

Research Article


Impact of Corporate Governance on share price of Firms: A case study of listed companies at Pakistan Stock Exchange (PSX)

Abstract

The objective of this study is to examine the relationship between corporate governance and share price of companies listed at Pakistan Stock Exchange (PSX) using a sample of 80 non-financial companies and employing empirical study approach to analyze their corporate governance structures based on variables like board size, board independence, CEO duality, managerial ownership, and ownership concentration. The data of share prices were gathered from 2011 to 2020 and the specific relationships were estimated using fixed effects regression model. According to the findings, the variables, such as board size, board independence, ownership concentration, earnings per share, leverage, and firm size, have a significant relationship with share price of listed companies. However, there was no evidence found to support a significant association between managerial ownership, CEO duality and share prices of selected companies. The findings of the study are useful for policymakers and regulators of Pakistan and other developing countries facing similar problems of corporate governance.

Key words: Corporate Governance; Board size; Board independence; CEO duality; Managerial ownership; Market price of shares.

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1. Introduction

Corporate governance is the systems of rules, practices, and processes by which a firm is directed and controlled. It is critical to a company's performance, sustainability and trustworthiness. Good corporate governance is built on the principles of fairness, transparency and accountability — all of which are the foundations of trust among stakeholders. Such trust is essential for any firm's future success and particularly important in the financial markets as it affects investors' confidence and perception of markets (Black, et al. (2005). Corporate governance comes up especially when considering its influence on share prices. Factors like the strength of governance — which often serve as warning flags for investors — also impact share prices, which are commonly thought of as barometers of investor sentiment. But identifying the precise nature of this relationship can be difficult (Cappellieri, et al. 2024). To this end, the study aims to examine whether there has been a long-term relationship between governance mechanisms and market prices and potentially assist in understanding this complex relationship through unpredictable behavior. According to different empirical studies including the one by Raza, Ramakrishnan, Gillani, and Gillani (2020) there is a strong relationship between financial performance indicators and shares prices in almost all global financial markets.

1.1 Background of Study

Pakistan has evolved in the relation of promoting high corporate governance standards focusing accountability, transparency and stakeholder protection. In 2002, the Securities and Exchange Commission of Pakistan (SECP) issued Code of Corporate Governance, which was amended in 2012 and then in 2017; with the objective of improving regulatory compliance. Aside from the Companies Act 2017, these codes up fraternity with PCB objective the State

of listed companies involved, their board matrix with committees on risk governance, auditing, and investor relations. These mandatory requirements include qualifications for the board of directors, disclosure norms, and strong internal controls to prevent errors and frauds. While there have been positive changes in regulatory framework, some issues remain, especially around consistent application across different types of organizations, including family-owned and smaller enterprises. However, there still remain challenges that need to be addressed such as protecting minority shareholders and figuring out enforcement mechanisms. Governance practices have been enhanced with the introduction of measures such as director education programs and grievance resolution mechanisms. These measures are part of a broader effort to build transparency, ensure efficient boards, and create a secure investment environment (Ginesti & Ossorio, 2021),

Pakistan Institute of Corporate Governance (PICG) promotes best practices mainly through conducting educational programs, training workshops, symposium and collaborative work with regulatory bodies and members of the industry. Such initiatives are being taken to help enhance governance awareness and compliance to regulations, as well as contribute towards the sustainable development of Pakistan's corporate sector. Such agencies like Pakistan Stock Exchange (PSX) and SECP also have significant roles in governing mechanism and financial market steward. They aim to boost investor confidence and grow the economy. However, governance lapses in Pakistan, such as the 2008 Karachi Stock Exchange crisis, financial mismanagement at Pakistan International Airlines, and governance issues in the large business groups like Schon, Dewan, and Tawakkal, underscore the pressing need for robust reforms. Addressing these weaknesses is crucial to

rebuilding trust in financial markets and ensuring long-term sustainability (Zia & Burton, 2023).

1.3 Research Objectives

This research aims to:

- Examine how board size influences the share prices of publicly listed firms in Pakistan.
- Explore the effect of board independence on share price performance in listed companies.
- Investigate the relationship between CEO duality and the share prices of listed firms.
- Assess the role of managerial ownership in determining share price trends.
- Evaluate the influence of ownership concentration on the valuation of listed firms.

1.4 Research Questions

In the light of the above objectives, we will explore the following research questions: -: -

RQ1: What is relationship between board size and share price of listed firms in Pakistan?

RQ2: How does board independence impact the financial performance of listed firms in Pakistan?

