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Impact of Capital Structure and Dividend Payout Policy on Firm's Financial Performance: Evidence from Manufacturing Sector of Pakistan

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Abstract

The main objective of this study is to investigate the impact of capital structure and dividend policy on the firm financial performance in Pakistani firms. Data is collected from the annual reports of companies. Panel data analysis such as OLS has been used to examine the hypothesis. Return on Assets and Return on equity has been used to measure the firm performance. According to findings there is no relation between leverage and return on assets. There is high significant relation between short term Leverage, Long term leverage, Dividend policy and return on assets. Size does not have any impact on firm return on assets. According to second modal; only leverage has significant impact on return on equity.

1. Introduction

Capital Structure is the combination of debt and equity used by firms to run their long term and short term operations. A firm can fulfill its financing needs in two ways. It can either be debt financing or it can either be equity financing. Maximization of shareholders wealth is the main goal of management of every firm. There are many theories related to capital structure of firms. One of them was proposed by Durand (1952) in the form of Net income approach and his theory say that "increasing leverage in capital structure will increase the firm's value as well as market price of share". Modigliani and Miller (1958) introduced arbitrage process which was an addition to literature. MM said and concluded that value of both levered and unlevered firm is equal under arbitrage process. Modigliani and Miller (1963) also stated the benefit of using debt financing in capital structure in the

shape of Tax shield advantage. They were of the view that leverage provides tax shield in the form of interest that decreases taxable income which results in reducing the tax payable amount. A number of theories have been presented to solve the problem of deciding the best mix of financing for optimal capital structure. Ilyas (2008) proposed Packing order theory. They stated that when a firm require funds to meet its long term financial requirement, they should preferably use internal funds like retained earnings, surplus or reserves etc., in case of financial deficiency they can use leverage in their capital structure and finally they can use equity financing as a final decision. Capital structure is essential on how a firm finances using different sources of available to them. Myers (2001) is basically related to capital structure theory. MM theory is one of very basic theories of this field. And it is the base of theories of many other researchers. But MM says that there are some assumptions.

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And under these assumptions this theory will work properly.

A) Perfect Capital Market

B) No taxes

C) Investors are Rational

D) No bankruptcy costs etc.

The basic and old theories of capital structure basically say that an optimal level of CS is good and required by firm. It will help in reducing the cost and it will also result in increasing the profits. And ultimately will affect the earning and interest of shareholders. Debt ratio is not the only measure of it. There can be many others as well.

1.1. Research Questions

Following questions are proposed for this study:

1. What impact (Positive or negative) Capital structure have on firm's financial performance in cement sector of Pakistan?

2. What is the relation between Dividend Policy and Firm Performance?

3. Whether these results are consistent with previous studies?

4. Whether variable used here explains our dependent variables or not in a significant manner?

5. Whether these results are consistent with other studies in Pakistan or not?

1.2. Objectives of Study

The Proposed research objectives are described below:

• To investigate the impact of Capital Structure on Firm Performance

• To investigate the relationship between these variables and Firm Performance

• To examine the relation between Dividend Policy and Firm Performance

• To investigate the Predictions of Pecking Order Theory

• To investigate the whether these results are consistent with previous studies

1.3. Significance of Study

This study includes one new variable that is the dividend policy to examine the impact of dividend policy on firm performance. The study considers the comparative analysis on the Pakistani and Chinese manufacturing firms.

Different sector has different results. Some has positive impact and some has negative impact. Some has positive for some time period while other have different for other time period. So we will find in this study that whether these results are changed or not. Recent data has been used here and we will find these results are only specific to manufacturing sector. As discussed earlier they depend upon the sector and time period. For some researchers it also depends upon the sample selection.

Here we will find that in what manner these variables are important for manufacturing sector, whether they behave differently when we will compare it with other sectors. Other sectors mean the studies which are already done in Pakistan. But time period of those studies will be different from this one. As those studies have been done in past and this study is being conducted on latest data. Here I will check the impact of capital structure using different variables on performance of companies of manufacturing sector of Pakistan.

2. Literature Review

2.1. Past Studies on Relationship

Ong and The (2011) conducted a study in Malaysia on Construction Sector. They studied impact of Capital Structure on Performance of this sector. They studied it before crises period and during crisis period of 2007. They used data of companies listed in Main Board of Bursa of Malaysia. And they used data for their research from 2005 to 2008. They divided their sample into 3 categories (big, medium and small). And base for these categories were on the paid-up capital. Their results showed that there was a relation between capital structure (CS) and corporate performance. But as a whole there was an existence of relation between CS and performance of these companies.

