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The Moderating Effect of Board Director Diversity on the Relationship between Ownership Structure and Firm Performance: Evidence from Jordan

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Abstract

This study examines the moderating effect of board director diversity on the relationship between ownership structure and firm performance in Jordanian-listed companies. Analyzing 158 firms listed on the Amman Stock Exchange from 2015 to 2021, we investigate how institutional, government, foreign, and concentrated ownership impact firm performance, measured by Return on Assets (ROA) and Tobin's Q, and how board diversity moderates these relationships. Using the Generalized Method of Moments (GMM) estimation to address endogeneity, our findings reveal complex interactions between ownership structures, board diversity, and firm performance. Ownership concentration and foreign ownership consistently show positive effects on both ROA and Tobin's Q, suggesting their potential to mitigate agency problems and introduce valuable international practices. Government ownership positively impacts ROA but not Tobin's Q, highlighting the nuanced role of state ownership in emerging markets. Institutional ownership positively affects Tobin's Q but not ROA, indicating its influence on market perceptions rather than operational performance. Board diversity emerges as a crucial moderating factor, positively moderating the relationship between foreign ownership and both performance measures, suggesting that diverse boards can enhance the benefits of foreign investment. Similarly, board diversity strengthens the positive impact of institutional ownership on ROA, indicating a complementary effect between diverse boards and institutional monitoring. These findings contribute to understanding corporate governance dynamics in emerging markets, with significant implications for policymakers, corporate leaders, and researchers. They underscore the need for nuanced corporate governance regulations that consider complex interactions between ownership structures and board composition, providing empirical support for initiatives promoting board diversity in emerging markets. While the focus on Jordanian-listed companies limits generalizability, future research could extend this analysis to other emerging markets, conduct cross-country comparisons, or explore individual components of board diversity for more granular insights.

Keywords: Corporate Governance, Ownership Structure, Board Diversity, Firm Performance, Emerging Markets, Jordan, GMM Estimation, Agency Theory, Institutional Ownership, Foreign Ownership, Government Ownership, Ownership Concentration, Tobin's Q, Return on Assets.

Introduction

Corporate governance has emerged as a critical factor in determining firm performance, particularly in developing economies. In Jordan, a country facing economic challenges and striving to improve its corporate governance standards, understanding the interplay between ownership structures, board characteristics, and firm performance is crucial. This study examines the moderating effect of board director diversity on the relationship between ownership structure and firm performance in Jordanian companies listed on the Amman Stock Exchange (ASE) from 2015 to 2021.

The ownership structure of firms has long been recognized as a key determinant of corporate governance quality and, consequently, firm performance (Jensen & Meckling, 1976). In Jordan, ownership structures are characterized by high concentration, with significant institutional, government, and foreign ownership (Al-Azzam et al., 2015). These unique ownership patterns may have distinct implications for firm performance, which this study aims to explore.

Simultaneously, board diversity has gained increasing attention as a potential factor influencing firm performance. Diverse boards, comprising members with varied backgrounds, experiences, and perspectives, are thought to enhance decision-making processes and improve monitoring functions (Adams & Ferreira, 2009). However, the impact of board diversity on the relationship between ownership structure and firm performance remains understudied, particularly in the context of emerging markets like Jordan.

Recent data from the Amman Stock Exchange reveals a concerning trend in the performance of listed companies. The market value of Jordanian companies listed on the ASE decreased by 15,495.7 million JD at the end of 2021 compared to previous years, while the number of listed companies fell from 228 in 2015 to 171 in 2021 (ASE, 2022). These figures underscore the need for a deeper understanding of the factors influencing firm performance in Jordan, including the potential moderating role of board diversity on the ownership structure-performance relationship.

The primary objective of this study is to investigate how board director diversity moderates the relationship between ownership structure and firm performance in Jordanian listed companies. Specifically, this research aims to:

1. Examine the relationship between various ownership structures (institutional, government, foreign, and concentrated ownership) and firm performance in Jordanian listed companies.
2. Assess the direct impact of board director diversity on firm performance in Jordan.
3. Investigate the moderating effect of board director diversity on the relationship between different ownership structures and firm performance.
4. Provide insights into how the interaction between ownership structures and board diversity influences firm performance in the context of an emerging economy.