RQ3: What is the effect of CEO duality on share prices of listed companies?

RQ4: How does managerial ownership shape the share prices of firms in Pakistan?

RQ5: What is the role of ownership concentration in determining the market value of listed firms?

By exploring these questions, the study contributes to the existing knowledge on corporate governance and its impact on share prices in Pakistan. The major

focus of this study is to examine key elements of governance including board composition, leadership relations, and ownership structure, providing insights for regulators, policymakers, and corporate managers. The findings emphasize on reforms that promote transparency, investor confidence, and sustainable development in Pakistan's corporate landscape. In addition, it also offers a set of recommendations for bridging governance gaps, contributing to a better, more resilient corporate sector.

The structure of remaining paper is as follows. In section 2, we provided a literature review of pertinent research, identified research gaps in previous literature, which leads to hypotheses development. Section 3 discussed the research methodology, selected variable, and the conceptual model. Section 4 illustrated empirical results, Section 5 presented the interpretation of the results, policy implications, limitations and recommendations for future research.

2. Literature Review

Extensive research has been conducted on the relationship between corporate governance, firm performance, financial stability and shareholder value. Corporate governance refers to the systems in place that direct a company's decision making, while also providing accountability, transparency, and safeguarding orientation. There are many empirical studies identifying various ways in which corporate governance structures influence outcomes like financial performance, market valuation, and share prices.

The academic research emphasizes how board attributes, such as size, independence, and composition influence firm performance. According to agency theory, bigger boards which have a lopsided share of independent directors can facilitate overcoming agency conflicts by motivating management and shareholders' interests ([Jensen Meckling, 1976](#)). In support

of this view, [Dalton et al. \(1998\)](#) and [Ginesti, & Ossorio, \(2021\)](#) concluded that the more independent the board, the better the corporate governance, ultimately enhancing firm performance. CEO duality, in which the CEO also serves as board chair, has generated a lot of debate ([Grossman, & Hart, 1986](#)). Although some studies argue that CEO duality reduces firm value through the constraining influence of independent oversight and undermines the board effectiveness ([Finkelstein & D'Aveni, 1994](#)), others argue that CEO duality promotes enduring leadership and enhances productive decision making ([Zhang & Rajagopalan, 2003](#)); [Debellis, et al. \(2022\)](#),

Another area of interest is ownership structure, in which the emphasis was placed on managerial ownership and ownership concentration. Managerial ownership is often linked to better governance as it aligns management's interests with those of shareholders ([Morck et al., 1988](#)). However, excessive managerial ownership can lead to entrenchment, where managers prioritize their interests over shareholders' concerns ([Shleifer & Vishny, 1989](#)). Similarly, ownership concentration can have dual effects on governance. While high ownership concentration may reduce agency costs, it also poses risks such as minority shareholder oppression and weaker governance practices ([La Porta et al., 1999](#)).

Despite substantial research on corporate governance, several gaps were found, especially in the developing economies like Pakistan. Prior studies predominantly focus on Western markets, leaving the distinct challenges of Pakistan's corporate governance landscape unexplored. Existing research on Pakistan focuses on regulatory frameworks and their enforcement ([Zia & Burton, 2023](#)). There is limited research on governance mechanisms—such as board size, board independence, CEO duality, managerial ownership, and ownership concentration—affect the share prices of firms listed on the

Pakistan Stock Exchange (PSX). Additionally, although many studies such as Kabir, & Thai, (2017); Amran, et al. (2014); García-Sánchez, et al. (2019); Borralho, et al. (2020); and Fera, et al. (2022) have explored corporate governance in global context, the direct linkage of corporate governance with the market valuation of firms in Pakistan is not examined by any study. This research has bridged this gap by investigating into the corporate practices and their impact on investors' perception in the emerging markets like Pakistan. Such insights may illuminate how corporate governance may shape the dynamics of financial markets in the developing economies like Pakistan.

