FIRM SPECIFIC DETERMINANTS AND PERFORMANCE OF CEMENT FIRMS IN PAKISTAN

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ABSTRACT

This paper examines the association between firm specific determinants and the performance of cement firms' in Pakistan over the period 2010 to 2019 for sixteen sampled cement firms quoted at Karachi stock exchange using the panel least square technique. Return on Investment (ROI) is the dependent variable of the regression model and five firm specific determinants are expressed as the independent variables. The results of data analysis disclose that the variables of liquidity, activity and profitability are positively associated with cement firms' performance measure, ROI. Besides, the variables of leverage and growth are negatively associated with it. In addition, the regression results highlight that all the variables except the growth are significant and have significant influence on cement firms' performance. The analysis results may be very encouraging and useful for management as well as for the investors to plan investment and operational activities to accomplish profitability goals more efficiently and effectively.

INTRODUCTION

Cement is arguably the most essential prime ingredient in any kind of construction activity. It is indeed, cement industry is one the top most industries of Pakistan and has been playing a differential role in the infrastructural development of the country from the past two decades. Owing to the country's vast geographical scale and enormous population, different construction activities are undertaken by the private sector, which produce massive demand for cement. Moreover, the market demand for cement for private use is constantly rising day by day due to a rise in the living standard of inhabitants (Kamal and Moudud-Ul-Huq, 2014; Tunio, 2020). Hence,

it is significant to ensure that cement companies in Pakistan perform in a remarkable and productive way.

Each corporate firm in today's competitive market is concerned with its performance and good performance doesn't just build its market value yet help in the (Kamal & Moudud-Ul-Huq, 2021) growth of the industry over time, consequently prompting general prosperity of the economy (Ahmed et al., 2011; Tunio, et al., 2021). Mostly, the shareholders who have made an investment into an organization expect positive returns in terms of performance whether it is a cement company or other sort of firm. There are many performance measures however the foremost wide used seems to be profitability.

At present, there's found a number of studies aimed at discovering firm specific determinants and their relationship with performance of cement companies. Researchers in various fields of research and strategic management have main focus on financial performance (Amal et al., 2012; Tunio, et al., 2021). Due to the impact of financial performance on an organization's health and its sustainability, it has become the primary concern of business professionals in different organizations. Management productivity and efficiency in employing the resources of a firm is expressed in high performance and aids to contribute to the economy (Naser & Mokhtar, 2004). From past two decades in the sector of corporate finance, organization performance has attracted the attention of researchers but as it relates to cement industry, little attention has been given (Ahmed et al., 2011; Chaudhry, et al., 2021).

Performance is essentially important for firms as it aids their endurance in the cement industry. Over the years the variations in profit gradually increases as reported in annual reports of cement companies in Pakistan. This led to the idea that certain firm specific determinants must have been responsible for affecting the performance of cement companies over time. In Pakistan, to the best of our understanding, very few of the research studies have examined the firm specific determinants like liquidity, leverage, firm size, firm age, profitability, activity and cash conversion cycle in relation to cement firms' performance.

Preceding studies in Pakistan (Aqeel, Munir, & Shahzad, 2016; Muhammad, Ameen, & Shahzadi, 2017; Farah, Ijaz, & Naqvi, 2016; Tunio, et al., 2021) examined liquidity, leverage, profitability, activity and cash conversion cycle in relation to financial performance of cement companies

in Pakistan. These conclude with mix findings on the link between these firm specific determinants and performance of cement companies in Pakistan. Hence, the paper struggles to empirically examine the impact of firm specific determinants on performance of firms' in cement sector, Pakistan.

The paper introduces growth as a new variable in the examination of determinants of cement firms' performance in Pakistan. Studies conducted outside Pakistan like Batchimeg (2017), Hajihassani (2015), Sumathi & Jothti (2016), and Kamran, Ramiyani, Shirkouhi & Badizadeh (2014) used growth in their corresponding studies. The study results conducted outside Pakistan may not be applicable to cement firms' in Pakistan. The reason is that the environments in which the cement firms' operate differ in terms of regulation and operation. Hence, the obligation to analyze the impact of growth in addition to other specific determinants on cements firms' performance in Pakistan.

