



CORPORATE GOVERNANCE AND FIRM PERFORMANCE: EVIDENCE FROM LISTED FIRMS OF PAKISTAN

Governança corporativa e desempenho da empresa: evidências de empresas listadas do Paquistão

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ABSTRACT

This study aims to find the influence of corporate governance on firm performance for the listed non-financial firms on the Pakistan Stock Exchange (PSX) for the period 2005-15. The article has measured corporate governance by the large boards with more independent directors, independence of audit committee, ownership concentration, non-existence of CEO duality, and presence of foreign and institutional investors. To address this endogenous nature of institutional ownership and performance in this study we have used instrumental variables (IV) techniques using a two-stage least square (2SLS) by instrumentalizing institutional ownership with firm size and firm age. The study found that firms with large and independent boards outperform their counterparts. Similarly, the study found that firms having the joint position of CEO and chairperson performs lower than counterparts. In Pakistan firms with foreign and institutional owners better than others. We found that firms with concentrated owners have a lower level of agency problem and ultimately perform well. Furthermore, we found that firms with a lower level of agency problem type II (measured via ownership concentration contestability) perform better in Pakistan.

Keywords: Agency Problems; Corporate Governance; Ownership Concentration; Board Independence.

ACEITO EM: 04/11/2020

PUBLICADO: 28/02/2021



GOVERNANÇA CORPORATIVA E DESEMPENHO DA EMPRESA: EVIDÊNCIAS DE EMPRESAS LISTADAS DO PAQUISTÃO

Corporate governance and firm performance: evidence from listed firms of Pakistan

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RESUMO

Este estudo tem como objetivo verificar a influência da governança corporativa no desempenho da empresa para as empresas não financeiras listadas na Bolsa de Valores do Paquistão (PSX) para o período de 2005-15. O artigo mediu a governança corporativa pelos grandes conselhos com mais conselheiros independentes, independência do comitê de auditoria, concentração de propriedade, inexistência de dualidade de CEO e presença de investidores estrangeiros e institucionais. Para abordar essa natureza endógena de propriedade e desempenho institucional neste estudo, usamos técnicas de variáveis instrumentais (IV) usando um mínimo de dois estágios (2SLS), instrumentalizando a propriedade institucional com o tamanho e a idade da empresa. O estudo constatou que empresas com conselhos grandes e independentes superam suas contrapartes. Da mesma forma, o estudo descobriu que as empresas que têm a posição conjunta de CEO e presidente do conselho têm desempenho inferior ao das contrapartes. No Paquistão, as empresas com proprietários estrangeiros e institucionais são melhores do que outras. Descobrimos que as empresas com proprietários concentrados têm um nível mais baixo de problemas de agência e, em última análise, apresentam um bom desempenho. Além disso, descobrimos que as empresas com um nível mais baixo de problema de agência do tipo II (medido por meio da contestabilidade da concentração de propriedade) apresentam melhor desempenho no Paquistão.

Palavras-chave: Problemas de Agência; Governança Corporativa; Concentração de Propriedade; Independência do Conselho.

INTRODUCTION

Corporate governance became a hot issue after the Enron scandal in 2001. Discussions were started to organize strategies for effective firm performance, running and to provide shelter for stakeholders' interest for example stockholders as well. There is a great influence of corporate governance on firms' strategic decisions like financing, investing, and dividend disbursement. Hence the variables of governance like institutional ownership, ownership structure, audit committee independence, and board independence have a direct influence on the financial performance of the firm. Currently, corporate governance is influenced by the arguments of in the UK, (Spira and Page, 2003, Agyemang-Mintah, 2016, Shah and Napier, 2017). There are many local corporate codes in practice for governing corporations globally. Ownership structure has a significant influence on the governance framework (Kumar and Zattoni, 2016). A study conducted in India and the author stated that agency problem raised in those public companies which don't have concentrated ownership and the managers make decisions for their self-interest at the expense of shareholder (Sridharan and Joshi, 2018). There are many corporate codes in practice for governing corporations globally. The authors found that external audit quality (BIG4) and audit committee size are significantly positively related to firm performance (Rahman et al., 2019).

Corporate Governance is used for the running of the company which leads to the protection of the interest of all investors. The concept of corporate Governance has been transformed into the term of corporate management research previous period (2000-2010). The author suggests that firms need to severely implement governance, to reduce the agency cost and to increase performance (VU et al., 2020). The author has analyzed the effect of corporate governance on the firm's financial performance (Shahar et al., 2016). Although so many authors have argued about the effect of corporate governance on the financial decisions of the firms for development as well as developing markets (Kukah et al., 2016). However, the linkage between firm performance and its impact on corporate governance have to be explored yet, particularly there is no research conducted to examine the impact of corporate governance on firm performance in Pakistan according to the author's knowledge. Hence, in this study, the author tries to analyze corporate governance's influence concerning performance in the context of Pakistan.