Gleason, Mathur and Mathura (2000) did a study on relation between culture, CS and performance. They used data of 14 countries. They concluded that CS differs as cultural changes from country. But performance of retailers does not depend on cultural differences as retailers work within countries. But capital structure affects performance in every case. Onaolapo and Kajola (2010) did a study on different level of sensitivities of performance and capital structure on different companies. They selected food and beverage sector companies of Nigeria. They showed that performance indicators and leverage are sensitive.

Zeitun and Tian (2007) used data of 167 companies of Jordan. They used data of 15 years. And found that CS has negative impact on performance of firm. Malik, Gul et al. (2013) did a research on textile and using ordinary least square (OLS) they found that Debt to equity ratio, EPS and time interest earned ratio had positive impact on stock returns.

Other measures of performance which may include market performance like performance of shares in stock market.

Earnings per share is one of them and this may be compared with price if share as well. But the performance measure which is used here is ROA and it is used in almost all studies that have been done related to this topic. ROA there is another measure which is also used here is ROE.

2.2. Some Recent Studies

Moghaddam, Kashkoueyeh et al. (2015) investigated the correlation of capital structure and profitability. Their results pointed out that Return on Asses has inverse prominent relationship with capital structure (ratio of short term loan to total assets), the portion of long term debt to total assets and total liabilities to total assets ratio were independent in their model.

Ahmed Sheikh and Wang (2013) did a study to check the impact on firm's performance. They conducted study on textile firm of Pakistan. They used data of six years. They found that debt has negative relation with profit. Mirza and Javed (2013) also conducted a study on firms of Pakistan. They used data of sixty firms for a period of five years. They also found a negative relation.

Bontis (2003) also conducted a study on textile firms of Pakistan. They also checked its effect on stock returns. They found that leverage and return on equity affect the stock return positively (Salim and Yadav 2012) did a study on cement sector and found that profitability and size has negative relation with leverage.

Performance of firms can be measured by ways. These different ways includes different variables and with different proxies. It can also be measured in terms of growth. And these variables are based on different theories. But here financial measures are used to measure performance. Goyal (2013) in India found that short term debt has positive impact on profitability. While long term has negative impact. Masnoon and Saeed (2014) did the study for automobile sector of Pakistan. They used data of 10 companies for 5 years. They also found that debt (short and long term) has negative relation with profitability. Almost same results were found for Jordan's firms when a study was conducted by (Shubita and Alsawalhah 2012).

Debt or equity capital is two choices available to any company to do business. Some goes for greater portion of debt in their equity structure. And some other prefers to do the opposite. It all varies from firm to firm. As firms goes has different structures. And they are exposed to different risks. So they will choose according to their preferences. It also depends upon the reputation of firms in the markets, whether loans are available to them easily or not and also the nature of their business. Some have long term investments plan. And some works on short term basis. So their choice for long term or short will depend on their nature as well.

Different types of studies in different countries have been done in different sectors. And each sector use to give different results every time. As these results also varies across time. For different types of time durations they have different results. As in literature review sections these things has been described in detail.

2.3. Studies in Pakistan

Shubita and Alsawalhah (2012) conducted the same study but their sector of interest of sugar sector of Pakistan. They analyzed data of 10 firms for a period of four years. They found that long term debt has positive while short term has negative impact.

Majeed, Aziz et al. (2015) conducted a study on non-financial sector of Pakistan. They used data of 7 years and analyzed 380 firms. They used different proxies form measuring profitability. And they found that different variables respond differently to different proxies of profitability. For some there was positive relation for others it was insignificant. So we can also say that it depends on type of proxies used as well.

Kausar, Nazir et al. (used both OLS and panel data regressions on their data. There data was consisted of 197 companies of non-financial sector and consisted of 7 years. But they found that CS variables has negative impact on performance when performance in measured as price to earnings ratio. But when they used Tobin's Q the short and long run debt had insignificant impact (Kausar, Nazir et al.).

