

## CEO's Remuneration and Performance of Firm: Evidence from Emerging Economy

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### ABSTRACT

From the perspective of an emerging market like Pakistan, this study looks into the influence of a firm's performance over the compensation of the Chief Executive Officers (CEO). For this purpose, the sample data of 170 non-financial companies ranging from 2008 to 2018 enlisted on the Pakistan Stock Exchange is separated into groups based on firm size, ownership type (family & non-family), and levels of corporate governance so as to analyze pay-performance link. Performance is assessed using return on equity, return on assets, and Tobin's Q, along with firm size, debt ratio, and stock beta serving as the control variables. The results of the study are determined by the Fixed Effect Model and Dynamic GMM-Difference. The results show that a company's performance has a significant impact on the CEO's remuneration. Vice versa results are found on the firm's size and debt ratio. Furthermore, the results show that family businesses pay their CEOs for performing more in case of return on equity. Similarly, in the case of Tobin Q, return on asset, return on equity, and corporate governance, mixed conclusions are drawn in the case of small, medium, and large size firms.

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### INTRODUCTION

Does the level of effort CEOs put in and the value they provide for their shareholders reflect the staggering salaries they earn? The average pays for executives at the 350 biggest companies in the USA, according to Mishel and Schieder (2018), is roughly \$18.9 million. This amount is comparable to 312 times the regular worker's pay at the same companies.

Over the last two decades, research related to executive compensation has developed strong attention on the remuneration of CEO. Executives therefore act opportunistically at the cost of shareholders' interests under agency theory (Jensen & Meckling, 1976). In order to control CEO's opportunism and brings the interests of executives with shareholders, corporate boards implement efficient pay arrangements and effective mechanisms of corporate governance. The success of the organization affects the way CEOs are compensated.

Studies in the West have limited significance for Asian countries since the economical, behavioral, and regulatory settings in Asia differ from those in the West (Fan et al., 2011; Van Essen et al., 2012; Fan et al., 2011). The Pakistani scenario is different for some reasons, even though other Asian nations have discovered evidence of a connection between corporate governance, performance, and compensation. First, compared to Japan and Korea, concentrated family ownership is more prevalent in Pakistan. Like Pakistani companies, Chinese companies have a higher concentration of ownership but the nature of that concentration is different because the government often owns most Chinese companies. Contrary to that, ownership by non-government stockholders is overly concentrated in Pakistan. The concentration of non-government ownership transforms organizations into private-sector businesses with different CEO remuneration concerns.

As a matter of concern, from the angle of administration, the political and judicial system of Pakistan is becoming less effective (Rehman et al., 2012). Pakistanis are, therefore, more likely to act unethically and opportunistically, especially CEOs (Mujtaba & Afza 2011). Not least, Pakistan has strict and conventional laws on CEO pay disclosure. As such, all the components of CEO's remuneration must be disclosed by companies. This is not the situation in most Asian nations (Conyon & He, 2011).

This study seeks to analyze whether CEO's remuneration is influenced by company performance. This research separated the data into subsamples of family and non-family, small, medium, and large size firms, and strong, medium, and weak corporate governance firms to better observe the consequence of a firm's performance on CEO remuneration. While remuneration has received little attention in the literature, executive pay has received much

attention. This study fills the gap by focusing on Pakistan's growing economy and subdividing the data according to firm size (Large, Medium & Small), corporate governance (Strong, Medium, and Weak), and firm ownership type (family-owned vs. non-family).

The study is organized as follows: The literature review is presented in Section 2, the analytical methods are discussed in Section 3, and the discussion on results is given in Section 4. Section 5 is allocated for the conclusion and policy implication.

## **LITERATURE REVIEW**

### **CEO Remuneration and Performance of Firm**

According to Agency Theory, the corporate boards assume responsibility for the company and work with the CEO in arms-length relationships to establish compensation policies that give the CEO effective rewards to maximize profit while minimizing the moral hazard brought on by ownership separation (Bebchuk & Fried, 2003). This revealed a connection between CEO compensation and business performance. Agency Theory is supported by all of this research (Conyon & He, 2011; Murphy, 1999; Ozkan, 2011). Additional contradictory theories are developed in response to the finding that there is little pay-performance relationship (Van Essen et al., 2012).