3. Data and Methodology

This research uses research methodology adopted for studying the dynamics between corporate governance practices, and share prices of companies listed at Pakistan Stock Exchange (PSX). This methodology utilizes a quantitative research design, using panel data analysis to assess the impact of different corporate governance variables on the market value of firms. This section outlines the study approach, data collection process, variables, and analytical framework. Systematic analyses were conducted, particularly utilizing quantitative approaches, which are commonly based on numerical data from the company domain, including share price, metrics of corporate governance, as well as financial results (Dahl 2017). The objective is to determine the effect size of specific corporate governance mechanisms (board size, board independence, CEO duality, managerial ownership, and ownership concentration) on share prices. We use panel data, which combines cross-sectional and time-series data, in order to observe firm-level differences across years. The data for the analysis was taken from the 80 non-financial companies listed on PSX for the period spanning from 2011-2020. Firms were selected on the basis of market capitalization. Data is collected from

authentic sources such as firms' annual reports, State Bank of Pakistan and Pakistan Stock Exchange official website. These sources of data are rich in financial and corporate governance, the key ingredients for establishing the relationship between governance practices and firm performance. The dependent variable used in this study is the market value of share prices, and independent variables include board size, board independence, CEO duality, managerial ownership and ownership concentration. The board size means number of total directors while board independence implies the ratio of independent directors to total number of directors. The CEO duality is a dummy variable indicating whether the CEO has dual functions such as director as well as Chief Executive Officer. Ownership by management highlights percentage of share hold by the board of directors, whereas ownership concentration means the percentage of shares held by the top five shareholders of the firm. Utilizing these variables, the study attempts to provide a profound understanding of corporate governance practices effect on market valuation of the share price at Pakistan Stock Exchange. [Table 1](#) outlines the variables included into this study, their symbols and brief definitions.

Table 1

Selected variables.

Variable Name	Symbol	Definition
Board Size	BS	Overall number of the board's directors.
Board Independence	BI	The ratio of independent directors to all directors.

Variable Name	Symbol	Definition
CEO Duality	CD	A dummy variable that takes the value 1 if the CEO also serves as the board chairman, 0 otherwise.
Managerial Ownership	MO	The percentage of shares held by the board of directors relative to total shares.
Ownership Concentration	OC	The percentage of shares held by the top five shareholders.
Market Value of Share Price	MVSP	The market value per share at year-end.

This model highlights the relationship between corporate governance variables and share price, alongside control variables like earnings per share (EPS), leverage, and firm size. The inclusion of these control variables is essential for assessing the influence of corporate governance mechanisms on share prices, factoring in additional indicators of financial performance (Gujarati & Porter, 2009). The independent and dependent variables used in the study are the key elements that allow the econometric model to function and control variables are introduced to reduce the estimation error. The econometric model is specified as:

$$SP = \beta_0 + \beta_1 BS + \beta_2 BI + \beta_3 CD + \beta_4 MO + \beta_5 OC + \beta_6 EPS + \beta_7 Lev + \beta_8 FS + \epsilon$$

Where:

- SPSPSP=share price;
- BSBSBS=board size;
- BIBIBI=board independence;

- CDCDCD=CEO duality;
- MOMOMO=managerial ownership;
- OCOCOC=ownership concentration; EPSEPSEPS, and
- FSFSFS=control variables for earnings per share, leverage, and firm size, respectively. ϵ is an error term.

This model is also shown in the [Figure 1](#), showing relationship between independent and dependent variables.

