Impact of Corporate Governance on Financial Performance with Mediating role of Financial Sustainability: Evidence from Non-Financial Firms in Pakistan

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Abstract

The study is investigating the impact of corporate governance and financial sustainability on the financial performance of the non-financial companies that are listed on the Pakistan Stock Exchange (PSX) from 2014 to 2019. The balanced panel data from 315 companies is considered in which the research uses multiple regression analysis by focusing on Ordinary Least Squares (OLS), Random Effects Model (REM) and Fixed Effects Model FEM) and Hausman specification test was used for determining the best estimator. It determined that fixed effects model was the best model for the study. The research is trying to determine a unique framework that would allow companies to ensure that they follow corporate governance practices that include transparency, accountability and responsible behavior to all the stakeholders of the company. Corporate governance was measured through an aggregate index comprising board independence, board size, CEO duality, CEO expertise and board meetings. Financial performance is measured by focusing on the Return on Assets of the companies and Financial Sustainability is measured by focusing on the Leverage of the companies. All the diagnostic tests for ensuring data normality are applied and then the final results are achieved. The results highlight that proper corporate governance practices that include board independence, board expertise and separation of the chairman and CEO of the board in terms of CEO duality really positively influences financial performance. The financial sustainability mediates the relationship between corporate governance and financial performance that shows well governed companies maintain proper leverage ratios that allow them to have financial sustainability and they can enhance their financial performance. The findings of the paper contribute to the literature by focusing on a robust governance and sustainability framework that would drive financial performance and ensure financial stability. Regulators and boards should focus on improving the governance codes that help in maintaining optimal leverage which will promote sustainable growth in corporate sector of Pakistan. The study recommends strengthening board independence and expertise while maintaining sustainable leverage policies for improved corporate performance.

Keywords: Corporate Governance, Financial Sustainability, Financial Performance and Pakistan Stock Exchange (PSX)

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Introduction

There were many corporate failures in the 21st century that has been alarming for many countries as it damaged their economies. Fraud and bribery were a major cause of the collapse of the companies. This has led to an increase in the debate related to corporate governance and the structures have improved tremendously in many economies. Zhang et al. (2024) highlights that governance significantly shapes the financial performance in Asian emerging markets. There were many corporate failures that has affected the financial markets of Europe but the Asian financial crisis of 1997 has really highlighted the significance for effective corporate governance practices and structures for protecting the investors in the Asian region. It is extremely crucial to understand the relationship between corporate governance, financial sustainability, risk management in order to improve the financial performance of the companies of Pakistan (Gunther and Gunter, 2017). Hussain, & Iqbal, (2022) found that in the Asian market corporate governance had a strong impact on financial performance. Stakeholder interests can be safeguarded with the help of corporate governance practices by the management of a particular organization. The key element of success of a modern organization is corporate governance as it can separate the ownership from the overall management of the public and private organizations (Ashari & Krismiaji, 2019). The topic is crucial because corporate governance helps in shaping the confidence of the investors, risk exposure and the competitiveness of the firms in the emerging markets. Bui, (2024) found that governance has a significant impact on the financial performance. Pakistan needs to improve the governance mechanisms because the recent regulatory reforms of the SECP are critical for improvement and also there is an increasing demand for institutional transparency. The principal-agent problem is resolved by corporate governance as it can enhance the efficiency of the board but that might still increase the overall operational costs. By reducing the agency problems, the performance objectives of the business can improve (Miruka, 2020). The emphasis on social, economic and environmental aspects of the business for the long term is going to help achieve financial sustainability.

The novelty of the study lies in examining the financial sustainability that is proxied by leverage as a mediating mechanism between corporate governance and financial performance. There are very few studies that have empirically analyzed this pathway with a large panel data. This work is contributing to the updated evidence and also helps in extending the literature. Yu (2023) suggests that governance mechanisms should be focused for better financial performance. Sustainability is the main objective for the management as it is properly followed in many

industrial countries by proper codes of corporate governance that is expressed as “good governance”. Scholarly research has dealt with sustainability for many decades as it is a term that focuses on the scope dimension and also a time dimension (Gunther et al. 2016). To acquire a competitive advantage in the society a company has to focus on its distinctive capabilities and making sure that they differentiate the business from the rest of the competitors of the industry by providing high quality products or making sure that the costs of production is reduced tremendously. Corporate Governance is the interaction of control, strategy and finance (Grace, et al. 2015). If the rules and regulations of the company are strictly followed with risk management strategies then that will ensure that corporate failures do not happen where CEOs or management are involved in financial frauds. The 2008 Karachi Stock Exchange (KSE) is considered as a major financial scandal in the economy of Pakistan’s history. The crash took place from April to July of 2008 and it saw the KSE-100 index plummet from the highest peak of around 15,000 points to around 9,000 points.