Literature Review

Performance and its Measurement

The term performance originates from French word 'Parfournir' meaning thereby to do, to carry out or to render. Performance is the outcome obtained by an executive or group of executives in an organization relevant to its authority and responsibility to accomplish the purpose lawfully 'not against the law' and in compliance with morals and ethics (Amal et al., 2012 ; Shaikh, et al., 2021). According to Mayowa and Ogieriakhi (2018) the measure used in evaluating firms' performance depends on the type of the organization which is to be analyzed and the purpose of carrying out the evaluation. It serves as an indicator to select the useful measure for evaluating performance. Different scholars offered different models for evaluating firms' performance in the field of strategic management. The multifaceted perspective on performance implies that the used of multiple models will create distinct relationship between predicted and predictor variables in the projected model (Ostroff & Schmidt, 1993 ; Tunio, et al., 2021).

According to Ali and Eneizan (2018) the two distinct types of performance are the financial and the non-financial performance. A distinction is often found between these two i.e. between financial and non-financial performance. Financial performance is usually expressed in terms of sales growth and turnover/ stock prices whereas, non-financial performance is outlined in terms of goodwill, expenditures innovative sales ratio (Hagedoorn and Cloodt, 2003; Shaikh, et al., 2021; Afshan, et al., 2021). In present paper

liquidity, leverage, activity, profitability and growth are chosen as explanatory variables while variable return on investment, ROI is used as performance indicator because most of the empirical studies on performance as it relates to cement firms used return on investment as the measure of performance (Farah et al., 2016; Daryanto, 2018; Sahar et al., 2019; Kamran et al., 2014; Tunio, et al., 2014; Preeti & Hosmani, 2018; Qasim et al., 2012; XiMei, et al., 2016 Amalendu et al., 2011; Nishanthini & Nimalathasan, 2013; Ajmal, 2015; Tunio, et al., 2017).

Return on investment, ROI as measure of performance indicates the overall profit produced by firm on its total wealth (investment) and expressed as percentage of the amount invested. The ratio is thought out as the most appropriate measure of performance of a firm and if there's occur some increase in ratio it depicts positive performance of the relative concern (Venkatacham & Kasthuri, 2016; Tunio, 2020).

Firm Specific Determinants and Performance

Liquidity and Performance

An important variable used in determining firms' performance is the liquidity. Liquidity measures company's power and ability to pay as and when some obligations are due. Ali and Eneizan (2018) high liquidity occurs when a firm has an enough working capital to meet such obligations. It enables the company to handle with unexpected risk factors and meet the requirements of paying off its obligations when earnings are low. The empirical findings as it relates to liquidity and performance of cement companies have been mixed. Ali & Eneizan (2018), Muthusamy & Karthika (2019), Hajihassani (2015), and Aqeel et al. (2016) found a significant positive association between liquidity and cement firms' performance. Farah et al. (2016) and Mistry (2012) found a significant and negative interrelationship between liquidity and performance of firms. Ajmal (2015), Prajapati (2019), Sumathi & Jothi (2016), and Batchimeg (2017) found an insignificant association between liquidity and performance.

Leverage and Performance

Leverage refers to degree at which the borrowed capital is being utilized by the company. A possibility of bankruptcy occurs when a highly leveraged firm finds it difficult to pay off all of its debts (Mayowa et al., 2018). A high use of leverage in a firm reduces conflict between shareholders and company's management (William, 1987). The empirical results as it relates to leverage

and firms' performance have been mixed. Batchimeg (2017), Muthusamy et al. (2019), Farah et al. (2016), Ahsan & Shahzadi (2017), Muhammad et al. (2017), and Nawaz et al. (2015) found a significant negative association between leverage and performance. Khurram et al. (2016) found a negative and positive interrelationship between leverage and performance in both the models. Mahboob et al. (2015) found a negative association between leverage and profitability in manufacturing sector while, on the other vein, no association was noted between leverage and profitability in service sector.

