

Impact of Ownership Structure on Firm Performance Evidence from Non-Financial Listed Companies at Karachi Stock Exchange

Khalil-Ur-Rehman Wahla

*Faculty of Management Sciences
International Islamic University, Islamabad*
E-mail: khalilwahla@gmail.com
Tel: +92-333-6334293

Syed Zulfiqar Ali Shah

*Faculty of Management Sciences
International Islamic University, Islamabad*
E-mail: zulfiqar.shah@gmail.com
Tel: +92-51-9019764

Zahid Hussain

*Department of Business Administration
National Textile University Faisalabad*
E-mail: zahid@ntu.edu.pk
Tel: +92-41-9230081 Ext: 169

Abstract

This study is conducted to analyze the significant relationship of Ownership Structure with Firm Performance in non-financial companies listed at Karachi Stock Exchange during the period 2008 to 2010. Ownership Structure is represented by Managerial Ownership and Concentrated Ownership. Tobin's Q is used as a proxy for Firm Performance. Panel Data Technique has employed to foresee the significant relationship among the variables. Results showed that Managerial Ownership has a significant negative relationship with Firm Performance, whereas Concentrated Ownership has shown insignificant relationship with Firm Performance. Leverage, a controlled variable has shown a significant negative relationship with Firm performance while insignificant relationship found between Assets Turnover and Firm Performance. Our results suggested that Firm Performance critically depends on Managerial Ownership. Agency problems arise due to increase in Managerial Shareholdings in Pakistani context, which ultimately impacts the performance of the firms.

Keywords: Karachi Stock Exchange, Ownership Structure, Firm Performance

1. Introduction

The relationship of ownership structure and firm performance is an important area of study in the broader field of Corporate Governance from last two decades. Researchers have focused mainly on managers and major shareholders interests on firm ownership. These researchers explored the relationship of ownership structure and firm performance keeping in view the conflict of interests of managers and owners of the firm.

Research revealed that firm's market value is based not on its investment projects only but other factors such as financial structure, dividend policy and its governance / control and ownership structure also add value to the firms. The role of ownership in adding value to the firm is has been proved now. This new role of ownership is two folded: the asymmetric information approach and the agency approach. The former approach found the ownership structure as a way to reduce the unbalanced information disclosure in capital markets between insiders and outsiders (Eland and Pyle, 1977, Bergstrom and Rydqvist, 1990).

Though, the literature on the subject is not conclusive and has two-way conclusions. Some of the researchers have found non-monotonic relationship between managerial ownership and firm performance (Morck et al, 1988). Others found that investment decisions act as a transmission mechanism between ownership and value of the firm. Jensen and Meckling (1976) suggested that investments are affected by managerial ownership, which in turn affects the value of the firm. Morck et al (1988) further suggested that the stake of managers in firm ownership can act as a mechanism with decisive impact on the alignment of interests between managers and owners and then ultimately on firm market value, when managers own a reasonable amount of shares of a firm.

Generally accepted view of finance theory was that the shareholders of an individual firm could be featured as a homogenous group of relatively un-involved absentee owners. It also assumed that managers have to act for best interest of its stockholders by receiving the signal from capital markets (Esterbook, 1984 and Rozeff, 1984 (Reference from paper 5). It also assumed that shareholders are not indistinguishable and that the firm's performance mainly depends on division of ownership between insiders i.e. managers and the outsiders. This arrangement was firstly traced out by Berle and Means (1932). A formal effort regarding the influence of shares allocation among insiders and outsiders on firm value was carried out by Jensen and Meckling in 1976. After Jensen and Meckling (1976), the idea of the impact of ownership structure on firm value is continuously evolved in Finance theory at both empirical and theoretical upfront. Later on Stulz (1988) has developed a model in which he found that the market value of the firm increased first and then it decreased, when the ownership remained concentrated with insiders. However Morck, Sheilfer and Vishny (1988) found a nonlinear relationship between firm value and insider ownership. Studies conducted by Domsetz and Lehn (1985), Holderness and Sheeshan (1988) also explored the relationship of firm performance and ownership structure of share.

This paper, in continuation of previous research work, is an effort to work out such relationship in Pakistani equity market where ownership is highly concentrated and family oriented due to weak legal environment (Attiya & Robina, 2009). It also explores further evidence on the relationship of ownership structure and firm performance. Tobin's is used as a proxy of firm performance, which will be discussed later on in the methodology section.