This study contributes to the existing literature in several ways. First, it extends the application of agency theory by considering how board diversity might influence the relationship between ownership structures and firm performance. Second, it provides empirical evidence from an emerging market context, where the dynamics of ownership, board composition, and firm performance may differ from those in developed economies. Third, by focusing on Jordan, this research offers insights into a relatively understudied market in the Middle East, contributing to a more comprehensive understanding of corporate governance in the region.

Moreover, this study is timely given the ongoing economic challenges faced by Jordan and the global emphasis on improving corporate governance standards. By providing empirical evidence on how board diversity moderates the relationship between ownership structure and firm performance, this research can contribute to broader discussions on enhancing the competitiveness and sustainability of Jordanian businesses in the global market.

In conclusion, this study aims to shed light on the complex relationships between ownership structure, board director diversity, and firm performance in the Jordanian context. By examining the moderating role of board diversity, it seeks to provide a more nuanced understanding of how corporate governance mechanisms interact to influence firm performance in an emerging market setting. The findings of this research have the potential to inform policy decisions, guide corporate strategies, and ultimately contribute to the enhancement of Jordan's economic landscape.

Literature Review and Hypothesis Development

Theoretical framework (Agency theory)

Agency theory, first proposed by Jensen and Meckling (1976), provides the theoretical foundation for understanding the relationship between ownership structure, board diversity, and firm performance. This theory addresses the principal-agent problem that arises when ownership and control are separated in modern corporations. In the context of corporate governance, shareholders (principals) delegate decision-making authority to managers (agents), leading to potential conflicts of interest.

The agency theory posits that managers, assumed to be rational but opportunistic, may pursue their self-interests at the expense of shareholders' wealth maximization (Fama & Jensen, 1983). This misalignment of interests can result in agency costs, including monitoring expenses, bonding costs, and residual losses (Jensen & Meckling, 1976). To mitigate these agency problems, various corporate governance mechanisms are implemented, with ownership structure and board composition being crucial elements.

In the Jordanian context, where ownership is often concentrated and family-owned businesses are prevalent (Al-Azzam et al., 2015), the agency problem may manifest differently compared to markets with dispersed ownership. High ownership concentration can lead to conflicts between majority and minority shareholders, known as the principal-principal problem (Dharwadkar et al., 2000). This situation is particularly relevant in emerging markets like Jordan, where legal protections for minority shareholders may be weaker. Board diversity, as a corporate governance mechanism, can play a significant role in addressing agency problems. Diverse boards, comprising members with varied backgrounds, experiences, and perspectives, are thought to enhance monitoring and decision-making processes (Adams & Ferreira, 2009). By improving board effectiveness, diversity can potentially reduce information asymmetry and align the interests of managers with those of shareholders.

The agency theory also suggests that different ownership structures may have varying impacts on firm performance. Institutional ownership, for instance, is often associated with more effective monitoring due to the resources and expertise of institutional investors (Shleifer & Vishny, 1986). Government ownership, on the other hand, may introduce political objectives that could conflict with profit maximization (Shleifer & Vishny, 1994). Foreign ownership can bring international best practices and improved governance standards (Douma et al., 2006).

In the context of this study, agency theory provides a framework for understanding how ownership structures and board diversity interact to influence firm performance in Jordan. It suggests that the effectiveness of different ownership structures in mitigating agency problems and enhancing firm performance may be moderated by the diversity of the board of directors.

Ownership Structure and Firm Performance

The relationship between ownership structure and firm performance has been a subject of extensive research in corporate governance literature. Different types of ownership structures can have varying impacts on firm performance due to their unique characteristics and incentives.

Institutional ownership is often associated with improved firm performance due to the monitoring capabilities and expertise of institutional investors (McConnell & Servaes, 1990). In Jordan, institutional ownership has been found to have a positive impact on firm performance in some studies (Al-Fayoumi et al., 2010), while others have reported mixed results (Zeitun & Tian, 2007).

Government ownership, prevalent in many Jordanian firms, can have both positive and negative effects on performance. While government ownership can provide stability and access to resources, it may also introduce political objectives that conflict with profit maximization (Boubakri et al., 2005). Studies in Jordan have shown mixed results regarding the impact of government ownership on firm performance (Al-Najjar, 2015).

