The Nexus between Ownership Structure and Firm's Value: Corporate Governance as a Key Moderator in Pakistan

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Abstract

This study rigorously examined the impact of ownership on the value of non-financial sector companies in Pakistan, with a particular emphasis on the moderating role of corporate governance in the relationship between ownership and firm value. The study is encouraged by earlier contradictory findings that urged a more thorough examination of the possibility of a moderator. The novelty of this study lies in its innovative use of corporate governance as a moderating factor, providing new perspectives on the relationship between ownership and firm value. This study uses data from 192 listed companies spanning 2009 to 2019. Measures like the market-to-book price ratio and Tobin's Q are used to evaluate a firm's value. The firm's equity market value and Tobin's Q ratio have been significantly improved by foreign and institutional ownership. On the other hand, director ownership negatively and significantly affects the market-to-book ratio, while having a slight negative influence on Tobin's Q ratio. Corporate Governance does not have a moderating role in the relationship between ownership structure and the firm's value. The research findings indicate that the internal owners are less in control and more inefficient than institutional and foreign shareholders. The result highlights the importance of considering the ownership structure when making an investment decision. Because they emphasise the need for well-balanced ownership structures, these findings can also serve as a guide for corporate governance procedures. Managers can use the results of this study to make better-informed decisions.

Keywords: Ownership Structure, Corporate Governance, Firm's Value, Tobin's Q Ratio.

Introduction

Business competition has increased due to economic interconnectedness, creating more business opportunities. Companies need to constantly adapt to shifting market conditions to remain successful in this highly competitive, dynamic business climate. Developing a competitive edge depends critically on this adaptation process (Horvathova & Mokrisova, 2020). Consequently, it allows companies to identify changing trends and assess the efficiency of corporate governance, enabling them to investigate new, creative solutions that may give them a competitive advantage (Dvorakova & Faltejskova, 2016).

Weak governance practices and ownership structures can hinder growth and innovation, making it difficult to compete in the global market (Tricker, 2015). Corporate governance practices and ownership structures, Jensen and Meckling (1976) identify the need for improvement in this area and suggest solutions to enhance the firm's value. Therefore, companies need to establish a robust

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corporate governance system that ensures transparency, Accountability, and effective decisions (Tricker, 2015). Previous studies have predominantly focused on the significance of ownership structure in developed economies (Iwasaki & Mizobata, 2022), with limited attention to developing economies (Al Mutairi & Bakar, 2023). However, it is essential to acknowledge that Pakistan is classified as an emerging economy; Pakistan's economic policy aims to increase investment, maximise growth, and build employment opportunities to ensure a healthy economic environment.

The majority of firms in developing countries, including Pakistan, face transparency issues, inadequate protection of investor rights, and agency problems. These weaknesses refer to a lack of consistent rules and adequate oversight (Al-Shattarat et al., 2018). Thus, firms will suffer from a market deficiency. Another consequence of market weakness is that minority shareholders' investments would be harmed by influential shareholders who control their assets.

Several previous studies, such as Mishra (2014), Peck-Ling et al. (2016), Beatson and Chen (2018), and Alabdullah (2018), examine the relationship between different ownership segments and a firm's value, but they yield conflicting results. In exploring inconsistent findings regarding the impact of ownership structure on a firm's value, Baron and Kenny (1986) recognised the need for moderating variables to provide a comprehensive explanation of these discrepancies. In line with their insights, this study aims to address this issue. The theoretical framework of Agency theory by Jensen and Meckling (1976) provides a deeper understanding of the relationship between a firm's internal mechanisms and value. It explains the relation between an agent (manager) and a principal (owner or shareholder). According to the theory, differences in objectives and motives can lead to conflicts of interest between the principal and the agent. (Shleifer & Vishny, 1986). Agency problem may arise when an agent acts in their own interest rather than the principal's (Wright, 2015). A firm's governance structure should be designed to balance the interests of the principal and the agent, thereby reducing agency conflict. (Javed & Iqbal, 2007). Stewardship theory, on the other hand, proposes that managers act as stewards who look after the business's resources and operate in the principal's best interest (Davis, Schoorman, & Donaldson, 1997). This argument holds that since the principal and the agent have aligned interests, there is no conflict of interest between them.

According to Al-Matari et al. (2017), corporate governance is an essential factor in determining a company's ownership structure and its impact on a company's value. The key obligation of corporate governance is assuring that management persistently acts in the best interests of stakeholders, including shareholders (Alodat et al., 2022; Kijkasiwat et al., 2022). McConnell and Servaes (1990) illustrated how corporate governance affects the relationship between ownership structure and firm performance. By contrast, Shleifer and Vishny (1997) showed that a crucial factor affecting the firm's value is the alignment of managers' and shareholders' interests. They contend that agency issues can be successfully resolved and that the alignment of managers' and shareholders' interests can be encouraged by corporate governance practices, such as the formation of independent boards. A company's ownership structure can influence its decision-making. Still, corporate governance can help ensure that decisions are made with the company's and its stakeholders' best interests in mind, according to Wang et al. (2020).

Furthermore, several academics and experts, including Nirino et al. (2022), Guluma (2021), and Kabir and Thai (2017), have linked poor corporate governance to firm failure. Prior research emphasises corporate governance's role in linking ownership structure, financial decisions, and performance. This study extends this view by integrating stewardship and agency theory. In Pakistan, ownership concentration among a few entities often yields transparency and

Accountability issues, fostering conflicts and subpar management (Farooq, Noor, & Ali, 2022). The absence of independent directors, weak legal enforcement, and inadequate investor protection intensifies these concerns (Hunain et al., 2021). This scenario undermines profit generation, investor attraction, and asset preservation for companies (Wang et al., 2020).