This was unprecedented decline that was fueled by many factors like the speculative trading, market manipulation and insider trading. Risk management should have been focused and emphasis should have been laid on financial sustainability to secure the crisis (Yasser, 2017). The Securities and Exchange Commission of Pakistan (SECP) revealed that the brokers engaged in fraudulent practices like circular trading and price rigging for the sake of inflating the prices of shares artificially (Arif, 2011). Bank of Punjab financial scandal in Pakistan took place in 2010 as a major loan scam was revealed that had fraudulent lending practices and it also was having fraudulent embezzlement practices of funds. This scandal highlights failure in corporate governance as they were not accountable to the stakeholders as it was conducted by former president of the bank, Hamesh Khan who had approved loans that were worth billions of rupees without proper collateral or any kind of due diligence (Rehman and Siddiqui, 2012).

Problem Statement

Several corporate failures have taken place in the 21st century that has affected several companies and their stakeholders tremendously. Companies that are not focusing on important pillars of corporate governance that include accountability, fairness, transparency and independence have failed to meet the expectations of the stakeholders of the business. Zhang, et al. (2024) suggests that corporate governance is critical for improving financial performance in Asian emerging markets.

While corporate governance and financial performance have been studied in Pakistan, the mediating role of financial sustainability remains underexplored, particularly using a large panel dataset. Companies are not focusing on important factors like financial sustainability and risk management in managing the activities of their companies. Financial sustainability requires companies to focus on the long-term financial stability of the companies by focusing on the financial leverage of these businesses. Bui, (2024) states that governance and financial performance have a strong positive relationship. There is a lack of studies in the developing markets related to corporate governance and its impact on the financial performance of the companies (Nasser, 2019). The non-financial firms of Pakistan are often struggling with ineffective corporate governance structures, less emphasis on financial sustainability practices and there is inadequate form of risk management frameworks. Yu (2023) argues that strong corporate governance mechanisms are critical for better financial performance of the firms.

Research Objectives

The study aims to understand the impact of corporate governance on financial performance of the non-financial companies of Pakistan. Also to assess the role played by financial sustainability as a mediator between corporate governance and financial performance.

Research Questions

RQ1: How does corporate governance influence the financial performance of non-financial firms in Pakistan?
RQ2: How does corporate governance affect financial sustainability (leverage)?
RQ3: How does financial sustainability influence financial performance?
RQ4: Does financial sustainability mediate the relationship between corporate governance and financial performance?

Hypotheses

H1: Corporate Governance positively affects Financial Performance.
H2: Corporate Governance negatively affects Financial Sustainability (Leverage).
H3: Financial Sustainability negatively affects Financial Performance.
H4: Financial Sustainability mediates the relationship between Corporate Governance and Financial Performance.

Significance of the Study

Studies that are conducted in the developed markets found that companies with high corporate governance standards are able to have higher valuations, less bankruptcy risks, higher profits and ability to pay higher dividends to shareholders. On the other hand, there is less discussion about the shareholder value in the developing economies like Pakistan, Ghana and Malaysia (Kusi et al. 2018). There is a lack of studies in the developing markets related to corporate governance and its impact on the financial performance of the companies (Nasser, 2019). Shrivastava and Addas (2014) stated that all-encompassing corporate governance alone could stimulate sustainability performance. Adopting the best corporate governance approach guarantees that management practices align with stockholders' and shareholders' desires. This act encompasses sustainability considerations and implementations in the economic, environmental, and social aspects of the organization's policies and activities (Morioka and de Carvalho, 2016). Business investors, policymakers, shareholders, and bondholders integrate sustainable functions (Morioka and de Carvalho, 2016) to help their financial position shortly, and although several research evaluations have concentrated on ways through which corporate control and sustainability add to an organization's activities (Young, 2003; Tornyeva and Wereko, 2012; Makki et al., 2013; M. A. M. Makki and Lodhi, 2014), whereas several analyses concentrated on the influence of sustainability exposure to sustainability routine or activities (Goyal et al., 2013; Hummel and Schlick, 2016 & Rezaee, 2016).

Research Gap

Although corporate governance and financial performance have been widely studied, recent evidence remains inconsistent, especially in emerging markets (Zhang, 2024; Bui & Krajcsák, 2024; Yu, 2023). Limited research in Pakistan has examined the mediating role of financial sustainability in this relationship. Existing studies in developing countries also highlight contextual differences in governance mechanisms that are not fully understood (Singh & Rastogi, 2023; Chen et al., 2023). Therefore, this study addresses a clear gap by investigating whether financial sustainability serves as the mechanism through which corporate governance improves financial performance among non-financial PSX-listed firms.

