

Factors Influencing Capital Structure: Evidence from the Oil and Gas Industry of Pakistan

Muhammad Tahir
School of Management,
University Sains Malaysia and University of Turbat Pakistan

Muhammad Mushtaq
Graduate School of Business,
University Sains Malaysia and University of Turbat, Pakistan

Abdul Majid Nasir
University of Turbat, Pakistan

Badal Khan
University of Turbat, Pakistan

This study aims to find out the variables to determine the financial leverage of listed Oil and Gas companies of Pakistan. We have found the regression analysis by using the STATA. Variables were taken from the existing literature plus with the new variables of dividend payout and government ownership, which is the major contribution of this study. Results indicate the significant negative impact of dividend payout and state ownership on financial leverage. Liquidity and business risk also have a significant inverse effect on the firm's financial leverage. Size and growth found to have a significant positive relationship with financial leverage which indicates that large and growing firms tend to go for external financing particularly debt financing than the small and not growing counterpart.

INTRODUCTION

Equity and debt financing are the two largest sources of financing available to the corporations. Equity financing is the funds invested by the owners (shareholders) of the corporation. The main type of equity securities is common stock and preferred stock. Common stockholders are the ultimate owner of the corporation, and they have voting rights. Preferred stockholders compared to common stockholders have a prior claim to profit, but generally, they do not have the voting power. On the contrary, debt financing is the amount provided by the lenders to the corporation. Lenders have the prior claim to the profit and assets of the corporation in case of liquidation. The main class of debt financing includes loans from banks and other financial institutions and corporate bonds. Here the question arises that either what should be the proportion of equity and debt in firm's capital structure. Financial managers are struggling in deciding the optimal capital structure that is a key decision.

Corporate finance theory insists for the wealth maximization of shareholders. Financial managers are in a great challenge to take effective decisions to achieve wealth maximization goal of the firm. It shows the importance of capital structure decision in the wealth maximization process. Firms achieve wealth maximization when they have the lowest cost of capital and high rate of return on the invested capital. Financial managers have to decide whether to run the business operations from the internally generated funds or they should go for external financings such as issuing new stocks or issuing bonds, taking a loan from banks and other financial institutions. These all issues are addressed in capital structure decision of the firm.

Companies prefer debt financing due to the tax shield provided by debt financing. However, at the same time, more reliance on debt financing exposes the companies to financial or bankruptcy risk. There are two types of costs related to bankruptcy. One is the direct costs incurred in settling the litigation, and the other cost is an indirect cost regarding lost sales and brand image among the customers.

Optimal capital structure decision traced back to work of Modigliani and Miller (1958), where they argued irrelevance theory regarding capital structure on firms' value in the perfect capital market with no taxes and bankruptcy cost. However, the real perfect capital market does not exist, corporations have to pay taxes on earnings, and they can get tax shield by using more debt in the capital structure. Many research has been conducted to determine the impact of capital structure on firm value since the Miller and Modigliani (1958) theory of irrelevance. Researchers have mainly focused capital structure in advanced economies with efficient capital markets.

Literature regarding optimal capital structure represents differences in their factors selection. Recent paper fills the gap by mainly focusing on factors influencing the capital structure of a firm from developing country perspective. Because Pakistan is an emerging and developing country having few capital markets, which are not so effective and efficient. Some of the researchers in the country have studied capital structure either from the general perspective or specific industry perspective, having very few kinds of literature available. This study aims to investigate key factors that can influence capital structure of listed oil and gas companies in Pakistan. This industry is the growing industry in the country which requires huge investments by shareholders and creditors. Businesses in this industry mostly rely on short and long-term debt for their operations of activities. Considering the importance of this industry in the economy of Pakistan, which is relying on debt financing, makes this needed study to find out the factors affecting its capital structure.

This paper will contribute to existing literature by helping financial managers to take effective decisions regarding financing matters. It describes factors, which are reliably important to affect capital structure of the particular industry in Pakistan. It can help the lenders in their lending decisions to these firms. Further, it can be useful for financial managers to frame optimal capital structure keeping in consideration the factors that can affect capital structure decision. Issuing stock or debt issue decisions for future investment projects can significantly helpful for managers.

Section 2 of this paper equips with the existing literature regarding capital structure; Section 3 talks about the methodology, Section 4 comprised of results and discussion and section 5 gives an overall conclusion of this study and major contributions as well.