One of the most popular is Managerial Power Theory (MPT). MPT argues that if the power ratio moves in favor of CEOs and they act opportunistically, they are more likely to engage in rent withdrawal by raising their compensation, which is not in the best interest of shareholders. The board of directors violates their fiduciary responsibility under the CEO's control by approving exorbitant CEO compensation that may or may not be linked to the company's success (Bebchuk & Fried, 2003).

In their study of the linkage between executive pay and risk-taking behavior, Guo et al. (2015) evaluated by comparing the relationship between executive pay and stock return risk and volatility before and after the financial crisis and discovered that both the proportions of bonuses and long-term incentives are related positively with bank valuation and performance. According to Eling and Marek (2014), higher remuneration levels, more independent boards with more meetings, and more block holders are all linked to lower risk-taking.

According to Sun et al. (2013), total CEO salary is positively and strongly linked with firm efficiency. They argue that data envelopment analysis (DEA) can be used to generate a proxy for efficiency in company performance. However, according to Pepper and Gore (2015), behavioral agency theory places more emphasis on agent performance than traditional agency theory on cost monitoring and incentive alignment. Sonenshine et al. (2016) studied the determinants of CEO compensation post-crisis and found that the financial crisis "had a significant impact on the structure of CEO compensation with variable compensation preferred over cash payout" and found support for a close relationship between post-crisis compensation and executive performance. However, their research also affirms that "the interests of shareholders and their agents are most likely to be aligned if executives are motivated to perform to the best of their abilities." In order to determine CEO pay schemes that are more effective in supporting specific financial corporate goals, Bhuyan et al. (2022) looked at the relationship between chief executive officer (CEO) compensation and a firm's financial performance in the insurance business. It is also clear that a key factor in establishing CEO compensation is the combination of the CEOs' professional expertise and the company's financial performance.

### **CEO Remuneration and Corporate Governance**

To protect the interests of shareholders, corporate governance is responsible for keeping an eye on and regulating executive opportunism (Fama & Jensen, 1983). Executive compensation would be modest in the presence of effective company governance because of a strong corporate governance structure that allows for comprehensive monitoring and inspection of management.

Numerous corporate governance factors are shown to affect the CEO's compensation, but their effects may vary depending on the situation (Core et al., 1999; Sun et al., 2010). The board composition has been one of the key areas of focus in the corporate governance code, such as (2002; 2012; 2017, and 2019) to reduce agency conflicts, concentrated and family ownership is a significant aspect of the corporate governance environment in Pakistan.

### **CEO Compensation and Family Firm**

The impact of interest alignment and the entrenchment effect are the two opposing effects of concentrated and family ownership on CEO compensation agreements. According to the interest alignment effect, large or family shareholders have considerable incentives to manage agents' operations since they are insiders, strongly committed, and possess greater firm-specific knowledge (Harris & Raviv, 2008; Bertrand & Schoar, 2006). This leads to less management opportunism, greater interest alignment, and lesser CEO compensation since shareholders with concentrated and family ownership are better positioned to preserve their company interests.

**Firm Size and CEO's Remuneration**

In their meta-analysis of an investigation of the empirics on the determinants of CEO compensation, Tosi et al. (2000) investigated the proposed relationships between firm sizes, performance, and CEO pay. The precise theories of Tosi et al. (2000) are centered on the connection between business performance and the pay of CEO and the relationship between firm size and CEO's pay. Tosi et al. (2000) discovered that firm performance accounts for less than 5% of the variance in overall CEO pay, whereas firm size explains more than 40%. The relationship between company size and CEO pay of Australian companies (1990–1999) was examined by Merhebi et al. (2006) and a significant and positive finding was discovered.