Activity and Performance

Activity, as a tool, compares the two competing businesses with the same industry. It helps the investor to measure different facets of company's fiscal strength. Hajihassani (2015) used the activity to determine the period of service and the composition of business current assets. The empirical results as it relates to activity and firms performance have been mixed. Lina and Al-Omari (2015) found a significant effect of activity ratios on Jordanian company's performance. Santosuosso (2014) found a positive association between activity ratios and Italian firms performance. Abbas (2019) used several turnover ratios as proxies of activity. The findings reveal that account receivable turnover and total assets turnover have a significant impact on Mining companies' performance. Besides, the variables of inventory turnover and working capital turnover were considered insignificant determinants of performance.

Profitability and Performance

Another key factor used in determining companies' performance is the profitability. Profitability refers to capability of a given investment to produce some return from its use (Nimalathasan, 2009). It measures present and past profitability and projecting of future profitability is significant. The empirical findings as it relates to profitability and performance of cement companies have been mixed. Prajapati (2019), Farah et al. (2016), and Sumathi (2016) found a good positive association between profitability and firms' performance. Hajihassani (2015) found a significant impact of profitability on performance of cement sector firms. Batchimeg (2016) used several ratios as proxies of profitability. Amongst, return on costs and earning per share were the most crucial determinants that have a significant positive impact on performance of Mongolian companies.

Growth and Performance

Another key factor used to determine the position of the company in

industry is the growth. Generally, higher growth rate does not imply a high rate of future oriented growth, as industrial and economic conditions are continuous evolving and frequently cyclical. Mansoor (2019) defines the growth as rise in the value of the contract overtime. The empirical findings as it relate to growth and firms' performance has been mixed. Lazar (2016) found significant positive effect of growth on firms' performance. Batchimeg (2016) used several determinants like growth in sales, growth in profit and growth in assets as proxies of growth. Amongst all these only growth in sales was considered as the most crucial determinant that has a significant positive impact on Mongolian companies' performance. Besides, growth in profit and growth in assets were considered insignificant determinants of performance.

Empirical Review

Previous studies conducted on the relationship between firm specific determinants and performance of cement firms' in the extant literatures conclude with mix findings.

Hajihassani (2015) did a valuable work to evaluate the performance of 28 cement companies in Iran for the period 2000-2009 using Copeland method. One predicted variable (performance) and five predictor variables (liquidity, profitability, activity, growth and leverage) were chosen for the study. The result indicates that Ardabil and Azar Shahr lime cement firms' got the first rank. More, all the predictor variables are considered significant in effecting performance of cement sector firms. In one more study, Nousheen and Hassan (2013) find out the impact of firm specific and macroeconomic factors on profitability of firms in food sector Pakistan using panel data and a sample that consists of total 12 firms from period 2004-2006. The findings indicate that size of firm has a significant negative effect on profitability. The tangibility of assets, growth and food inflation have an insignificant positive effect on profitability. On the same way, an insignificant and negative effect was also noticed between the debt to equity and the profitability of firms in food sector, Pakistan.

Farah, Ijaz, and Naqvi (2016) in their paper *Financial performance of firms of cement industry in Pakistan* examines the relationship between five ratio parameters like liquidity, profitability, leverage, assets utilization, cash conversion cycle and financial performance of cement firms in Pakistan. The study concluded that liquidity, profitability, assets utilization and cash conversion cycle all had significant relationship with financial performance while leverage had insignificant relationship with performance. Krishna et al.

(2013) in their study evaluates the performance efficiency of Indian cement companies for 15 years period from 1992 to 2006. Eight inputs including the debt equity ratio, current ratio, profit before tax, profit after tax, Dividend, return over capital employed, return over net worth, average profit per unit and one output (financial performance) was chosen. The output concludes that all the inputs chosen for study have showed the significant impact on financial performance of companies except the debt equity ratio. More, future outlook of companies is very bright. One more recent study by Banupriya and Thyagarajan (2018) analyzed the financial performance of cement companies in Tamilnadu over a period of five years. The cement industry of India is the 2nd top most industry in India after china that showed the net profit growth rate of 85% and contributed almost 8% to the economic development of India. Performance in the study was chosen as predicted variable and liquidity, leverage, activity and profitability ratios were selected as predictor variables. The results of data analysis disclosed that all the chosen variables are considered significant. Overall, they help in improving performance of companies.