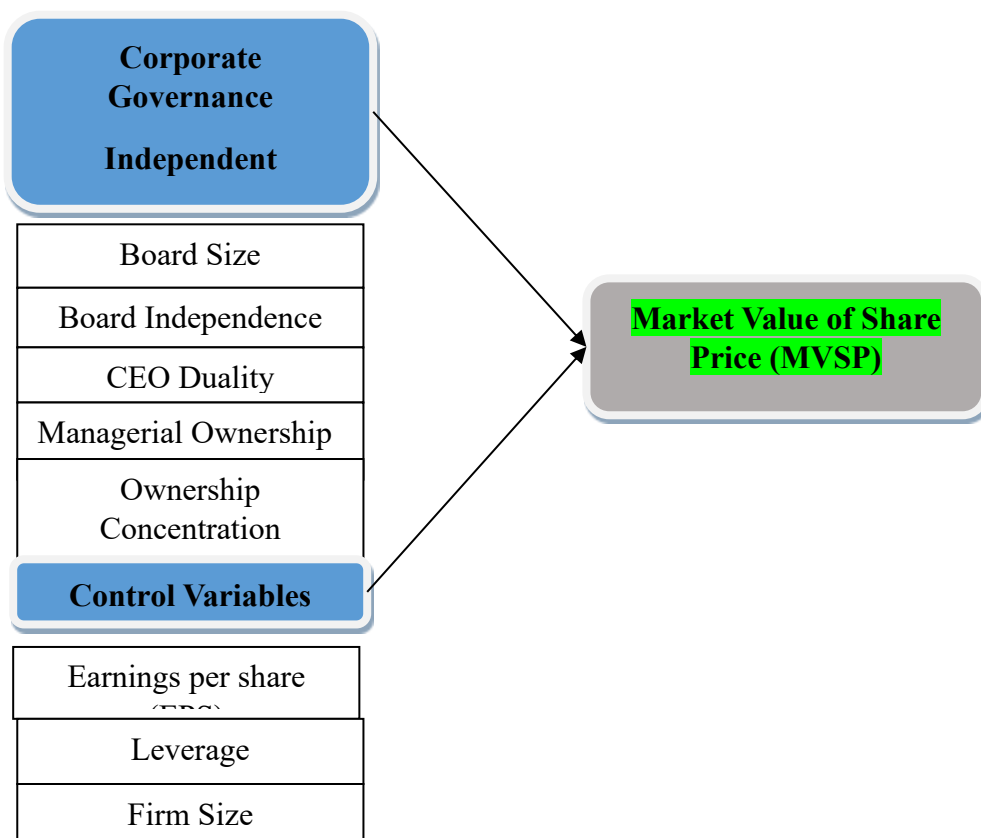


Fig 1: Conceptual Model

4. Results

4.1 Descriptive Analysis

The study started its empirical analysis with descriptive statistics of which results are presented in [Table 2](#).

Table 2:

Descriptive analysis results

	MVSP	CD	BS	BI	OC	MO
Mean	161	0.17	8	0.14	0.61	0.38
Median	88	0.00	7	0.11	0.61	0.41
St. Dev	216	0.38	1.510	0.2	0.22	0.44
Min	2.81	0	6	0.00	0	0.12
Max	1300	1	15	1.29	1	0.78
Count	800	800	800	800	800	800

The descriptive statistics provided insights into the characteristics of six variables: Market value of share price (MVSP), CEO duality (CD), board size (BS), board independence (BI), ownership concentration (OC), and managerial ownership (MO). These statistics summarize key aspects of the distribution of each variable within the dataset. The mean values provide an indication of the central tendency, with MVSP averaging at 161, CD at 0.17, BS at 8, BI at 0.14, OC at 0.61, and MO at 0.38. The median values offer further insight into central tendencies, with MVSP having a median of 88, CD of 0.00, BS of 7, BI of 0.11, OC of 0.61, and MO of 0.41. Standard deviations reflect the degree of variability around the mean, with MVSP

showing considerable variability at 216, while CD, BS, BI, OC, and MO display lesser variations at 0.38, 1.510, 0.2, 0.22, and 0.44 respectively. The minimum and maximum values illustrate the range of each variable's values within the dataset, providing context for the spread of observations. Examination for each variable, these descriptive statistics offer a comprehensive overview of the dataset's characteristics, aiding in understanding the distribution and variability of the measured metrics. The number of total non-financial firms are 80 and the period of study is 10 years (2011 to 2020), resulting in 800 total firms' year observations.

4.2 Data Normality Test

Before proceeding to calculate the correlation coefficient to examine relationships between variables, it is imperative to first assess the normality of all the variables. This is because correlation relies on the assumption that all variables involved are normally distributed. The Jarque-Bera test is a statistical method used to assess whether a given dataset conforms to a normal distribution. It evaluates a null hypothesis that the data is normally distributed. The estimated results are presented in [Table 3](#).

Table 3:

Normality checking by Jarque Bera Test

Variables	Jarque-Bera Test Statistic	Sig.
MVSP	2453.69	0.23
CD	451.02	0.45
BS	641.73	0.06
BI	1111.72	0.07
OC	36.11	0.63
MO	49.31	0.21

In [Table 3](#), various variables are listed alongside their respective Jarque-Bera test statistics and associated p-values. The test statistic indicates the extent of departure from normality, with higher values suggesting greater deviation. The p-value, on the other hand, determines the significance of this deviation: if it falls below a chosen threshold, typically 0.05, the null hypothesis of normality is rejected.

Among the variables listed, MVSP, CD, OC, and MO exhibit p-values greater than 0.05, indicating no strong evidence against normality. Conversely, for BS and BI, while their p-values are slightly above 0.05, suggesting some evidence against normality, the evidence is not decisive. Therefore, based on the provided findings, the variables MVSP, CD, OC, and MO can be considered approximately normally distributed, whereas BS and BI might deviate from a normal distribution, although the deviation is not conclusive.