Foreign ownership is often associated with improved performance due to the introduction of international best practices and advanced technologies (Douma et al., 2006). In the Jordanian context, some studies have found a positive relationship between foreign ownership and firm performance (Zeitun, 2009), while others have reported no significant impact (Abu Ghazaleh et al., 2012).

Ownership concentration, a common feature in Jordanian firms, can have both positive and negative effects on performance. While concentrated ownership can reduce agency costs through better monitoring, it may also lead to the expropriation of minority shareholders (Shleifer & Vishny, 1997). Studies in Jordan have shown varying results regarding the impact of ownership concentration on firm performance (Zeitun & Tian, 2007; Al-Fayoumi et al., 2010).

Board Diversity and Firm Performance

Board diversity has gained increasing attention as a potential factor influencing firm performance. Diverse boards, comprising members with varied backgrounds, experiences, and perspectives, are thought to enhance decision-making processes and improve monitoring functions (Adams & Ferreira, 2009).

In the context of Jordan, studies on board diversity and firm performance are limited but growing. Al-Rahahleh (2017) found that gender diversity on boards positively affects firm performance in Jordanian banks. Similarly, Ibrahim and Hanefah (2016) reported a positive relationship between board diversity and corporate social responsibility performance in Jordan.

Board diversity can enhance firm performance through several mechanisms. Diverse boards can bring a wider range of perspectives and expertise, leading to more comprehensive decision-making (Carter et al., 2003). They can also improve the board's monitoring function by reducing groupthink and enhancing independence (Adams & Ferreira, 2009). Furthermore, diverse boards can signal a firm's commitment to inclusivity, potentially improving its reputation and stakeholder relations (Bear et al., 2010).

The Moderating Role of Board Diversity

The moderating role of board diversity in the relationship between ownership structure and firm performance is a relatively unexplored area, particularly in the context of emerging markets like Jordan. Board diversity can potentially influence how different ownership structures impact firm performance by affecting the board's effectiveness in its monitoring and advisory roles.

Board diversity may enhance the positive effects of certain ownership structures on firm performance. For instance, in firms with high institutional ownership, a diverse board might complement the monitoring role of institutional investors by bringing varied perspectives and expertise (Ferrero-Ferrero et al., 2015). Similarly, in firms with foreign ownership, a diverse board might facilitate the integration of international best practices with local knowledge (Oxelheim & Randøy, 2003).

Conversely, board diversity might mitigate potential negative effects of certain ownership structures. In firms with high ownership concentration, a diverse board could potentially reduce the risk of majority shareholder expropriation by enhancing board independence and monitoring effectiveness (Pucheta-Martínez & Bel-Oms, 2019).

In the Jordanian context, where ownership structures are often characterized by high concentration and significant government and family ownership, the moderating role of board diversity could be particularly significant. A diverse board might help balance the interests of different shareholder groups and enhance overall governance quality.

Development of hypotheses

Based on the theoretical framework and literature review, we develop the following hypotheses:

H1: There is a significant relationship between institutional ownership and firm performance in Jordanian listed companies.

H2: There is a significant relationship between government ownership and firm performance in Jordanian listed companies.

H3: There is a significant relationship between foreign ownership and firm performance in Jordanian listed companies.

H4: There is a significant relationship between ownership concentration and firm performance in Jordanian listed companies.

H5: Board director diversity has a significant direct effect on firm performance in Jordanian listed companies.

H6: Board director diversity moderates the relationship between institutional ownership and firm performance in Jordanian listed companies.

H7: Board director diversity moderates the relationship between government ownership and firm performance in Jordanian listed companies.

H8: Board director diversity moderates the relationship between foreign ownership and firm performance in Jordanian listed companies.

H9: Board director diversity moderates the relationship between ownership concentration and firm performance in Jordanian listed companies.

These hypotheses will be tested using empirical data from Jordanian listed companies, contributing to our understanding of how ownership structures and board diversity interact to influence firm performance in an emerging market context.

Research Methodology

Sample and Data Collection

This study focuses on financial and non-financial firms listed on the Amman Stock Exchange (ASE) from 2015 to 2021. The sample comprises 158 firms, resulting in 1106 firm-year observations. Data for the variables were collected from the annual reports of the sample firms, published on the ASE website. The selection criteria for the sample firms included:

1. Shares listed on the ASE during the 2015-2021 period
2. Continuous trading operations throughout the study period
3. Availability of required data for calculating and evaluating research variables
4. Firms with missing or incomplete data were not excluded.

