis and Discussion

The study uses panel regression analysis to measure the objective and highlight the outcome inducing the following equation.

$$NPM_{it} = \beta_0 + \beta_1 (WCM_{it}) + \beta_2 (CGI_{it}) + \beta_3 (WCM_{it} * CGI_{it}) + \beta_4 Sales_{it} + \beta_5 Debt/Assets_{it} + \text{eit} \dots \dots \dots (1)$$

Table 2 provides descriptive statistics of 15 cement corporations listed in PSE for 10 years period from 2006 to 2015. Total 150 observations have used analysis of data.

**Table2: Descriptive Statistics**

Variables	Observations	Mean	Std. Dev.	Min	Max
NPM	150	-.0194	.4471179	-3.19	.56
CCC	150	4.650933	116.5172	-312	245.28
CGI	150	10.28667	1.825754	7	14
CCC*CGI	150	11.06913	1462	-2184	3430
Sales	150	9.671467	.5212973	7.91	10.65
Debt/Assets	150	.5829333	.4207608	.12	4.55

Analysis for correlations is specified in table 3 for dignified variables. The purpose of correlations analysis is to detect multicollinearity. Correlation analysis also used to trace the direction among independent and dependent variables. Probability of significance is given under each correlation coefficient. The results showed mixed relations with each other.

**Table 3 Correlation Matrix**

Variables	NPM	CCC	CGI	CCC*CGI	Sales	Debt/Assets
NPM	1					
CCC	0.0722 0.3800	1				
CGI	-0.1017 0.2157	-0.1740 0.0332	1			
CCC*CGI	0.0737 0.3699	0.9965 0.0000	-0.1445 0.0777	1		

Sales	0.6598	0.116400	-0.0268	0.1208	1
	0.0000	0.1562	0.7446	0.1407	
Debt/Assets	-0.2767	-0.1064	0.0905	-0.0922	-0.2088
	0.0006	0.1950	0.2710	0.2620	0.0104

Results of regression analysis are illustrated in table 4. R<sup>2</sup> is 61.99% (F=10.77, P<.001). Results of fixed effect regression indicate the coefficient of CCC is negative but statistically significant ( $\beta = -0.009$ , P<.001). This indicates when the number of CCC increased by one day then CCC of cement firms tend to decreased by 0.009%. If the number of collection days increased, then the customers have opportunity to acquire further goods for extensive credit period, and sales of the cement companies increase and profit may also increases, but bad debts can increase as expense.

**Table 4: Regression Analysis (Fixed Effects)**

NPM	Coef .	Std. Err.	t	P >   t	[95%Conf. Interval]	
CCC	-0.0090905	0.003347	-2.72	0.008	-0.0157121	-0.0024689
CGI	-0.0319224	0.0340234	-0.94	0.350	-0.0992336	0.0353888
CCC*CGI	0.0007015	0.0002651	2.65	0.009	0.000177	0.001226
Sales	0.7353106	0.0881296	8.34	0.000	0.5609567	0.9096646
Debt/Assets	-0.0337654	0.0693905	-0.49	0.627	-0.1710462	0.1035153
Constant	-6.74836	0.956815	-7.05	0.000	-8.641304	-4.855416
Sigma_u	.22334258					
Sigma_e	.29818758					
rho	.35938559					
R <sup>2</sup>	0.6199					
F - Statistic	10.77653					
Probability	0.0000					
N	150					

Coefficient of CGI is negative & insignificant ( $\beta = -0.031$ , P>.05). This indicates that corporate governance may not affect the profitability. CCC\*CGI has positive significant relations with profitability ( $\beta = 0.0007$ , P<.05), which indicates corporate governance positively effects working capital management relationships with profitability as moderating variable. It means profitability might be increased with proficient working capital management & corporate governance. Sales Logarithm considered as proxy of firm size have positive association with profitability for cement companies in Pakistan ( $\beta = 0.735$ ) shows that bigger firms can earn higher profit. Debt ratio has negative relationship with profitability ( $\beta = -0.03$ , P>.01) this means when leverage increasing, profitability have a tendency of decreasing.