Salim and Yadav (2012) also conducted a study on textile firms of Pakistan. They also checked its effect on stock returns. They found that leverage and return on equity affect the stock return positively. Hijazi & Tariq, (2006) did a study on cement sector and found that profitability and size has negative relation with leverage. They found that size, tangibility, growth and risk have significant and positive relationship with leverage while profitability and liquidity have a negative and significant relationship with leverage.

3. Research Methodology

This chapter contains description of Variables their proxies and Hypothesis development. Theoretical framework is also explained here.

3.1. Dependent Variables

Firm performance will be measured by two ways: Return on Assets and Return on Equity

3.2. Independent Variables

These independent variables are proposed to be used in this study

- Leverage measured as Debt ratio

- Short term leverage measured as total current liabilities divided by total assets

- Long term average measured as total Long term liabilities divided by total assets

- Dividend Policy measured as Dividend Payout ratio

3.3. Control Variables

Two control variables are currently proposed to be used in this study

- Size measured as log of sales.

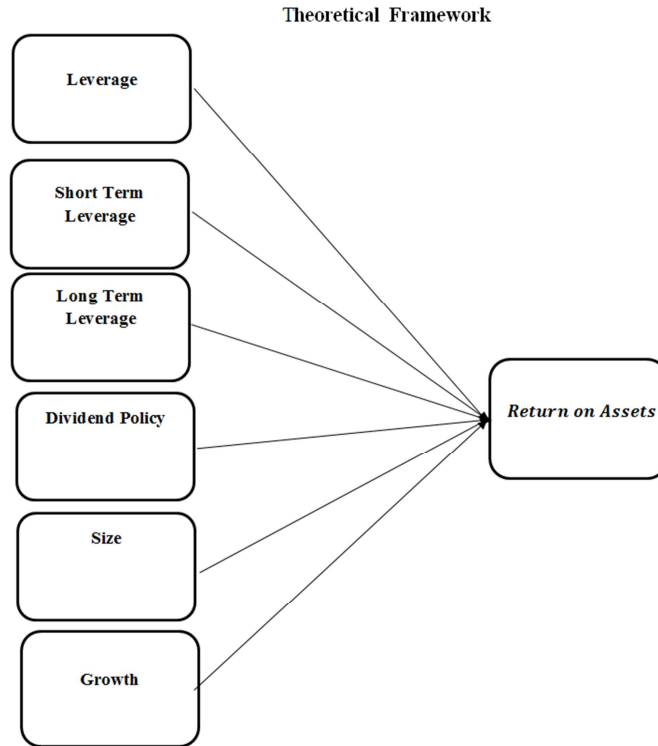- Growth measured as (Current year assets-previous year assets)/previous year assets.
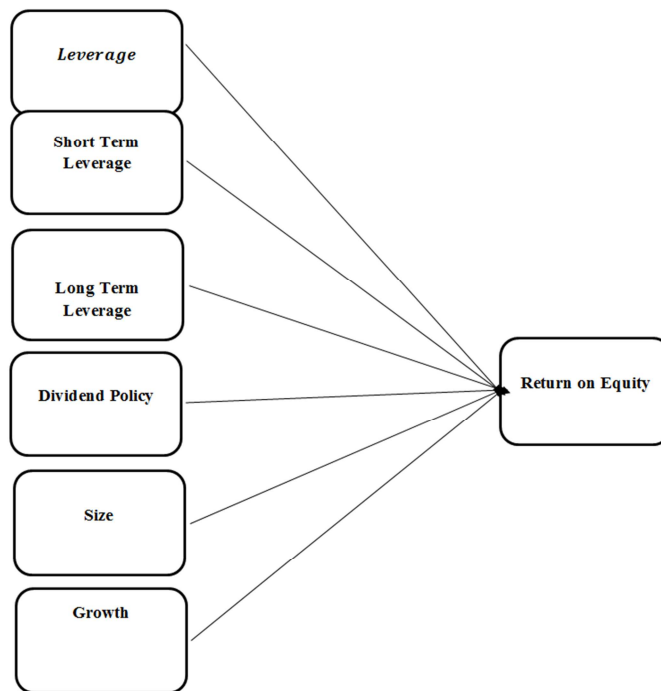

Figure 1. Theoretical framework.

Figure 2. Theoretical framework.