Along with Practical issues, the previous studies also have several theoretical and contextual gaps. The majority of the existing literature on corporate governance, such as Almashhadani and Almashhadani (2022), Alodat et al. (2022), Kyere and Ausloos (2021), and Khan (2022), has been conducted in developed countries with different contexts compared to their underdeveloped counterparts. The distinctions between developed and emerging countries have been highlighted by scholars such as Eden & Miller (2004) and Gaur et al. (2011). Moreover, Prior studies focus less on developing economies. Robust corporate governance in developed nations is linked to more effective capital markets (Hussain et al., 2022). Developing countries face challenges due to immature firm governance systems. Urgent action is crucial in Pakistan as a developing nation (Hussain et al., 2022). McGee (2009) notes that compared to developed economies, firms in emerging markets exhibit greater institutional diversity. Diverse shareholders, government ownership, laxer laws, family control, and concentrated ownership are common characteristics of developing economies. These companies have a propensity for authoritarian leadership (Yasser & Mamun, 2017), which presents interesting study questions. In the context of Pakistan, the underdeveloped economy and inefficient capital markets, combined with a limited history of corporate governance (Afza & Nazir, 2015), create a fertile ground for further exploration.

To take advantage of this fertile ground for exploration, this study seeks to provide a more nuanced view by introducing the corporate governance index as a moderating variable in the relationship between ownership structure and a firm's value. The research aims to clarify how governance practices affect the impact of ownership structure on business performance, while accounting for the corporate governance index.

Literature Review

Makhija and Spiro (2000) studied Czech businesses and found that insider and foreign ownership were positively correlated with a company's market value, which they attributed to owners' greater skill. Conversely, Isshaq, Bokpin, and Mensah (2009) examined the relationships among ownership structure, corporate governance, and business value and found no significant relationship between inside shareholders and stock value on the Ghana Stock Exchange. Meanwhile, Romalis (2011) conducted a study across 20 emerging economies using firm share prices and foreign investment data. The study found that foreign ownership affects a firm's valuation, but this effect depends on stock prices and is more significant in host nations experiencing economic crises. Moreover, he revealed partial proof that foreign equity investors have a substantial impact on a firm's total value. These inconsistent findings show how intricate the relationship between ownership structure and firm value is and highlight the need for further research to provide a more comprehensive understanding and determination of these contradictory findings.

Similarly, the involvement of the director is intended to reduce opportunistic behaviour. This strategy is based on the notion that directors who have a direct financial interest in the firm make decisions that are at odds with maximising the firm's value, thereby also affecting their own value (Ducassy & Guyot, 2017). However, this approach carries the potential risk of detrimental behaviour. As per Darko et al. (2016), Risk-averse managers or directors may prioritise risk avoidance over maximising value, thereby adversely affecting the company's overall value.

Sometimes, due to substantial support from the majority ownership, managers become firmly established in their positions and are difficult to remove by shareholders, often as a result of that support (Ducassy & Guyot, 2017). Additionally, Nancy and Lihong (2019) elucidate how director ownership and leading shareholder control affect the emergence of firm value in Chinese-listed companies. According to their study, companies with higher valuations typically have higher market-to-book ratios.

Dakhlallh et al. (2021) examined data from 180 companies registered on the Amman (ASE) from 2009 to 2017 and used Tobin's Q to evaluate firm value (TQ). Their data suggest that managerial ownership significantly affects anticipated business value (TQ). Naidu et al. (2021) investigated non-financial registered companies in Johannesburg from 2012 to 2018. They used the Tobin's Q ratio as a vindicator of unfavourable outcomes and found that higher levels of foreign ownership. According to Yasser and Mamun (2017), the presence of foreign and institutional investors in these firms was associated with higher profitability and increased stock prices.

In summary, the impact of ownership structure on a firm's value depends on finding a balance between the entrenchment effect and alignment of interests with shareholders (Huang & Zhu, 2015). Chagirov (2020) conducted a study of Russian publicly registered firms from 2015 to 2018 and found that management shareholdings had a statistically significant negative impact on firms' M/B ratios. The effect of ownership on firm value is a controversial issue in the finance literature. Various studies have used different levels of ownership interests and have reported diverse effects of ownership on a firm's value.

Previous literature has extensively established how ownership structure affects a firm's value. The results demonstrate that ownership structure is essential and that variations in its impact on value may be due to other factors. It is believed that varying results across comparable studies conducted in different settings imply the need to examine moderating variables, stemming from the notion that study results can be influenced by contextual factors (Hayes, 2018; Baron & Kenny, 1986). As the previous researcher produced conflicting results across various contexts, this suggests that additional factors may be influencing the main variables and the conclusions. By identifying and analysing these moderating variables, scholars can gain a deeper understanding of the fundamental mechanisms and boundary conditions that shape the primary relationship, thereby yielding more robust and broadly applicable results. This research aims to bridge this critical gap.

Many scholars and professionals have linked poor corporate governance to business failure. According to Nirino et al. (2022), Corporate governance guides businesses in conducting their operations to achieve high value. However, it concerns how companies should be run to boost consumer confidence and meet stakeholder expectations. Practical and good corporate governance would eventually improve business value (Blevins, Ragozzino, & Eckardt, 2022). In other words, corporate governance is a control mechanism that addresses the agency problem and enhances value (Jensen & Meckling, 1976).