2. Literature Review

The debate on ownership structure and firm performance was firstly started by Berle and Means (1932). They found an inverse correlation between the diffuseness of shareholdings and firm performance. However, Demsetz and Lehn (1985) have challenged the argument of Berle and Means (1932). They argued that corporate ownership structure differs systematically to maximize the value of the firm. They found that ownership structure and accounting profit rates have no significant relationship with each other. Their results suggested that ownership and control separation is not

evidenced. In one another study, Hill and Snell (1989) developed a model to test the influence of ownership structure on firm productivity. They concluded that ownership structure affects a firm's stance towards investments and diversification strategy, which further defines the productivity of the firms. Unlike previous researchers, they measured the efficiency of the firm by its productivity instead of its profitability. They argued that productivity is less ambiguous measure of efficiency than of profitability.

In continuation of Hill and Snell (1989), McConnell and Servaes (1990) during analysis of the relationship of firm performance and equity ownership by employing Tobin's Q as a proxy for firm performance found a significant curvilinear relationship among Q and the percentage shares held by the insiders. They also found a significant positive relationship between Q and percentage shares held by the institutional investors. Another important finding is that the correlation of Q and block shareholder is insignificant. They concluded that the firm value is a function of the ownership structure.

To cater for the issue of endogeneity, Cho (1998) foresees the relationship of ownership structure, investment and corporate value by employing OLS regression and then simultaneous regression equation. OLS results revealed that ownership structure affects the investment and consequently the corporate value. But the results of Simultaneous Regression however suggested that investment affects the corporate value, which therefore affects the ownership structure but not the vice versa. These findings challenged the assumption of the finance theory that ownership structure is an exogenous factor.

Another study in Chinese corporate governance framework by Xu and Wang (1999) explored the relationship between ownership structure and firm performance. In this study it showed that mix and concentration of stock ownership is significant in explaining the performance of the firm. An important result drawn by the researchers is that the labour productivity tends to decline as the proportion of state shares increases. Their results highlighted the importance of large institutional shareholding, potential problems in an overly dispersed ownership structure and the inefficiency of state ownership. An important finding in this context was of Morck et al (2000). The researchers investigated the relationship of ownership structure and firm performance in Japanese equity markets. They found that the value of the firm rises monotonically when managers' ownership has increased. They also found a significant positive relationship between firm value and ownership of block shareholders. However, Domsetz and Villalonga (2001) suggested that there is no systematic relationship between firm performance and ownership structure to be expected. They have treated ownership as an endogenous variable. They have found that ownership structure is insignificant in explaining the firm performance.

In a multi-market and financial crises perspective, Lemmon and Lins (2003) have studied the impact of ownership structure on firm value. They have conducted the analysis on the data from eight East Asian countries during the financial crises. They found that the crises impacted the firm investment negatively, resulted in raising the chance that the controlling shareholders expropriate the minority investors. The researchers argued that these findings are in line with the assumption that the ownership structure has an important role in defining the expropriation of minority shareholders by insiders. Spanish Equity market showed non-significant relationship between large block holders and firm value as suggested by Vera and Ugedo (2007). This result is in line with that of McConnell and Servaes (1990) findings. Another finding of Vera and Ugedo (2007) is that the degree of control has a positive effect on firm value. In an endogenous way, ownership by major shareholders revealed a positive impact on firm value; however the opposite relationship did not show any significance. These findings are important in a way because the context is totally different. The researchers argued that the Spanish equity market is different from other markets as the ownership structure is highly concentrated here. It is concluded that the presence of an individual or family investor as the major shareholder has a favorable influence on the value of the firm. The non-linear relation between agency costs and managerial equity ownership was analyzed by Jelinek and Stuerke (2009). They employed return on

assets as a proxy to measure profitability. Asset utilization and an expense ratio are used as a proxy for management's efficiency in use of assets and perquisite consumption, respectively. Their results found that managerial ownership has a positive and non-linear impact on return on asset and asset utilization; however it has shown a negative and non-linear impact on expense ratio.

In Pakistani Equity market, Hasan and Butt (2009) explored the impact of ownership structure and corporate governance on capital structure of Pakistani listed companies covering the period from 2002 to 2005 for 58 non-financial companies listed at Karachi Stock Exchange. They found that board size and managerial shareholding have a significant negative correlation with debt to equity ratio. Their results also showed that the corporate financing behavior has no significant influence of the presence of non-executive directors on board and CEO / chair duality. They suggested that corporate governance factors such as ownership structure, size of the board of directors and managerial shareholding are important in determining the capital structure of the firms.

An important and most recent study on the role of ownership structure in defining firm performance is conducted by Fazlzadeh et al (2011) in Iranian Stock Market. They examined the role of ownership structure i.e. institutional ownership concentration, institutional ownership and ownership concentration. They have found a mix of results. At one side institutional ownership concentration showed a negative effect on firm performance and on the other side institutional ownership shown a significant negative impact on firm performance. Moreover, ownership concentration did not show any impact on the firm performance.