Dhivya et al. (2017) carried out a study on financial performance of ACC Cement Company in Tamilnadu on various fronts of profitability, liquidity, and solvency and concludes that overall liquidity position of ACC Company is good; hence, it can meet its short term obligations. The solvency ratio highlights that company is in a good condition and there is no problem to fulfill its long term debts. However, company's profitability position is not good, hence there is need to improve profitability by cost reduction as well the modernization of companies. Another study by Venkatacham and Kasthuri (2016) assessed the financial performance of Indian cement industry using analysis of variance that consists of 10 years period i.e. from 2007 to 2016. Current ratio, liquidity ratio, net profit ratio, debt equity ratio and interest coverage ratio were chosen as explanatory variables of the study. The results represent that current ratio and liquidity ratio had not any significant association with financial performance. Similarly, the net profit ratio, debt to equity ratio and interest coverage ratio had a significant positive association with financial performance.

Sumathi and Jothi (2016) carried out a study to analyze the financial performance of two cement companies in India using panel data and consist of 10 years period from 2006 to 2015. Liquidity, profitability, leverage and assets utilization were taken as firm specific factors in the study. The analysis reveals that 'chosen companies' profitability ratio is satisfactory while

'chosen companies' liquidity position is not satisfactory because the level of current ratio and quick ratio is too low than one. More, both the companies must maintain their inventory level, investment and debtors. Manjula and Sabarinathan (2015) did a perishable work to analyze the performance of cement companies in India using multiple regression analysis technique with a sample consisting of total 5 cement companies over the period 2005 to 2014. The output reveals that liquidity and long term efficiency ratio both are found statistically significant. However, financial position of Indian cement companies is also found strong.

In one more study Khurram et al. (2016) developed two models to find out the interrelationship between systematic risks and profitability of 16 cement companies in Pakistan from 2009-2015. Using Return on Assets (ROA) and Return on Equity (ROE) as measures for profitability and Degree of Operating Leverages and Degree of Financial Leverage as representatives of systematic risks. The output of model 1 shows that there's found a negative relationship between both the degree of operating leverage, degree of financial leverage and return on assets of companies. Similarly, the result of model 2 indicates that there's existed a positive relationship between the degree of financial leverage and return on equity while, on the same vein, a negative relationship was noted between the degree of operating leverage and return on equity of companies.

From the previous studies reviewed above across different boundaries, the significance of the relationship between the firm specific determinants and performance become unambiguous for Pakistan's cement industry in present study.

Research Objectives

1. To examine if the associations between cement firms' performance and variables are negative or positive.

2. To find out the influence of selected variables on performance of cements firms' in Pakistan.

Research Hypotheses

Present paper mainly focused on five hypotheses formulated in their null form. They are:

H01: Liquidity is positively associated with cement firms' performance.

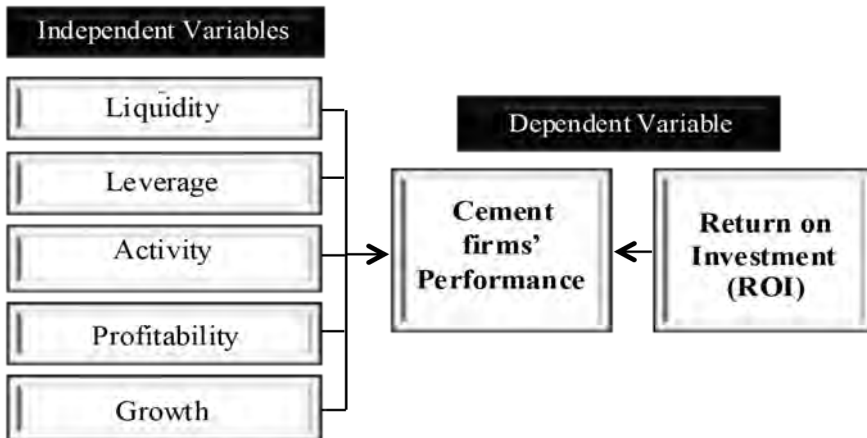H02: Leverage is negatively associated with cement firms' performance.

