

Revisiting Capital Structure and Firm Value: Moderating Role of Corporate Governance: Evidence from Pakistan

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Abstract

The aim of the study was to examine the most discussed relationship between capital structure and firm value by investigating the intervening impact of various corporate governance measures. chief idea of the study was to observe the moderating impact of chosen governance attributes (board size, board independence, CEO role duality, managerial ownership and ownership concentration) on the relationship between capital structure (leverage) and firm value (Tobin' Q). The study used the 775 firm year observations of 155 non-financial companies listed at Karachi Stock Exchange for financial years containing 2008 to 2012. Keeping in view the nature of data (balanced panel), fixed effects regression method was employed to estimate the formulated relationship. In finding moderation, this study found significant positive moderation for board independence and ownership concentration. However for managerial ownership this study found significant negative moderating effect between leverage and firm value.

Keywords: Moderation, Capital structure, Firm value, Corporate Governance.

1. INTRODUCTION

Corporate governance, an expression that was meant little two decades before to all but a handful of scholars and shareholders, has become a middle-of-the-road concern. Corporate governance is intended to increase the accountability of a company and to avoid massive disasters before they occur. The existence of strong governance standards gives improved access to capital and assists economic development. Firms around the world are comprehended that improved corporate governance inserts substantial value to their value. Shareholder supremacy is incarnate in the finance view of corporate governance, which is a matchless example of the principal-agent arrangement in economic theory.

According to Larcker and Tayan (2011) Corporate Governance is a set of control mechanism that an organization adopts to refrain its management from the activities that are detrimental to its welfare. Problem of economic choice led the emergence of complex management structures, theories, and other dynamics. Governance matters has got too much attention in today's corporate world that it has become the subject matter of scholar's research, meetings in boardrooms and manager's education. Corporate governance became more hot issue during the wave of financial crises and this notion arose with full strength when largest companies of the world gone bankrupt. Due to quick popularity, the term is still not clearly defined. The term is used in too widely that often its users fail to describe it comprehensively. The domain is newly originated that's why there is no universal definition to agree upon by all the researchers and practitioners. Many textbooks on the subject do not provide an explicit definition of the term corporate governance; some have provided these definitions in glossary only. Similarly the some researchers provide the definition and others do not.

Managers do not incarcerate the intact incentive from firm's actions, but they do tolerate the complete cost of these actions by foregoing expenditures that would benefit them personally, for example. Therefore managers overindulge in personal pursuits at the expense of maximizing the value of the firm. However, management might be tempted to pursue personal incentives instead of maximizing shareholder value (Myers, 2001). Since there are numerous concerned parties, it's inept to permit them to be in charge of the firm directly. Instead, the company functions under a scheme of regulations that let stakeholders to have an influence in the business commensurate through their stake yet permit the company to carry on working in a well-organized way. Corporate governance keeps into account audit practices to check results and how personally they grasp the goals and to inspire the company as a whole to act toward business goals via corporate governance measures prudently and sharing outcomes, a company can stimulate all stakeholders to act in the direction of the firm's goals by representing the benefits, to stakeholders, of the firm's success.

This research study wants to examine the intervention of corporate governance attributes on leverage and firm value relationship in Pakistan. Much of research on this issue has been done by using the data of firms in developed countries whereas less attention has been paid to explore the said relationship emerging countries

like Pakistan. Point of attention is that even papers supporting this study have presented theoretical framework of these relationships while this study focus on empirical testing of these relationships by using the data of companies from Pakistan. This clear gap in the literature is vital reason that has induced the call for this empirical exploration.

2. LITERATURE REVIEW

2.1 *Capital Structure and Firm Value*

Most researchers on capital structure take as their point of departure the seminal work of Modigliani and Miller (1958), who developed the Leverage Irrelevance Theorem, summarizing that capital structure does not influence firm value in a perfect atmosphere. Their assumption of an ideal financial environment excludes the impact of tax, inflation and transaction costs. This theory, known as MMI, received criticism from peers who question the validity of their theory given the fact that the no firm actually operates in an environment without the impact of tax, inflation and transactional costs.