Variable measurement

Dependent variables:

1. Return on Assets (ROA): Measured as the ratio of net income to total assets (Belkebir et al., 2018)
2. Tobin's Q (TQ): Calculated as the sum of market value of equity and book value of debt divided by book value of total assets (Sitara Karim, 2021)

Independent variables (Ownership structure measures):

1. Institutional Ownership (INSOW): Percentage of shares owned by institutional investors (Abu-Serdaneh et al., 2010)
2. Foreign Ownership (FOROW): Percentage of equity owned by foreign individuals/institutions (Moez et al., 2015)
3. Government Ownership (GOVOW): Percentage of equity owned by Jordanian Government companies (Al-Janadi et al., 2016)
4. Ownership Concentration (OC): Measured using the Herfindahl Hirschman Index (HHI) - sum of squared ownership shares of the top 5 shareholders (Dong et al., 2014)

Moderating variable: Board Diversity Index (BD): Calculated using the Blau index (1977) incorporating gender, nationality, multiple directorships, and independence (Ferrero-Ferrero et al., 2015)

Control variables:

1. Firm Size (SIZE): Natural logarithm of total assets (Warrad & Khaddam, 2020)
2. Firm Age (AGE): Natural logarithm of the firm's listing period (Boone et al., 2007)
3. Leverage (LEV): Ratio of total debt to total assets (Myers, 1977).

Model Specification

To test the hypotheses, the following regression models were developed:

1. Direct effects model: Performance = β0 + β1INSOW + β2FOROW + β3GOVOW + β4OC + β5SIZE + β6AGE + β7LEV + ε
2. Moderation model: Performance = β0 + β1INSOW + β2FOROW + β3GOVOW + β4OC + β5BD + β6(INSOWBD) + β7(FOROWBD) + β8(GOVOWBD) + β9(OCBD) + β10SIZE + β11AGE + β12LEV + ε
3.

Where Performance is measured by ROA and Tobin's Q in separate models.

Estimation technique (GMM)

Given the potential endogeneity issues in corporate governance research (Wintoki et al., 2012), this study employs the Generalized Method of Moments (GMM) estimation technique. GMM addresses endogeneity concerns arising from unobservable heterogeneity, simultaneity, and dynamic endogeneity (Arellano & Bond, 1991). This method is particularly suitable for panel data with a large number of cross-sections (N) and a small number of time periods (T).

The two-step system GMM estimator is used, as it provides more efficient estimates compared to the one-step estimator (Blundell & Bond, 1998). To ensure the validity of the GMM estimator, the Sargan test for over-identifying restrictions and the Arellano-Bond test for second-order autocorrelation are conducted.

Results and Analysis

1. Descriptive Statistics

Table 1

Presents the Descriptive Statistics for all Variables used in this Study.

Variable	Obs.	Mean	Std. Dev.	Min	Max
ROA	1106	0.0027	0.1638	-4.8328	0.407
TQ	1106	1.1849	2.3274	0.0925	61.5512
OC	1106	60.304	22.525	0	100
FOROW	1106	14.506	23.876	0	94.33
GOVOW	1106	5.7961	14.897	0	99.92
INSOW	1106	43.999	29.639	0	100
SIZE	1106	7.5719	0.8666	5.1369	10.441
AGE	1106	28	16.735	5	91
LEV	1106	1.55	1.015	0	2.95
BD	1106	0.3914	2.447	-80.16	1

The descriptive statistics reveal considerable variation in firm performance measures. ROA shows a mean of 0.0027, indicating that on average, firms generate a small positive return on their assets. However, the large standard deviation (0.1638) and wide range (-4.8328 to 0.407) suggest significant performance differences across firms. Tobin's Q (TQ) has a mean of 1.1849, implying that on average, firms' market values exceed their book values. The high standard deviation (2.3274) and wide range (0.0925 to 61.5512) indicate substantial variation in market perceptions of firm value.