EXISTING LITERATURE

Theoretical Literature

When it comes to capital structure literature, we have two schools of thoughts. One school of thought believes that capital structure is irrelevant and it has no effect on firm's value. It means that it does not matter whatever financial mix the company chooses; firm value will not be affected. The pioneers of this thought are Miller and Modigliani (1958) who argued that in a perfect capital market, where there is no transaction cost, no taxes, and no bankruptcy cost, the capital structure cannot affect the firm value. As we know in the real world, perfect capital markets do not exist, companies have to pay taxes on corporate income, and there is bankruptcy cost to the firms. Moreover, M&M proposition did not consider the

floatation costs that businesses have to pay at the time of stock and bond issues. After the paper of M&M, three theories were developed to explain the optimal capital structure of a firm.

Jensen and Meckling (1976) are the first who introduced the famous Agency theory. Principals being the owners and agents being managers have differing interests, where shareholders holding well-diversified portfolio prefer shareholder's wealth-maximization with some degree of risk but on the other hand, agents are more risk-averse and prefer to invest free cash flows in less risky and low NPV projects. To manage this conflict of interest, principals have to monitor activities of agents to make sure that agents are working in best interest of shareholders. These monitoring activities have certain cost called agency cost. Jensen and Mackling (1976) suggested that companies should pay a high dividend or use more debt financing to reduce agency cost. High debt financing will restrict the usage of free cash flows for unproductive activities through the inclusion of debt covenants, therefore; managers cannot misuse the free cash flows. Furthermore, they proposed that high debt financing provides more control to lenders and increases the chance of bankruptcy, which managers do not like and try to avoid debt financing. Grossman and Hart (1982) suggested that high debt financing could be used to motivate managers to work efficiently due to fear of job loss.

In contrast to agency theory, firms decide their leverage by trading off the benefits of debt financing that is tax shield and disadvantages of debt financing like bankruptcy cost. Corporations prefer debt financing because it provides tax shield as interest expense is tax-deductible expense compared to the dividend. There are certain costs related to debt financing like bankruptcy cost and agency cost, which means that higher the debt ratio higher will be the probability of bankruptcy. This theory suggests that companies will use debt financing until marginal tax benefit is equal to marginal cost of bankruptcy. Agency cost occurs when the company has free cash flow, and managers invest these free cash flows in risky and high NPV projects.

Later, Myers and Majluf (1984) presented the pecking order theory, in which they suggested that firms prefer the internal source of financing the most, followed by debt financing and lastly equity issue. This theory based on the assumption of information asymmetry between insiders (managers) and outsiders (shareholders) where insiders have complete information regarding the affairs of the firm that is not available to shareholders. Due to the availability of full information regarding the current and future value of the company to managers, internal financing ranked the cheapest source of financing. Debt financing and issuing new shares are the expensive sources of financing because lenders and shareholders have no information and knowledge about the present value of current and future investment projects. They need more return to compensate them for bearing the risk. Highly profitable firms rely less on debt financing because they have enough internally generated cash flows to fund the investment projects. This theory rejects the existence of optimal capital structure. Firms go for internal source the first followed by debt financing and lastly issuing equity.

Empirical Literature

Profitability

Tradeoff theory states that the most profitable firms may have high debt to equity ratio due to the tax benefit of debt financing. This proposition recommends that there is a positive relationship between profitability and debt to equity ratio. However, Pecking-order theory suggests that highly profitable firms have low debt to equity ratio because these firms have enough free cash flows to finance their activities and they prefer internal financing compared to external financing. This theory proposes negative impact of profitability on financial leverage. However, agency theory suggested that firms should use more debt to reduce agency cost. In this scenario, many empirical studies have observed the relationship between profitability and capital structure.

Many empirical studies proposed negative effect of profitability on financial leverage. Friend and Lang (1988) ; Titman and Wessels (1988) used US firms' data and based on the results suggested a negative association of profit with financial leverage. Kester (1986) suggested that highly profitable firms in Japan and US have low financial leverage due to the availability of internal finance for investment projects. Latest empirical results Ahmed Sheikh and Wang (2011); Karadeniz, Yilmaz Kandir, Balcilar

and Beyazit Onal (2009); Supanvanij (2006) showed the inverse relationship as well. On the contrary, Abor (2005) and Booth, Aivazian, Demircuc-Kunt and Maksimovic (2001) found a significant positive relationship.