Implementing effective corporate governance practices in a company helps bridge the information gap between those managing the company and its ultimate owners. This alignment of interests results in increased value for the entire company. Essentially, good corporate governance fosters transparent communication across levels of management, thereby enhancing firm performance (Farooq, Noor, & Ali, 2022).

Strong corporate governance serves as a vital tool for regulating and overseeing a company's resources. The board of directors plays a pivotal role in establishing and enforcing corporate governance policies within the organisation. As the ultimate decision-making body responsible for guiding the company's strategy, the board's effectiveness directly influences the overall success of the corporate governance system. A well-functioning board dedicated to upholding ethical standards and Accountability cultivates a culture of transparency and trust, ultimately contributing to greater long-term success and sustainability (Naz et al., 2022).

Given the importance of literature emphasising the critical role of corporate governance in defining a company's success and value, this study modifies the relationship between ownership structure and firm value by using a corporate governance index. Scholars and professionals consistently link inadequate corporate governance to business failure, underscoring its importance in directing operations to maximise value (Nirino et al., 2022). In addition to increasing stakeholder expectations and fostering consumer confidence, good corporate governance serves as a restraint that helps resolve agency issues and increase company value (Blevins, Ragozzino, & Eckardt, 2022; Jensen & Meckling, 1976).

The effect of ownership structure on various measures of business value has been extensively studied. Tobin's Q ratio has been referenced by (Dakhlallh et al., 2021), (Naidu et al., 2021), and (Ducassy & Guyot, 2017) as a measure of firm value. However, other scholars have advocated using the market-to-book ratio to assess corporate value. This statistic, which compares an equity investment's book value to its market value, has been embraced by Lihong (2019), Yasser and Mamun (2017), and Chagirov (2020).

Methodology

Variables

Tobin's Q

One of the firm's value indicators is the Tobin Q ratio. It contrasts the asset's market value with the firm's book value. Nicholas Kaldor introduced it in 1966. In 1970, James Tobin disseminated it; he explained its two components: the market valuation, or numerator, is the price at which existing assets can be exchanged. On the other hand, the denominator is the cost of replacement or reproduction: the cost of new stock on the open market. According to Claessens, Fan, and Lang (2003), Tobin's Q offers a comprehensive range of insights and elucidates numerous aspects of firm behaviour, including the diverse cross-sectional dimensions of investment decisions. Tobin's Q considers investment development, managerial potential, and share price increases (Sudiyanto & Puspitasari, 2010).

"Tobin Q is equal = (Market value of equity + book value of debts)."

Book value of Assets

If the value of Tobin's Q is less than 1, it shows that the firm's total value is less than its book value of assets. Moreover, if Tobin's Q is greater than 1, it indicates that the firm's value exceeds its book value of assets.

Market to Book Ratio

A financial valuation measure called the Market-to-Book Ratio compares a firm's current stock market value with its book value. The stock price determines the market value of all outstanding shares at that moment. The balance left over after the company sells its assets and settles all of its debts is known as the book value. In a different context, the ratio compares a firm's available net assets with the price at which its stock trades (Damodaran, 2011). According to Belo et al. (2022), this is the most widely used measure of a firm's value. The market-to-book ratio provides insights into how the market perceives a firm's future growth prospects relative to its current net asset value. A higher M/B ratio typically indicates that investors expect significant future growth, suggesting that the market values the firm more than its tangible assets would imply (Kim et al., 2021)..

"Market to book ratio = Market value of a share/ Book value of a share."

Ownership Structure

The procedure of assessing and computing the ownership structure, percentages held by institutional investors, foreign investors, and the firm's directors is an essential step in evaluating the ownership framework.

Moderating Variable

The CG index, as suggested by Fernando et al. (2020), is a key tool used in this study to evaluate corporate governance. If the board meets four times a year or more, it receives a score of 1; otherwise, it gets a score of 0. Pakistan's CG recommendation specifies that a minimum of four meetings is required. The score is one if there are more than two independent directors; otherwise, it is 0. The CG code (CCG, 2019) stipulates that each listed firm's board of directors must include at least two independent directors, or a third of its members, whichever is higher. Whenever the CEO is distinct from the chairman of the board, a score of 1 is given; otherwise, a score of 0 is provided.

Study Period and Sample Selection

The scope of this investigation includes all non-financial companies listed on the Pakistan Stock Exchange. To ensure the research's reliability and significance, filtering methods were employed to improve the sample for analysis. As a result, only companies with comprehensive data on their value and company-specific details were included. After applying these filters, the initial sample comprised 192 companies. During the preliminary evaluation, anomalies were detected within the dataset. In response, data refinement techniques were applied, leading to the exclusion of an additional six firms with exceedingly extreme values from the sample. Data on these selected companies was collected over the period from 2009 to 2019.

The data, which are unbalanced panel data, comprise 192 enterprises between 2009 and 2019. The selection of this time frame stems from the possibility of parameter instability arising from the financial crisis, which led to data Collection after 2008. In addition, the COVID-19 pandemic, which emerged in 2020, drastically altered the global economic landscape and caused unprecedented market disruptions. Because the data used in this analysis reflect more stable pre-pandemic conditions and long-term trends and patterns, it was decided to restrict the study's scope to 2019. Thus, the study's time frame is 2009–2019.