Furthermore, Merhebi et al. (2016) contended that size is a good proxy for performance since bigger businesses have the financial wherewithal to offer more generous compensation plans regardless of performance. Likewise, Baker et al. (1988) found evidence that CEOs can improve their remuneration by expanding the business size even when the size increase decreases the firm's market value, challenging the idea that size is a proxy for performance. The authors say that this motive may explain part of the enormous amount of unproductive corporate resource investment in diversification efforts that have produced large conglomerate companies.

**DATA, VARIABLES, AND METHODOLOGY**

**Data**

The firms with incomplete data are eliminated those who had; missing value data, outliers, and negative equity. For the years 2008 to 2018, 170 Pakistani non-financial listed data of the firms were used in this study. Data on the firm-specific characteristics were gathered through the annual reports published by the companies. Information on stock share prices and indices was gathered from a Pakistan Stock Exchange release.

**Variables**

This study followed the method of Windsor and Cybinski (2009), Sheikh et al. (2018), and Raithatha and Komera (2016). Table 1 provides the measurement variables used in the study.

Table 1: Definitions of Variables

Variable	Abbreviation	Measurement
Dependent Variable		
CEO's remuneration	CEOCOMP	The remuneration of the company's CEOs in Pakistani rupees is expressed as a natural logarithm.
Explanatory Variables or Performance		
Tobin's Q	TBINQ	[(outstanding shares* share price at the end of year) +total debt]/Total assets]
Return on assets	ROA	EBIT / Total assets.
Return on equity	ROE	EAT / total equity.
Control Variables		
Stock Beta	BETA	covariance of the daily return of the KSE 100 index and individual stocks / daily market return variance
Debt Ratio	TBDR	Total debt / total assets.
Size	SIZE	The firms' total assets are expressed as a natural logarithm in Pakistani rupees.
Variables used to split the data		
Family firms		The corporation is categorized as a family business if insider ownership is higher than or equal to 20%; otherwise, it is categorized as a non-family business.
Governance quality		The data is divided according to the effectiveness of corporate governance using a ratio of 70 provisions of the corporate governance code that the company gave equal weight. The first quartile of data is referred to as "poor governance," the second and third quartiles as "medium governance," and the fourth quartile as "strong governance."
Firm size		Smaller companies are those in the first quartile, medium-sized companies in the second and third quartiles, and larger companies in the fourth quartile.

**Methodology**

This study uses equation 1 to examine how current-year firm performance affected the CEO's remuneration.

$$CEO_{i,t} = \alpha_{i,t} + PERFORMANCE_{i,t} + BETA_{i,t} + TBDR_{i,t} + SIZE_{i,t} + \mu_{i,t} \dots \dots \dots 1$$

Equation 2 is used in a dynamic setting to examine the effects of the previous year's CEO's remuneration and firm performance on the CEO's remuneration.

$$CEO_{i,t} = CEO_{i,t-1} + PERFORMANCE_{i,t} + BETA_{i,t} + TBDR_{i,t} + SIZE_{i,t} + \mu_{i,t} \dots \dots \dots 2$$

**RESULTS AND DISCUSSION**

Table 2: Descriptive statistics of the study

	CEOCOMP	TBINQ	BETA	TBDR	SIZE	ROA	ROE
Mean	3.38	1.26	0.11	0.53	15.40	0.12	0.11
Median	3.84	0.90	0.06	0.51	15.12	0.11	0.12
Maximum	5.73	9.85	0.67	0.91	20.21	1.12	2.11
Minimum	0.00	0.20	-0.30	0.01	12.01	-0.61	-1.91
Std. Dev.	1.40	1.01	0.10	0.21	1.40	0.12	0.25
Observations	1700	1700	1700	1700	1700	1700	1700

The descriptive statistics are given in Table 2. The mean value of CEO remuneration is 3.38, scaled by the natural logarithm of remuneration paid in thousands of Pak Rupees. The average Tobin Q is 1.26, which indicates the market value of the firms is more than the book value. The average beta value is 0.11. The mean total debt-to-book ratio is 0.53, which shows that the firms of Pakistan use debt as a major source of financing in their capital structure. The average size is 15.40. The average return value on equity is 11%, and the return on assets is 12%.