H1: Profitability has significant impact on financial leverage

Firm size

Researchers have mixed findings regarding the association of firm size with financial leverage. Some empirical studies Titman and Wessels (1988); Rajan and Zingales (1995); Huang (2006) found a positive link between firm size and financial leverage. They argued that the large size firms be more diversified and have stable and more predictive future cash flows and have a low probability of bankruptcy. These results are consistent with the trade-off theory, which advocates that big business has more debt financing because they have easy access to capital markets and have good credit ratings and they can manage funds at low cost. In contrast, Marsh (1982); Yu and Aquino (2009); Ebeh Ezeoha (2011) have reported negative impact of firm size on financial leverage. These companies have more access to equity capital market and can get equity financing easily which reduces debt funding. Firm size according to pecking order theory found to have an inverse relationship with financial leverage with the explanation that big companies have more information asymmetry and more agency cost for debt holders, therefore large firms attract less debt.

H2: Firm size has a significant impact on financial leverage.

Growth Opportunities

Empirical studies stipulated different findings of the growth opportunities with the financial leverage. Companies follow an order in funding the growth opportunities, starting with internal funds and if internal funds are not adequate to encounter the growth needs, then companies prefer to issue debt and lastly equity financing as per pecking order theory. It indicates the positive relation of growth opportunities with financial leverage (Viviani, 2008; Drobetz & Fix, 2003; Chen & Strange, 2005; Huang and Song, 2002).

On the contrary, Trade-off and Agency theory suggest an inverse relationship between growth opportunities and financial leverage. Growing firms have more agency cost due to the availability of different investment alternatives, which increases the risk to lenders and they are more pessimistic about this issue and demand high-interest premium to compensate them for this risk. The high-interest rate will make the debt financing expensive for the firm thus resulting in low debt financing.

H3: Growth opportunities have significant impact on financial leverage

Business Risk

Whereas, current as well as future performance, can be affected by business risk. When there are volatility and many variations in earnings, companies will not be able to meet their short or long-term debt obligations. The probability of financial distress or bankruptcy is high during variant earnings. To encounter this risk, lenders demand more risk premium, which will increase the cost of capital and makes the debt financing more expensive. Now to reduce the cost of capital, companies prefer to use the internally generated funds, and if internal funds are not sufficient, then they issue shares. According to tradeoff as well as pecking order theory, debt financing decrease with the increase in earnings volatility or business risk. Numerous empirical studies have found a negative link between business risk and financial leverage (Akhtar & Oliver, 2009; Jong et. al., 2008; Booth et al., 2001; Al-Najjar & Taylor, 2008; Sheikh and Wang, 2011; Heshmati, 2001). However, some of the researchers have reported a positive relationship between business risk and financial leverage. They argued that companies with variant earnings could not issue shares at a high price due to the information asymmetry (Booth et al. 2001; Cools, 1993; Ellili & Farouk, 2011; Omran & Pointon, 2009).

H4: Business risk has significant effect on financial leverage

Liquidity

As per trade-off theory, companies having good liquidity position can borrow more compared to companies facing liquidity problem. This theory predicts the positive association between liquidity and financial leverage. Pecking order theory proposes that companies have a good liquidity position desire to use internal funds for business operations and future investment projects. This theory suggests a negative link between liquidity and financial leverage. Also, some of the empirical studies have reported a negative relationship between liquidity and financial leverage. Deesomsak, Paudyal and Pescetto (2004) based on their study results reported the inverse association of liquidity with financial leverage. They argued that companies with high liquidity prefer retained earnings to external finance resulting in a low financial leverage, which agrees with pecking order theory. Some of the other empirical studies have also reported negative impact of liquidity on financial leverage (Eriotis, Vasiliou, & Ventoura-Neokosmidi, 2007; Sheikh & Wang, 2011; Friend & Lang, 1988; Icke & Ivgen, 2011).

H5: Liquidity has significant effect on financial leverage

Dividend Payout

Researchers recommended that companies have specified dividend payout policy based on the projected future cash flows and growth opportunities. Companies are more reluctant in cutting dividends because it has an adverse impact on share price of the firm. On the other hand, dividend increase announcement is perceived by the investors as a positive signal regarding future growth prospect and has a favorable effect on firm's stock price. Investors will prefer to pay a high price for the stock of such firms, and they will use low discount rate resulting in lower cost of capital. Low cost of capital will encourage these firms to issue more equity compared to debts. It implies a negative association between financial leverage and dividend payout. Tahir and Mushtaq (2016) also found a negative relationship between financial leverage and dividend payout.

On the contrary, dividend payment to shareholder's results in a decrease of internally generated funds. If the firm's future cash needs exceed the available free cash flows then external financing will be required, where firms go for debt financing compared to equity financing because it is cheaper than the equity financing (pecking order theory). It advises a positive link between dividend payout and financial leverage.