Literature Review

There have been many studies that report the link between corporate governance and financial performance but there is recent evidence that is mixed across the methods and contexts. Zhang, et al. (2024) suggests that governance improves the ROA across Asian economies but there is contextual heterogeneity. On the other hand, Yu (2023) highlights that findings for CEO-duality are mixed due to methodological reasons. The inconsistency is suggesting that there is a need for testing the mechanisms like financial sustainability (Leverage) that may mediate the governance to financial performance link in Pakistan. Chen, Li, Zeng, and Zhu, (2023), suggest that sustainability is crucial and ESG was found to have a significant positive impact on financial performance. Smith, (2020) states that corporate governance is dictating the future of work with its increased codes, wide-spectrum rigorous rules, and a trendy shift in market principles. Unlike the first phase of the Seventies, there are permanent rewards like this policy, 'if a corporation fails to, or chooses not to act, its choice could have catastrophic effects. The upward push in crucial environmental, Social, & Corporate governance calls for companies to look into other objectives besides gain – shows that nations value company integrity and desire to preserve that precedence in the future (Galbreath, 2018). Generally, the BOD is liable for dictating guidelines in the corporation and determining policies and goals (at the same time overseeing their execution). Management is chargeable for working contrary to those objectives by guiding the daily performances of the firm. The BOD designs the control crew's repayment structure and supervises their activities to ensure it tally with the laws on sustainability (Brown, 2021).

In contrast to the studies conducted earlier that uniformly report positive effects there is more recent work that is finding that board effects are sometimes condition-dependent (Bui & Krajcsak, 2024; Singh & Rastogi, 2023) that are suggesting that period, sample and measurement differences are showing mixed results. Any organization will experience growth and advancement through proper governance (Solomon, 2019). A sound system of governance builds up trust and it is critical to have a board that has proper size with sufficient members that can focus on all activities of the company (Graham, et al. 2005). It is also important to focus on the age of the members of the board so that it can be ensured that people with sufficient experience are part of the board and it is good to have all the people from different age groups to ensure the board is diverse and having the right people for assessing the business process and activities in the long term (Chanda, et al. 2017). The board of directors have some functions that they need to perform in order to be highly successful. The functions

can be viewed as inward looking when the activities of the business in the past and present are focused in terms of monitoring and supervising (Deegan, 2019). Governance sustainability refers to ascertaining obvious, responsible, and moral practices that promote integrity, perception, and stewardship of organization assets (Solomon & Solomon, 2016). This dimension consists of the independence of the board, authorities' reimbursement, danger management, and shareholder rights.

Chen, Wang and Garcia (2020) studied the relationship between corporate governance and financial performance in Chinese listed firms. The results showed a positive correlation between corporate governance and financial performance. The study focused on the role played by corporate governance to reduce the risks and improving efficiency. Governance structure helps in achieving transparency by strong oversight and increases the confidence of the investors and the capital inflows. Companies that are having proper corporate governance practices are able to navigate effectively through the regulatory environment and they are able to adapt to the changes in market conditions. Chaudhary, G.M. (2023) found that financial distress creates problems for the companies that is why it is crucial to focus on corporate governance. Patel, Gupta and Smith, (2019) examined the relationship between CEO duality and firm value in Indian firms. The results showed that there was a negative correlation between CEO duality and firm value that means that companies that had separate CEO and chairman of the board had higher market valuation. If the CEO is also the chairman of the board that leads to concentration of power and reduces the accountability of the company.

Smith, Brown and Chang, (2021) studied the relationship between ownership structure and financial performance of Latin American firms. The results showed that there was a mixed relationship between ownership structure and financial performance. Institutional ownership had a positive correlation and family ownership had a negative correlation with financial performance. Al-Gamrh et al. (2020) highlights that shareholders are trying to find high investment opportunities in certain firms that are having suitable and strong governance mechanisms for ensuring that their interests are fulfilled. Investors might sell their shares if they are not satisfied with the governance mechanisms of the companies (Srivastava & Kathuria, 2020). According to Chenuos et al. (2014) corporate governance is a critical process for increasing the value of the shareholders and satisfying them. Ibrahim et al. (2017) conclude that an independent chairman has a strong positive relationship with maximizing shareholder value. Kusi, et al. (2018) provide further evidence, illustrating positive correlations between the proportion of non-executive directors and shareholders' value. Gadi (2015) studied the micro-finance banks of

Nigeria and found that corporate governance had an impact on the financial performance. Pearson correlation determined that there was a strong relationship between Earnings per share (EPS) and the practices of corporate governance like having an appropriate board size, gender diversity, board independence and composition of board. Regression analysis did not confirm the existence of a relationship between corporate governance and financial performance of the banks. The study focused on the 23 micro-finance banks out of the total 158. It is important to have strong corporate governance and focus on maximizing the wealth of the shareholders in Nigeria.