3.4. Models for This Study

Model 1

$$ROA_{it} = \beta_0 + \beta_1 Lev + \beta_2 STL + \beta_3 LTL + \beta_4 DP + \beta_5 Size + \beta_6 Growth + \varepsilon_{it}$$

Model 2

$$ROE_{it} = \beta_0 + \beta_1 Lev + \beta_2 STL + \beta_3 LTL + \beta_4 DP + \beta_5 Size + \beta_6 Growth + \varepsilon_{it}$$

3.5. Sample and Data Collection

The target population is the manufacturing sector. Data has been collected from secondary sources Such as Annual reports of companies and websites of companies. Data of manufacturing sector listed in Karachi stock exchange has been collected. Data was also being collected from State bank files. Simple Random sampling technique has been used. Panel data analysis techniques have been used to investigate the collected data. OLS has been used to examine the hypothesis.

3.6. Hypothesis Development

Dependent variable: Return on assets

H11: There is Positive relation between leverage and return on assets.

H21: There is significant relation between short term Leverage and return on assets.

H31: There is positive relation between long term Leverage and return on assets.

H41: There is relationship between Dividend policy and return on assets.

H51: There is positive relation between and size and return on assets.

H61: There is positive relation between growth and return on assets.

Dependent variable: Return on Equity

H11: There is positive relation between return on equity and leverage.

H21: There is positive/negative relation between return on equity and long term leverage.

H31: There is positive relation between Short term leverage and return on equity.

H41: There is positive relation between Dividend policy and return on equity.

H51: There is positive relationship between size and return on equity.

H61: There is positive relationship between growth and return on equity.

4. Results and Findings

4.1. Regression

Model No. 1

$$ROA_{it} = \beta_0 + \beta_1 Lev + \beta_2 STL + \beta_3 LTL + \beta_4 DP + \beta_5 Size + \beta_6 Growth + \varepsilon_{it}$$

First Researcher applied OLS ignoring time and entity effects results are given below.

Table 1. Regression results.

No. of obs.	128
Prob.> F	0.0000
R-squared	0.5074
Adj. R-squared	0.4872

From Table 1 we can see that F test has P value less than 0.05 so fit is good and 50.74% of variation is being explained in dependent variable by independent variables.

Table 2. Coefficients.

ROA	Coef.	Std. Err.	t-stat	P-Value
Leverage	-0.0373	0.0489		0.447
Short term Leverage	-21.916	5.0702	-4.32	0.000
Long term Leverage	-21.561	5.3996	-3.99	0.000
Dividend Policy	-14.543	3.7654	6.876	0.0000
Size	7.33927	1.6635	4.41	0.000
Growth	2.7051	2.9711	0.91	0.364
_cons	-34.264	12.437	-2.75	0.007

Results of regression can be seen from table 2 we can see that leverage, short term and Long term Leverage has negative coefficients and p-value shows there is no relation between leverage and ROA. There is high significant relation among Short term Leverage, Long term Leverage, Dividend Policy, Size and ROA. Growth does not have any impact on ROA.

Table 3. Multi-collinearity test.

Leverage	VIF	1/VIF
Short term Leverage	1.68	0.595567
Log of Sales	1.62	0.616809
Long term Leverage	1.07	0.935976
Dividend Policy	1.45	0.76543
Growth	1.07	0.937402
Leverage	1.04	0.957016

Value of Variance inflation factor of all variables is less than

5 so there is no multi-collinearity.

Model No. 2

$$ROE_{it} = \beta_0 + \beta_1 Lev + \beta_2 STL + \beta_3 LTL + \beta_4 DP + \beta_5 Size + \beta_6 Growth + \varepsilon_{it}$$

Same step of processes were repeated for second model as well

Table 4. Regression results.

Number of obs.	128
Prob.> F	0.00
R-squared	0.1790
Adj. R-squared	0.145
Root MSE	57.953

17.9% of variation is explained ROE is used as dependent variable with same independent variables, F test says model is good fit as p value is less than 0.05.

Table 5. Coefficients.

ROE	Coef.	Std. Err.	t-stat	P>t-stat
Leverage	-1.4781	0.3361	-4.4	0.00
Short term Leverage	-19.492	34.820	-0.56	0.577
Long term Leverage	28.8044	37.082	0.78	0.439
Size	17.6578	11.424	1.55	0.125
Dividend Policy	-65.6754	12.758	1.63	0.8764
Growth	9.98756	20.404	0.49	0.625
_cons	-115.038	85.414	-1.35	0.181

Table 5 shows results of pool regression only leverage has significant effect as p-value is significant and has negative impact on ROE as values of coefficient is negative.