H6: Dividend payout has significant effect on financial leverage

Ownership Structure

Agency theory of Jensen and Meckling (1976) advocated that ownership structure and debt financing could be used to minimize agency cost. They argued that debt financing restrict the usage of free cash flows for unproductive processes through the inclusion of debt covenants from creditors. Debt financing provides more control to creditors, which managers of the firms do not like, therefore, they prefer equity financing compared to debt financing. This put forward a negative relationship between managerial ownership and financial leverage. Friend and Lang (1998) based on the results of their study concluded that high managerially owned firms less likely use debt financing because of default risk and control by creditors. They suggested an inverse association between managerial ownership and financial leverage. Some other researchers have also found a significant negative relationship between managerial ownership and financial leverage (Mohammed et al. 1998; Huang & Song, 2006 ; Hossain & Ali, 2012).

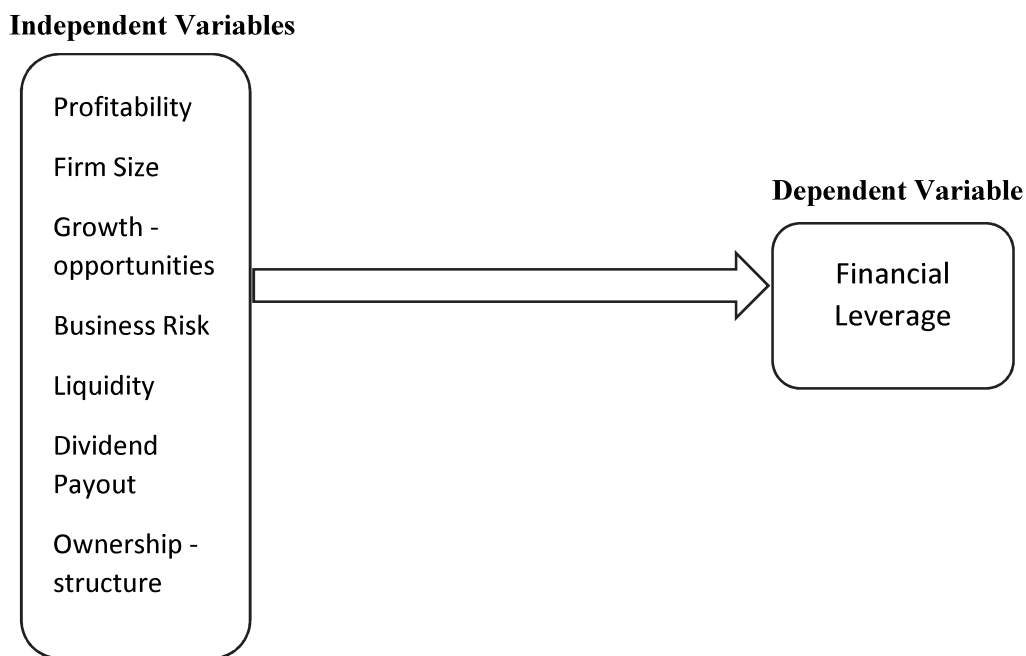
H7: Managerial ownership has significant impact on financial leverage

Researchers have observed that state ownership results in low productivity, which is against the interests of the general shareholders. Li, Yue and Zhao (2009) argued that state-owned companies could secure debt on easy terms compared to privately owned companies. In contrast, Dewnenter and Malatests (2001) reported that state-owned corporations have low debt ratio in their capital structure suggesting a negative link between state ownership and financial leverage. Su (2010) study findings recommend that state-owned companies tend to issue less debt and rely more on internal funds and equity financing.

H8: Government ownership has significant impact on financial leverage

Theoretical Framework

**FIGURE 1
THEORETICAL FRAMEWORK**



METHODOLOGY

Data Collection

The population of this study includes all the listed Oil & Gas companies on Karachi Stock Exchange. The sample size is decided based on the availability of data. Unlisted firms and the firms with incomplete records are not included in the sample. This study includes Eleven (11) listed companies of respective Oil and Gas industry from 2008 to 2014. The reason for selection of the said time-period is that the credit crunch or global financial crisis occurred during this time-period. Therefore, observing the capital structure decision of companies during such crisis will be interesting. Secondary data were obtained from audited financial statements of listed oil and gas companies listed on Karachi Stock Exchange and used the necessary information about these firms from (KSE) for our illustration.

Variables Measurement

The study adopts the measures for variables used by Tahir and Mushtaq (2016) to find the effect of a set of explanatory variables on financial leverage.