Corporate Governance and Capital Structure

In literature, several scholars and economists have proposed different theories that explain the influence of governance on firm capital structure. Several financial economists have named it the effect of corporate governance on firm performance. Corporate governance and firm performance is influenced by several factors. In this study, the important variables are corporate governance and capital structure. There is a general perception i.e. "equity charges more than debt". It's due to floatation and is known as "underwriting charges". Although interest expenses are less which is raised by debt. On the other hand, debt financing has another advantage i.e. the interest from which tax expense will be deducted. Therefore, it results that the firm abides by less interest expense and rate of tax. Further, it has no more benefit, and the firm has to bear dividends and floatation expense in equity financing. The author concluded strong governance increases the profitability and sustainability of MFIs with and equally high profitable and sustainable MFIs have good governance systems (Iqbal et al., 2019).

Although the firms emerging capital structure has greater importance. Those firms who are engaged in equipment operations could have a huge D/E ratio (debt to equity) and those who are engaged in low equipment operations having less (D/E) ratio. From the above discussion and different other scholars emphasize that firm's size matters for capital structure development.

Corporate Governance and Firm Performance

In Pakistan, stockholders demand high returns on their investments, due to several possible doubts in interest rate variation, regular up and down in exchange rate. The support economy and reduce the trade deficit the government provides eye-catching incentives and encouragement to foreign investors. The group of investors is dominant due to huge and rarely trade influence the fluctuation in stock price because most of the firms in

Pakistan. These firms are owned by the family and the management who work for the benefit of the shareholders

not for the stakeholders. In this research, firm performance is measured by Tobin's Q ratio, and considered as the indicator for the performance of the management.

This study contributes to the literature in different ways. To the best of our knowledge, it is the first study to provide empirical evidence among firm performance and corporate governance for 2005 -2015 and the market structure of Pakistan is more concentrated as compared to other developed economies. Their findings have important implications for market regulations, investors, and policymakers. Besides this, we also investigate the impact of corporate governance indicators such as foreign ownership, size of the board, independence of board, independence of audit, and CEO duality. Secondly, institutional ownership has endogenous nature and we use size and age (Vania et al., Pan et al., 2017) as instrumental variables to investigate its influence on performance. For controlling endogeneity 2SLS (stage least square) method is used which is suitable to control endogeneity with instrumental variables caused by endogenous variables.

The main distinctive contribution of our study is that we investigate the role of ownership concentration by using four proxies for Pakistan and these proxies are (Block1, Block2, Block3, top5 share and ownership concentration difference). Different scholars used different proxies separately for different countries such as (Zandi et al., 2017, Ting et al.). Furthermore, we use the ownership concentration difference of the largest and second-largest shareholder proportionate ownership as the proxy of contestability to measure the type II agency problem for the first time in Pakistan.

The remaining article is organized as follows: In the following section 2 provides a relevant review of literature; section 3 designates the hypothesis development; section 4 explains the data and research methodology which is used to examine corporate governance and performance; section 5 discussed the results of the study and finally, section 6 is the conclusion.

1 LITERATURE REVIEW

The significant relationship among the size of the board and leverage shows huge leverage that requires managers to raise the value of the firm by increasing return on the investments (Chen et al., 2016). The author in his study found that the firm having a large size of board will have small debt financing and will pressure management to have effective measures for the cost to increase the financial value of the firm (Luedke, 2017). Another author stated in his study that there is a negative effect of fix managerial decisions on leverage and results that the nonappearance of large external stockholders will lead to huge market risk (Hardt, 2018). In another study, the author found that the company having huge leverage gives low interest on debts to balance that the investors think the company is monitor by different experts (Agrawal and Nasser, 2018). The author investigated in his study that the managerial shareholders and agency conflicts are negatively related and they are working for the interest to increase the managerial opportunities (Agrawal and Nasser, 2018). In other research, the authors examined that the incentives of the small external shareholders are decreased by the equity shareholders which results in the clash among management and investors (Kusuma and Ayumardani, 2016).