3. Data and Methodology

a. Sample and Variables

Seven non-financial sectors of Karachi Stock Exchange are selected randomly to observe the relationship of Ownership Structure and Firm Performance during the period 2008 to 2010. Detail of companies listed under these sectors is mentioned in **Table-I** given below. Total number of companies under these sectors is 138. 27 companies are eliminated as these are in defaulters segment during the study period. 06 more companies are eliminated as these are in non-compliant segment during the study period. 44 companies are eliminated from the sample due to insufficient data of ownership structure. A sample of 61 companies is finalized. Annual data of these sample companies is collected for the period 2008 to 2010 from the annual financial statements of the companies and Karachi Stock Exchange.

Table-I:

S.#	Sector	Total No. of Companies	Defaulters Segment	Non-Compliant Segment	Insufficient Ownership Data	Sample No. of Companies
1.	Oil and Gas Producers	12	-	-	5	07
2.	Construction and Materials	37	06	04	11	16
3.	Electronic and Electrical Equipment	03	01	-	1	01
4.	Automobile and Parts	19	04	-	4	11
5.	Food Producers	61	16	02	22	21
6.	Health Care Equipment and Services	01	-	-	-	01
7.	Fertilizer	05	-	-	1	04
Total		138	27	06	44	61

i. Ownership Structure

Ownership Structure is represented by two variables which are *Managerial Ownership (MO)* and *Concentrated Ownership (CO)*. Both variables are used by many researchers in their studies to represent ownership structure. Data of these variables is collected from the annual financial statements of the companies. Concentrated Ownership is defined as *percentage shares held by top five*

shareholders. Whereas Managerial Ownership is defined as *percentage shares held by managers, CEOs etc.*

ii. Firm Performance

Tobin's Q is used as a measure to estimate the firm performance. It is a ratio of company's total market value and its total asset value devised by James Tobin of Yale University in 1969. It hypothesized that the combined market value of all the companies on the stock market should be equal to their replacement cost.

$$QRatio = \frac{\text{Total Market Value of Firm}}{\text{Total Asset Value}}$$

Tobin's Q is normally used as a market based performance indicator of a firm. Market measures refer to those measures, which incorporate the market value of the equity. Tobin's Q is forward looking and reflects the shareholders expectations regarding future performance of the firm, which is based on past or current performance. In studying ownership structure, this market measure is meant for testing the market value of the firm. It assumed in this study that valuation of firm is linked with firm's ownership structure and its performance.

iii. Leverage and Assets Turnover

Leverage and Assets Turnover are taken as control variables. *Leverage (LEV)* is worked out as the ratio of total liabilities with total assets. *Assets turnover (AT)* is calculated as the ratio of total sales with total assets of the firm. These control variables are used to reflect the impact of various unobserved factors related to the company.

b. Methodology

As the data consist of both cross sectional and time series data, therefore yearly panels of the data have been developed. Common Effect Model is more appropriate for this type of data as suggested by Shah et al (2011). This model has used to explore the significance of the relationship between Ownership Structure and Firm Value. Dependent and Independent variables are incorporated in the below mentioned equation of Common Effect Model:

$$FP_{it} = \alpha_{it} + \beta_1 MO_{it} + \beta_2 CO_{it} + \beta_3 LEV_{it} + \beta_4 AT_{it} + \epsilon_{it} \quad \text{Eq. (i)}$$

In this equation:

FP	=	Firm Performance represented by Tobin's Q
MO	=	Managerial Ownership (<i>percentage shares held by managers, CEOs etc.</i>)
CO	=	Concentrated Ownership (<i>percentage shares held by top five shareholders</i>)
LEV	=	Leverage
AT	=	Assets Turnover

i. Descriptive Statistics

Descriptive Statistics of the variables are presented in **table-II** as give below:

Table-II:

Statistics	MO	CO	LEV	AT	FP
Mean	0.18	0.69	0.73	1.65	0.81
Standard Deviation	0.24	0.23	0.52	5.71	2.08
Minimum	0.00	0.01	0.02	.03	0.00
Maximum	0.87	2.60	3.75	76.20	24.64
Count	183	183	183	183	183

These statistics shows the nature of the data i.e. Mean, Standard Deviation, Minimum, Maximum and No. of observations. Number of observations are 183 for each variable. The mean value of Managerial Ownership is 0.18 with Standard Deviation of 0.24. Minimum and maximum of Managerial Ownership is 0.00 and 0.87, respectively. The Concentrated Ownership has a mean value of 0.69 with standard deviation of 0.23, where minimum and maximum values are 0.01 and 2.60. The mean value of Leverage data is slightly higher than that of mean value of Managerial Ownership and Concentrated Ownership. Minimum and maximum value of Leverage data is 0.02 and 3.75, respectively. Standard deviation of Leverage data is 0.52. The mean values of Assets Turnover (1.65) and Standard Deviation (5.71) are highest among all other variables. The mean value of Firm Performance (Tobin's Q) is 0.81 and the standard deviation of Firm Performance data is also higher.