Empirical Model

We will use the panel regression model for this study because of its panel characteristics. Double subscript on each variable differentiates panel regression study from other studies. The model is:

$$Y_{i,t} = \alpha_{i,t} + \beta X_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where subscript *i* denotes the cross-sectional dimension and *t* denotes the time series dimension. $Y_{i,t}$ and $X_{i,t}$ represents the dependent and independent variables in the model, $\alpha_{i,t}$ represents the constant and $\beta_{i,t}$ being the independent variable coefficient, and $\varepsilon_{i,t}$ is taken for random error term. General regression equation of this study is:

$$LEV_{i,t} = \beta_0 + \beta_1 PROF_{i,t} + \beta_2 SIZE_{i,t} + \beta_3 GO_{i,t} + \beta_4 RISK_{i,t} + \beta_5 LIQ_{i,t} + \beta_6 DIV_{i,t} + \beta_7 MNG_{i,t} + \beta_8 GOV_{i,t} + \varepsilon_{i,t} \quad (2)$$

The symbols show:

- LEV_{*i,t*} = Total debts/ Total equity for firm *i* in time *t*
- PROF_{*i,t*} = Net income/ Total assets
- SIZE_{*i,t*} = Natural log of total assets
- GO_{*i,t*} = (New sales – Old sales) / Old sales
- RISK_{*i,t*} = Current OP -Previous OP/ Previous OP for company *i* in time *t*
- LIQ_{*i,t*} = Current assets/Current liabilities
- DIV_{*i,t*} = Dividend on each share/ EPS
- MNG_{*i,t*} = Percentage of shares with Managers
- GOV_{*i,t*} = Percentage of shares with Government

RESULTS AND DISCUSSION

TABLE 1
DESCRIPTIVE RESULTS

<i>Variables</i>	<i>Observations</i>	<i>Mean</i>	<i>Standard deviation</i>	<i>Min</i>	<i>Max</i>
<i>LEV</i>	77	2.4825	2.446154	0.25	9.06
<i>DIV</i>	77	38.26104	30.22478	0	98.31
<i>PROF</i>	77	12.45961	13.16851	-23.64	33.41
<i>SIZE</i>	77	7.478052	.9088122	4.12	9.06
<i>GO</i>	77	22.7713	23.15158	-19.57	88.64
<i>LQ</i>	77	1.822078	1.221993	0.76	6.87

RISK	77	19.73481	82.41424	-187.24	345.64
MNG	77	1.105684	2.226133	0	7.48
GOV	77	17.29714	28.64947	0	85.04

The results presented in **table 1** indicate that the firms in oil and gas industry on average use 2.4825 times debt to equity in their capital structure by showing a heavy reliance on debt financing. On average dividend payout of these firms is 38.26104 that is very high and demonstrates 38% of the profit being paid out as dividend but standard deviation also showing the high value of 30.22, which shows that these firms are not consistent dividend-paying firms. Profitability of 12.45 % indicates that on average these firms are profitable with the high standard deviation of 13.17%. Results of growth opportunities suggest that on average the sale of oil and gas industry is growing by 22.713%. These firms are liquid since for every single Dollar of liability they have 1.822 Dollar available in Asset. There is 19.73 score for RISK with the standard deviation of 82.41 indicating that these firms are not entirely certain about their operating income, albeit there is uncertainty. Managerial ownership of 1.105 percent of these firms is minimal which means that the managers and directors are just holding about 1% of shares which may not affect the financial leverage of Oil and Gas Companies of Pakistan. Whereas, the Government ownership of 17.29 % is quite high and shows that Government of Pakistan is holding a significant amount of ownership in the industry. Furthermore, it can significantly affect the financial leverage decision of the said industry firms.

Correlation Test

TABLE 2
CORRELATION MATRIX

Variables	LEV	DIV	PROF	SIZE	GROW	RISK	LIQ	MNG	GOV
LEV	1.000								
DIV	-0.5832	1.0000							
PROF	-0.4515	0.3641	1.0000						
SIZE	0.1102	0.0258	0.1481	1.0000					
SG	0.0427	.2079	.00851	-0.0251	1.0000				
LQ	-0.5334	0.3294	0.4275	0.2177	-0.0713	1.0000			
RISK	-0.1746	-0.0419	0.3388	-0.0592	0.1516	-0.0097	1.0000		
MNG	-0.1697	0.1930	0.0639	-0.4440	0.1053	-0.0788	0.0070	1.0000	
GOV	-0.3813	0.1305	0.3817	0.4120	-0.0251	0.6293	0.0244	-0.3030	1.0000