Table 3: Correlation matrix

Probability	CEOCOMP	TBINQ	BETA	TBDR	SIZE	ROA	ROE
CEOCOMP	1.00						
TBINQ	0.22*	1.00					
BETA	0.26*	0.16*	1.00				
TBDR	-0.20*	-0.09*	-0.13*	1.00			
SIZE	0.35*	0.17*	0.55*	-0.06**	1.00		
ROA	0.24*	0.41*	0.23*	-0.31*	0.20*	1.00	
ROE	0.27*	0.43*	0.17*	-0.20*	0.21*	0.72*	1.00

Table 3 shows the correlation analysis of the study. Correlation is performed to deduct the possibility of multicollinearity. Correlation analysis suggests no issue of multicollinearity between investigated variables used in the same regression equation of the study.

Table 4: Full Sample Regression Results

CEO <sub>t,t-1</sub>				0.866*	0.826*	0.869*
				(0.019)	(0.023)	(0.021)
TBINQ	-0.036			-0.009		
	(0.028)			(0.010)		
ROA		0.397*			-2.070*	
		(0.216)			(0.424)	
ROE			0.155*			0.077
			(0.085)			(0.077)
BETA	0.353	0.345	0.366	-0.134	0.066	-0.112
	(0.282)	(0.282)	(0.281)	(0.130)	(0.149)	(0.134)
TBDR	-0.295*	-0.209	-0.223	-0.375*	-1.380*	-0.191*
	(0.173)	(0.181)	(0.179)	(0.125)	(0.262)	(0.115)
SIZE	0.363*	0.354*	0.354*	0.181*	0.264*	0.129*
	(0.067)	(0.067)	(0.067)	(0.077)	(0.096)	(0.077)
C	-2.049*	-2.057*	-2.009*			
	(1.021)	(1.021)	(1.021)			
R-squared	0.801	0.801	0.801			
Adjusted R-squared	0.777	0.777	0.777			
F-statistic	33.568*	33.617*	33.616*			
Durbin-Watson stat	0.779	0.781	0.777			
J-Statistic				39.793	40.761	39.006
Prob (J-statistic)				0.265	0.231	0.294
Instrument rank				48	48	48
AR(1)				0.000	0.000	0.000
AR(2)				0.398	0.623	0.388

\* show significance at 10 percent. Standard Errors are given in parentheses

Table 4 shows the result of the full sample. Panel 1 shows the OLS fixed effects result. From performance measures, return on equity and return on assets significantly affect the CEO's remuneration. As far as the control variables are concerned, only size significantly affects CEO remuneration. These results support the finding of (Guo et al. 2015; Sonenshine et al. 2016; Raithatha and Komera 2016; Sheikh et al. 2018; and Bhuyan et al. 2022). Panel 2 shows the result of GMM-Difference in dynamic settings. The lag of CEO remuneration has significant effects on CEO remuneration. The lag of CEO remuneration has significant effects on CEO remuneration. These results support the finding of (Raithatha and Komera 2016; Sheikh et al. 2018). This indicates that CEO remuneration played a major role in determining current CEO remuneration in the previous year. From the side of proxies of performance, only return on assets has a significant and negative effect on current CEO remuneration. This result contradicts the studies of (Raithatha and Komera 2016; Sheikh et al. 2018). This result supports the finding of Raithatha and Komera (2016). This finding suggests that Pakistani firms pay more to the CEO than the return on assets. The total debt-to-book ratio has negative, while size has a significant positive effect on CEO remuneration. The negative relationship of total debt to book ratio with CEO remuneration shows Pakistani firms discourage CEO from including more debt in the firm's

capital structure which may cause to increase in firm risk. The positive association between the performance of a firm and CEO remuneration reveals that Pakistanis firms pay more to CEO those efforts improve the size of the firms.