Jensen and Meckling (1976) added that an additional disadvantage is the agency costs for equity holders and debt holders. To further substantiate this argument DeAngelo and Masulis (1980) predicted an inverse relationship between leverage and investment tax shield. The information asymmetry theory of capital structure is credited to the work of (Ross, 1977). Kim (1978) declared that the shortcoming of debt is the probable cost of financial anguish. Myers and Majluf (1984) proposed that the “pecking order” framework is based on asymmetric information since managers have inside information on the future prospect of the firm and act in the favor of existing shareholders. According to pecking order theory firms prefer internal finance (from retained earnings) to external finance. Myers (1984) modified the strict pecking order hypothesis and suggests that firms with many investment opportunities may decide to issue equity before it is absolutely necessary. The study of O’Connell and Cramer (2010) explored significant and positive relationship of leverage and firm value. Opler and Titman (1994) reported an inverse relationship between leverage and firm value. Further Suggested that high leverage for firms inclined to drop off market share and lesser operating performance than their rivals. On the other hand Demsetz and Villalonga (2001) considered leverage and Tobin’s Q as endogenous variables. While, Salim and Yadav (2012) showed that capital structure was significant and negatively correlated to Tobin’s Q.

2.2 *Corporate governance and firm value*

Research in this stream was initiated by (Jensen and Meckling, 1976). They identified two kinds of argument: those involving shareholders and executives, and those between debt holders and stockholders. They postulate that disagreement between stockholders and managers occur since the latter clutch less than one hundred percent of the remaining claim. Similarly, Bhagat and Bolton (2008) found that good corporate governance was positively associated to performance of the firm. Balasubramanian et al. (2010) suggested that governance index has positive relation with firm value. Khatab et al. (2011) reported that corporate governance has positive relation with Tobin’s Q. Sami et al. (2011) showed that corporate governance features are significant and have positive relation to firm’s value.

2.2.1 *Board size and firm value*

Mak and Kusnadi (2005) reported that size of the board and firm value are negatively correlated. Whereas Coles et al. (2008) showed a U-shaped relationship, initially Tobin’s Q decreases in response to increase in board size, then increases with the further increase in board size. O’Connell and Cramer (2010) explored that board size was less significant as well as inversely related to performance of the firm for smaller firms. While Uchida (2011) provided evidence from Japan, results showed that there is no evidence of performance improvement for Japanese firms that downsized boards. Garcia-Ramos and Garcia-Olalla (2011) reported influence of board size was positive on company performance in non-founder-led family firms and influence of board size was negative on company performance founder-led family businesses. Adams and Mehran (2012) reported that size of the board was found significantly and directly related to performance of the firm. Conversely, Kumar and Singh (2013) indicated inverse relations between board size and Tobin’s Q.

2.2.2 *Board independence and firm value*

Erickson et al. (2005) explored that outside directors presence on the board does not have positive influence on firm value. They further argued that firms those perform poorly increase outside directors on the board in subsequent periods. Lefort and Urzua (2008) explored that rise in the board independence influences Tobin’s Q. Further they revealed direct relation between independent directors and Tobin’s Q. Whereas Duchin et al. (2010) established that effect of increased independent directors on average do not improve or harm performance. Further Suggesting that increase in outside directors having low information cost will positively influence Tobin’s Q, which means improved performance. Kangarlouei, et al., (2013) found that there was no significant relationship between the outside directors on the board and Tobin’s Q. They study further explains that independence on the board does not affect firm value.

2.2.3 CEO role duality and firm value

The impact of chief executive officer duality on performance of the firm has been debated from an academic viewpoint. Agency theorists call attention to the negative impact of CEO role duality from its permitting a CEO to take steps liberally in private best benefits (Jensen & Meckling, 1976; Fama & Jensen, 1983). In contrast, believers of stewardship theory argued about the positive impact of CEO role duality (Brickley et al., 1997; Bhagat & Black, 2001). Lam and Lee (2008) attempted to examine the effect of CEO role duality on firm performance and also the moderating role that family control aspect on the above mentioned association. Found that CEO duality and performance of the firm relation was conditional on the existence of family control aspect. It was also suggested that duality status was good for non-family firms. Amaral-Bapaista et al. (2011) found that the relationship between CEO duality and firm value is not significant. Gill and Mathur (2011) revealed that CEO role duality has a direct impact on firm value. While Guillet et al. (2013) indicated that CEO duality improves performance of the restaurant.