Hypothesis

This research comprises the following hypothesis.

H1: Foreign ownership has a significant impact on the firm's value.

H1A: There is a significant impact of foreign ownership on the firm's Tobin Q ratio.

H1B: There is a significant impact of foreign ownership on the firm's market-to-book ratio.

H2: There is a significant impact of director ownership on the firm's value.

H2A: There is a significant impact of director ownership on the firm's Tobin Q ratio.

H2B: There is a significant impact of director ownership on the firm's market-to-book ratio.

H3: There is a significant impact of institutional ownership on the firm's value.

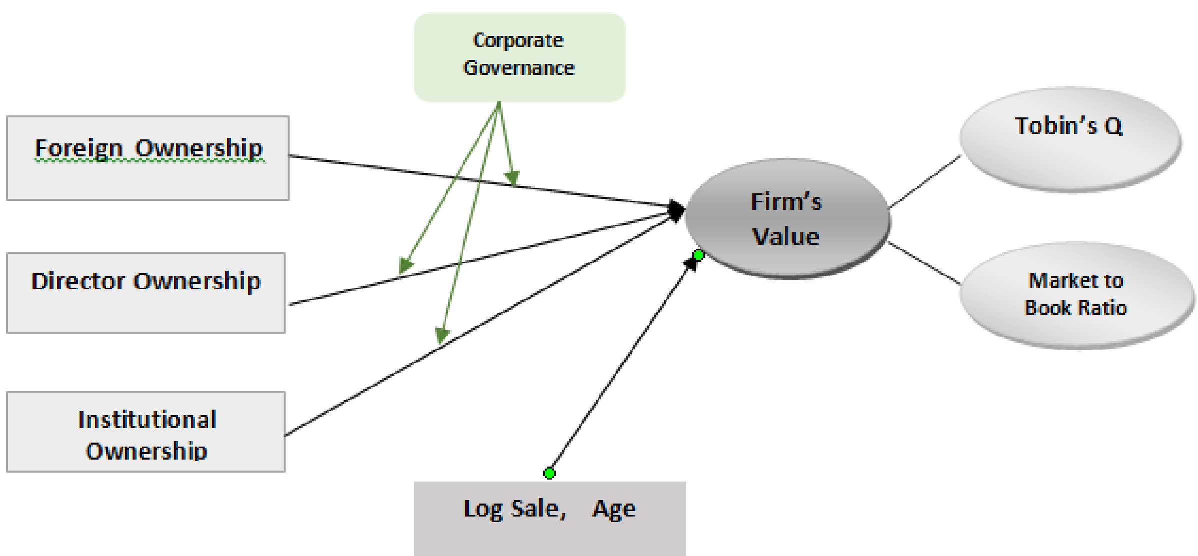
H3A: There is a significant impact of institutional ownership on the firm's Tobin's Q ratio.

H3B: There is a significant impact of institutional ownership on the firm's market-to-book ratio.

H4: Corporate governance has a significant moderating role in the relationship between foreign ownership and a firm's value.

H4A: Corporate governance plays a significant moderating role in the relationship between foreign ownership and a firm's Tobin's Q ratio.
H4B: Corporate governance has a significant moderating role in the relationship between foreign ownership and the market-to-book ratio.
H5: Corporate governance has a significant moderating role in the relationship between director ownership and the firm's value.
H5A: Corporate governance has a significant moderating role in the relationship between director ownership and Tobin's Q ratio.
H5B: Corporate governance has a significant moderating role in the relationship between director ownership and the market-to-book ratio.
H6: Corporate governance significantly moderates the relationship between institutional ownership and a firm's firm value.
H6A: Corporate governance has a significant moderating role in the relationship between institutional ownership and Tobin's Q ratio.
H6B: Corporate governance has a significant moderating role in the relationship between institutional ownership and market-to-book ratio.

Figure 1: Research Framework



Data Analysis

The study utilizes correlation analysis and multiple regression analysis within a panel data regression model as its primary statistical methodologies. These statistical assessments were conducted using the Eviews software. Panel data has certain drawbacks in addition to benefits, such as the ability to account for unobserved heterogeneity and observing dynamics over time. One of the most important steps in panel study analysis is choosing the right model to analyse the panel data. There are three models that are frequently used for panel data analysis, and choosing the best model is crucial. Different processes are usually used to determine which model is best; these procedures involve testing and comparing the models that are accessible. These methods are meant to assess each model's goodness-of-fit in relation to the panel data under investigation. By performing model specification process, researchers can ascertain which model most accurately captures the underlying patterns and relationships observed in the panel data. These model selection processes are extremely important for ensuring the validity and dependability of the panel study's conclusions.

This research assessed and addressed a number of potential issues with the panel data analysis to guarantee the validity of the findings. To eliminate multicollinearity, variables having a variance inflation factor (VIF) larger than 10 are changed or removed using VIF testing. Autocorrelation was detected using the Durbin-Watson test and corrected with either robust standard errors. The Breusch-Pagan test was employed in this study to determine heteroskedasticity, which was then taken into consideration using heteroskedasticity-robust standard errors. To address endogeneity, we used instrumental variable (IV) approaches. The Hansen J-test was used to verify the instruments, which we selected based on their theoretical applicability. Tests such as the Hausman test and the Wald test were used to address model specification concerns in order to select between fixed and random effects OLS models.

Table 1 contains important statistics such as the total number of observations, the maximum and minimum values of each sample variable, the standard deviation, mean, and median of the dataset.