4.3 Correlation Analysis

We calculate Pearson correlation matrix to identify, if there is multicollinearity issue in the data set. It is the relationship between pair of variables. For example, variable A and variable B, if they have strong relationship between them, it shows both are depicting the same phenomena, so we need to include either one of them as an independent variable. It is shown with correlation coefficients, this coefficient must be less than 0.70. This study first evaluated the multicollinearity of the data before determining the coefficients. The pair wise correlation matrix for each variable included in the model is shown in the [Table 4](#).

Table 4:

Correlation Matrix results

Variables	CD	BS	BI	OC	MO
CD	1				
BS	0.59*	1			
BI	0.43**	0.26**	1		
OC	0.33*	0.45**	0.39**	1	
MO	0.65*	0.58*	0.16*	0.23*	1

(**= Significant at 1%, *= significant at 5 %)

The correlation analysis unveils the interrelations among the variables CD, BS, BI, OC, and MO. Notably, CD exhibits significant correlations with BS (0.59*, significant at 5% level), BI (0.43**, significant at 1% level), OC (0.33*, significant at 5% level), and MO (0.65*, significant at 1% level), indicating its strong associations with various aspects. BS, in turn, demonstrates moderate to strong correlations with BI (0.26**, significant at 1% level), OC (0.45**, significant at 1% level), and MO (0.58*, significant at 5% level), suggesting its influence on multiple dimensions within the dataset. BI also correlates moderately with OC (0.39**, significant at 1% level), highlighting its role in operational aspects. However, BI correlation with MO (0.16*, not significant at 5% level) suggesting a weaker or possibly non-significant association. OC and MO exhibit a weak positive correlation (0.23*, significant at 5% level). These findings collectively offer valuable insights into the relationships among the variables, elucidating potential patterns and dependencies within the dataset. The correlation analysis shows that multicollinearity is not an issue in the model.

4.4 Identification of correct model

In order to identify which model is fit to the data we used two tests: Restricted F-Test and Hausman Test. These tests enable us to understand which model either fixed effect model or random effect model is the most relevant and fit to data. The estimated results of both tests are presented in [Table 5](#).

Table 5:

Model specification

Diagnostic test	F-Statistic	Chi-square
Restricted F-Test	2.58108***	
Hausman Test		27.1932***

(*** denote significance level of 1%)

The first diagnostic test we employ is the Restricted F-Test. This test aims to determine whether the cross-sectional units exhibit similar characteristics. The null hypothesis for this test is that "the groups share a common intercept." We reject the null hypothesis based on the results in [Table 5](#), because the F-Test produces a result of 2.58 that is significant at the 1% level. This suggests that pooled OLS estimates may be inefficient due to the differences in cross-section units. Then, we perform the Hausman test to determine whether to consider Fixed or Random effects model. This test is useful to find if the "Generalized Least Squares (GLS)" estimates are consistent or not and also follows the Chi-square distribution. We use a Chi-square test to conclude that fixed effect estimates are efficient for our data (use insisted) with a Chi-square value of 27.19, statically significant and rejecting the null hypothesis, confirming that "GLS estimates are consistent".

4.5 Fixed effects model

Fixed Effects Regression Analysis (FERA) is a statistical technique often used in econometric research to analyze relationships between variables using panel data structures, particularly in the context of longitudinal data, where the same subjects are monitored over periods of time. This study employs Least Squares Dummy Variable (LSDV) regression to investigate the determinants of Market Value of Share Price (MVSP) with a dataset of 800 observations, 80 cross-sectional units and 10 years. The analysis focuses on the dependent variable which is MVSP to identify the determinants of MVSP. The estimated results are presented in [Table 6](#).

Table 6:

Fixed Effects Regression Results (Using whole sample, 800 observations).

Method: Least Square Dummy Variable				
Time Series Length: 10				
Cross sectional units: 80				
F-Statistic: 12.74				
Adjusted R-square: 0.406				
p-value: 0.000				
Variables	Coefficient	Std. Error	t-ratio	p-value
Constant	11.227	17.03	0.659	0.510
CD	-0.02	0.14	-1.786	0.321
BS	0.12	0.03	3.887	0.000
BI	0.03	0.08	7.469	0.000
OC	0.06	0.04	2.898	0.001
MO	0.01	0.01	5.528	0.089

EPS	3.035	0.39	7.759	0.000
LEV	1.459	0.21	6.914	0.031
SIZE	0.27	66.60	3.812	0.000

* Dependent Variable: MVSP

The regression output gives some key statistics in order to evaluate the results of the research and the significance of individual predictors. First, the adjusted R-squared value is 0.406, meaning that around 40.6% of the variation in MVSP is explained by the independent variables that are included in the study. It means that the level of explanatory power is moderate, implying that the research captures a huge portion of the variation in market value. The F-statistic is a measure of the overall significance of the research model. The F-statistic for this context is 12.74 and its p-value is 0.000. This would mean that at least one of the independent variables was having a non-zero effect on the dependent variable; thus, it validated the use of the research for explaining the MVSP variance.