**Table 5: Regression Analysis (Random Effects)**

NPM	Coef .	Std. Err.	z	P >   z	[95%Conf. Interval]	
CCC	-0.0041875	0.0031125	-1.35	0.178	-0.0102878	0.0019128
CGI	-0.0278448	0.0185705	-1.50	0.134	-0.0642424	0.0085528
CCC*CGI	0.00032	0.0002467	1.30	0.195	0.0001635	0.0008035
Sales	0.5747199	0.0606023	9.48	0.000	0.4559417	0.6934982
Debt/Assets	-0.1198056	0.0678553	-1.77	0.077	-0.2527994	0.0131883



Constant	-5.205582	0.6350045	-8.20	0.000	-6.450168	-3.960996
Sigma_u	0.0765008					
Sigma_e	0.29818758					
rho	0.0617546					
R <sup>2</sup>	0.6547					
F Statistic	21.95227					
Probability	0.0000					
No. of Observations	150					

Variables	---- Coefficients ----		b-B (Difference)	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
CCC	-0.0090905	-0.0041875	-0.004903	0.0012308
CGI	-0.0319224	-0.0278448	-0.0040775	0.0285083
CCC*CGI	0.0007015	0.00032	0.0003815	0.0000971
Sales	0.7353106	0.5747199	0.1605907	0.0639859
Debt/Assets	-0.0337654	-0.1198056	0.0860401	0.0145156

Regression results of Random effect are illustrated in table 5. R2 is 65 percent (F=21.55, P<.001). The results of random effect regression highlight coefficient of CCC has negative but statistically insignificant ( $\beta = -0.004$ ,  $P > 0.005$ ). It indicates when the number of CCC increase by one day then CCC of the cement companies tend to decrease by 0.004 percent. If the number of collection days increased, then the customers have opportunity to acquire further goods for extensive credit period, and the sales of cement companies' increase and profits can also increase, but bad debts can increase as expense.

Coefficient of CGI is negative & insignificant ( $\beta = -0.02$ ,  $P > 0.005$ ). This indicates only Corporate Governance may not affect profitability. CCC\*CGI has positive but insignificant relations with profitability ( $\beta = 0.00032$ ,  $P > 0.005$ ), which indicates corporate governance not effects on working capital management relations with profitability as moderating variable. It means that profitability cannot be increased with proficient of working capital management & corporate governance. Sales Logarithm considered as proxy for firm size have positive association with profitability for cement companies in Pakistan ( $\beta = 0.57$ ) highlights bigger firms can earn higher profit. Debt ratio has negative relationship with profitability ( $\beta = -0.11$ ) this means when leverage increases, profitability have a tendency to decrease.

**Table 6: Hausman Test (Fixed vs Random)**

Variables	---- Coefficients ----		b-B (Difference)	sqrt(diag(V_b-V_B)) S.E.
	(b) Fixed	(B) Random		
CCC	-0.0090905	-0.0041875	-0.004903	0.0012308

CGI	-0.0319224	-0.0278448	-0.0040775	0.0285083
CCC*CGI	0.0007015	0.00032	0.0003815	0.0000971
Sales	0.7353106	0.5747199	0.1605907	0.0639859
Debt/Assets	-0.0337654	-0.1198056	0.0860401	0.0145156

Table 6 indicates results of Hausman test, compare the results of coefficients from fixed and random effects. p value of CCC is 0.0028, CGI is 0.8912 and moderation is 0.0033 which strengthen the results of fixed effect. So according to Hausman test we accept the outcomes of fixed effect regression model.

Calculated value of R-square is 0.6199 indicating above average explanatory power of the model, 61% of the total variation in NPM is accounted for by model. This model is good fit as value of P of F statistic is 0.0000 which proves that the variables have a significant link between them. The CCC has negative but significant relationship with NPM, while CGI have negative & insignificant relations with NPM. The moderation term which includes both CCC\*CGI have positive and also significant relationship with NPM. Sales have significant and positive relationship and Debt/Assets have negative and insignificant relationship with NPM.

Hausman test has applied to compare the both fixed & random effect models. Results of Hausman test (Table 6) are equal to the results of fixed effects regression analysis (Table 4) which are more reliable to our model because the value of moderation positively and significantly related to NPM.

## Conclusion

The study aims to identify the link between working capital management and firms' financial performance using corporate governance as interacting factor. Cement sector of Pakistan is selected as a population of study where fifteen cement companies are sampled for study, listed in Pakistan Stock Exchange. The secondary figures are collected from annual reports, data portal of Pakistan stock exchange and the state bank of Pakistan analysis for the period of 10 years from 2006 to 2015. After applying the Hausman test on the selection between fixed effect and random, the results show that working capital management has negative but significant relation with net profit margin. Corporate governance have negative but insignificant relation with net profit margin. Interaction of working capital and governance has positive but significant relations with net profit margin of listed cement corporations in Pakistan which supports our hypothesis that the moderation of corporate governance positively and significantly effects the connection of working capital management and firm's financial performance

Corporate governance mechanism have crucial role on financial profitability of cement sector companies in Pakistan. Laws, rules and regulations are control shareholders, directors, managers and all stakeholders of the companies. These regulations and laws profile the corporate governance practices for improvement of financial performance, growth, constancy, stability of the firms through strengthen the efficiency, and integrity. For generating the economic growth good working capital management & corporate governance improves performance and external finance. It develops long term good relationships between the management, board and minority shareholders.