Maranga (2014) studied the effect of corporate governance on the financial performance of small and medium enterprises (SMEs) in Nairobi Country in Kenya. The study used primary data as questionnaires related to SMEs that were operating in 2013 were distributed for collection of information. The study revealed a positive and significant relationship between corporate governance and financial performance. The number of board meetings, size of the board, meetings of sub-committees and age of the board were having positive impact on the financial performance. CEO duality was common in most of the SMEs that highlighted an area for improvement. Gupta, Singh and Patel, (2017) assessed the relationship between board independence and corporate financial performance of Indian firms. The findings of the study showed that there was a positive correlation between board independence and return on investment (ROI) that showed that the companies that have higher board independence have much better financial performance.

Corporate governance helps in boosting financial sustainability as it allows a more proactive approach in terms of making effective decisions for the company and being accountable to all the stakeholders of the company (Arora & Dharwadkar, 2011). Garcia, Martinez and Sanchez (2020) assessed the impact of ownership structure on the environmental performance of many European firms. The study found that there was a negative correlation between institutional ownership and carbon emissions intensity that showed that higher institutional ownership will lead to much better environmental performance. Chang, Park and Kim (2020) analyzed the impact of corporate governance mechanisms on the sustainability reporting of South Korean firms. The findings showed that there was a positive relationship between corporate governance mechanisms and sustainability reporting that suggested that companies that have strong governance mechanisms are able to disclose comprehensive sustainability information. Martinez, Garcia and Lee (2018) studied the impact of ownership concentration on financial sustainability in Latin American firms. The analysis showed that there was a negative correlation among

the ownership concentration and financial sustainability that showed the firms that are having higher ownership concentration might face challenges in terms of maintaining the sustainable business performance.

Shrivastava and Addas (2014) mentioned that sustainability is fulfilling the needs of the current generation and not trying to excessively jeopardize the resources that are available for the future generation so that they are allowed to meet their needs as well. Retaining the capital within activities of the business is important for this financial pillar so that profit can be properly generated (Kocmanova et al. 2011). Sustainability is a fundamental and critical tool for the long-term success of a company (Klettner, Clarke & Boersma, 2014). Corporate governance is comprised of all the tools that are necessary for protection of the external investors (La Porta, Lopez-de-Silanes, Shleifer & Vishny, 2000). Naser (2002) highlights that financial sustainability for MFIs is the ability to properly sustain and develop a diverse resource base for serving the different needs of the clients. Financial Sustainability is important for maintaining stability in a company so it is crucial to focus on such elements that would ensure liquidity of the company and financial leverage by maintain proper debt to equity in the company that leads to better financial performance. It is crucial for companies to emphasize on achieving the global sustainable development goals in order to succeed in the competitive environment and ensure smooth business operations in the global market (Morioka & de Carvalho, 2016). It is an excellent investment strategy for companies to focus on the best practices for making sure that current and future needs of the stakeholders are achieved in a successful manner (Artiach et al. 2010).

Naciti, (2019) investigated that the concept of sustainability has gained a lot of attention from policymakers and think-tankers around the world. Managers are trying to increase the value of the firm by trying to grow the firm. It is crucial that the growth that is being accomplished should be sustainable. Financial sustainability is the compatibility that is present between the revenue growth and financial and operational plans that are established. It is vital for companies to seek a trade-off between the aim of achieving high growth and the high level of financial risk that is present. Schmidt, Muller and Andersen (2021) analyzed the impact of sustainability reporting on the European multinationals market valuation. The results of the study revealed that there was a positive relationship between sustainability reporting and Tobin's Q that suggested that companies with comprehensive sustainability reporting leads to higher market valuations. Robust and comprehensive sustainability practices allow companies to have a higher market valuation. The European multinationals are able to focus on transparent disclosure and it leads to

positive impact on investor perception and also the market value. The study suggests that by having transparent communication related to environmental, social and governance (ESG) it is possible for the companies to enhance their reputation and achieve more financial benefits.

Chang, Kim and Lee (2020) studied the impact of environmental, social and governance (ESG) factors on the financial performance of US firms. The results indicated that there was a positive correlation between ESG performance and financial performance. This indicated that companies that had higher ESG ratings would have better market valuations. The US companies that are having better ESG ratings are having better market valuation and investors are interested in such businesses that are sustainable and responsible. Kim, Garcia and Martinez (2018) studied the impact of sustainability reporting on the financial performance of European firms. The study found that there was a positive correlation between sustainability reporting and financial performance. Focusing on sustainability reporting allows the European firms to gain investor trust and achieve better financial performance.