Correlation Matrix table 2 results show that the majority of independent variables have a negative relationship with the financial leverage particularly dividend payout being the most important variable showing a negative value of .5832, which indicates that in Pakistan, dividend paying Oil and Gas companies uses less debt in their capital structure. Moreover, liquidity, profitability and government ownership also showed a significant inverse relationship to financial leverage by the negative value of

0.5334, 0.4515 and 0.3813 respectively. Other independent variables like risk, managerial ownership indicates the inverse relationship but not that much as mentioned in table 4.2. Size and sales growth being the only variables which have positive relationships with the financial leverage where the results are showing a positive value of 0.1102 for Size and 0.0427 for sale growth. Growing firms and large size firms have greater opportunity to access capital markets because funds are easily available to these firms with less asymmetric information that makes them the candidate for using debt in their capital structure.

Multicollinearity Test

**TABLE 3
MULTICOLLINEARITY**

<i>Variable</i>	<i>VIF</i>	<i>1/VIF</i>
<i>GOV</i>	2.08	0.479730
<i>LQ</i>	1.97	0.507514
<i>PROF</i>	1.67	0.597320
<i>SIZE</i>	1.42	0.703937
<i>MNG</i>	1.40	0.713710
<i>DIV</i>	1.38	0.724275
<i>RISK</i>	1.25	0.802704
<i>GO</i>	1.11	0.902711
<i>Mean VIF</i>	1.54	

To test the Multicollinearity among the variables, which is the correlation of all the independent variables with each other, we have just applied the Variance Inflation Factor (VIF). According to (Gujarati and Porter, 2009), there is no high correlation between the independent variable if the Mean (VIF) is less than four. So, our results support the same notion being the mean (VIF) of just 1.54 which is much less than four, that our results are robust and there is no significant correlation among the variables.

Regression

TABLE 4
ORDINARY LEAST SQUARE

<i>Variables</i>	<i>Coefficients</i>	<i>t Value</i>	<i>P value</i>
<i>DIV</i>	-.0392	-5.48	0.000***
<i>PROF</i>	-.0110	-0.61	.0542
<i>SIZE</i>	.6784	2.81	.007***
<i>GO</i>	.0176	2.11	.039**
<i>LQ</i>	-.4595	-2.17	.033**
<i>RISK</i>	-.0053	-2.14	.036**
<i>MNG</i>	-.0839	-0.86	.396
<i>GOV</i>	-.0229	-2.48	.01***
<i>Constant</i>	.0796476	0.04	0.966

*** Represents 1% level of significance; ** Represents 5% level of significance * Represents 1% level of significance

The overall model is quite strong since the results of R square reveal that 61.41% of the variation of financial leverage. Moreover, the ordinary least square regression results explain in table 4.4 that profitability has a negative but insignificant relationship with financial leverage. Therefore we reject the H1. However, these results are somehow consistent with (Friend and Lang, 1988), (Kester, 1986), (Sheikh and Wang, 2011), (Karadeniz et al., 2009; Supanvanij, 2006) where they have found an inverse relation between Profitability and financial leverage. Results suggest that Oil and Gas Companies of Pakistan somehow prefer internally generated funds to finance their projects, which also supports the traditional pecking order theory. The results are insignificant may be due to the fewer data available for this study.

Also, Size being the most researched variable to influence the financial leverage also showed the same results as found in many studies. The results in table 4.4 indicate a significant positive association between size and financial leverage at 1% significance level, therefore the H2 is accepted and which indicates that the Oil and Gas companies of Pakistan use larger debt in their capital structure as their size goes up. It means that the larger firms have greater access to the capital market and face low information asymmetry and when there is a need for external financing, they easily can get the required funds to exploit the market opportunity. Results are consistent with (Titman and Wessels, 1988; Rajan and Zingales, 1995; Gued et. al. 2003; Huang and Song, 2002) as well as with the Tradeoff Theory.

Furthermore, we accept the H3 at 5% level of significance, which indicates that Growth opportunity has significant positive impact on leverage. The results direct that 1% increase in sales brought a 0.0176% increment in the leverage. This is consistent with (Viviani, 2008; Drobetz and Fix, 2003; Chen, 2003; Huang and Song, 2002) who found that Growth opportunity has a positive and significant relationship with Financial leverage. This also supports the Pecking Order Theory that growing firms invest in positive NPV projects to increase the size of sales and profits that creates a demand for external financing. When they need external financing, then they will go for debt financing first which is the confirmation of following the Pecking Order Theory.