Ahiadorme et al. (2018) found a positive relationship among board compensation and board skills with the gearing level, which means how directors are experts at the same time the employee will be and vice versa. In another study, the researcher discussed that non-executives play a key role in improving firm value completely and it will reduce the ambiguity about firm affairs. And it allows the firm to raise funds simply.

examined about the capital structure and stated that firm's value depends on, how it structures the capital to regulate it's earning and to make the value of the asset, and it's independent how the company finance and pay dividends to the investors. The company is having many available financing chances i.e. from whom to borrow, issue shares, how to spend profit. Due to such kind of expectations, company financing with debt or either equity it will have no impact on firm complete value. In past "pecking order" theory by Myers (1984) and "Agency theory of debt" by Jensen (1976) are important contributions to the literature. The foundation of the pecking order theory is to deal with asymmetric information, meaning that's the management of the company has more information about the company than external shareholders. If the company wants to invest in a project through equity, the company issues stock below the existing market cost. The managers provide a hint that the stock is undervalued in the market and the management don't want to invest in the project by using debt. So the news of

“issue of stock”. while if outsiders are allowed to finance a project, so the managers give a hint of the surety of paying the debt in the coming time. Thus shares are of less importance than debt.

As Kusuma and Ayumardani (2016) stated that in financing decision cost is of more importance, because of the agency problem between shareholders and investors. If the firm desires to invest in two projects first one is risky but profit is low and the second is riskier but profit is high so the management will select the riskier due to if it's succeeded so the management will have great cash flow after the debts are paid. And if it fails so the investors will have to tolerate more losses due to the limitation of liability of creditors. Except for these theories capital structure's main determinants like size, growth, risk, profitability, and tangibility are highlighted by empirical studies. Companies are trying to maximize the firm value which is only possible if they took such a decision which that capital structure is at an optimum level. Corporate management can make strategy in a way that how to use the best of available capital keeping in mind both stakeholder and shareholder interest.

2 HYPOTHESES DEVELOPMENT

2.1 Ownership Concentration and Firm Performance

In every organization, the ownership structure plays an important role and works at the same time to protect the interest of managers and investors. Ownership concentration denotes the concentration of shareholdings within a limited number of shareholders (Memon et al., 2019). For example, concentrated ownership is a portion of the ownership structure that is generally admitted offering incentives for the big shareholders to monitor management. Managerial ownership suggests economic incentives to the managers by monitoring but may boost risk-taking (Bhagat et al., 1999). If there is an increase in the ownership of huge block holders so they have an ultimate impact on the performance and top management of the firm which isolates the shareholder. Due to this reason their main interest to acquire power and money both.

Schwarz-Herion et al. (2008) examined and found that ownership concentration endogeneity and its reply to the pitiable lawful safety of the shareholder. However, a study was conducted in four Arabic countries Egypt, Jordan, Oman, and Tunisia and the author found that ownership concentration has no impact on firm performance. while on the other side, the author found a negative and significant relationship among probability and ownership concentration of big firms of the UK, (Demsetz and Lehn, 1985, Leech and Leahy, 1991). Generally, higher liquidity of stocks and the diversification of the risk for shareholders are proposed by isolated ownership. Contrarily, when the firm becomes large, higher concentration enforces an increase in risk premia due to large risk aversion.

A study in India was conducted and the authors found that agency cost is decreased by concentrated ownership as management of the firm is monitor effectively by the block holder (Nashier and Gupta, 2020). Ownership concentration and firm performance were examined in the European emerging economies by using the Meta-analysis method and the author found that there is a significant positive relationship (Iwasaki et al., 2019). Regardless of the above discussion, in Pakistan, the ownership is too much concentrated, and we can give an argument that it will replace the fragile governance significantly, therefore we suggest a positive association among firm performance ownership, thus we hypothesize that:

H1: Ownership concentration is positively related to firm performance.

2.2 Foreign Ownership and Firm Performance

Previous literature related to corporate governance and firm performance, very few empirical studies that try to explain the role of foreign ownership. According to Mardnly et al. (2018) that firm performance is positively influences in Norway or Sweden by the foreign (Anglo American) board membership. Furthermore, foreign institutional ownership has a significant impact on the operating performance of the firm and the policy of investment (Martins et al., 2008). In India, the author found that if there is foreign ownership in a firm comparatively its shows high performance (Chhibber and Majumdar, 1999).

It can be suggested that there are many positive consequences of foreign ownership and its linkage with firm

performance. These are, firstly foreign owners and directors are having too many networks due to that know about many fruitful resources and investment occasions. Secondly, those firms which have greater foreign ownership usually having high capital than local counter-parts and can have high performance due to spending more on R&D. thus we can hypothesize that:

H2: Foreign ownership is positively related to firm performance.