2.2.4 Managerial ownership and firm value

Effect of insider ownership on the performance of the firm has been a topic followed in different studies. Whereas, Morck et al. (1988) indicated that association between managerial ownership and firm value first increases, then decreases and finally to some extent go up, that indicates a complex relationship. McConnell and Servaes (1990) explored that managerial ownership and Tobin's Q have significant but non-monotonic relationship. Research study by Holderness et al. (1999) provided evidence that over a period of 60 years managerial ownership increased from 13 percent to 21 percent in listed companies. They do not find any explanation for the change in managerial ownership that it is due to the change in performance-ownership relationship or not. Cui and Mak (2002) showed W-shaped association between insider ownership and performance of the firm. Hu and Zhou (2008) claim that they provided first evidence about the above said relation from china. They discussed that firms with significant managerial ownership outperforms others those do not have significant managerial ownership.

2.2.5 Ownership concentration and firm value

Demsetz and Lehn (1985) established no significant association between the above mentioned relationship. Whereas Himmelberg et al. (1999) reported no relationship linking ownership concentration and Tobin's Q. Results are consistent with Demsetz and villalonga (2001). In contrast Gunasekarage et al. (2007) revealed that balanced ownership structure improves the firm's performance and there is indication of detrimental effects of ownership concentration. Garcia-Meca and Sanchez-Ballesta (2011) explored that the ownership concentration is the main ownership structure mechanism that affects firm value. The found that initially increases in ownership concentration influence firm value positively but at higher level of ownership concentration the impact becomes negative. Shah et al. (2011) explored that ownership is negatively related to firm performance.

Recent studies from Pakistan

- Evidences on capital structure issue from Pakistan

Khatib et al. (2011) reported that leverage has significant and positive influence on Tobin's Q. Sheikh and Wang (2012) found that capital structure and firm value has an inverse relationship. Khan et al. (2013) revealed that capital structure and firm value has positively relationship. Mumtaz et al. (2013) showed that leverage and firm value has an inverse relationship. Rafique et al. (2008) found that by analyzing specific industry one can ascertain unique attributes that cannot be analyzed if all the industries considered. Similarly Awan et al. (2011) Presented the same findings as by the study of (Rafique et al.; 2008). Sabir and Malik (2012) studied the determinants of capital structure in specific industry.

- Evidences on corporate governance issue from Pakistan

Javed and Iqbal (2007) revealed that board composition and ownership structure are positively associated with firm value. Likewise, Afandiyar et al. (2013) report in their study that board size and board leadership have significant as well as positive impact on Tobin's Q. while board composition shown insignificant relationship with firm value. Sardar et al. (2013) explored that size of the board and board composition has significant connection with firm value while CEO duality has insignificant association. Similarly, Rehman and Shah (2013) explored that board size and board independence is significant and positively related to Tobin's Q. Alam and Shah (2013) found that CEO duality and ownership structure have a positive relationship with firm risk. There are many other studies which discussed corporate governance issue in different aspects (see. e.g. Khatib et al., 2011).

Following research stream in corporate governance elaborate the potential intervention of governance structure in financing decisions:

- According to Jensen and Meckling (1976) and Williamson (1988) agency cost may be required to incur in order to eliminate possible conflicts of interest between the management and control as well as equity holders and debt holders, as it may increase the chances of bankruptcy by increasing cost of financial distress.
- By change in capital structure the ownership will be change, as by change in this structure it will change

the monitoring and controlling status for managers' decision making (Jensen, 1986).

- As managers do possess some extra information, they may signal for opposite changes in market and in this way again the relationship of capital structure and firm value may be changes (Ross, 1977).
- Financing choice can affect firm value by encouraging shareholders and other financiers to check up on management's actions (Shleifer and Vishny, 1986).
- Encouraging, above all, firm-specific decision making style in certain aspects and improving efficiency in how decision making power is dispersed in the organization (Zingales, 1998) ; and
- La Rocca (2007) was first to identify this relationship specifically, the researcher developed a theoretical framework based on certain studies as discussed below, for further testing.

Based on all the discussion, the study certainly found sufficed need for studying the intervening role of corporate governance for capital structure and firm value. In Pakistan current researches discussed only determinants of capital structure extensively, only few studies targeted the corporate governance and firm value.