Besides, at 5% significance level the H4, as well as the H5, are accepted since both the liquidity and business risk have a significant negative effect on financial leverage. As per Pecking Order Theory, most liquid firms use their internal funds to finance future projects, which reduces the need for external financing. (Deesomsak *et al.*, 2004; Eriotis *et al.*, 2007; Sheikh and Wang, 2011; Friend & Lang, 1988; Icke and Ivgen, 2011), resulted the same negative relationship. Business risk creates volatility in earnings and leads to high cost of capital that makes the debt financing most costly. Here we also found the same pattern for Oil and Gas companies of Pakistan which supports the both” Pecking Order and Tradeoff “Theories of capital structure.

Additionally, Dividend Payout has a significant negative relationship with the financial leverage. Therefore, the H6 is accepted at 1% level of significance which shows that 1% increase in dividend payout may decrease the leverage by 0.0392%. Suggesting that dividend-paying firms not go for external financing particularly for debt financing because they have internally generated funds and when they need it, they will use their internally generated funds which also supports the pecking order theory. Our results are consistent with Tahir and Mushtaq (2016) where they have found that the leveraged firms prefer not to pay dividend but use the internally generated funds to meet its financial needs.

In contrast to the H7, we found that managerial ownership has an insignificant negative effect on the financial leverage. Results are consistent with (Friend and Lang, 1998; Mohammed *et al.* 1998; Huang and Song, 2006; Hossain & Ali, 2012).

Government ownership with 1% significance level shows that it has an inverse effect on the financial leverage which also supports H8. 1% increase in governmental shares decreased the financial leverage by 0.0229%. Majority of oil and gas companies in Pakistan are greatly affected by government financial policies because government has retained a certain number of shares in the Oil and Gas industry.

CONCLUSION

This paper examines the factors that affect the capital structure specifically financial leverage of Oil and Gas firms listed on KSE during 2008 to 2014. The variables are from existing literature with the inclusion of new variable of dividend payout and government ownership. Results were supporting some of the existing studies that have been conducted in most advanced countries, but somehow the differences were found in the particular industry by supporting or rejecting the most popular capital structure theories. OLS regression analysis was used to scrutinize the affiliations. Also, through VIF we found there is no multicollinearity issue. The most significant negative influencing factors were dividend payout, liquidity, business risk and government ownership that greatly affect the financial leverage decision of industries. We have also found a negative impact of profitability and managerial ownership on financial leverage, but the relationship was insignificant which may be due to the small sample size. The only independent variables, firm size, and growth have a positive relationship with financial leverage which means that large size firms have greater chances to avail debt financing from the market as compared to small size firms. Growing firms need external debt financing to invest in new projects to increase their market share and the profits. Dividend payout and government ownership being the new variables in the study influencing the financial leverage is the major contribution of this study which adds to existing literature as government of Pakistan plays its role as a shareholder in most of listed oil and gas companies.

This research study covers a short period and small sample size. For future research, longer time-period and large sample size can be used to analyze the effect of explanatory variables on financial leverage. Additionally, this study is based on single industry; in future research, multi industries can be utilized to compare the capital structure of different industries. Furthermore, Generalized Method of Moment (GMM) estimator can minimize the multiple endogeneity and auto-correlation of the dependent variable.