Ownership structures also show diversity. Ownership concentration (OC) has a mean of 60.304%, suggesting relatively high concentration. Institutional ownership (INSOW) averages 43.999%, indicating significant institutional presence. Foreign ownership (FOROW) and government ownership (GOVOW) show lower means of 14.506% and 5.7961% respectively, but with considerable variation across firms.

Correlation Analysis

Table 2

Presents the Correlation Results for all Variables.

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**	**(8)**	**(9)**	**(10)**
(1) ROA	1.000									
(2) TQ	0.3317	1.000								
(3) OC	0.0567	0.1287	1.000							
(4) FOROW	0.0192	0.0704	0.2952	1.000						
(5) GOVOW	0.0817	0.0766	0.2083	-0.0171	1.000					
(6) INSOW	0.1081	0.0963	0.7148	0.3497	0.3589	1.000				
(7) SIZE	0.1500	0.1029	-0.1505	0.3628	0.3027	0.3445	1.000			
(8) AGE	0.0828	0.0602	-0.0038	0.1297	0.2256	0.1004	0.5072	1.000		
(9) LEV	-0.0207	0.0005	0.0060	0.1216	0.0116	0.0452	0.0596	0.0621	1.000	
(10) BD	0.0062	0.0060	0.0766	0.0249	0.0397	0.0406	0.0252	0.0369	0.0165	1.000

The correlation analysis reveals several noteworthy relationships. ROA and TQ show a moderate positive correlation (0.3317), suggesting some alignment between accounting and market-based performance measures. Ownership concentration (OC) shows a strong positive correlation with institutional ownership (INSOW) (0.7148), indicating that concentrated ownership in Jordanian firms is often associated with institutional investors. Foreign ownership (FOROW) and government ownership (GOVOW) show weaker correlations with performance measures and other ownership variables.

Multicollinearity

To assess multicollinearity, we calculated Variance Inflation Factors (VIF) for all independent variables. The results are presented in Table 3.

Variable	VIF	1/VIF
INSOW	2.54	0.394
OC	2.15	0.466
SIZE	1.72	0.583
AGE	1.38	0.723
FOROW	1.33	0.749
GOVOW	1.28	0.778
LEV	1.02	0.981
BD	1.01	0.991
Mean VIF	**1.55**	

All VIF values are below 10, with a mean VIF of 1.55, indicating that multicollinearity is not a significant concern in our model.

Moderation Analysis Results

Table 4

Presents the Moderation Analysis Results for the ROA Model.

Moderation Analysis (ROA Model)

VARIABLES	**(1)** **Model with extra IV**		**(2)** **Moderation Model (ROA)**	
L1	-0.0674***	(0.0032)	-0.061***	(0.002)
L2	-0.0618***	(0.0041)	-0.066***	(0.003)
OC	0.0141**	(0.0057)	0.0132**	(0.0055)
FOROW	0.0003***	(0.0001)	0.0004***	(0.0001)
GOVOW	0.0002***	(0.0001)	0.0005**	(0.0002)
INSOW	-0.0001	(0.0001)	-0.0001	(0.0001)
SIZE	0.098	(0.002)	0.096***	(0.0019)
AGE	0.0056	(0.0114)	0.028***	(0.0067)
LEV	-0.0157***	(0.0039)	-0.0157***	(0.0038)
BD	-0.0001	(0.0001)	0.0057	(0.0150)
BD*OC			-0.0087	(0.0099)
BD*FOROW			0.0012***	(0.0001)
BD*GOVOW			-0.0013	(0.001)
BD*INSOW			0.001***	(0.0003)
Sargan Test (p-value)	0.111		0.051	

Note: ***, **, and * indicate p<0.01, p<0.05, and p<0.1, respectively

The moderation analysis reveals significant interaction effects between board diversity (BD) and foreign ownership (FOROW), as well as between BD and institutional ownership (INSOW).

These results suggest that board diversity moderates the relationship between these ownership types and firm performance.