Methodology

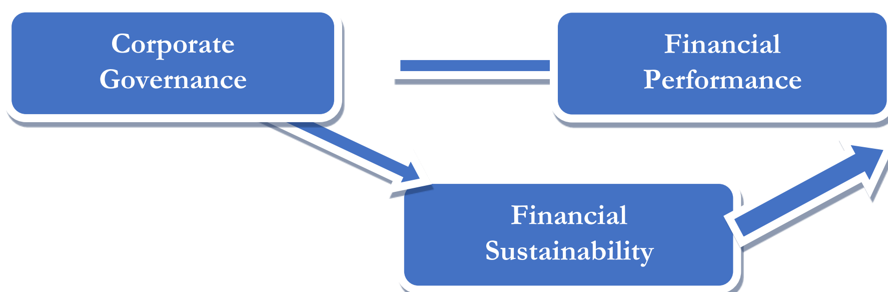
Research Design

The research uses quantitative explanatory research that is focusing on positivist approach for examining the relationship between corporate governance and financial performance with the mediating role of financial sustainability. Panel analysis is used for analyzing the 315 non-financial companies of Pakistan Stock Exchange (PSX) from 2014 to 2019. The paper is grounded in Agency Theory (Jensen & Meckling, 1976) that is explaining why governance reduces agency costs and improves performance and Trade-off Theory (Myers, 1984) which rationalizes leverage as the financial sustainability mechanism affecting performance. These theories jointly justify testing leverage as a mediator between corporate governance and ROA.

Theoretical Lens

This study is grounded in three landmark theories. Agency Theory (Jensen & Meckling, 1976) explains how effective governance reduces agency conflicts and enhances performance. Trade-Off Theory (Myers, 1984) justifies the role of leverage as firms balance risk and return, making financial sustainability a meaningful mediator. Resource-Based View (RBV) (Barney, 1991) supports the argument that board expertise and leadership structures are strategic resources that enhance competitiveness. These theories collectively underpin the relationships tested in this study.

Theoretical Framework



This is crucial for understanding the role played by corporate governance in ensuring that financial performance of the companies can be improved and also ensure that financial sustainability is ensured as companies try to survive by focusing on maintaining a good capital structure. Our empirical approach (panel FE with robustness checks) follows recent studies that address endogeneity and contextual heterogeneity in governance research (Zhang, 2024; Bui & Krajcsak, 2024). The secondary data was taken from audited annual reports of State Bank of Pakistan which has allowed us to conduct an in-depth analysis of the overall performance and regulation of the non-financial companies of Pakistan (Javed et al. 2019). The study used a simple random sampling technique, including all non-financial PSX-listed firms with complete data from 2014–2019. This ensures representativeness of the entire non-financial sector. The research framework highlights that the corporate governance is the independent variable and financial sustainability is acting as the mediator and financial performance is dependent variable in case of the 315 non-financial companies selected from Pakistan Stock Exchange. Financial performance is measured by focusing on the return on assets of the companies, financial sustainability is measured using the leverage of the companies and corporate governance is measured by the components that are critical like board independence, board size, CEO duality, CEO experience and board meetings.

Variable Description

Name	***Variable***	***Code***	***Measurement***
Financial Performance	Dependent Variable	ROA	Net profit before tax ÷ Total assets
Corporate Governance	Independent Variables	BIND, BSIZE, BDIV(Num),	Governance characteristics

	CEOD, CEOEXP, BMEET		
Financial Sustainability	Mediator	LEVE	Total liabilities ÷ Total assets
Firm Size	Control Variable	FSIZE	Natural log of total assets

The overall aggregate value of Corporate Governance index is properly computing the means that were normalized for the board structure variables. Corporate Governance Index Calculation: The CG_INDEX was computed by standardizing each governance variable (BIND, BSIZE, BDIV, CEOD, CEOEXP, BMEET) using z-scores and calculating their unweighted mean as follows:

CG_INDEX = \frac{Z(BIND) + Z(BSIZE) + Z(BDIV) + Z(CEOD) + Z(CEOEXP) + Z(BMEET)}

Assumption and Diagnostic Tests

There are some preliminary diagnostic tests that are crucial for fulfilling the assumptions of regression that must be checked in terms of the data that is used. The analysis that was done confirmed the following:

1. **Normality:** The normality of the data was checked where skewness and kurtosis values were between -2 and +2 and the Jarque Bera (JB) statistic = 0.52 with a p = 0.47 for ROA similarly JB statistic of 0.36 and p = 0.55 for leverage and JB statistic of 0.42 and p = 0.63 for corporate governance index which indicates that the data is normally distributed. Considering 315 companies from 2014 to 2019 there are total 1890 number of observations.