REFERENCES

- Abor, J. (2005). The effect of capital structure on profitability: an empirical analysis of listed firms in Ghana. *The Journal of Risk Finance*, 6(5), 438–445.
- Ahmed Sheikh, N., & Wang, Z. (2011). Determinants of capital structure: An empirical study of firms in manufacturing industry of Pakistan. *Managerial Finance*, 37(2), 117–133.
- Akhtar, S., & Oliver, B. (2009). Determinants of capital structure for Japanese multinational and domestic corporations. *International Review of Finance*, 9(1-2), 1–26.
- Al-Najjar, B., & Taylor, P. (2008). The relationship between capital structure and ownership structure: New evidence from Jordanian panel data. *Managerial Finance*, 34(12), 919–933.
- Booth, L., Aivazian, V., Demircug-Kunt, A., & Maksimovic, V. (2001). Capital structures in developing countries. *The Journal of Finance*, 56(1), 87–130.
- Chen, J., & Strange, R. (2005). The determinants of capital structure: Evidence from Chinese listed companies. *Economic Change and Restructuring*, 38(1), 11–35.
- Cools, C. (1993). Capital structure choice: confronting (meta) theory, empirical test and executive opinion.
- Deesomsak, R., Paudyal, K., & Pescetto, G. (2004). The determinants of capital structure: evidence from the Asia Pacific region. *Journal of Multinational Financial Management*, 14(4), 387–405.
- Drobetz, W., & Fix, R. (2003). What are the determinants of the capital structure? Some evidence for Switzerland. *University of Basel. WWZ/Department of Finance, Working Paper*, 4(3).
- Ebeh Ezeoha, A. (2011). Firm versus industry financing structures in Nigeria. *African Journal of Economic and Management Studies*, 2(1), 42–55.
- Ellili, N. O. D., & Farouk, S. (2011). Examining the capital structure determinants: empirical analysis of companies traded on Abu Dhabi Stock Exchange. *International Research Journal of Finance and Economics*, 67, 82–96.
- Eriotis, N., Vasiliou, D., & Ventoura-Neokosmidi, Z. (2007). How firm characteristics affect capital structure: an empirical study. *Managerial Finance*, 33(5), 321–331.
- Friend, I., & Lang, L. H. P. (1988). An empirical test of the impact of managerial self-interest on corporate capital structure. *The Journal of Finance*, 43(2), 271–281.
- Grossman, S. J., & Hart, O. D. (1982). Corporate financial structure and managerial incentives. In *The economics of information and uncertainty* (pp. 107–140). University of Chicago Press.
- Heshmati, A. (2001). The dynamics of capital structure: Evidence from Swedish micro and small firms. *Research in Banking and Finance*, 2(1), 199–241.
- Hossain, F., & Ali, A. (2012). Impact of firm specific factors on capital structure decision: an empirical study of Bangladeshi Companies. *International Journal of Business Research and Management*, 3(4), 163–182.
- Huang, G. (2006). The determinants of capital structure: Evidence from China. *China Economic Review*, 17(1), 14–36.
- Icke, B. T., & Ivgen, H. (2011). How Firm Specific Factors Affect Capital Structure: An Emerging Market Practice—Istanbul Stock Exchange (ISE). *Middle Eastern Finance and Economics*, 13, 90–102.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Karadeniz, E., Yilmaz Kandir, S., Balcilar, M., & Beyazit Onal, Y. (2009). Determinants of capital structure: evidence from Turkish lodging companies. *International Journal of Contemporary Hospitality Management*, 21(5), 594–609.
- Kester, W. C. (1986). Capital and ownership structure: A comparison of United States and Japanese manufacturing corporations. *Financial Management*, 5–16.
- Li, K., Yue, H., & Zhao, L. (2009). Ownership, institutions, and capital structure: Evidence from China. *Journal of Comparative Economics*, 37(3), 471–490.

- Marsh, P. (1982). The choice between equity and debt: An empirical study. *The Journal of Finance*, 37(1), 121–144.
- Modigliani, F., & Miller, M. H. (1958). The American economic Review. *The American Economic Review*, 48(3), 261–297. Retrieved from <http://www.jstor.org/stable/1809766>
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*.
[https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Omran, M. M., & Pointon, J. (2009). Capital structure and firm characteristics: an empirical analysis from Egypt. *Review of Accounting and Finance*, 8(4), 454–474.
- Rajan, R. G., & Zingales, L. (1995). What do we know about capital structure? Some evidence from international data. *The Journal of Finance*, 50(5), 1421–1460.
- Su, L. D. (2010). Ownership structure, corporate diversification and capital structure: Evidence from China's publicly listed firms. *Management Decision*, 48(2), 314–339.
- Supanvanij, J. (2006). Capital structure: Asian firms vs. multinational firms in Asia. *The Journal of American Academy of Business, Cambridge*, 10(1), 324–330.
- Tahir, M., & Mushtaq, M. (2016). Determinants of Dividend Payout: Evidence from listed Oil and Gas Companies of Pakistan. *The Journal of Asian Finance, Economics and Business*, 3(4), 25–37.
<https://doi.org/10.13106/jafeb.2016.vol3.no4.25>
- Titman, S., & Wessels, R. (1988). The determinants of capital structure choice. *The Journal of Finance*, 43(1), 1–19.
- Viviani, J.-L. (2008). Capital structure determinants: an empirical study of French companies in the wine industry. *International Journal of Wine Business Research*, 20(2), 171–194.
- Yu, D. D., & Aquino, R. Q. (2009). Testing capital structure models on Philippine listed firms. *Applied Economics*, 41(15), 1973–1990.