Table 5
Presents the Moderation Analysis Results for the Tobin's Q (TQ) Model
Moderation Analysis (TQ Model)

Variables	**(1) Model With Extra Iv**		**(2) Moderation Model (Tq)**	
L1	0.879***	(0.065)	0.819***	(0.058)
L2	0.002	(0.036)	0.018	(0.048)
OC	0.101**	(0.047)	0.288***	(0.070)
FOROW	0.0012**	(0.0005)	0.034*	(0.019)
GOVOW	0.0002	(0.002)	0.082*	(0.046)
INSOW	0.0011***	(0.0004)	0.054**	(0.026)
SIZE	-0.037	(0.025)	-0.103***	(0.036)
AGE	0.0862	(0.125)	0.183	(0.181)
LEV	0.096***	(0.037)	0.082**	(0.041)
BD	-0.014	(0.026)	0.235***	(0.078)
BD*OC			0.121*	(0.067)
BD*FOROW			0.074***	(0.027)
BD*GOVOW			-0.019	(0.052)
BD*INSOW			-0.058	(0.045)
Sargan Test (p-value)	0.40		0.091	

Note: ***, **, and * indicate p<0.01, p<0.05, and p<0.1, respectively

This table presents the results of the moderation analysis for the Tobin's Q model. The first column shows the model with extra independent variables, while the second column presents the full moderation model including interaction terms between board diversity (BD) and ownership variables.

Robustness checks
To ensure the reliability of our results, we conducted several robustness checks:

a) Heteroskedasticity: We used the Breusch-Pagan / Cook-Weisberg test, which revealed the presence of heteroskedasticity (chi2 = 4332.87, p = 0.000 for ROA model).

b) Autocorrelation: The Wooldridge test for autocorrelation in panel data indicated the presence of first-order autocorrelation (F = 7.584, p = 0.0059 for ROA model).

c) Cross-sectional dependence: The Pesaran CD test suggested the presence of cross-sectional dependence (CD = 2.345, p = 0.0190).

To address these issues, we re-estimated our models using robust standard errors clustered at the firm level. The main findings remained consistent, supporting the robustness of our results.

In conclusion, our analysis reveals significant relationships between various ownership structures and firm performance in Jordanian listed companies. The moderating role of board diversity is particularly noteworthy, suggesting that the impact of ownership structures on firm performance is contingent on board composition. These findings contribute to our understanding of corporate governance dynamics in emerging markets and have important implications for policymakers and corporate leaders in Jordan.

Discussion

This study examined the moderating effect of board director diversity on the relationship between ownership structure and firm performance in Jordanian-listed companies. The findings provide valuable insights into the complex interplay of these factors in an emerging market context.

Ownership Structure and Firm Performance

Our analysis revealed significant relationships between various ownership structures and firm performance. Ownership concentration (OC) showed a positive impact on both ROA and Tobin's Q, supporting the notion that concentrated ownership can lead to better monitoring and improved firm performance (Shleifer & Vishny, 1997). This aligns with previous findings in the Jordanian context (Zeitun & Tian, 2007) and suggests that concentrated ownership may help mitigate agency problems in emerging markets where legal protections for minority shareholders may be weaker.

Foreign ownership (FOROW) demonstrated a consistently positive effect on both performance measures. This supports the view that foreign investors bring international best practices and advanced technologies, contributing to improved firm performance (Douma et al., 2006). The result is consistent with findings by Zeitun (2009), in the Jordanian context and underscores the potential benefits of attracting foreign investment to emerging markets.
Government ownership (GOVOW) showed mixed results, with a positive effect on ROA but no significant impact on Tobin's Q. This nuanced finding reflects the complex role of government ownership in emerging markets. While government ownership may provide stability and access to resources, potentially improving accounting-based performance, it might not necessarily translate into higher market valuation. This complexity is consistent with the mixed results reported in previous studies on government ownership in Jordan (Al-Najjar, 2015).

Institutional ownership (INSOW) showed a positive effect on Tobin's Q but not on ROA. This suggests that institutional investors may enhance market perceptions of firm value, possibly due to their perceived monitoring capabilities (McConnell & Servaes, 1990). However, the lack of significant impact on ROA indicates that this may not necessarily translate into improved operational performance. This finding adds nuance to the mixed results reported in previous Jordanian studies (Al-Fayoumi et al., 2010; Zeitun & Tian, 2007).

Moderating Role of Board Diversity

The moderating effect of board diversity on the ownership structure-performance relationship provides novel insights. Board diversity positively moderated the relationship between foreign ownership and both performance measures (ROA and Tobin's Q). This suggests that diverse boards may enhance the positive impact of foreign ownership, possibly by facilitating the integration of international practices with local knowledge (Oxelheim & Randøy, 2003).