The most important requirement is to evaluate that how these companies leads the economy on the way to financial growth through implementation working capital management & corporate governance policies. Therefore, policymakers should have complete vision and knowledge of working capital management practices and corporate governance through which they can

perform benefits for the nation and economy. For effective implementation of corporate governance strategies in cement companies it is suggested that internal procedures and supervisory arrangements must be established. The SECP introduce the corporate governance reforms for the need of the country.

The study is limited to cement sector only it can be conducted on the other sectors and the whole manufacturing sector also, and the data is limited to 10 years from 2006 to 2015. Corporate Governance variables can also be increased. This study can be conducted on other sectors also considering other variables of profitability, strategies of corporate governance and factors of working capital management.

Corporate governance mechanism has crucial role on financial profitability of cement sector companies in Pakistan. Laws, rules and regulations control shareholders, directors, managers and all stakeholders of the companies. These regulations and laws profile the corporate governance practices for improvement of financial performance, growth, constancy, stability of the firms through strengthening the efficiency, and integrity. For generating the economic growth good working capital management and corporate governance improves the performance and external finance. It develops long-term good relationships between the management, board and minority shareholders.

The most important requirement is to evaluate that how these companies lead the economy on the way to financial growth through implementation of working capital management and corporate governance policies. Therefore, the policymakers should have a complete vision and knowledge of the practices of working capital management and corporate governance through which they can perform benefits for the nation and economy.

For effective implementation of corporate governance policies in the cement companies it is suggested that the internal procedures and supervisory arrangements must be established. The SECP introduce the corporate governance reforms for the need of the country. This study can be conducted on other sectors also considering other variables of profitability, corporate governance and working capital management.

## References

- Achchuthan, S., & Kajanathan, R. (2013). Corporate Governance Practices and Working Capital Management Efficiency: Special Reference to Listed Manufacturing Companies in Sri Lanka. *Information and Knowledge Management*, 3, 216-226.
- Ahmed, E., & Hamdan, A. (2015). The Impact of Corporate Governance on Firm Performance: Evidence from Bahrain Stock Exchange. *European Journal of Business and Innovation Research*, 3(5).
- Amba, S. M. (2013). Corporate Governance and Firm's Financial Performance. *Journal of Academic and Business Ethics*.
- Amer, Jaser, M., & Qasim. (2014). The Impact of Corporate Governance on Firm Performance: Evidence from the UAE. *European Journal of Business and Management*, 6(22).
- Autukaite, & Molay. (2011). cash holding, working capital and firm value: evidence from France. *International conference of the French Finance association (AFFI)*.
- Aytac, B., Hoang, T. H. V., Lahiani, A., & Michel, L. (2016). Working Capital Management and Profitability of Wine Firms in France. An Empirical analysis. *AAWE Working Paper*, 201.
- Barine. (2012). working capital management efficiency and corporate profitability: evidences from quoted firms in Nigeria. *Journal of Applied Finance & Banking*, 2(2).
- Cadbury. (1992). The Committee on the Financial Aspects of Corporate Governance and Gee and Co. Ltd. Report.
- Cheema, K. U. R., & Din, M. S. (2013). Impact of Corporate Governance on Performance of