Table 1: Descriptive Statistics

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Skewness	Kurtosis
TOBINQ	1.418	0.988	12.312	0.4506	1.648	0.73	2.26
MB	2.143	0.826	40.73	-8.31	5.718	0.7	3.17
FOR	0.161	0	0.9586	0	0.264	1.83	2.06
DIR	0.221	0.103	0.9747	0	0.257	1.37	2.23
INST	0.12	0.069	0.9833	0	0.15	1.13	2.02
CGI	0.5418	0.5	1	0	0.1973	-0.194	2.4122
AGE	37.46	36	155	7	17.35	0.27	0.74
LOG_SALE	6.658	6.62	7.0046	6.296	0.074	1.54	1.08

Foreign ownership in Pakistan normally runs from 0% to 95%, with a mean of 16.14%. Directors typically own between 10.3 and 97.4 percent of the firm’s stock, or an average of 22.18 percent. On the other side, institutional ownership ranges from 0% to 98.0%, with an average equity stake of 12.03%. With a standard deviation of 0.19, the average CGI value is 0.54.The value of Tobin's Q is 1.418, with a range of 0.450 to 12.312 and a standard deviation of 1.64. The mean value of Tobin's Q ratio indicates that, on average, a firm’s value exceeds the cost of its assets. The mean value of the market-to-book ratio is 2.14, with a minimum and maximum value of -8.310 and 40.7, respectively, and a standard deviation of 5.718. These findings illustrate that, on average, a firm's equity market value is 2.14 times its book value. According to Trochim and Donnelly (2006) and Anderson et al. (2016), when working with sample sizes more than 300, skewness values should lie within the range of -3 to +3, while kurtosis values should be within the range of -10 to +10. It is possible to confirm that all of the skewness and kurtosis values for the relevant variables are, in fact, within the allowed range.

A statistical tool for determining the strength and direction of a relationship between two variables is the correlation coefficient. The correlation between the research's variable is shown in Table II.

The leading independent variable is foreign, director and institutional ownership for determining the firm's value. Whereas corporate governance index (CGI) is used as moderating variable. It is obvious that the independent variables do not show any evidence of a significant correlation when looking at the prospective correlation summarized in Table II. The firm's equity owned by foreigners positively correlates with, Tobin's Q, and market to book ratio. In contrast, director ownership shows a significant negative correlation with market-to-book ratio.

The institutional ownership significantly positively relates to Tobin’s Q market to book ratio. Corporate governance index have positive relation with Tobin’s Q, MB. The firm's sale is a significant and positive relationship with Tobin’s Q and market to book ratio. There is no evidence of a relationship between all independent variables, so it can be say that there is no evidence of multicollinearity between the independent variables.

Table 2: Correlation

	Tobin	MB	For own	Dir own	Inst own	CGI	logsale	Age
Tobin	1.00							
MB	0.71	1.00						
	(0.00)							
For own	0.41	0.38	1.00					
	(0.00)	(0.00)						
Dir own	-0.39	-0.10	-0.37	1.00				
	(0.00)	(0.00)	(0.00)					
Inst own	0.47	0.55	-0.03	-0.23	1.00			
	(0.05)	(0.07)	(0.26)	(0.00)				
CGI	0.43	0.34	0.43	0.56	0.23	1.00		
	(0.07)	(0.00)	(0.06)	(0.06)	(0.07)			
Log sale	0.37	0.11	0.28	-0.31	0.14	0.09	1.00	
	(0.01)	(0.00)	(0.00)	(0.00)	(0.00)	(0.10)		
Age	0.03	-0.02	0.18	-0.03	0.03	0.001	0.06	11.00
	(0.20)	(0.55)	(0.00)	(0.23)	(0.25)	(0.23)	(0.02)	

The applied tests confirmed the presence of individual heterogeneity in the disturbance terms, indicating that the random effect model is appropriate for our analysis with Tobin's q as the dependent variable. Table III presents the results of the random effect model. Foreign ownership demonstrated a significant positive effect on Tobin's q ($\beta = 0.63$, $p < 0.05$), suggesting that increased foreign ownership enhances firm value. This finding aligns with the literature that highlights the benefits of foreign investors bringing in better governance practices and expertise. Conversely, director ownership had a significant negative impact on Tobin's q ($\beta = -1.083$, $p < 0.05$), which may indicate potential agency conflicts where higher director ownership could lead to entrenchment issues. Institutional ownership was found to positively influence Tobin's q ($\beta = 2$, $p = 0.01$), supporting the notion that institutional investors play a crucial monitoring role that improves firm performance. Although the log of sales coefficient was positive ($\beta = 0.23$), it was not statistically significant, indicating that firm size did not have a discernible impact on Tobin's q in this study. Additionally, firm age showed no significant effect on Tobin's q. The overall model was significant ($R^2 = 0.489$, F-test < 0.05), explaining 48.9% of the variation in Tobin's q, which underscores the relevance of ownership structure variables in determining firm value. These results suggest that different types of ownership structures have distinct impacts on firm value, highlighting the importance of considering ownership composition.