3. MEASUREMENT OF VARIABLES

3.1. VARIABLES OF STUDY

Definitions of the included variables are added as below:

Table 1: Operational definitions of variables included in the study

Variable Name	Symbol Used	Type of Variable	Operational Definition
Capital Structure	LEV	Independent	Calculated as ratio of total debt to total assets
Tobin's Q	Q	Dependent	Ratio of market value of equity to book value of equity.
Managerial Ownership	MNO	Moderating	Ratio of shares held by CEOs, directors, and their immediate family members to total outstanding shares
Ownership Concentration	OWC	Moderating	Number of Common Shares of five largest to total Number of Common Shares.
Board Size	BS	Moderating	Total number of directors on the board
Board Independence	BI	Moderating	Ratio of Number of Outside Directors to total number of Directors
CEO duality	CD	Moderating	A dummy variable that takes on 1 if the CEO is also the chairman of the board, 0 otherwise.

3.2. BASE MODEL AND HYPOTHESIS

This research study proposes relationships i.e. interviewing role of corporate governance in concerned relationship (impact of Leverage on firm value). The study used previously published studies (see, e.g. Williamson, 1988; Coase, 1991; Zhang, 1998; Zingales, 1998; Heinrich, 2000; Brailsford et al., 2004; La Rocca, 2007; Mahrt-Smith, 2005), to develop conceptual model and hypothesis to be tested.

H₁: Corporate governance measures significantly moderate the relationship of capital structure and firm value.

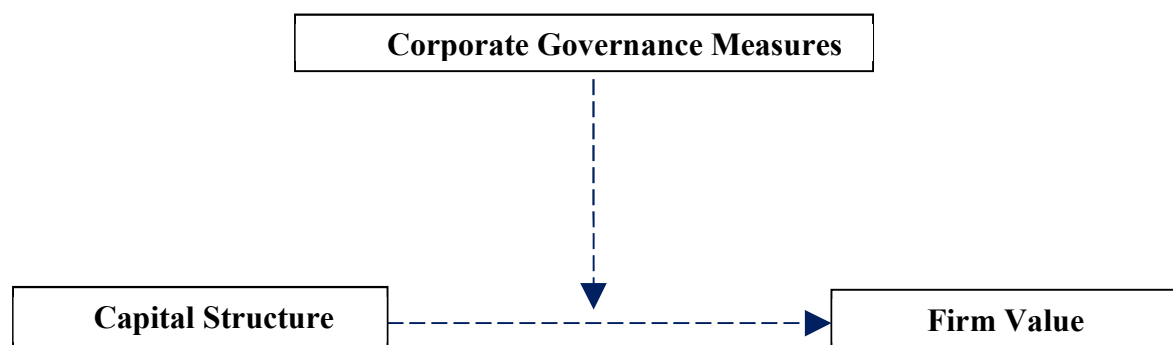


Figure 1: Moderating impact of corporate governance measures on the relationship between capital structure and firm value.

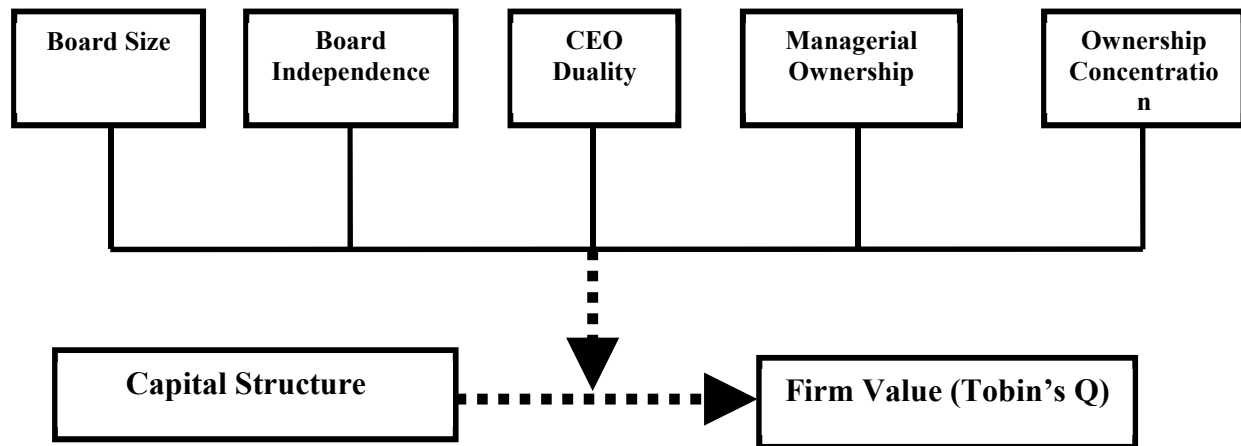


Figure 2: Moderation effect of corporate governance measures

4. RESEARCH METHODOLOGY

4.1. POPULATION AND SAMPLING

Population for the study is comprised of the non-financial companies listed at Karachi Stock Exchange of Pakistan (KSE). Population constitutes of non-financial firms because to investigate the moderating role of corporate governance measures selected data must be volatile. It would be of no use if governance structure is similar across the sample units. Convenience sampling was used to collect data.