Let us look at the behavior of individual coefficients for independent variables. The coefficient estimate for CEO duality (CD) is -0.02, which is negatively correlated with MVSP. But it does not have a conventional statistical significance, as the p-value = 0.321. This indicates that there is no impact of having a CEO duality or where the CEO has double role as the chairman of the board and director on the market value of share price in this research study. The coefficient estimate for Board Size (BS) is 0.12, with a statistically significant p-value of 0.000. It implies that higher board size is associated with higher market value of share price. One unit increase in the board size leads to 12% increase in MVSP, if all other factors remain constant. The coefficient estimate for Board Independence (BI) is 0.03, also statistically significant (p-value = 0.000). This suggests that higher levels of board

independence, where a greater proportion of board members are independent, are positively associated with MVSP. A one-unit increase in board independence leads to a 3% increase in MVSP, holding other factors constant. The coefficient estimate for Ownership Concentration (OC) is 0.06, with a statistically significant p-value of 0.001. This suggests that higher ownership concentration, where a larger proportion of shares are held by a single entity or a small group of entities, is positively associated with MVSP. A one-unit increase in ownership concentration leads to a 0.06 increase in MVSP, holding other variables constant. These results support to the findings of [Huacca-Incacutipa, et al. \(2022\)](#), who also identified close link between ownership concentration and market value of share price. The coefficient estimate for Managerial Ownership (MO) is 0.01, though it is not statistically significant at conventional levels (p-value = 0.089). This suggests that the percentage of company shares owned by managers or executives may not significantly impact MVSP in this research. This evidence corroborates to findings of [Molly, et al. 2019](#)), who diagnosed that holding of company shares by company's employees do not influence market prices of its share. The coefficient estimate for Earnings per Share (EPS) is 3.035, with a statistically significant p-value of 0.000. This suggests that higher earnings per share are strongly associated with higher market values of share price. A one-unit increase in EPS leads to a 3.035 increase in MVSP, holding other variables constant. The coefficient estimate for Leverage (LEV) is 1.459, with a statistically significant p-value of 0.031. This suggests that higher levels of leverage, indicating higher financial leverage or debt financing, are positively associated with MVSP. A one-unit increase in leverage leads to a 1.459 increase in MVSP, holding other factors constant. The coefficient estimate for Firm Size (Size) is 0.27, with a statistically significant p-value of 0.000.

This suggests that larger firm sizes are associated with higher market values of share price. A one-unit increase in firm size leads to a 27% increase in MVSP, holding other variables constant.

The above results highlight valuable information regarding what factors affect market value of firms. Results indicate that governance structures, financial performance metrics, and firm characteristics play an important role in determining the market value of share prices. Specifically, variables such as board size, board independence, ownership concentration, earnings per share, leverage, and firm size demonstrated significant impacts on the market value of share price. However, CEO duality and managerial ownership seem to have no significant effects. These findings are in line with the study of [\(Abdulmalik, et al. \(2020\)\)](#), which found the similar results. Based on the findings of this study, there are some other characteristics that significantly affect listed companies share price, including board size, independence, ownership concentration, earnings per share, leverage, and firm size. In contrast, we noted that managerial ownership and CEO duality has no or less impact on market value of shares [\(Chen, et al. 2022\)](#). The results of this analyses can help investors and managers to make more informed decisions about investing and managing corporations and can assist policymakers in developing regulations that encourage effective corporate governance. Future studies may incorporate additional variables or different research approaches to gain access to the factors that are driving market value in different sectors or industries.

5. Discussion and analysis

Corporate governance is one of the key factors that matters for the success and worth of enterprises in contemporary economies. This knowledge might be of interest to investors, managers, policymakers, and others involved in

seeking the factors that affect the market value of share price (MVSP). In this study, we conducted a fixed-effects regression analysis by means of the least-squares dummy variable (LSDV) method on a sample of 800 observations within a 10-year period on 80 cross-sections for each year to analyze the determinants of MVSP.