4.2. Multi-collinearity

Table 6. Multi-collinearity test.

Variable	VIF	1/VIF
Short term leverage	1.68	0.595567
Log of Sales	1.62	0.616809
Long term leverage	1.07	0.935976
Growth	1.07	0.937402
Leverage	1.04	0.957016
Dividend Policy	1.34	0.67543

Table 6 shows values of VIF and all variables has value of less than 5 so there is no issue of multi-collinearity.

5. Conclusion

The main objective of the study is to investigate the impact of capital structure and dividend policy on the firm financial performance in Pakistani firms. Data is collected from the secondary sources namely annual reports of companies and state bank files. Most recent data of companies is used. According to findings P value shows that there is no relation between leverage and return on assets. There is significant relation between short term Leverage and return on assets. There is significant relationship between Long term leverage return on assets. There is relationship between Dividend policy and return on assets. Size does not have impact on firm return on assets.

According to modal two only leverage has significant effect as p-value is significant and has negative impact on ROE as values of coefficient is negative. VIF is less than 5 so there is no issue of multi-collinearity.

References

[1]   Ahmed Sheikh, N. and Z. Wang (2013). "The impact of capital structure on performance: An empirical study of non-financial listed firms in Pakistan." International Journal of commerce and Management 23 (4): 354-368.

[2]   Akintoye, I. R. (2009). "Sensitivity of Performance to Capital Structure." Banking and Finance Letters 1 (1): 29.

[3]   Bontis, N. (2003). "Intellectual capital disclosure in Canadian corporations." Journal of Human Resource Costing & Accounting 7 (1): 9-20.

[4]   Durand, D. (1952). Costs of debt and equity funds for business: trends and problems of measurement. Conference on research in business finance, NBER.

[5]   Goyal, A. (2013). "Impact of capital structure on performance of listed public sector banks in India." International journal of business and management invention 2 (10): 35-43.

[6]   Ilyas, J. (2008). "The determinants of capital structure: Analysis of non-financial firms listed in Karachi stock exchange in Pakistan." Journal of Managerial Sciences 2 (2): 279-307.

[7]   Kausar, A., et al. "Capital Structure and Firm Value: Empirical Evidence from Pakistan."

[8]   Majeed, S., et al. (2015). "The Effect of Corporate Governance Elements on Corporate Social Responsibility (CSR) Disclosure: An Empirical Evidence from Listed Companies at KSE Pakistan." International Journal of Financial Studies 3 (4): 530-556.

[9]   Malik, F., et al. (2013). "Factors influencing corporate dividend payout decisions of financial and non-financial firms." Research Journal of Finance and Accounting 4 (1): 35-46.

[10]   Masnoon, M. and A. Saeed (2014). "Capital Structure Determinants of KSE Listed Automobile Companies." European Scientific Journal 10 (13).

[11]   Mirza, S. A. and A. Javed (2013). "Determinants of financial performance of a firm: case of Pakistani Stock Market." Journal of Economics and International Finance 5 (2): 43.

[12]   Modigliani, F. and M. H. Miller (1958). "The cost of capital, corporation finance and the theory of investment." The American economic review 48 (3): 261-297.

[13] Modigliani, F. and M. H. Miller (1963). "Corporate income taxes and the cost of capital: a correction." The American economic review 53 (3): 433-443.

[14] Moghaddam, A. G., et al. (2015). "The Impact of Capital Structure on Corporate Performance." International Journal of Academic Research in Business and Social Sciences 5 (3): 148.

[15] Myers, S. C. (2001). "Capital structure." The Journal of Economic Perspectives 15 (2): 81-102.

[16] Onaolapo, A. A. and S. O. Kajola (2010). "Capital structure and firm performance: evidence from Nigeria." European Journal of Economics, Finance and Administrative Sciences 25: 70-82.

[17] Salim, M. and R. Yadav (2012). "Capital structure and firm performance: Evidence from Malaysian listed companies." Procedia-Social and Behavioral Sciences 65: 156-166.

[18] Shubita, M. F. and J. M. Alsawalhah (2012). "The relationship between capital structure and profitability." International Journal of Business and Social Science 3 (16).

[19] Zeitun, R. and G. G. Tian (2007). "Capital structure and corporate performance: evidence from Jordan." Australasian Accounting, Business and Finance Journal 1 (4): 3.