Table 3: Regression

IV	Tobin's Q			M/B		
	OLS	Random Effect	Fix effect	OLS	EM	Fix effect
C	0.9	0.071	0.751	-3.383	-3.457	-3.024
p-value	(.751)	(0.952)	(0.887)	(0.165)	(0.178)	(0.166)
For-own	0.638	0.636	0.693	5.42	6.089	5.784
p-value	(0.013)	(0.013)	(0.019)	(0.049)	(0.05)	(0.057)
Dir-own	-1.182	-1.084	-1.139	-1.567	-1.172	-1.481
p-value	(0.03)	(0.04)	(0.036)	(0.221)	(0.131)	(0.271)
Inst-own	1.98	2.01	1.716	4.082	3.93	3.802
p-value	(0.014)	(0.016)	(0.015)	(0.047)	(0.027)	(0.045)
log sale	0.28	0.239	0.254	0.863	0.751	0.793
p-value	(0.117)	(0.159)	(0.156)	(0.011)	(0.012)	(0.018)
Age	0.012	0.005	0.009	-0.008	-0.011	-0.011
p-value	(0.109)	(0.474)	(0.209)	(0.792)	(0.823)	(0.803)
R-square	0.473	0.489	0.464	0.48	0.478	0.473
F- stat	4.612	4.494	2.852	8.883	4.494	8.883
p-value	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Method		REM			**OLS**	
Wald Test		2.302 (0.011)			1.051 (0.396)	
Breusch-Pagan		6.243 (0.013)			0.0104 (0.919)	
Hausman		10.136 (0.115)			10.03 (0.1105)	
Heterosked-asticity Test		12.82 (0.885)			12.021 (0.915)	
Serial Correlation		1.067615 (0.269)			1.152347 (0.0975)	

The analysis also examined how different ownership structure variables affect the market-to-book ratio. Given the lack of sufficient evidence for individual heterogeneity in the disturbance term, ordinary least squares (OLS) regression was deemed appropriate. The findings indicated that foreign ownership had a significant positive impact on the market-to-book ratio ($\beta = 5.4204$, $p < 0.05$), suggesting that increased foreign investment enhances the firm's market valuation. This result aligns with previous studies that emphasize the benefits of foreign investors, who often bring advanced management practices and improved governance standards.

Director ownership, while showing a negative coefficient ($\beta = -1.566$), was not statistically significant ($p > 0.05$), indicating that it does not have a substantial impact on the market-to-book ratio in this context. This could be due to the potential entrenchment effect, where directors with significant ownership might prioritize personal interests over those of shareholders, although the effect here is not strong enough to be conclusive. Institutional ownership had a significant positive effect ($\beta = 4.08$, $p < 0.05$), suggesting that institutional investors play a crucial role in enhancing market perceptions of firm value. This is consistent with the idea that institutional investors can effectively monitor management, thereby reducing agency costs and signaling firm quality to the market.

These findings align with previous studies by Rashid (2020); Kao, Hodgkinson, and Jaafar (2019); Lee and Chung (2018); Khasawneh and Staytieh (2017); Yasser and Mamun (2017); and Makhija and Spiro (2000), suggesting that foreign ownership enhances a firm's value. However, the studies by Alodat et al. (2021) and Romalis (2011) do not support the notion that foreign ownership can enhance a firm's Tobin's Q ratio and market value.

The coefficient for the log of sales was positive ($\beta = 0.86$) and statistically significant, indicating that larger firm size, as measured by sales, is associated with a higher market-to-book ratio. This finding suggests that investors perceive larger firms as more valuable, potentially due to economies of scale and better market positioning. Firm age showed a negative but insignificant effect on the market-to-book ratio, indicating that older firms do not necessarily have higher market valuations relative to their book values. This could be due to various factors, such as the possibility that older firms face more bureaucratic inertia and less innovative dynamism compared to younger firms.

The R-square value of 0.4801 suggested that 48% of the variability in the dependent variable could be explained by the independent variables. Overall, the model was statistically significant based on the F-test. Overall, these results highlight the varying impacts of ownership structures on firm valuation and underscore the importance of foreign and institutional ownership in enhancing market perceptions of firm value. These insights are valuable for policymakers and practitioners looking to optimize ownership structures to maximize firm value.

A situation where the relationship between two variables is modified by a third variable known as the moderator is referred to as "moderation" in statistics and regression analysis. By adding more information and justifications about how the independent and dependent variables relate to one another, this moderator variable might be useful in enhancing a regression model (Jose, 2013).

Table 4: Regression with Moderation

IV	Tobin's Q			M/B		
	OLS	REM	FIX	OLS	REM	FIX
C	-0.19	-0.17	-0.15	-5.33	-5.33	-5.36
P-value	(0.89)	(0.9)	(0.91)	(0.03)	(0.03)	(0.03)
For-own	1.58	1.68	1.79	3.88	3.88	4.07
P-value	(0.30)	(0.27)	(0.24)	(0.14)	(0.14)	(0.12)
Dir-own	-1.76	-1.74	-1.73	-2.67	-2.67	-2.73
P-value	(0.26)	(0.26)	(0.26)	(0.32)	(0.32)	(0.31)
Inst-own	3.15	2.81	2.4	-3.36	-3.36	-2.27
P-value	(0.23)	(0.29)	(0.37)	(0.47)	(0.46)	(0.62)
CGI	0.56	0.4	0.21	-0.07	-0.07	0.3
P-value	(0.66)	(0.76)	(0.87)	(0.97)	(0.97)	(0.89)
CGI*For Own	-1.76	-1.87	-2	-3.5	-3.5	-3.73
P-value	(0.49)	(0.46)	(0.43)	(0.43)	(0.43)	(0.40)
CGI*Dir Own	1.09	1.11	1.13	1.34	1.34	1.62
P-value	(0.05)	(0.05)	(0.04)	(0.77)	(0.77)	(0.73)
CGI*Ins Own	2.22	3.79	1.3	0.65	0.64	0.82
P-value	(0.62)	(0.69)	(0.78)	(0.94)	(0.93)	(0.92)
log sale	0.29	0.28	0.27	0.99	0.99	0.97