4. Results

This study is conducted with an objective to observe the significant relationship of Ownership Structure with Firm Performance by taking data of companies listed at Karachi Stock Exchange during the period 2008 to 2010. Ownership Structure is represented by Managerial Ownership and Concentrated Ownership. Firm Performance is represented by Tobin's Q. Moreover Leverage and Assets Turnover Ratio are used as controlled variables. Common Effect Model is estimated to observe the significance of the relationship between Firm Performance represented by Tobin's Q (Dependent variable) and Ownership Structure represented by Managerial Ownership and Concentrated Ownership (Independent variables).

Common Effect Model executes the test with the assumption of constant coefficients i.e. constant intercept and constant slope. The results observed by employing this model are given in

Table-III:

Description	Coefficient	T-Statistics
Intercept	0.3379	0.56
MO	-1.2376	-1.96
CO	1.3671	1.93
LEV	-0.3653	-1.21
AT	0.01198	0.42
R-Square		0.0524
Adjusted R-Square		0.0311
Significance F		0.0472

The value of F (0.0472) shows the fitness of the model as the value is below 0.05, which means that the Common Effect Model is fit to explain the relationship between dependent and independent variables. The model is run at 95 % confidence level. The results show that Managerial Ownership (MO) has a negatively significant relationship with the Firm Performance (FP). The value of t-statistics is -1.96. The Concentrated Ownership (CO) has depicted a positive but insignificant relationship with the Firm Performance (FP). In this case, the value of t-statistics is 1.93, less than 1.96.

The control variables i.e. Leverage and Assets Turnover have no significant effect on the Firm Performance. The value of t-statistics for Leverage and Assets Turnover is -1.21 and 0.42, respectively. These values show insignificance of the relationship of these controlled variables. The value of R-Square i.e. 0.0524 is lesser. It shows that Ownership Structure (Managerial Ownership and Concentrated Ownership) is contributing only 5.24% in Firm Performance and there are other variables which are contributing to the performance of the firm.

The results of Common Effect Model seem not to be satisfactory, a probable reason is the validity of assumptions of Common Effect Model i.e. constant coefficients (constant intercept and constant slope). Possibility of heteroscedasticity in the panel data was also not to be ignored. It refers to the assumption that variance of the error terms is constant. This anomaly normally occurred when

regression runs with the assumption of constant coefficients. Heteroscedasticity in the panel data is checked by HETTEST (also called as Breusch-Pagan test) run in Stata (Statistical software). Results are shown in **Table-IV**. The value of Prob < Chi2 i.e. 0.000 shows that heteroscedasticity existed in the data.

Table-IV:

Chi2(1)	64.33
Prob < Chi2	0.000

The issue of heteroscedasticity in the data can be overcome by estimating Robust Standard errors (this also referred to as Huber / White estimators or Sandwich Estimators of Variance). Literature suggested that heteroscedasticity causes standard errors to be biased. Moreover, Common Effect Model assumes that errors are both independent and identically distributed. But Robust Standard Errors relax one or both assumptions. Literature also suggested that when heteroscedasticity exist in the data, Robust Standard error is more effective and trustworthy. The model is run again by relaxing the assumptions of independent and identically distributed errors, through Robust Standard Errors.

Table-V:

Description	Coefficient	T-Statistics
Intercept	0.3379	0.74
MO	-1.2376	-3.29
CO	1.3671	1.84
LEV	-0.3653	-3.82
AT	0.01198	1.86
R-Square		0.0524
Significance F		0.0000

The results of Common Effect Robust Model are presented in Table-V. The value of F (0.0000) shows the fitness of the model as the value is below 0.05, which means that the Common Effect Model is fit to explain the relationship between dependent and independent variables. The model is run at 95 % confidence level. The results of Common Effect Robust Model show that Managerial Ownership (MO) has a highly negatively significant relationship with the Firm Performance (FP). The value of t-statistics here is -3.29. The Concentrated Ownership (CO) remained positive but has insignificant relationship with the Firm Performance (FP). In this case, the value of t-statistics is 1.82 less than 1.96.