Board diversity also positively moderated the relationship between institutional ownership and ROA, indicating that diverse boards may complement the monitoring role of institutional investors (Ferrero-Ferrero et al., 2015). However, this moderating effect was not significant for Tobin's Q, suggesting a more nuanced impact on market perceptions.

Interestingly, board diversity did not significantly moderate the effects of government ownership or ownership concentration on firm performance. This lack of moderation might indicate that the influence of these ownership types is less dependent on board composition in the Jordanian context.

Implications

These findings have several important implications. First, they highlight the complex nature of ownership structures' impact on firm performance in emerging markets. While concentrated and foreign ownership generally appear beneficial, the effects of government and institutional ownership are more nuanced. This underscores the need for policymakers to consider these complexities when designing corporate governance regulations.

Second, the positive moderating effect of board diversity on certain ownership-performance relationships suggests that diversity can enhance corporate governance mechanisms. This provides empirical support for initiatives promoting board diversity in emerging markets. Third, the varying effects of ownership structures on accounting-based (ROA) and market-based (Tobin's Q) performance measures indicate that different stakeholders may perceive and value ownership structures differently. This has implications for how firms communicate their governance structures to various stakeholders.

Limitations and Future Research

While this study provides valuable insights, it has limitations that offer opportunities for future research. First, the study focused on Jordanian listed companies, limiting generalizability to other contexts. Future research could extend this analysis to other emerging markets or conduct cross-country comparisons.

Second, the study used a composite measure of board diversity. Future research could explore the individual components of diversity (e.g., gender, nationality, expertise) to provide more granular insights into their moderating effects. Finally, while the study used GMM estimation to address endogeneity concerns, future research could employ alternative methodologies or longer time frames to further validate these findings.

In conclusion, this study contributes to our understanding of how ownership structures and board diversity interact to influence firm performance in an emerging market context. It highlights the complex and nuanced nature of these relationships, providing valuable insights for researchers, policymakers, and corporate leaders in Jordan and similar emerging markets.

Conclusion

This study investigated the moderating effect of board director diversity on the relationship between ownership structure and firm performance in Jordanian listed companies from 2015 to 2021. The research provides valuable insights into the complex interplay of corporate governance mechanisms in an emerging market context. Our findings reveal that different ownership structures have varying impacts on firm performance in Jordan. Ownership concentration and foreign ownership consistently showed positive effects on both accounting-based (ROA) and market-based (Tobin's Q) performance measures. This suggests that concentrated ownership may help mitigate agency problems in the Jordanian context, while foreign ownership brings valuable international practices and resources.

Government ownership demonstrated a positive impact on ROA but not on Tobin's Q, highlighting the complex role of state ownership in emerging markets. Institutional ownership positively affected Tobin's Q but not ROA, indicating that institutional investors may enhance market perceptions of firm value without necessarily improving operational performance.The moderating role of board diversity emerged as a crucial factor in the ownership-performance relationship. Board diversity positively moderated the relationship between foreign ownership and both performance measures, suggesting that diverse boards can enhance the benefits of foreign investment. Similarly, board diversity strengthened the positive impact of institutional ownership on ROA, indicating a complementary effect between diverse boards and institutional monitoring.

These findings have significant implications for policymakers, corporate leaders, and researchers. For policymakers, the results underscore the need for nuanced corporate governance regulations that consider the complex interactions between ownership structures and board composition. Corporate leaders should recognize the potential benefits of board diversity, particularly in firms with foreign or institutional ownership. Researchers can build on these findings to further explore the dynamics of corporate governance in emerging markets.

However, this study has limitations that provide avenues for future research. The focus on Jordanian listed companies limits the generalizability of the findings to other contexts. Future studies could extend this analysis to other emerging markets or conduct cross-country comparisons. Additionally, exploring the individual components of board diversity (e.g., gender, nationality, expertise) could provide more granular insights into their moderating effects.

In conclusion, this study contributes to the growing body of literature on corporate governance in emerging markets by highlighting the complex relationships between ownership structures, board diversity, and firm performance. It emphasizes the importance of considering both direct and moderating effects in understanding these relationships. As Jordan and other emerging economies continue to develop their corporate governance frameworks, insights from this study can inform efforts to enhance firm performance and attract investment.

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