P-value	(0.1)	(0.12)	(0.14)	(0.00)	(0.00)	(0.00)
Age	0.01	0.01	0.01	0.03	0.03	0.02
P-value	(0.11)	(0.15)	(0.21)	(0.03)	(0.03)	(0.06)
R-square	0.49	0.51	0.48	0.49	0.48	0.48
F-stat		7.8			5.05	
P-value		(0.00)			(0.00)	
Method		**REM**			**OLS**	
Wall Test						
		1.93			1.91	
		(0.04)			(0.04)	
Breusch-Pagan						
		7.35			0.02	
		(0.01)			(0.86)	
Hausman					10.11	
		10.85				
		(0.09)			(0.10)	
Heteroskedasticity		2.005			2.073	
Test		(0.991)			(0.99)	
Serial Correlation					1.4293	
		1.037				
		(0.349)			(0.172)	

After conducting several specification tests, the random-effects model was employed to examine the moderating effect of corporate governance on the relationship between ownership and Tobin's Q ratio. The moderator's inclusion contributed an additional 2% to the explanation of Tobin's Q ratio variance, beyond the direct effect of ownership. At the 5% significance level, this effect size was not significant. The panel specification test led to the use of OLS to investigate the effect of corporate governance on the relationship between ownership and the market-to-book ratio. At a 5%, the corporate governance index's (CGI) effect size was not statistically significant. Consequently, CGI does not moderate the relationship between ownership metrics and the market-to-book ratio.

The statistical findings did not provide strong evidence in favour of the hypothesis that corporate governance moderates the relationship between ownership structure and a firm's value. This result implies that although corporate governance may be expected to affect this relationship, other considerations may be more important. According to Fauzi and Wahyudi (2016), external variables, including changes in interest rates, inflation, and economic expansion, may also affect a firm's value. These external factors could affect investor sentiment, potentially leading to changes in stock prices. Furthermore, political events such as elections and changes in government policies may affect stock prices (Irshad, 2017). On the other hand, research by Silpachai (2023) has revealed a significant relationship between corporate governance and a firm's value.

This highlights the complexity of the relationship between ownership structure and firm value and suggests that factors beyond corporate governance may be important. It is helpful to recognise the broader framework in which corporate governance operates, highlighting its external and political aspects, which underscores the importance of accounting for a range of variables when analysing a firm's value.

Conclusion

This research investigates the impact of ownership structure on a firm's value by analysing two key measures: the Tobin Q ratio and the market-to-book ratio. The research findings show that although director ownership is associated with a decrease in a firm's overall value, foreign ownership has a positive impact on a firm's value. Furthermore, institutional ownership has been shown to affect both measures of a firm's value positively. These findings highlight the significance of ownership structure in creating firm value, with foreign and institutional ownership proving more valuable than director ownership. Thus, it is surprising that corporate governance was unable to significantly moderate the relationship between an ownership structure and a firm's value.

Future researchers can assess the generalizability and robustness of the findings across several time periods. This makes it easier to determine if the relationship between ownership structure and firm value persists in the face of changing social, political, and economic factors. Additionally, considering macroeconomic factors can provide a deeper understanding of the relationship between ownership structure and a firm's value. Further research should examine other moderating factors that may affect the relationship between ownership structure and a firm's value. This would contribute to a more sophisticated understanding of the variables that might affect this relationship, ultimately leading to more focused and successful policy recommendations for businesses and decision-makers.

References

- Afza, T., & Nazir, M. S. (2015). Ownership structure, board size and corporate performance in Pakistan. *Research Journal of Finance and Accounting, 6*(11), 110–118.
- Al Mutairi, A. M. S., & Bakar, S. B. (2023). How does ownership structure affect performance? A systematic literature review. *Resmilitaris, 13*(2), 2862–2878.
- Alodat, A. Y., Salleh, Z., Hashim, H. A., & Sulong, F. (2022). Corporate governance and firm performance: Empirical evidence from Jordan. *Journal of Financial Reporting and Accounting, 20*(5), 866–896.
- Al-Shattarat, W. K., Al-Shattarat, B. K., & Hamed, R. (2018). Do dividends announcements signal future earnings changes for Jordanian firms? *Journal of Financial Reporting and Accounting, 16*(3), 417–442.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*(6), 1173–1182.
- Belo, F., Gala, V. D., Salomao, J., & Vitorino, M. A. (2022). Decomposing firm value. *Journal of Financial Economics, 143*(2), 619–639.
- Blevins, D. P., Ragozzino, R., & Eckardt, R. (2022). Corporate governance and strategic decision making: Enhancing firm value. *Journal of Management Studies, 59*(3), 567–589.
- Chagirov, D. (2020). Ownership structure and company's performance: Evidence from Russia's publicly listed companies (Doctoral dissertation, Youngstown State University).
- Claessens, S., Djankov, S., Fan, J. P., & Lang, L. H. (2003). When does corporate diversification matter to productivity and performance? Evidence from East Asia. *Pacific-Basin Finance Journal, 11*(3), 365–392.
- Dakhlallh, M. M., Rashid, N., Abdullah, W. A. W., & Dakhlallh, A. M. (2021). Ownership structure and firm performance: Evidence from Jordan. *Journal of Contemporary Issues in Business and Government, 27*(2), 79–90.