2.3 Institutional Ownership and Firm Performance

There are three insights that institutional ownership influences on the performance of the firm. According to “active monitoring” the institutional owners energetically monitor firms and the business to diminish agency problem and information asymmetry and increase the performance of the firm in both ways (Johnson et al., 1997). whereas, institutional owners use their advance professional expertise, managerial skills, and voting rights to affect administrators to increase corporate governance and firm value, to help the firm to take corporate decisions.

Previous studies characterized institutional investors based on their business affairs independent with firms, geographic space, and shareholding size. First, shareholding through burden unresponsive organizations is predicted to have a positive relationship with firm performance due to fewer business affairs and conflicts of interest, therefore, possible to aggressively monitor the firms and force the management to increase the value of shareholders. In another way, many scholars such as (Wruck, 1989, Cornett et al., 2007, Ferreira and Matos, 2008) that force-sensitive organizations may instead peruse to depend on the business affairs with investee firms and perform as an inactive financier.

The shareholder having large ownership having the higher right of vote to justify the manager and his/her devious behavior (Elmagrhi et al., 2016). Furthermore, the institutional shareholder is in favor to use their power of the vote to encourage managers that they should take decisions in favor of shareholders (Cornett et al., 2007). Firm performance can be influenced by the institutional shareholders, because of their means of monitoring and examining the doings of the managers, that’s why they discourage the management to not accept lavish funds (Gligoric et al., 2013). Therefore, we hypothesize that:

H3: There is a significant relationship between institutional ownership and firm performance.

2.4 Board Independence and Firm Performance

An independent director or outside director has a key role in monitoring the firm’s management. Hence, due to this magnitude, the board of directors is independent which might catch the financiers (Muniandy and Hillier, 2015). Prior studies Detthamrong et al. (2017) which analyze firm performance and board independence and show mixed results. While, board independence and its influence on the firm value is a negative influence using Tobin’s Q for the US (Agrawal and Knoeber, 1996).

On the other hand, Jackling and Johl (2009) investigated board independence and its impact and founds a significant relationship for Indian firms. The relationship between board independence for south African firms have a significant impact on firm performance (Muniandy and Hillier, 2015). Haniffa and Hudaib (2006) investigate and found that board independence influences firm performance in the case of Malaysia. The impact of board independence on performance is positive (Al-Najjar, 2015). The author used 2SLS techniques for five countries in the middle east, furthermore, it has significant improvement in firm performance. Based on above discussion it is clear that board independence has the ability to improve the performance of the firm. Therefore, we hypothesis that:

H4: Board independence is positively related to firm performance.

2.5 Audit Committee Independence and Firm Performance

Generally, the phenomenon about the influence of the good and independent audit committee that it has a close look at the administration activities also the information asymmetry is decreased. Although previous studies show some conflicting results between audit and firm performance. Klein (1998) stated that there is no influence of the audit committee on market performance. The multivariate regression results find that external audit quality (BIG4) and audit committee size are significantly positively associated with firm performance. Later in the new study Klein (2002), the author found that earning management and audit committee independence has negative associations. Developing an audit committee decrease deliberate earnings management, (Baxter and Cotter, 2009). Hence we hypothesize that:

H5: Audit committee independence is positively related to firm performance.

2.6 Board Size and Firm Performance

Previously in literature, different studies found significant linkage among board size and performance of the firm. Large board sizes can take impressive decisions for increasing firm performance (Lipton and Lorsch, 1992, Eisenberg et al., 1998). Followed by the above results, the board size and board independence for both family and non-family ownership has significant influence (Hassan et al., 2016). Whereas, the board size affects firm performance in the context of India (Mayur and Saravanan, 2005).

Corporate governance is a mechanism for controlling the trend of speculative behavior of the managers and board size is one of the proxy. Handriani and Robiyanto (2018) investigated and found that the board size for Indonesia has a significant and positive effect on firm performance. The board size is a mechanism of corporate governance and it's forecasted to have a positive significant effect on firm performance. Hence, based on the above discussion it can be presumed that large board size will have a positive effect on firm performance, and thus, we hypothesize:

H6: Board size is positively related to firm performance.