Table 5: Regression Results of Family and Non-Family Firms

	Family			Non-Family		
CEO <sub>i,t-1</sub>	0.806*	0.809*	0.807*	-0.350	-0.410	-0.298
	(0.021)	(0.021)	(0.020)	(0.428)	(0.317)	(0.612)
TBINQ	-0.005			0.167		
	(0.013)			(0.154)		
ROA		0.042			0.056	
		(0.120)				
ROE			0.133*			-0.038
			(0.061)			(0.116)
BETA	-0.024	-0.029	-0.040	-0.092	-0.075	-0.122
	(0.137)	(0.139)	(0.134)	(0.198)	(0.231)	(0.124)
TBDR	-0.326*	-0.307*	-0.220*	-0.417	-0.271	-0.316
	(0.122)	(0.122)	(0.116)	(0.504)	(0.414)	(0.404)
SIZE	0.135	0.125	0.099	0.076	0.077	-0.176
	(0.091)	(0.087)	(0.087)	(0.116)	(0.221)	(0.209)
J-statistic	29.570	30.167	29.996	7.144	6.841	6.773
Prob(J-statistic)	0.727	0.700	0.708	0.128	0.130	0.148
Instrument rank	48	48	48	17	17	17
AR(1)	0.000	0.000	0.000	0.99	0.99	0.99
AR(2)	0.618	0.616	0.623	0.99	--	--

\* show significance at 10 percent. Standard Errors are given in parentheses

Table 5 presents the results of family and non-family firms. Panel 1 displays the results of family firms. From performance proxies, only return on equity has a positive and significant effect on CEO remuneration. This result supports the finding of Raithatha and Komera (2016). This result explains that the family firms pay more to CEOs focusing on return on equity. The total debt-to-book ratio shows evidence of a negative and insignificant effect on the CEO's remuneration. This finding suggests family firms discourage CEOs from using more debt. Panel 2 shows the results of non-family firms. All three performance proxies and control variables show an insignificant effect on CEO's remuneration.

Table 6: Regression Results of a Small, Medium, and Large Size Firms

	Small			Medium			Large		
CEO <sub>i,t-1</sub>	0.582*	0.589*	0.592*	0.587*	0.586*	0.586*	0.795*	0.798*	0.794*
	(0.008)	(0.009)	(0.016)	(0.019)	(0.019)	(0.019)	(0.011)	(0.010)	(0.009)
TBINQ	-0.003*			-0.065*			-0.004		
	(0.009)			(0.019)			(0.007)		
ROA		-0.130*			-0.067			0.100	
		(0.044)			(0.165)			(0.073)	
ROE			0.069*			0.093*			-0.032
			(0.028)			(0.095)			(0.028)
BETA	1.103*	1.083*	1.183*	0.025	-0.173	-0.146	-0.061	-0.061	-0.049
	(0.102)	(0.142)	(0.234)	(0.134)	(0.127)	(0.162)	(0.081)	(0.061)	(0.083)
TBDR	-1.591*	-1.614*	-1.450*	-0.222	-0.244*	-0.134	-1.149*	-1.106*	-1.165*
	(0.033)	(0.037)	(0.074)	(0.138)	(0.129)	(0.126)	(0.076)	(0.067)	(0.063)
SIZE	-0.086*	-0.082*	-0.110*	0.244*	0.095	0.108	0.605*	0.588*	0.606*
	(0.012)	(0.010)	(0.022)	(0.069)	(0.076)	(0.096)	(0.024)	(0.020)	(0.019)
J-statistic	45.747	43.059	42.258	41.173	46.091	47.566	41.400	39.486	38.563
Prob(J-statistic)	0.085	0.137	0.186	0.218	0.099	0.076	0.211	0.276	0.311
Instrument rank	47	47	48	48	48	48	48	48	48
AR(1)	0.409	0.387	--	0.019	0.023	0.021	0.130	0.050	--
AR(2)	--	--	0.954	0.941	0.997	0.981	0.789	0.811	0.622