H03: Activity is positively associated with cement firms' performance.
H04: Profitability is positively associated with cement firms' performance.
H05: Growth is positively associated with cement firms' performance.

Conceptual Framework

Fig. 1: Conceptual Framework

METHODOLOGY

The author aimed at exploring the impact of firm specific determinants on the performance of cement firms' in Pakistan. In this paper, author focused on secondary data, all data is taken form "financial statement analysis" of a panel of 16 cement companies listed at Karachi stock exchange from period 2010-2019. Data analysis was done using descriptive statistics, correlation coefficient and panel least square method using EViews 10.

Data and Variables

The study employed two types of variables, viz. the dependent and independent variables. Return on investment, ROI as a measure of performance is taken as dependent variable while liquidity, leverage, activity, profitability and growth as determinants of performance are expressed as independent variables, shown in table 1. Most of the variables employed in present study are organized based on the variables used in previous research as work done by Batchimeg (2016) on the "Financial performance determinants of organizations".

Table 1: Independent Variables

Sr. #	Variables	Measurements
1	Liquidity	Current Assets/ Current Liabilities
2	Leverage	Total Liabilities/ Total Assets
3	Activity	Sales/ Average Total Assets
4	Profitability	Net Profit After Taxes/ Net Sales × 100
5	Growth	(St- St-1/ St-1)

Variables Description

- Return on Investment: Indicates the overall profit produced by firm on its total wealth (investment) and expressed as proportion of the amount invested.
- Liquidity: It refers to company's power and ability to pay as and when some obligations are due. A company's liquidity can be measured by calculating current ratio i.e. a proportion of current assets to current liabilities.
- Leverage: It reveals the significant amount of debt a firm uses to finance assets. A ratio applied to measure a company's financial leverage is the debt ratio.
- Activity: Used as a tool to measure the performance of a firm in utilizing and managing its resources to generate highest possible revenue. A firm's activity could be measured by computing the ratio between sales to average total assets.
- Profitability: It is the capability of the company to utilize its resources in a way that it can produce maximum profit from its operations. Ratio that measure company's profitability is generally called as net profit margin ratio.
- Growth: Means increase in the value of the deal overt time. It indicates whether a firms or company position in the industry is good or not. Growth could be measured by enumerating the sales growth ratio.

Research Model

To explore the impact of above independent variables on performance, author considered the following ordinary least square (OLS) regression model.

$$\text{ROI}_{i,t} = \beta_0 + \beta_1 \text{ LQ}_{i,t} + \beta_2 \text{ LV}_{i,t} + \beta_3 \text{ AV}_{i,t} + \beta_4 \text{ PR}_{i,t} + \beta_5 \text{ GR}_{i,t} + \varepsilon$$

Where;

ROI = Return on Investment
LQ = Liquidity

LV = Leverage
AV = Activity
PR = Profitability
GR = Growth
$\beta_0 - \beta_5$ = Model Coefficients
ε = Error term.
i,t = for firm i in period t

DATA ANALYSIS AND INTERPRETATION

The data values for the dependent variable return on investment (ROI) and the independent variables; liquidity, leverage, activity, profitability and growth in relation to each sampled cement firms were analyzed using the extracted data, from "financial statement analysis" of each sampled cement firm listed on Karachi stock exchange.

Table 2: Descriptive Statistics

	ROI	LQ	LV	AV	PR	GR
Mean	8.9532	1.3523	0.5109	0.6153	0.0448	21.7299
Maximum	34.9206	8.0671	1.8199	1.3762	0.3919	798.0103
Minimum	-19.7974	0.1462	-0.4387	0.0147	-3.1915	-87.8967
Std. Dev.	11.5505	1.1599	0.2948	0.2909	0.4248	85.7198
Observations	160	160	160	160	160	160