The findings identify main factors influencing MVSP, while providing insight into the interaction of corporate governance practices and firms' performance. This research uses a fixed effects regression model, which provides a strong framework for analyzing the relationship between corporate governance practices and MVSP by allowing us to account for time-invariant variability among cross-sectional units. Panel data analysis is a good fit for the LSDV approach since it accounts for time-specific effects and unobserved heterogeneity. The independent variables of the model explain about 40.6% of the variations in MVSP, through the adjusted R-squared value of 0.406, which is classified as moderate explanatory power. The F-statistic of 12.74 and the p-value of 0.000 validate the over-all statistical significance of this model and prove that, at least one of these independent variables has a non-zero contribution to MVSP. Several important drivers of the MVSP begin to surface upon examining specific coefficients. The MVSP indicates highly statistically significant positive correlations between BS and BI. This evidence implies that high boards having more independent directors, in conjunction with a size, correlate strongly with share price's market value (Borralho, (2020)). Therefore, this study result places huge importance on board composition, while enhancing firm value along with curbing agency conflicts. Similarly, there is a positive and statistically significant correlation between ownership concentration (OC) and MVSP indicating that companies with concentrated ownership structures could benefit from enhanced

managerial responsibility and incentives, which are better aligned toward shareholder interests (Arzubiaga, et al.2023). Besides, increases in EPS, increased leverage levels, and large firm size all relate positively with a market value of share price. This demonstrates how crucial decisions about capital structure and profitability are in determining the value of a firm and investor trust. On the other hand, it can be observed from the findings that there is no significant impact of CEO duality (CD) and managerial ownership (MO) on MVSP. It seems that managers' direct ownership interest may not have any significant influence on firm value in this context because the share of stock held by a company's managers or executives (MO) does not seem to be statistically associated with MVSP. CEO duality where the chief executive officer also sits as chair of the board also appears to make no significant difference to MVSP (Abdulmalik, et al..2020); Abdulmalik, et al. (2020). This observation indicates that when it comes to the value of a firm, as crucial as managerial ownership and CEO duality might be for the corporate governance, it might not be a key factor in this case.

5.1. Theoretical contribution

The findings of this study support to Fama's (1970) *Theory of Efficient Market Hypothesis* (EMH), which postulates that financial markets exhibit informational efficiency whereby all publicly available information is quickly integrated into a share price. This theory underlies the results obtained from the study with respect to the importance of corporate governance variables BS and BI. This correlation between BS, BI and MVSP shows positive and statistically significant relation which is consistent with EMH, which says that effective governance signals tend to decrease agency costs and increase investor confidence and subsequently increase firm valuation (Kothari & Zimmerman, 1995). The results of current study also

corroborate to the Behavioral Finance Theory, which highlights the impact of human psychology and emotions on the value of stocks (Ghafoor, et al. 2022). If the effect of OC on MVSP is indeed positive, as the study shows, this finding may be related to investors' perception that a high level of ownership concentration has biased executives to conduct-all decisions in consideration of shareholder interests. This perception may cause overreactions or underreactions towards governance signals, and lead to market inefficiencies (Wruck, (1993); (Vadasi, Bekiaris & Andrikopoulos, 2019). Likewise, the non-significance of CEO duality and managerial ownership may be driven by behavioral issues, for example, investors' doubt regarding the actual effectiveness of these governance channels. The Behavioral Finance Theory provides insight into situations, when investors' perceptions of governance structures influence stock price movements, despite a lack of significant empirical support for such correlations. The results of current research also in line with Modigliani and Miller's (M&M) (1958) *Irrelevance Theorem and confirm that a firm's valuation under perfect market conditions should be unaffected by its capital structure or governance mechanisms. In contrast, real-world imperfections such as agency conflicts, information asymmetry, and transaction costs lead to setting in which governance practices have a substantial impact on firm value. The positive relationships between leverage, EPS and MVSP by the study provides an insight into how the decisions regarding capital structure and profitability have motivational impacts on the firm valuation. High leverage levels, on the other hand, could indicate strategic use of debt to optimize capital structure, thereby increasing investor trust (Kothari & Zimmerman, 1995). Notably, both board composition (BS, BI) and ownership concentration (OC) play a significant role, reinforcing the importance of governance mechanisms in addressing*