\* show significance at 10 percent. Standard Errors are given in parentheses

Table 6 shows the results of large, medium, and small firms. Panel 1 shows the results of small-size firms. From performance proxies, return on equity has a significant positive effect, while Tobin's Q and return on assets have a negative and significant effect on CEO's remuneration (Guo et al., 2015; Sonenshine et al., 2016; Raithatha & Komera, 2016; Sheikh et al., 2018; Bhuyan et al., 2022). A positive effect of return on equity on a CEO's remuneration indicates that small pay more to CEOs for more return on equity to attract more investors. The negative effect of Tobin Q suggests that small firms are not performing well in the market. Looking at the remunerations of CEOs, the negative effect of return on assets on CEOs' remuneration suggests that small firms are not performing well as CEOs are remunerated for holding assets. Beta has a significant positive effect on CEO's remuneration. The positive effect of beta on CEOs' remuneration indicates that small firms pay more to CEOs than those who bear more risk. The total debt-to-book ratio negatively and significantly impacts the CEO's remuneration. This result indicates that small firms discourage CEOs from more debt. Size has a negative and significant impact on CEO's remuneration. This finding shows that as size increases, small firms pay less to CEOs (Raithatha & Komera, 2016).

Panel 2 shows the results of medium-sized firms. All three performance proxies and control variables almost show an insignificant effect on CEO's remuneration like Raithatha and Komera (2016). Panel 3 shows the results of large-size firms. All three performance proxies show an insignificant effect on CEO's remuneration. The total debt-to-book ratio has a significant but negative impact on CEO's remuneration. This result indicates that large firms discourage CEOs from more debt. Size has a positive and significant effect on CEO's remuneration. This finding shows that large firms pay more to CEOs as size increases.

Panel 2 shows the results of medium-sized firms. All three performance proxies and control variables, almost show an insignificant effect on CEO's remuneration. Panel 3 shows the results of large-size firms. All three performance proxies show an insignificant effect on CEO's remuneration. The total debt-to-book ratio has a significant but negative impact on CEO's remuneration. This result indicates that large firms discourage CEOs from more debt. Size has a positive and significant effect on CEO's remuneration. This finding shows that large firms pay more to CEOs as size increases.

Table 7: Weak, Medium, and Strong Corporate Governance Firms

	Weak			Medium			Strong		
CEO <sub>i,t-1</sub>	0.162*	0.155*	0.154*	0.792*	0.776*	0.793*	0.354*	0.409*	0.425*
	(0.013)	(0.012)	(0.012)	(0.032)	(0.030)	(0.032)	(0.106)	(0.128)	(0.133)
TBINQ	-0.139*			0.011			0.009		
	(0.055)			(0.010)			(0.016)		
ROA		0.183			-0.128			0.354*	
		(0.132)			(0.106)			(0.108)	
ROE			0.064			-0.077*			0.296*
			(0.065)			(0.038)			(0.059)
BETA	-0.010	-0.089	-0.107	0.422*	0.477*	0.434*	-0.148	-0.162	-0.149
	(0.219)	(0.230)	(0.225)	(0.145)	(0.147)	(0.141)	(0.129)	(0.136)	(0.132)
TBDR	0.338	0.455	0.413	-0.564*	-0.585*	-0.618*	-0.645*	-0.516*	-0.540*
	(0.374)	(0.415)	(0.399)	(0.152)	(0.141)	(0.139)	(0.208)	(0.183)	(0.189)
SIZE	-0.064	-0.079	-0.090	0.300*	0.289*	0.303*	-0.104*	-0.210*	-0.266*
	(0.150)	(0.148)	(0.164)	(0.057)	(0.044)	(0.045)	(0.104)	(0.084)	(0.085)
J-statistic	24.044	21.929	22.174	55.555	56.961	53.052	16.394	15.696	16.39
Prob(J-statistic)	0.064	0.109	0.103	0.0149	0.010	0.0258	0.691	0.735	0.691
Instrument rank	28	28	28	48	48	48	33	33	33
AR(1)	--	0.085	0.09	0.000	0.000	0.000	0.991	--	--
AR(2)	0.509	0.447	0.444	0.7126	0.695	0.735	0.997	0.990	0.998