Source: E-view 10.0 Output, 2019

Table 2 discloses the descriptive statistics of all the study variables, the mean of return on investment is 8.9532 while the maximum and minimum is 34.9206 and -19.7971 respectively. The standard deviation is 11.5505 representing a considerable dispersion from the mean. The average value of liquidity is 1.3523 with an 8.0671 maximum and 0.1462 minimum values. The standard deviation is 1.1599 represents a considerable clustering around the mean. The leverage had an average of 0.5109 with a maximum of 1.8199 and minimum of -0.4387 values. The standard deviation was 0.2948 representing considerable clustering around the mean. Activity had a central tendency of 0.6153 with a maximum and minimum values range from 1.3762 to 0.0147 respectively. The standard deviation was 0.2909 representing considerable clustering around the mean. The average profitability had 0.0448 with a maximum of 0.3919 and minimum of -3.1915 values. The standard deviation was 0.4248 which represent a considerable clustering around the mean. The average growth of cement firms was 21.7299 with a maximum and minimum of 798.0103 and -87.8967 values respectively. The standard deviation large value 85.7198 represents a high variation from the mean.

Table 3: Correlation Coefficient

	ROI	LQ	LV	AV	PR	GR
ROI	1.00000					
LQ	0.51439	1.00000				
LV	-0.67743	-0.55849	1.00000			
AV	0.56336	0.41979	-0.34108	1.00000		
PR	0.57176	0.26380	-0.49618	0.37517	1.00000	
GR	-0.11330	-0.11959	0.18934	-0.09348	0.05194	1.00000

Source: E-view 10.0 Output, 2019

Table 3 represents the correlation coefficient that exists between the dependent variable return on investment and the independent variables; liquidity, leverage, activity, profitability and growth. The correlation coefficient highlights that return on investment (ROI) is significant with liquidity (LQ), leverage (LV), activity (AV), profitability (PR) and growth (GR). Besides, the results disclosed a positive association between return on investment and three variables; liquidity, activity and profitability while, on the other hand, a strong negative association was noted between return on investment and the other two variables. Results reveal that there's found a strong negative association between liquidity and leverage, liquidity and growth, leverage and growth, activity and growth, profitability and growth whereas, a significant positive association between leverage and activity, leverage and profitability, activity and profitability. The correlation coefficient results shown between variables are persistent with the study hypotheses. It reveals that correlation coefficients between variables are very low (no one is above 0.8) representing that there's not a multicolinearity problem.

Table 4: Panel Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	8.12537	2.26865	3.58159	0.0005
LQ	1.03805	0.62198	1.66895	0.0972
LV	-15.67491	2.64433	-5.92774	0.0000
AV	11.65971	2.26800	5.14097	0.0000
PR	6.42079	1.63093	3.93688	0.0001
GR	-0.00134	0.00688	-0.19405	0.8464
R-squared=0.626167, F-statistic=51.58964 (0.000000)				
Durbin-Watson stat=0.586739				

Source: E-view 10.0 Output, 2019

Table 4 displays the outcome of panel regression analysis' return on investment (ROI) is the dependent variable. The results of the study model analyzed are as follow.

ROI = 8.12537 + 1.03805 (LQ) - 15.67491 (LV) + 11.65971 (AV) + 6.42079 (PR) - 0.00134 (GR)

The results of data analysis disclose that amongst all the variables only the variable of liquidity, activity and profitability are positively associated with cement firms' performance measure, ROI while the others such as leverage and growth are negatively associated with it. Furthermore, the regression results highlight that all the variables except the growth are significant and have significant influence on cement firms' performance, the coefficient of liquidity is 1.03805 displays that ROI will increase by 1.03805 as a result of 1% increase in liquidity. The coefficient of leverage has -15.67491 represent that when there is increase in leverage by 1%, ROI decrease by15.67491. The coefficient of activity as 11.65971 reveals that ROI will increase by11.65971as a result of 1% increase in variable of activity. Profitability has coefficient of 6.42097 indicates that when there is increase in profitability by 1%, ROI increase by 6.42079. The coefficient of growth is -0.00134 shows that when there is decrease in growth by 1%, ROI decrease by 0.00134. More, the value of coefficient of determination in table 3 stood at 0.626167 which explains that 63% cross sectional variation in dependent; ROI is accounted for by independent variables of the study while the remaining 37% of variation in dependent variable; ROI could be explained by other variables which are not consider as part of present study model. The F-statistic 51.58964 and its related sig-value (0.00000) indicate about the validity of the model and provide evidence of existing significant association between dependent and independent variables of the study. The Durbin-Watson stat value of 0.586739 reveals that the presence of autocorrelation is unlikely.