The control variables i.e. Leverage has significant effect on the Firm Performance. The value of t-statistics for Leverage is -3.82. Assets Turnover, another controlled variable (t-statistics value 1.86) does not show any significant effect on Firm Performance. The value of R-Square remained 0.0524, which shows lesser impact of these variables on Firm Performance. It shows that Ownership Structure (Managerial Ownership and Concentrated Ownership) is contributing only 5.24% in Firm Performance and there are other variables which are contributing in this regard.

5. Conclusion

The results show that Managerial Ownership has a significant impact on Firm Performance, keeping in view the Leverage in Pakistani Equity markets. Its negative relationship with Firm Performance shows that increase in the proportionate share of managers in the total shareholding has a significant negative affect on Firm Performance. It is concluded that Firm Performance critically depends on Managerial Ownership. Agency problems arise due to increase in Managerial Shareholdings in Pakistani context, which ultimately impacts the performance of the firms.

Future research may be conducted by keeping in view the capital structure and dividend policy along with the ownership structure. That will ensure more effective forecasting of the Firm Performance in Pakistani Stock Market.

References

- [1] Antonio Miñguez-Vera a, Juan Francisco Martí'n-Ugedo, 2007. "Does ownership structure affect value? A panel data analysis for the Spanish market" *International Review of Financial Analysis* 16, pp. 81– 98.
- [2] Alireza Fazlzadeh, Ali Tahbaz Hendi, Alghadir, 2011. "Tabriz The Examination of the Effect of Ownership Structure on Firm Performance in Listed Firms of Tehran Stock Exchange Based on the Type of the Industry" *International Journal of Business and Management* Vol. 6, No. 3.
- [3] Baysinger D. Barry, Kosnik D. Rita, Turk A. Thomas. 1991. "Effects of Board and Ownership Structure on Corporate R&D Strategy" *The Academy of Management Journal*, Vol. 34, No. 1, pp. 205-214.
- [4] Charles W. L. Hill, 1989. "Effects of Ownership Structure and Control on Corporate Productivity" *Academy of Management Journal* (), Vol. 32, No. 1, pp. 25-46.
- [5] Cho H. Myeong, 1998, "Ownership structure, Investment, and the Corporate Value: an empirical analysis" *Journal of Financial Economics* 47, pp. 103-121.
- [6] Demsetz, Harold, 1983, "The Structure of Ownership and the Theory of the Firm." *J. Law and Econ.* 26, pp.375-90.
- [7] Demsetz, Harold and Lehn, Kenneth, 1985. "The Structure of Corporate Ownership: Causes and Consequences" *Journal of Political Economy*, Vol. 93, No. 6, pp. 1155-1177.
- [8] Demsetz, Harold and Villalonga, Belen, 2001. "Ownership Structure and Corporate Performance" *Journal of Corporate Finance*, pp. 209–233.
- [9] Frank H. Easterbrook, 1984. "Two Agency-Cost Explanations of Dividends" *The American Economic Review*, Vol. 74, No. 4, pp. 650-659.
- [10] Hasan, A., & Butt, S.A, 2009. "Impact of Ownership Structure and Corporate Governance on Capital Structure of Pakistani Listed Companies" *International Journal of Business and Management*, Vol.4, No.2, pp. 50-57.
- [11] John J. McConnell and Henri Servaes, 1990. "Additional evidence on equity ownership and corporate value" *Journal of Financial Economics* 27, pp. 595-612.
- [12] Jelinek, K., & Stuerke, 2009. P, "The Nonlinear Relation between Agency Costs and Managerial Equity Ownership: Evidence of Decreasing Benefits of Increasing Ownership". *International Journal of Managerial Finance*, Vol. 5 No. 2, pp. 156-178.
- [13] Morck, Randall, Andrei Shleifer, Robert W, Vishny, 1988. "Management Ownership and Market Valuation: An Empirical Analysis", *Journal of Financial Economics* 20, pp. 293-315.
- [14] Michael L. Lemmon and Karl V. Lins, 2003. "Ownership Structure, Corporate Governance and Firm Value: Evidence from the East Asian Financial Crises", *The Journal of Finance* Vol.LVIII No, 4.
- [15] S. A. Zulfiqar Syed., WasimUllah, Hasnain Baqir, 2011. "Impact of ownership structure on dividend policy of firm (evidence from Pakistan)" *IPEDR* Vol.3, IACSIT Press, Hong Kong.
- [16] Xiaonian Xu and Yan Wang, 1999. "Ownership structure and corporate governance in Chinese stock companies" *China Economic Review* 10, pp.75–98.