\* show significance at 10 percent. Standard Errors are given in parentheses

Table 7 shows the results of weak, medium, and strong governance firms. Panel 1 shows the results of weak governance firms. Tobin's Q has a significant and negative effect on CEO's remuneration, opposite to (Guo et al. 2015; Sonenshine et al. 2016; Raithatha and Komera 2016; Sheikh et al. 2018; Bhuyan et al. 2022). This finding indicates that weak governance firms are not performing well in the market as CEOs are remunerated. Panel 2 shows the results of medium governance firms. Return on equity has a negative and significant impact on CEO's remuneration. This result indicates that medium governance firms pay more to CEOs while they are not improving return on equity, unlike (Guo et al. 2015; Sonenshine et al. 2016; Raithatha and Komera 2016; Sheikh et al. 2018; Bhuyan et al. 2022).

Size has a significant and positive effect on CEO's remuneration. The same conclusion is drawn by (Guo et al. 2015; Sonenshine et al. 2016; Raithatha and Komera 2016; Sheikh et al. 2018; Bhuyan et al. 2022). This finding shows that medium governance firms pay more to CEOs as size increases. Panel 3 displays the results of strong governance firms. Return on equity and return on assets positively and significantly affect CEO's remuneration (Guo et al. 2015; Sonenshine et al. 2016; Raithatha and Komera 2016; Sheikh et al. 2018; Bhuyan et al. 2022). These findings suggest that strong governance firms remunerate more CEOs if the return on assets and equity increase. Total debt/book ratio and size significantly and negatively affect CEO's remuneration. At the same time, opposite results are found by (Raithatha & Komera 2016; Sheikh et al. 2018; Bhuyan et al. 2022). These indications suggest that strong governance firms discourage CEOs from more debt and the firm's size.

**CONCLUSION**

This study observed an assemblage of CEO remuneration and company performance depending upon the data length from 2008 to 2018 of 170 non-financial companies listed on the Pakistan Stock Exchange. To manage endogeneity, FEM and the GMM-Difference dynamics method were employed. The results of full sample regression showed that a company's performance significantly affects the CEO's remuneration. Among the control variables, firm size has positive and significant, while the debt ratio has a significant opposite relationship with the CEO's remuneration. Furthermore, the results showed that family businesses pay their CEOs for performing more in terms of return on equity. None of the performance of firm proxies significantly affects CEO's remuneration in non-family. Results indicated that small-size firms pay more CEOs based on ROE and discourage performing on Tobin Q and ROA. Medium-size firms discourage CEOs' remuneration based on Tobin's Q. In large-size firms, Tobin's Q, ROA, and ROE

were found for insignificant effects. Results based on sub-samples of corporate governance showed that weak corporate governance firms discourage CEOs based on performing market indicators (Tobin Q), and medium corporate governance firms discourage CEOs based on performing ROA. While strong corporate governance reward CEOs based on performing ROA and ROE.

The results of this study are unique for the executives, decision-makers, and regulatory agencies. Given that factors including firm size, governance, and family ownership influence the CEO's remuneration, investors and legislators can evaluate the CEO's remuneration based on the company's merits. The findings are particularly significant for those searching for the emerging market's corporate governance framework and CEO compensation.