CONCLUSION

Each corporate firm in today's competitive market is concerned with its performance and good performance does not just build its market value yet help in the growth of the industry over time, consequently prompting general prosperity of the economy (Ahmed et al., 2011; Tunio, et al., 2021). The present paper attempts to evaluate the position of the overall efficiency of the cement industry and its role in the economic development of country. The paper's objective is to have the overview of the variables influencing performance of firms' of cement sector in Pakistan.

The earnings reported on financial statement of any company are the principal interests of the stakeholders as it represents company's financial performance. Performance is the outcome obtained by an executive or group of executives in an organization relevant to its authority and responsibility to accomplish

the purpose lawfully 'not against the law' and in compliance with morals and ethics (Amal et al., 2012; Memon, et al., 2021). There are two distinct kinds of performance such as the financial and the non-financial performance. A distinction is often found between these two i.e. between financial and non-financial performance. Financial performance is usually calculated in terms of sales growth, growth in profitability and turnover/ stock prices while, on the other hand, non-financial performance measure provides information on firm's performance in non-monetary terms such as goodwill and patents etc. (Ali & Eneizan, 2018; Katper, et al., 2020).

The study reviews the related literature and develops a conceptual frame work regarding the firms' performance, ROI and its variables including liquidity, leverage, activity, profitability and growth. The type of data is secondary in nature and has been taken from "financial statement analysis" of a panel of 16 cement companies quoted at Karachi stock exchange from period 2010-2019. The paper 5 hypotheses are as follows:

H01: Liquidity is positively associated with cement firms' performance.

H02: Leverage is negatively associated with cement firms' performance.

H03: Actively is positively associated with cement firms' performance.

H04: Profitability is positively associated with cement firms' performance.

H05: Growth is positively associated with cement firms' performance.

The results of data analysis disclose that amongst all the variables only the variable of liquidity (H01), activity (H03) and profitability (H04) are positively associated with cement firms' performance measure, ROI while the others such as leverage (H02) and growth (H05) are negatively associated with it. Furthermore, the regression results highlight that all the variables except the growth are significant and have significant influence on cement firms' performance, the coefficient of liquidity is 1.03805 displays that ROI will increase by 1.03805 as a result of 1% increase in liquidity. The coefficient of leverage has -15.67491 represent that when there is increase in leverage by 1%, ROI decrease by15.67491. The coefficient of activity as 11.65971 reveals that ROI will increase by11.65971as a result of 1% increase in variable of activity. Profitability has coefficient of 6.42097 indicates that when there is increase in profitability by 1%, ROI increase by 6.42079. The coefficient of growth is -0.00134 shows that when there is decrease in growth by 1%, ROI decrease by 0.00134.

As hypothesis first is concerned it is supported and indicating the positive impact of liquidity on performance thus study results are aligned with Mansoor (2019). The second hypothesis is regarding the association between leverage and performance found to be supported as the outcomes reveal negative association thus supporting the study outcomes of Khurram et al. (2016). The third hypothesis of study is related to the association between activity and performance also found to be supported as the outcomes highlight the positive association thus supporting the outcomes of Sahar et al. (2019). The fourth hypothesis is regarding the association between profitability and performance found to be supported as association existing between variables is found to be positive hence supports the study result of Ali and Eneizan (2018). As well the fifth or the last hypothesis of the study is concerned it is not supported as the association between growth and performance is found to be negative in our analysis whereas Hajihassani (2015) examined the association of growth with performance and found a positive association between growth and performance.

RECOMMENDATION

This paper focused on performance of cement firms' in Pakistan and found that the variables of liquidity, leverage, activity and profitability have a significant impact on cement firms' performance. Thus in the context of Pakistan being a developing country, the management are recommended to manage significant ratios at a specific level to accomplish competitiveness both at the domestic and the global level. In addition, literature provides evidence that there is difference in firms' performance in different countries of the world, highlighting the role played by the government in the development of the sector. This highlights that developing economies such as Pakistan should provide support to cement manufacturers so that they enhance their production capacity to meet the internal and external demands of cement and be able to compete at the local and the international level.

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