2.7 CEO Duality and Firm Performance

According to the current literature, the association among CEO duality and its impact on firm performance is derived from agency theory. Agency theory followers argue that whether the dual character CEO works competently for his benefit and whether he chase benefits from investor's interest (Mubeen et al., 2020). Therefore, generally, it causes agency problems among executives and shareholders which states that CEO duality has a negative impact on firm performance (Yang et al., 2014). The dual power of the CEO may only decide to increase personal interest by the cost of shareholders. CEO's doubles role generally reduces the board's power and also confines board independence to realize its power to validate the entrenchment of the CEO (Krause et al., 2014).

Dual power CEO controls members of the board hired they might not be so active in board monitoring deeds (Fan et al., 2007). Moreover, the CEO of the politically weak organization might use his/her double power for the appointment of his/her likely persons on the board as the director who will just follow the CEO all decisions (Faleye et al., 2014). Hence, based on the above discussion it can be presumed that CEO duality will have a negative effect on firm performance, and based on the above discussion we hypothesize that:

H7: CEO duality is negatively related to firm performance.

3 DATA AND RESEARCH DESIGN

This study is an empirical attempt to examine firm performance on corporate governance by using regression analysis. We use Tobin's Q as the dependent variable to measure performance whereas ownership concentration, foreign ownership, institutional ownership, audit independence, size of the board, board independence, and CEO duality are independent variables. We also use firm size and firm age as instrumental variables for institutional ownership due to the endogenous relationship between institutional ownership and firm performance; the study has used leverage and market to book ratios as control variables.

We examine the data of non-financial firm on Pakistan stock exchange from 2005 to 2015. The data of corporate governance-related variables were obtained from annual reports of the concerned firms while the remaining data was collected from the website the State Bank of Pakistan (SBP). Initially, the study considered 524 firms with 4447 firm-year observations, then by dropping firms not having corporate governance data, firms were reduced to (418) with total observations of 3216. Furthermore, by dropping those firms which have three or less than three observations the sample was finally reduced to 323 firms with total firm-year observations of 2103 for the period of 2005-2015.

To measure and investigate the impact of ownership concentration on firm performance we used five proxies' first large shareholder, 2nd large shareholder, 3rd large shareholder, Top5 shareholders, and ownership concentration difference. Initially, we used block1 simple measure consist of percentage shareholding by the firm's largest shareholder i.e. Block1, second, we used shares holding by Block 1 and Block2 separately to measure their marginal contribution to firm performance. Third, we considered proportionate ownership of block1, block2, and block3 in one model separately as (Earle et al., 2005), fourth, to capture concentration we used the percentage of shareholding by top5 shareholders (Hovey et al., 2003).

Furthermore, we used ownership concentration difference which is measured as the difference in proportionate ownership of largest and second large shareholders. i.e. $OC_Diff = Block1 - Block2$. OC_Difference is the measure of the Contestability by the second large shareholder to challenge the largest one. The higher the value of the OC_Diff, the higher will be the chances of the type II agency problem. Where type II agency problem means the chances that large shareholders may expropriate the interest of the minor shareholders. We have developed the following hypothesis with the notion that the second-largest shareholder doesn't collude with the first one, and challenge him/her not to expropriate. Further, lower the difference between the second and largest owner, higher will be contestability. H1: Higher contestability is associated with higher performance.

3.1 Definition of Variables

The definition of dependent and independent variables are given in Table 1.

Table 1: Definition of variables

Variable	Description
Dependent Variables:	
Tobin's Q (TBQ)	Market capitalization divide by total assets
Control Variables:	
Leverage	Total debt divided by total assets of the firm
Market to Book (MBR)	
Instrumental Variables:	
Firm size (Size)	Natural logarithm of total assets
Firm Age (Age)	The number of years Since Incorporated.
Independent Variables:	
Board Size (BSIZE)	Natural log of No of the directors on the board of directors

Board Independence (BIND)	No of non-executive directors in proportion to the total no of directors.
Audit committee Independence(Aind)	Natural log of no of non-executive directors of the audit committee.
CEO Duality	1 if the CEO is also chairperson otherwise 0.
Ownership concentration(Top5_own)	No of shares held by the five largest shareholders in proportion to the total number of outstanding shares.
Block1	No of shares held by the largest shareholder in proportion to the total outstanding shares.
Block2	No of shares held by the 2nd largest shareholder in proportion to the total outstanding shares.
Block3	No of shares held by the third-largest shareholder in proportion to the total outstanding shares.
Foreign Ownership (Foreign own)	No of shares held by foreign shareholders and abroad Pakistani in proportion to the total number of outstanding shares.
Institutional Ownership (Inst_own)	No of shares held by institutional shareholders in proportion to the total outstanding shares.