- Darko, J., Aribi, Z. A., & Uzonwanne, G. C. (2016). Corporate governance: The impact of director and board structure, ownership structure and corporate control on the performance of listed companies on the Ghana stock exchange. *Corporate Governance, 16*(2), 259–277.
- Ducassy, I., & Guyot, A. (2017). Complex ownership structures, corporate governance and firm performance: The French context. *Research in International Business and Finance, 39*, 291–306.
- Dvořáková, L., & Faltejsková, O. (2016). Development of corporate performance management in the context of customer satisfaction measurement. *Procedia-Social and Behavioral Sciences, 230*, 335–342.
- Eden, L., & Miller, S. R. (2004). Distance matters: Liability of foreignness, institutional distance and ownership strategy. *Advances in International Management, 16*, 187–221.
- Farooq, M., Noor, A., & Ali, S. (2022). Corporate governance and firm performance: Empirical evidence from Pakistan. *Corporate Governance: The International Journal of Business in Society, 22*(1), 42–66.
- Fauzi, R., & Wahyudi, I. (2016). The effect of firm and stock characteristics on stock returns: Stock market crash analysis. *The Journal of Finance and Data Science, 2*(2), 112–124.
- Gaur, A. S., Kumar, V., & Singh, D. (2011). Institutions, resources, and internationalization of emerging economy firms. *Journal of World Business, 46*(4), 438–448.
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- Horvathova, J., & Mokrisova, M. (2020). Business competitiveness, its financial and economic parameters. *Montenegrin Journal of Economics, 16*(1), 139–153.
- Huang, W., & Zhu, T. (2015). Foreign institutional investors and corporate governance in emerging markets: Evidence of a split-share structure reform in China. *Journal of Corporate Finance, 32*, 312–326.
- Irshad, H. (2017). Relationship among political instability, stock market returns and stock market volatility. *Studies in Business and Economics, 12*(2), 70–99.
- Isshaq, Z., Bokpin, G. A., & Mensah Onumah, J. (2009). Corporate governance, ownership structure, cash holdings, and firm value on the Ghana Stock Exchange. *The Journal of Risk Finance, 10*(5), 488–499.
- Iwasaki, I., Ma, X., & Mizobata, S. (2022). Ownership structure and firm performance in emerging markets: A comparative meta-analysis of East European EU member states, Russia and China. *Economic Systems, 100945.*
- Jose, P. E. (2013). *Doing statistical mediation and moderation*. Guilford Press.
- Kao, M. F., Hodgkinson, L., & Jaafar, A. (2019). Ownership structure, board of directors and firm performance: Evidence from Taiwan. *Corporate Governance: The International Journal of Business in Society.*
- Khasawneh, A. Y., & Staytieh, K. S. (2017). Impact of foreign ownership on capital structure and firm value in emerging market: Case of Amman Stock Exchange listed firms. *Afro-Asian Journal of Finance and Accounting, 7*(1), 35–64.
- Kim, J., Yang, I., Yang, T., & Koveos, P. (2021). The impact of R&D intensity, financial constraints, and dividend payout policy on firm value. *Finance Research Letters, 40*, 101802.
- Lee, J., & Chung, K. H. (2018). Foreign ownership and stock market liquidity. *International Review of Economics & Finance, 54*, 311–325.

- Makhija, A. K., & Spiro, M. (2000). Ownership structure as a determinant of firm value: Evidence from newly privatized Czech firms. *Financial Review, 35*(3), 1–32.
- Naidu, D., Charteris, A., & Moores-Pitt, P. (2021). The impact of foreign ownership on the performance of Johannesburg Stock Exchange-listed firms: A blessing or a curse? *South African Journal of Economics.*
- Nancy Huyghebaert & Lihong Wang. (2019). Value creation and value distribution in Chinese listed firms: The role of ownership structure, board characteristics, and control. *The European Journal of Finance*, *25*(6), 465–488.
- Naz, M. A., Ali, R., Rehman, R. U., & Ntim, C. G. (2022). Corporate governance, working capital management, and firm performance: Some new insights from agency theory. *Managerial and Decision Economics, 43*(5), 1448–1461.
- Nirino, N., Battisti, E., Ferraris, A., Dell'Atti, S., & Briamonte, M. F. (2022). How and when corporate social performance reduces firm risk? The moderating role of corporate governance. *Corporate Social Responsibility and Environmental Management, 29*(6), 1995–2005.
- Rashid, M. M. (2020). Ownership structure and firm performance: The mediating role of board characteristics. *Corporate Governance: The International Journal of Business in Society.*
- Romalis, J. (2011). The value of foreign ownership. *Economic and Business Review for Central and South-Eastern Europe*, *13*(1/2), 107.
- Silpachai, K. (2023). Internal corporate governance mechanisms and firm performance: 3SLS empirical evidence from Thailand. *International Journal of Business Ecosystem & Strategy*, *5*(1), 23–36.
- Sudiyanto, B., & Puspitasari, E. (2010). Tobin's Q and Altman Z-Score as indicators of measuring company performance. *Accounting Study*, *2*(1), 9–21.
- Yasser, Q. R., & Mamun, A. A. (2017). The impact of ownership concentration on firm performance: Evidence from an emerging market. *Emerging Economy Studies, 3*(1), 34–53.