- Firms: A Case Study of Cement Industry in Pakistan. *Journal of Business and Management Sciences*, 1(4).
- Claessens, S., Djankov, S., & Fan, J. P. H. (2002). Disentangling the incentive and entrenchment effects of large shareholders. *The Journal of Finance*, 56(6), 2741-2771.
- Donaldson, W. (2003). Congressional testimony concerning the implementation of the Sarbanes-Oxly Act of 2002. [www.sec.gov/news/testimony/090903/tswhd](http://www.sec.gov/news/testimony/090903/tswhd).
- Egide, T., Olweny, D. T., & Peter, D. M. M. (2016). Effect of Working Capital Management on Organizational Performance. *International Journal of Thesis Projects and Dissertations (IJTPD)*, 4(2).
- Eljelly, & A. (2004). Liquidity-profitability trade off: an empirical investigation in an emerging market. *International Journal of commerce and Management*, 14(2).
- F, M., & Manaseer, A. (2012). The Impact of Corporate Governance on the Performance of Jordanian Banks. *European Journal of Scientific Research*, 67(3).
- Frost, C. A., Gordon, E. A., & Hayes, A. F. (2002). Stock exchange disclosure and market liquidity: An analysis of 50 international exchanges. Kuala Lumpur, paper presented at the World Federation of Exchanges Forum on managing exchanges in emerging economics.
- Gompers, P. A., Ishii, J. L., & Metrick, A. (2003). Corporate governance and equity prices. *Quarterly Journal of Economics*, 118(1).
- Hailu, A. Y., & Venkateswarlu, P. P. (2016). Effect of working capital management on firms profitability evidence from manufacturing companies in eastern, Ethiopia. *International Journal of Applied Research*, 2016; 2(1), 643-647.
- Hoang, T. V. (2015). Impact of Working Capital Management on Firm Perofitability: The HE CASE OF LISTED MANUFACTURING FIRMS ON HO CHI MINH STOCK EXCHANGE. *Asian Economic and Financial Review*, 5(5).
- Iqbal, M. (2016). Impact of Working Capital Management on Firm Profitability in Industry of Pakistan. *Industrial Engineering Letters*, 6(3).
- Jamil, S. A., Ani, M. K. A., & Shubiri, F. N. A. (2015). The Effect of Working Capital Management Efficiency on the Operating Performance of the Industrial Companies in Oman. *International Journal of Economics and Financial Issues*, 5(4).
- Kamau<sup>1</sup>, S. M., & Basweti<sup>2</sup>, K. A. (2013). The Relationship Between Corporate Governance And Working Capital Management Efficiency Of Firms Listed At The Nairobi Securities Exchange. *Research Journal of Finance and Accounting*, 4(19).
- Khan, M. N., Rasheed, S., Ahmed, H. I., & Rizwan, M. (2016). Impact of Working Capital Management on Firm Financial Performance: An Empirical Evidence from Non-Financial Sector of Pakistan. *International Journal of Advanced Scientific Research and Management*, 1(5).
- Konak, F., & Güner, E. N. (APRIL 2016). The Impact of Working Capital Management on Firm Performance: An Empirical Evidence from the BIST SME Industrial Index. *International Journal of Trade, Economics and Finance*, 7(2).
- MuhammadSabo, Rabi, U. S. J., K/Wambai, U. S., Bello, F., & Ahmad, T. H. (2015). The Effect of Working Capital Management on Corporate Profitability:Evidence from Nigerian Food Product Firms Applied Finance and Accounting, 1(2).
- Nejad, D. A., Bandarian, A., & Ghatebi, M. (2015). Effect of Working Capital Management on the Profitability of Listed Companies in Tehran Stock Exchange. *J. Life Sci. Biomed*, 5(1).
- Niresh, J. A. (2012). Working Capital Management & Financial Performance of Manufacturing Sector in Sri Lanka. *European Journal of Business and Management*, 4.
- OECD. (2009). The corporate governance lessons from the financial crisis. *Financial market trends*.
- Padachi, & K. (2006). Trends in working capital management and its impact on firms performance: an analysis of Mauritian small manufacturing firm. *International review of*

business research paper, 2(2).

Raza, M. Y. (2015). Impact of working capital management on profitability: Evidence from Pakistan oil sector. *International Journal of Accounting and Financial Reporting*, 5(1).

RIZWAN, S., & SHAH, F. M. (2015). Impact of Working Capital Management on Firm's Performance: A Case of Textile Spinning Sector in Pakistan. *International Journal of Scientific & Engineering Research*, 6(11).

Shin, & Soenne. (1998). Efficiency of Working Capital and Corporate Profitability. *Financial Practice and Education*, 8(2).

Shleifer, A., & Vishny, R. (1997). A survey of corporate governance. *Journal of Finance*, 52(2), 737-783.

Tachiwou, A. M. (2016). Corporate Governance and firm's financial performance of listed company in the west african Monetary union regional financial exchange. *international Journal of Economics and Finance*, 8(8).

Ukaegbu. (2014). the significance of working capital management in determining firm profitability: evidence from developing economies In Africa. *Research in International Business and Finance*, 31.

Velnampy, T. (2016). Corporate Governance and Firm Performance: A Study of Selected Listed Companies in Sri Lanka. <https://www.researchgate.net/publication/231590032>.

Wembe, M. A. (2013). Effects of Working Capital Management on the Performance of Firms in Kenya: A Case Study of Kenya Ports Authority. *International Journal of Science and Research (IJSR)*, 2013.

Yilmaz, C., & Buyuklu, A. H. (2016). IMPACTS OF CORPORATE GOVERNANCE ON FIRM PERFORMANCE: TURKEY CASE WITH A PANEL DATA ANALYSIS. *Eurasian Journal of Economics and Finance*, 4(1).

Zabria, S. M., Ahmadb, K., & Wahc, K. K. (2016). Corporate Governance Practices and Firm Performance: Evidence from Top 100 Public Listed Companies in Malaysia. *Procedia Economics and Finance*, 35(2016).

Zhang, J. (2011). THE RELATIONSHIP BETWEEN WORKING CAPITAL MANAGEMENT AND THE CORPORATE CASH HOLDINGS. Master's in Accounting and Finance, UNIVERSITY OF EASTERN FINLAND, Finland.