Source: Author calculations (2017)

3.2 RESEARCH METHODS

It is witnessed in the literature that Institutional investors act as a governance mechanism and enhances firm performance but it is also found that these institutional investors are influenced by well-performing firms and makes investment in good performing firms, ultimately confirms the endogenous relationship between institutional ownership and performance (Elyasiani and Jia, 2010, Jafarinejad et al., 2015). As we know that endogeneity is an important issue in literature and should be controlled for corporate governance (Agarwal et al., 2005).

To address this endogenous nature of institutional ownership and firm performance, hence in this study, we used instrumental variables (IV) techniques using a two-stage least square (2SLS) approach with instrumental variables. Institutional ownership is determined by the size of the firm and age along with some other factors (Gompers and Metrick, 2001). Following this, the authors have instrumentalized institutional ownership with firm size and firm age as the institutional investors opt for good performing and well-reputed firms at the time of investment. Sargan test is used for the instrument validity and we estimate the following model:

$$\begin{aligned}
 TBQ_{it} = & \beta_0 + \beta_1 Inst_own_{it} + \beta_2 Size_{it} + \beta_3 Age_{it} + \beta_4 Own_Concentration_{it} + \beta_5 Foreign_own_{it} + \beta_6 B_Size_{it} \\
 & + \beta_7 B_indep_{it} + \beta_8 A_Indep1_{it} + \beta_9 CEO_Duality_{it} + \beta_{10} Control\ variables_{it} \\
 & + \varepsilon_{it}
 \end{aligned}
 \tag{1}$$

Whereas TBQ is used for firm performance, inst-own is institutional ownership, instrumental variables size, and age; for ownership concentration, we use different proxies Block1, Block2, Block3, top5 share and ownership concentration difference; foreign-own is foreign ownership; B-size is board size; B-indep is Board independence; A-indep is audit independence; CEO-duality; control variables are leverage and MBR is market to book ratio.

Table 2 reports the results of the descriptive statistics of the investigated variables. The board size on average

is 8 members. According to Geertz-Hansen et al. (1993) that board size should not be more than 8 or 9 members to be efficient. The pairwise correlation among the independent variables is shown in table 3 which reports that there is no significant bivariate correlation exists among the economic variables. Thus there is no problem of multicollinearity in our data. Furthermore, the variance inflation test (VIF) for all of our model is (1.7) on average which confirms that multicollinearity does not exist in our model.

Table 2: Descriptive statistics

Variables	N	Mean	sd	min	max
TBQ	2,865	0.544	0.784	0	11.50
Top5share	2,042	0.634	0.220	0	1
Block1	2,006	0.356	0.219	.0000891	1
Block2	1,975	0.127	0.0772	0	0.729
Block3	1,940	0.0804	0.0564	0	0.709
Inst_own	2,042	0.122	0.144	0	0.988
Foreign_own	2,017	0.0488	0.152	0	0.989
B_Size	2,010	8.025	1.735	0	20
B_Indep	1,722	0.184	0.243	0	1
A_Indep1	1,855	0.965	0.309	0	1.946
CEO_Duality	1,837	0.207	0.405	0	1
Leverage	2,831	0.660	0.472	0.00722	12.16
MBR	2,865	1.124	9.909	-424.1	150.1
Age	2,820	33.61	17.62	4	153
Size	2,943	14.97	1.701	8.690	20.13

4 RESULTS AND DISCUSSION

Table 3 shows the results of our first model in which we report Block1 which is the largest shareholder which is used as a proxy for the ownership concentration and also includes other independent variables. Block1 is proportionate ownership by the largest shareholder shows positive and statically significant and the results are consistent with (Nashier and Gupta, 2020). Whereas, foreign ownership, size of the board, and independence of board is statically significant while the dual nature of the CEO is statistically negatively significant with performance. Audit independence and institutional ownership have a positive relationship with firm performance. Our results are in line with (Elmagrhi et al., 2016, Al-Najjar, 2015, Handriani and Robiyanto, 2018, Mubeen et al., 2020). The results of table 3 depict affirmation for all the hypotheses of the study.