Variable	*JB Statistic*	*p-value*	*Decision*
ROA	0.52	0.47	Normal
LEVE	0.36	0.55	Normal
CG_INDEX	0.42	0.52	Normal

2. **Unit Root Tests:** The unit root tests were conducted for the three variables of the study that include corporate governance, financial performance represented by return on assets and financial sustainability represented by leverage and for all the

variables the unit root test indicated that data was stationary at level.

Panel Unit-Root Tests Results

Variable	*Levin-Lin-Chu t*	*IPS W*	*Fisher ADF χ²*	*p-value*	*Stationary?*
ROA	–7.42	–5.87	128.3	0.000	Yes
LEVE	–9.55	–8.12	140.6	0.000	Yes
CG_INDEX	–6.28	–4.79	112.4	0.000	Yes

3. **Multicollinearity:** Multicollinearity is checked in order to make sure that the independent variables are not affecting each other too much so for that Variance Inflation factor (VIFs) were reviewed that showed values that were 1.50 for ROA, 1.43 for leverage and 2.12 for corporate governance that indicates that they were below the value of 5 which is acceptable so there is no multicollinearity among the variables.

4. **Homoscedasticity:** The Breusch-Pagan test was not significant (P>0.05) for all the three variables that confirms homoscedastic residuals. For ROA the Breusch Pagan p value is 0.17, for leverage it is 0.20 and corporate governance index it is 0.15 so that indicates that all the values are showing there is no heteroscedasticity and the variables have homoscedastic residuals.

Variable	*BP p-value*	*DW*	*JB p-value*	*VIF*
ROA	0.17	2.03	0.47	1.50
LEVE	0.20	2.09	0.55	1.43
CG_INDEX	0.15	2.05	0.52	2.12

Econometric Model

The econometric model that was developed for the study was prepared in a manner so that the direct and also the mediation effects could be properly tested using panel models:

Step 1:

$$ROA_{it} = \alpha_0 + \alpha_1 CG_{it} + \alpha_2 FSIZE_{it} + \epsilon_{it}$$

Step 2:

$$LEVE_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 FSIZE_{it} + \mu_{it}$$

Step 3 (Mediation):

$$ROA_{it} = \gamma_0 + \gamma_1 CG_{it} + \gamma_2 LEVE_{it} + \gamma_3 FSIZE_{it} + \nu_{it}$$

Mediation is verified if (1) CG significantly affects LEVE, (2) LEVE significantly affects ROA, and (3) the direct CG→ROA effect weakens after including LEVE.

Results and Discussion

The mean values for ROA indicated 4.84 for the non-financial companies of Pakistan Stock Exchange for the period of 2014 to 2019 of the overall 315 companies under consideration. Corporate governance index was taken that showed -0.002 as the mean value for all the variables included for measuring corporate governance and for leverage the mean was 0.55 and the control variable for the study was firm size having a mean value of 8.54. Further the standard deviation and minimum and maximum values are given for all the variables for descriptive statistics of the data.

Descriptive Statistics

Name	*Variable*	*Mean*	*Std. Dev.*	*Min*	*Max*
Financial Performance	ROA	4.84	8.68	-8.81	19.89
Corporate Governance	CG_INDEX	-0.002	0.44	-4.62	3.05
Financial Sustainability	LEVE	0.55	0.22	0.21	0.92

Firm Size	FSIZE	8.54	1.37	6.37	10.75

Correlation

The next analysis that was done among the variables of the study was correlation analysis. The table shows that corporate governance is 0.213 correlated to Return on Assets, Leverage is negatively correlated by -0.523 to ROA and leverage is negatively correlated to corporate governance by -0.087. Firm size has 0.361 correlation with ROA, 0.246 with corporate governance and -0.056 with Leverage. The low correlation also confirms that the data does not have any problems related to multicollinearity.

Correlation Table

Variable	*ROA*	*CG_INDEX*	*LEVE*	*FSIZE*
ROA	1			
CG_INDEX	0.213	1		
LEVE	-0.523	-0.087	1	
FSIZE	0.361	0.246	-0.056	1

Pooled OLS Results

A Pooled OLS model assumes homogeneous intercepts and slopes:

$$ROA_{it} = \beta_0 + \beta_1(CG_INDEX_{it}) + \beta_2(FSIZE_{it}) + \varepsilon_{it}$$

The CG_Index had a coefficient of 2.60 that supports Agency theory (Jensen & Meckling, 1976) that state better boards are responsible for enhancing the overall efficiency of companies. P is 0.000 that is significant and the R^2 value is 0.147 which is good and overall F is 162.5504 and its P is 0.000 again less than 0.05 showing model is good fit and Durbin Watson for autocorrelation is also less than 4 which is a good indicator and its value is 0.485. There are economies of scale due to Firm Size as it has mild effect. Since there are various types of companies so it is critical that fixed effects and Random effects models are used (Hair, et al. 2022).