4.2 DATA COLLECTION

Study is completely based on secondary data which is collected for five years (2008-12). Multiple sources were used to collect data, including annual reports of concerned companies and website of Karachi Stock Exchange.

4.3. ECONOMETRICAL MODEL OF THE RESEARCH

Moderating role of corporate governance measures in the relationship of capital structure and firm value

The effect of a moderating variable is characterized statistically as an interaction; that is, a qualitative or quantitative variable that affects the direction and/or strength of the relation between dependent and independent variables (Cohen et al., 2003). In regression analysis, a basic moderator effect can be represented as an interaction between a focal independent variable and a factor that specifies the appropriate conditions for its operation (Baron and Kenny, 1986). So to make sure corporate governance moderation this study used interaction (product) terms as explanatory variables in regression e.g. for board size an interaction term $LEV \cdot BS$ was created by multiplying the observations of board size and leverage. So following equation is formulated for moderation investigation:

$$Q_{it} = \beta_0 + \beta_1 LEV_{it} * BS_{it} + \beta_2 LEV_{it} * BI_{it} + \beta_3 LEV_{it} * CD_{it} + \beta_4 LEV_{it} * MNO_{it} + \beta_5 LEV_{it} * OWC_{it} + \epsilon_{it}$$

Here evaluation criteria for moderating role, as mentioned by researches aforementioned, are based on the statistics of that interaction term: slope coefficient and p-value. Slope coefficient “beta” of that interaction term shows the intensity of moderation and the p-value allows the researcher to draw inferences regarding the generalization of the result.

5. EMPIRICAL FINDINGS AND DISCUSSION

5.1 DESCRIPTIVE STATISTICS

Table 2 presents the descriptive statistics of all variables used in this study. Mean (Average of the data), Maximum and Minimum value along with standard deviation of total 775 Observations.

Table 2: Descriptive Statistics

	BS	BI	CD	MNO	OWC	LEV	Tobin's Q
Mean	8	0.630	0.230	0.246	0.658	0.579	0.766
Median	7	0.636	0	0.151	0.671	0.607	0.564
Max	15	1.000	1	0.931	0.999	0.980	4.357
Min	6	0.000	0	0.000	0.095	0.002	-1.076
Std. Dev.	1.510	0.224	0.421	0.254	0.188	0.214	0.661
Observations	775	775	775	775	775	775	775

5.2 CORRELATION ANALYSIS

This study tested the data for multicollinearity before estimating the coefficients. Below table shows the

correlation matrix. The correlation matrix does not propose any serious issue for multicollinearity problems.

Table 3: Correlation Matrix

	BI	BS	CD	MNO	OWC	LEV	Q
BI	1	0.099**	-0.085*	0.05	0.066	0.042	0.115**
BS		1	-0.135**	0.108**	-0.024	0.045	0.135**
CD			1	-0.022	-0.033	0.057	-0.143**
MNO				1	0.196**	-0.033	0.129**
OWC					1	-0.07	0.248**
LEV						1	-0.069
Q							1

Notes: Pearson correlation coefficient (**= Significant at 1%, *= significant at 5 %)