## REFERENCES

- Baker, G. P., Jensen, M. C., & Murphy, K. J. (1988). Compensation and incentives: Practice vs. theory. *The Journal of Finance*, 43(3), 593-616.
- Bebchuk, L. A., & Fried, J. M. (2003). Executive compensation as an agency problem. *Journal of economic perspectives*, 17(3), 71-92.
- Bertrand, M., & Schoar, A. (2006). The role of family in family firms. *Journal of Economic Perspectives*, 20(2), 73-96.
- Bhuyan, R., Butchey, D., Haar, J., & Talukdar, B. (2022). CEO compensation and firm performance in the insurance industry. *Managerial Finance*, 48(7), 1086-1115.
- Canyon, M. J., & He, L. 2011. Executive compensation and corporate governance in China. *Journal of Corporate Finance*, 17(4), 1158-1175.
- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of financial economics*, 51(3), 371-406.
- Eling, M., & Marek, S. D. (2014). Corporate governance and risk taking: Evidence from the UK and German insurance markets. *Journal of Risk and Insurance*, 81(3), 653-682.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The journal of law and Economics*, 26(2), 301-325.
- Fan, J. P. H., Wei, K. C. J., & Xu, X. (2011). Corporate finance and governance in emerging markets: A selective review and an agenda for future research. *Journal of Corporate Finance*, 17(2), 207-214.
- Guo, L., Jalal, A., & Khaksari, S. (2015). Bank executive compensation structure, risk taking and the financial crisis. *Review of Quantitative Finance and Accounting*, 45, 609-639.
- Harris, M., & Raviv, A. (2008). A theory of board control and size. *The Review of Financial Studies*, 21(4), 1797-1832.
- Jensen, M., & Meckling, W. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. Available at <http://dSPACE.kottakkalfarookcollege.edu.in:8001/xmlui/bitstream/handle/123456789/335/1-s2.0-0304405X7690026X-main.pdf?sequence=1&isAllowed=y>
- Merhebe, R., Pattenden, K., Swan, P. L. & Zhou X. (2006). Australian chief executive officer remuneration: Pay and performance. *Accounting and Finance*, 46(3), 481-497.
- Mishel, L. & Schieder, J. (2018), CEO compensation surged In 2017, Vol. 16, *Economic Policy Institute, Washington, DC*: Available at: <https://www.epi.org/publication/ceo-compensation-surged-in-2017>
- Mujtaba, B. G., & Afza, T. (2011). Business ethics perceptions of public and private sector respondents in Pakistan. *Far East Journal of Psychology and Business* 3(1), 1-11.
- Murphy, K. J. (1999). *Executive compensation*. In Handbook of Labor Economics, eds. O. Ashenfelter & D. Cards. New York: North Holland. 3, 2485-2563.
- Ozkan, N. (2011). CEO compensation and firm performance: An empirical investigation of UK panel data. *European Financial Management*, 17(2), 260-285.
- Pepper, A., & Gore, J. (2015). Behavioral agency theory: New foundations for theorizing about executive compensation. *Journal of management*, 41(4), 1045-1068.
- Raithatha, M., & Komera, S. (2016). Executive compensation and firm performance: Evidence from Indian firms. *IIMB Management Review*, 28(3), 160-169.
- Rehman, R., Hasan, M., Mangla, I., & Sultana, N. (2012). Economic reforms, corporate governance and dividend policy in sectoral economic growth in Pakistan. *The Pakistan Development Review*, 51(4), 133-146.
- Sheikh, M. F., Shah, S. Z. A., & Akbar, S. (2018). Firm performance, corporate governance and executive compensation in Pakistan. *Applied economics*, 50(18), 2012-2027.
- Sonenshine, R., Larson, N., & Cauvel, M. (2016). Determinants of CEO Compensation before and after the Financial Crisis. *Modern Economy*, 7(12), 1455-1477.
- Sun, F., Wei, X. and Huang, X. (2013), CEO compensation and firm performance: evidence from the US property and liability insurance industry, *Review of Accounting and Finance*, 12(3), 252-267.
- Sun, S. L., Zhao, X., & Yang, H. (2010). Executive compensation in Asia: A critical review and outlook. *Asia Pacific Journal of Management*, 27(4), 775-802.

- Tosi, H. L., Werner, S., Katz, J. P., & Gomez-Mejia, L. R. (2000). How much does performance matter? A meta-analysis of CEO pays studies, *Journal of Management*, 26(2), 301-339.
- Van Essen, M., Heugens, P. P., Otten, J., & Van Oosterhout, J. (2012). An institution-based view of executive compensation: A multilevel meta-analytic test. *Journal of International Business Studies*, 43, 396-423.
- Windsor, C. A., & Cybinski, P. J. (2009). Size matters: The link between CEO remuneration, firm size and firm performance moderated by remuneration committee independence. *Griffith University Business School Discussion Paper Economics*, (2009-05).