agency concerns, aligning managerial decisions with shareholder preferences, and ultimately enhancing firm value, which is consistent with observations in actual markets, diverging from M&M's conditions (Adams, & Ferreira, 2007). The current study's findings are also in line with Tobin's *Q ratio*, presented by Nicholas Kaldor, (1966), which establish balance between a company's market value and the cost of replacing its tangible assets, acts as a measurement of both asset efficiency and governance efficiency. This finding also supports Tobin's *Q* theory, which claims that board size, board independence, and ownership concentration have a positive relationship with MVSP. Stronger corporate governance practices, such as independent boards of directors and concentrated ownership, indicate improved oversight and strategic decisions and result in greater valuation by the market. This implies that companies with enhanced governance structures are regarded as making better use of their assets to create value, resulting in higher Tobin's *Q* (Smith, 2008). These results affirm that efficient governance systems enhance firm performance and boost market confidence more, such as in developing economies like Pakistan. The results of current research also corroborate to the Ohlson's (1995) *Valuation model* that explains equity market value in relation to accounting fundamentals (e.g. earnings, book value and dividends). Ohlson, in his model, establishes positive accounting relationships with variables, like EPS, which provide an insight into earnings potential, firm size which indicates firm value, and MVSP, representing market value per share, which are main drivers of the performance of the companies. One of the plausible ways that corporate governance practices such as board composition and ownership concentration could indirectly influence MVSP is by enabling transparency

among firms, improving managerial oversight, adequate reporting procedures to enhance the quality of reporting and decision making (Lo & Lys,2000

The above discourse establishes a connection between the theories related to the financial markets with the dimensions of corporate governance and valuation and confirms the implications of the finding of this study.

5.2 Managerial implications

Building on the insights from this study, we lay out some practical implications for managers, investors and corporate governance. First, organizations should promote greater board independence by appointing more independent directors, who are not closely tied to the business or management. The presence of independent directors adds diversity of thought and expertise, improving governance practices and building investor confidence (Cuadrado-Ballesteros, et al. 2015). A second focus area for companies to deliver on is board size optimization — achieving the right balance of diversity, expertise and efficiency (Javeed & Azeem, 2014). While the findings in this research show that larger boards have higher market values of share price, boards that are too cautious may suffer coordination problems that negatively affect decision-making. Periodic assessments of board structures can also help uphold an optimal board size.

Policies regarding ownership concentration also require close examination because of their importance for market value. Although a higher degree of ownership concentration (when a few entities account for a large share of ownership) has a positive correlation with the market value of firms, too much concentration can give rise to agency problems and manipulation of minority shareholders (Ferramosca, & Ghio, 2018), It is for companies to weigh these factors to design effective ownership policies. Also, as EPS and share prices have a very positive correlation with one another, firms should

work on strategies that increase earnings per share (EPS). Focusing on operational efficiency, top-line growth and expense management are key to finding sustainable earnings growth and increasing returns on shareholders' equity.

Equally important is prudent management of leverage. While the relationship identified in this study indicates that with a higher degree of leverage comes a higher degree of market value, excessive debt levels can lead to increased financial risks, and vulnerability to economic downturns, both of which could be detrimental to the investors' welfare (Jain, Jain, & Robin, (2020)). It is imperative to maintain balanced debt management, which contributes to financial sustainability and accelerates development. Lastly, it is necessary for firms to be able to align themselves to the advantages of big organizations like economies of scale, better certainly to resources and improve visibility of the market. Particularly, growth — in terms of strategic projects, market positioning, competitive advantages — can lead to these benefits, providing a compounded effect on the market multiple.

5.3 Limitations and suggestions for further research

Despite valuable contribution, the study is not without limitations. Findings may not be generalizable because of a small sample size of 80 firms and data points covering a ten-year period. Future studies with larger and more diverse samples may have more generalizable insights. Moreover, possible endogeneity and omitted variable bias cannot be excluded. More sophisticated, econometric techniques, such as instrumental variable analysis, could better allay these concerns. Furthermore, the quality of the data employed in this study was pivotal; in future research, data sources and data-cleaning methods should thus be base-lined. Instead, longitudinal studies can better record the evolution of corporate governance practices and

their long-run economic consequences through their impact on the market valuation. Other approaches, such as sector-based analyses, could reveal industry-level patterns, while qualitative research methods such as interview or case studies could prove beneficial in grasping processes behind these patterns. Using better econometric methods, like structural equation modelling or newer panel data models would also add robustness to results. Finally, cross-country studies might generate comparative insights into how institutional, cultural and legal factors shape the relationship between governance and market valuation. This would deepen insights into complex relationships between corporate governance and firm performance, with implications for both theory and practice.

Data statement

The data that supports the findings of this study will be made available by corresponding authors on strong request.

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