5.3 REGRESSION ANALYSIS:

The selected governance features shows moderation between leverage and firm value except board size and CEO role duality. Managerial ownership moderates the relationship under discussion negatively, but others do positively. Showing significant validity statistic and high determination power implied by F-stat, and R-Squared. Overall goodness of fit (adjusted R-squared) is also high (66.3%). Results are significant at allowed margins of errors (1%, 5% and 10 %). Further analysis explored that board independence is showing significant and positive moderation ($p < 0.05$), ownership concentration is showing significant and positive moderation ($p < 0.10$) while managerial ownership is showing significant and negative moderation ($p < 0.10$). Board size and CEO duality are not showing significant moderation relationship in the relationship of capital structure and firm value at significance level of 10%. Slope coefficient for board size is also very weak (-0.015). Slope coefficient for CEO duality is (0.149) but is not showing generalizable results. Intensity of moderation relationship is very high for board independence (0.374). For managerial ownership Intensity of moderation relationship is very high (-0.678). Ownership concentration is also moderating significantly and with high intensity (0.498). These slope coefficients indicating that governance attributes are strongly moderating the direct relationship of this study. The entire beta's coefficients are showing minimum standard error which indicates the efficiency of the results. For board independence, coefficient for product of leverage and board independence ($LEV \cdot BI$) is statistically significant as well as positively correlated to Tobin's Q. Observing that adding independent director on the board will positively change the association between leverage and firm market performance. In case of managerial ownership, coefficient for product of leverage and managerial ownership ($LEV \cdot MNO$) is statistically significant and negatively associated to Tobin's Q. Indicating that an increase in managerial ownership will inversely change the association between leverage and firm stock market performance. In case of ownership concentration, coefficient for product of leverage and ownership concentration ($LEV \cdot OWC$) is statistically significant as well as positively associated to Tobin's Q. Results explains that increase in ownership concentration will positively change the relationship between leverage and market performance.

Table 4: Moderating role of corporate governance measures

$Q_{it} = \beta_0 + \beta_1 LEV_{it} \cdot BS_{it} + \beta_2 LEV_{it} \cdot BI_{it} + \beta_3 LEV_{it} \cdot CD_{it} + \beta_4 LEV_{it} \cdot MNO_{it} + \beta_5 LEV_{it} \cdot OWC_{it} + \epsilon_{it}$	
C	0.590*** (0.081)
BS*LEV	-0.015 (0.030)
BI *LEV	0.374** (0.207)
CD*LEV	0.149 (0.136)
MNO*LEV	-0.678* (0.343)
OWC*LEV	0.498* (0.303)
R-squared	0.720
Adj. R-square	0.647
St. Error of Reg	0.392
F-statistic	9.945***

(***=Significant at 1%, **=Significant at 5 %, *=Significant at 10 %).

6. CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

A public firm raises money to finance its operations by issuing debt and equity, mix of these different sources of capital is referred to capital structure. The advancement of a nation demands enlargement of creative and dynamic activities, which convert in the consequences of capital realization that is the wealth of the country. Business decisions on capital structure strategy have been discussed by literature from a long time but issue is still unresolved. Firms' actions in reality show that it is traditional to have some "acceptable" mix of debt and equity. A lot of research work is in progress on capital structure, its determinants and other related aspects but mostly in advanced countries. The advancement of a nation demands enlargement of creative and dynamic activities, which convert in the consequences of capital emergence that is the wealth of the country. Good corporate governance ensures that the business environment is fair and transparent and that companies can be held accountable for their actions. Conversely, weak corporate governance leads to waste, mismanagement, and corruption.

Capital structure is influenced by firm's management, which has a long term impact on the firm's performance. Debt is perhaps the most important and most discussed ingredient of capital structure. Any decision regarding the choice of capital structure confuses the decision maker due to multiple benefits and costs associated with financing alternatives, especially debt. This study is conducted with several objectives in mind. At one side this research study is an attempt to examine the association between capital structure (leverage) and firm value (Tobin's Q) by confounding (moderating) role of governance attributes on this controversial relationship in Pakistan. This study is based on secondary data. As far as moderating role of governance attributes is concerned this study found mix result. All the governance attributes are not correlated to each other so each measure shows different extent of intervention in the relationship of leverage and firm value. This study found significant positive moderation for board independence (stronger relationship between capital structure and firm value for companies having more outside directors). This study found significant positive moderation for ownership concentration (stronger relationship between capital structure and firm value for companies having more concentrated ownership). However for managerial ownership this study found significant negative moderating effect between leverage and firm value (stronger relationship between capital structure and firm value for companies having small managerial ownership).

6.2 PRACTICAL IMPLICATIONS

Stakeholders should interpret financing pattern and its consequences by keeping an eye on governance attributes too. The empirical results of this study provided that corporate managers should consider the impact of leverage on value before adjusting the debt levels and also to comprehend how governance system affects the firm value. Owners can understand in which direction they have to use their voting rights while choosing governance mechanism for the corporation.

6.3 THEORITICAL IMPLICATIONS

In literature on corporate governance, this study contributed towards evidence on moderating impact of corporate governance attributes in the relationship of leverage and firm value. Although some studies may have tested some of corporate governance measures by using dummies, but still no study, to the extent of researcher's knowledge, is available yet, either in a local journal or in international journal regarding the empirical examination of moderation role of governance attributes.

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