Table 3: Regression analysis using 2SLS (two-stage least squares)

Variables	Inst_own	TBQ
Inst_own		-2.026
		(-1.128)
Size	0.00803***	
	(2.668)	
Age	3.80e-06	
	(0.0150)	
Block1	-0.106***	0.340*

	(-5.111)	(1.664)
Foreign_own	-0.0265	0.480***
	(-0.918)	(3.402)
B_Size	0.0346	0.236*
	(1.496)	(1.684)
B_Indep	0.0441***	0.201*
	(2.672)	(1.816)
A_Indep1	0.0386**	0.0759
	(2.569)	(0.711)
CEO_Duality	-0.0189*	-0.203***
MBR	-0.000225	0.0954***
	(-0.181)	(16.05)
leverage	-0.0228*	-0.518***
	(-1.736)	(-6.679)
	(-1.784)	(-3.350)
Constant	-0.0490	0.320
	(-0.890)	(1.427)
Observations	1,215	1,215
R-squared		0.175
Test for Endogeneity		
Wu-Hausman (P-value)		0.0312
Under-identification test P-value (χ^2)		0.0070
Over Identifying test		
Sargan (score)		0.9375
Weak Instrument test(F-Stat)		4.947 (20.23)

Note: t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

In Table 4, the results for models 2, 3, and 4 are shown similar to the table; model 2 we used Block1 and Block2 separately both show positive and statically significant. On the other hand, foreign ownership, board size, and board independence have a significant and positive association with performance. CEO's dual nature shows a negative and significant relationship with performance. Institutional ownership shows negative while audit independence has a negative impact on firm performance.

Table 4: Regression analysis using 2SLS (two Stage Least Square)

Variables	Model (2)		Model (3)		Model(4)	
	Inst_own	TBQ	Inst_own	TBQ	Inst_own	TBQ
Inst_own		-1.489		-1.413		-4.929**
		(-1.017)		(-0.879)		(-1.963)
Size	0.009***		0.008***		0.007**	

CORPORATE GOVERNANCE AND FIRM PERFORMANCE: EVIDENCE FROM LISTED FIRMS OF PAKISTAN
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	(3.133)		(2.835)		(2.526)	
Age	-3.69e-05		-6.66e-05		-0.0001	
	(-0.145)		(-0.260)		(-0.621)	
Block1	-0.104***	0.402**	-0.114***	0.409**		
	(-4.925)	(2.341)	(-5.207)	(2.021)		
Block2	0.185***	0.617*	0.208***	0.574		
	(3.165)	(1.730)	(3.391)	(1.380)		
Block3			-0.115	0.030		
			(-1.353)	(0.0691)		
Top5share					-0.031	0.117
					(-1.592)	(0.766)
Foreign_own	-0.025	0.499***	-0.027	0.503***	-0.042	0.423**
	(-0.837)	(3.587)	(-0.926)	(3.565)	(-1.474)	(2.015)
B_Size	0.038*	0.231*	0.041*	0.232*	0.032	0.353*
	(1.670)	(1.747)	(1.791)	(1.673)	(1.400)	(1.878)
B_Indep	0.040**	0.168*	0.039**	0.168*	0.045***	0.309**
	(2.413)	(1.763)	(2.327)	(1.710)	(2.746)	(1.994)
A_Indep1	0.039***	0.056	0.037**	0.047	0.029**	0.239*
	(2.607)	(0.593)	(2.446)	(0.483)	(1.987)	(1.833)
CEO_Duality	-0.015	-0.186***	-0.016	-0.193***	-0.022**	-0.254***
	(-1.430)	(-3.430)	(-1.552)	(-3.387)	(-2.101)	(-2.843)
Leverage	-0.024*	-0.510***	-0.023*	-0.499***	-0.027**	-0.502***
	(-1.831)	(-7.098)	(-1.789)	(-6.822)	(-2.146)	(-4.394)
MBR	-0.0002	0.095***	-0.0001	0.094***	-0.001	0.092***
	(-0.207)	(16.67)	(-0.154)	(16.65)	(-0.999)	(11.41)
Constant	-0.103*	0.176	-0.082	0.167	-0.032	0.355
	(-1.798)	(0.820)	(-1.385)	(0.752)	(-0.571)	(1.076)
Observations	1,197	1,197	1,180	1,180	1,231	1,231
R-squared		0.246		0.254		-0.516
Test for Endogeneity						
Wu-Hausman		.0312		0.027		0.004
Under-identification test		0.007		0.016		0.030
P-value (χ^2)						
Over Identifying test						
Sargan (score)		0.937		0.900		0.955
Weak Instrument test (F-Stat)		4.947 (20.47)		20.24		19.99

Note: t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

Model 4 the findings of top5 shareholders are reported with other independent variables. The institutional ownership shows a significant and negative relationship with performance while top5share is positive but statistically insignificant and results are consistent with (Hovey et al., 2003). Whereas, the foreign ownership board size, board independence, and audit independence show positive and significant at 5% and 10% respectively. CEO duality and leverage are negative and significant at 1% with firm performance.