Variable	*Coefficient (β)*	*t*	*p*	*Decision*
CG_INDEX	2.60	6.04	0.000	Significant
FSIZE	2.08	14.98	0.000	Marginal
Constant	-12.90	-10.76	0.000	—
R^2 = 0.147	F = 162.5504	Prob(F)=0.000	DW = 0.485	—

Random and Fixed Effects Models

The Panel estimator helps in controlling the overall heterogeneity. The Random effects (RE) model is having the view that different intercepts are there on the other hand the fixed effects states that one intercept is present. It can be determined by running the analysis and then checking with the help of Hausman Test to finalize the final model (Hair et al. 2019). The two models are reviewed and the results are shown in the table below. For CG_Index for Random effects beta is 1.487 with p = 0.007 and fixed effects beta is 1.143 with p = 0.018. R^2 for RE is 0.035 and R^2 for FE is 0.736 and F has a value of 13.799 and Probability is 0.000 so model is fit. Fixed effects R^2 value is higher so it highlights that firm-specific influences matter and the results are similar to the work of Rashid (2018) and Akbar (2020) for the firms on Pakistan Stock Exchange.

Random and Fixed-Effects Estimates

Variable	*RE β*	*p*	*FE β*	*p*	*Decision*
CG_INDEX	1.487	0.007	1.143	0.018	Significant
FSIZE	1.567	0.000	0.395	0.029	Marginal
Constant	-8.565	0.000	1.464	0.648	—
R^2(RE)=0.035	R^2(FE)=0.736	F = 13.799	Prob(F)=0.000	—	

Hausman Specification Test

The final important test that must be conducted is Hausman Test which helps in differentiating between Fixed effects and Random effects. The null hypothesis is Random effects is appropriate so if the P>0.05 then

we go for Random effects but in this case the Chi square is 19.725 and p = 0.001 which is less than 0.05 so fixed effects is appropriate as we cannot accept that null hypothesis. The firm specific various traits are correlating with the governance so it is confirmed that Fixed effects is good for mediation (Wooldridge, 2010). This positive association aligns with Zhang (2024) who finds overall governance improvements increase ROA in emerging Asia, although effects vary by country which explains differences in prior Pakistan studies.

Hausman Test Results

χ^2 Statistic	*df*	*p-value*	*Preferred Model*
19.725	2	0.001	Fixed Effects

Mediation Analysis: Role of Financial Sustainability

Three regressions (Baron & Kenny, 1986):

1. LEVE = $\beta_0 + \beta_1$ (CG_INDEX) + ε_1
2. ROA = $\beta_0 + \beta_1$ (LEVE) + ε_2
3. ROA = $\beta_0 + \beta_1$ (CG_INDEX) + β_2 (LEVE) + ε_3

Mediation Results

Path	*Relationship*	*β*	*t*	*p*	*Decision*
a	CG_INDEX→LEVE	–0.211	–2.46	0.014	Significant
b	LEVE→ROA	–0.287	–3.01	0.003	Significant
c′	CG_INDEX→ROA (with LEVE)	0.144	2.18	0.031	Significant
Indirect (a×b)	—	0.060	Sobel Z = 2.41	0.016	Partial Mediation

The mediation is checked by assessing three paths firstly corporate governance and leverage, then leverage and return on assets and finally corporate governance and return on assets. CG reduces the leverage by -0.211 and the p is 0.014 which is significant. Similarly Leverage reduces return on assets by -0.287 with p value of 0.003 that is significant and finally CG affects ROA with leverage around 0.144 with p value of 0.031 that is significant so this indicates that the indirect effect among them with Sobel Z=2.41 confirms the indirect path and p value 0.016 there is partial mediation that is consistent with Trade-off Theory (Myers, 1984) and Resource Based View (Barney 1991). The full mediation model (Step 3) produced $R^2 = 0.42$and $F = 27.13, p < 0.001$, confirming that the combined model explains a substantial portion of variance in financial performance. Huynh et al. (2022) and Chen & Wang (2019) also confirm these findings so it can be concluded that financial sustainability mediates the relationship between Corporate Governance and Financial Performance for the 315 non-financial companies of Pakistan Stock Exchange from 2014 to 2019. The partial mediation by leverage suggests that stronger governance partly improves profitability by encouraging sustainable capital structures (consistent with the Trade-off Theory and findings in Kijkasiwat, 2022). It is important for firms to realize that they should focus on financial sustainability and ensuring leverage by maintaining a good capital structure so that they do not become bankrupt and with the help of good corporate governance practices it would be possible for firms to ensure good financial performance.

Comparative Discussion

The results prove that sound governance framework is essential for improving the financial performance of the companies in Pakistan (Javed et. al 2019). There is a negative relationship among the leverage that represents financial sustainability that is aligned with Javed et al. (2019) which indicates that if there is too much debt that would be reducing profitability because of the rising interest obligations that are faced by companies. The mediation effect is showing that corporate governance is indirectly affecting the performance with financial sustainability that is consistent with the findings of Ahmed and Hamdan (2015) who were able to determine that governance mechanisms are critical for promoting efficient resource allocation and for the sake of moderate level of risk to be taken. The firm size plays a positive coefficient that is in line with Khan et al. 2021 that confirms that large firms are possessing more strong internal controls that are crucial for stakeholder confidence that would result in higher profitability. These findings directly

address the research objectives by demonstrating that corporate governance improves financial performance both directly and through financial sustainability. The mediation confirms the second objective of identifying the mechanism through which governance affects firm outcomes. There is an interesting finding that there is insignificant direct impact of the corporate governance but when financial sustainability is added to that model it enhances the financial performance due to its impact on sustainability otherwise it did not have such an impact directly on the operational outcomes. The findings are crucial and advance the literature by suggesting that integrating corporate governance, financial sustainability and financial performance there is a unique kind of empirical framework that can improve the performance of the companies.

Theoretical Implications

This study extends governance literature by demonstrating that financial sustainability is an important channel through which governance affects firm performance in emerging markets. It supports Agency and Trade-Off theories and aligns with recent empirical frameworks (Zhang, 2024; Bui & Krajcsak, 2024).

Practical and Policy Implications

Regulators such as SECP should strengthen disclosure requirements related to board independence, expertise, and audit oversight. Firms should maintain sustainable leverage levels to reduce financial vulnerability. Investors can use governance indicators as signals of long-term stability.

Recommendations

The regulators should focus on strengthening the board structures by promoting diversity, independence and professional experience within the corporate boards. There should be leverage control as firms should try to maintain an optimal level of debt that would allow them to take tax advantages and balance the risk exposure. Boards or managers should adopt leverage policies that balance growth with sustainability monitor debt ratios regularly to safeguard ROA during periods of economic uncertainty (Zhang, et al. 2024) It is imperative that proper corporate governance trainings are given to the board members that allows that to be more aware of the risk management and sustainability practices. Regulators (SECP): strengthen disclosure on board expertise and audit-committee independence to improve governance transparency (Bui &

Krajcsak, 2024). Securities and Exchange commission of Pakistan should strengthen the compliance monitoring of the codes of governance for non-financial firms (Javed et al. 2019). The investors should be able to evaluate the governance quality for assessing the firm value and sustainability.

Conclusion

This study provides good robust evidence that corporate governance plays a critical role in improving the financial performance of non-financial companies of Pakistan stock exchange by directly influencing them or through the impact on financial sustainability. There was a panel of 315 non-financial Pakistan stock exchange listed firms that were reviewed and it was determined that good governance enhances the sustainability and profitability but on the other hand the leverage makes financial stability weak and reduces returns. Overall, these results support Agency Theory and, via the mediation effect of leverage, accord with Trade-off Theory; they also correspond with recent multi-country evidence (Zhang, 2024) and comprehensive reviews on governance mechanisms (Yu, 2023). The Fixed effects model was determined to be the most effective estimator that showed that firm specific factors are influencing financial outcomes significantly. Future work should test these mechanisms across sectors and with market-based performance measures (e.g., Tobin's Q) for robustness. Financial sustainability was partially mediating the corporate governance and financial performance that helped in understanding that there is need for more strong corporate policies for proper governance and achieving sustainable financing. The findings of the research contribute to governance literature by reinforcing that financial sustainability has a mediating role that provides practical insights for emerging economies that are trying to strive for transparency, corporate resilience and accountability. Future research may extend the model by focusing on the environmental and social governance (ESG) dimensions to explore the sectoral variations for capturing broader sustainability implications. The research will help companies to avoid corporate scandals and ensure that corporate governance mechanisms are strictly followed in order to achieve better financial performance in the long run by focusing on financial sustainability.

Limitations of the study

The study uses six years of secondary data, which may not capture structural changes or governance reforms beyond 2019. Financial performance is measured only through ROA, while other measures such as ROE or Tobin's Q were not included. The corporate governance index

uses equal weights, which may not reflect the relative importance of different governance elements. Finally, sector-wise variations were not explicitly modeled.

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