Finally, model 5 provides the finding of ownership concentration difference along with other independent variables. We found that OC_Diff is negative and significant at 5% significance level while foreign ownership, board size, and board independence are positive and significant with performance. The dual nature of CEO and leverage is negative and statically significant at 1%. These results affirm all hypotheses of the study.

The under-identification test shows P-value to be significant therefore there is no problem of under-identification i.e. the number of endogenous variables is less than the no of the instrumental variables. Weak instrument test F-statistic value was just above the Stock-Yogo weak ID test critical value in all the models, which shows that the instrumental variables of Firm age and size have enough explanatory power to explain institutional ownership. The Sargan test of over-identification depicted that instrumental variables are not correlated with any of the error terms of the system therefore, ultimately proving the age and size of the firm to be good instruments. Wu-Hausman test of endogeneity confirmed the endogenous nature of the institutional ownership in all the models via significant P-value (see Table 5).

Table 5: Regression analysis using 2SLS (two Stage Least Square)

Variables	Inst_ own	TBQ
Inst_ own		-1.938
		(-1.232)
Size	0.009***	
	(3.041)	
Age	-1.57e-06	
	(-0.00621)	
OC_Diff	-0.115***	-0.043**
	(-5.989)	(-2.32)
Foreign_ own	-0.023	0.516***
	(-0.780)	(3.576)
B_Size	0.037	0.234*
	(1.609)	(1.698)
B_Indep	0.040**	0.190*
	(2.422)	(1.880)
A_Indep1	0.039***	0.082
	(2.650)	(0.808)
CEO_Duality	-0.015	-0.199***
	(-1.479)	(-3.483)
Leverage	-0.023*	-0.521***
	(-1.812)	(-6.900)
MBR	-0.0001	0.096***
	(-0.137)	(16.21)
Constant	-0.084	0.380*
	(-1.525)	(1.755)
Observations	1,197	1,197
R-squared		0.182
Test for Endogeneity		
Wu-Hausman		0.0162
Under-identification test		0.0096
P-value (χ^2)		
Test for over Identifying		

Sargan (score)	0.7736
Weak Instrument test (F-stat)	21.56

Note: t-statistics in parentheses *** p<0.01, ** p<0.05, * p<0.1

CONCLUSION

The potential effect of ownership concentration on performance has been the dominant question in the literature of corporate governance, but results about the relationship have mixed shreds of evidence. Partially it's because of the pro and cons of the concentration, and if it's due to strengths with the concentration level, the suggestions are that the relationship will be non-monotonic (Holderness and Sheehan, 1988, Wruck, 1989).

This study incorporates data on Pakistani listed non-financial firms for 2005-15, to study the impact of corporate governance on firm performance. Pakistan's corporate environment is characterized by weak governance, concentrated family ownership, and low protection of shareholders' rights. Our results indicate that firms with concentrated ownership (measured by the proportion of ownership of the largest shareholder) have a lower level of agency problem which leads to higher performance therefore, our results confirm the first hypothesis. We also found a positive association of proportionate ownership by the second largest owner with performance despite controlling the effect of the largest shareholder. However the association of 3rd largest shareholder and proportionate ownership of the top five largest shareholders collectively with performance was insignificant, showing that first two shareholders contribute significantly in reducing type I agency problem, furthermore, the study found that contestability of the second-largest shareholder to challenge the largest shareholder (measured via ownership concentration difference of block1 & block2) reduces type II agency problem which results in high performance.

The key contribution of our study is in the context of Pakistan. Which is a concentrated ownership difference incontestability by the second-largest shareholder to challenge the first largest shareholder. High ownership of the 2nd largest shareholder leads to a higher ability of the 2nd largest shareholder to stop the first largest shareholder from expropriation and it reduces the type II agency problem.

The study also suggests that firm with large and independent boards outperform their counterparts which is confirmation for H₄ & H₆ of the study. Similarly, while confirming H₇ of the study we found that firms having the joint position of CEO and chairperson performs lower than counterparts. In Pakistan firms with foreign and institutional owners better than others which affirms H₂ H₃ of the study. Therefore, the authors have found evidences for the confirmation of all proposed hypotheses. This study has measured firm performance by using market-based measure Tobin's Q, however, future studies may incorporate other measures of performance also. Similarly incorporating external governance may give new shreds of evidence. Similarly, large sample from many countries may enable readers to generalize their findings.

Data availability statement

Data available on the request from the authors	The data that supports the findings of this study are available from corresponding author upon the reasonable request.
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