

-RESEARCH ARTICLE-

CORPORATE GOVERNANCE AND ITS IMPACT ON EARNING MANAGEMENT: STUDY IN A CHOSEN SAMPLE OF COMPANIES LISTED IN THE IRAQI STOCK EXCHANGE

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—Abstract—

This paper introduces the concept of Agency Theory, which underscores the importance of monitoring mechanisms in aligning the interests of management, shareholders, and stakeholders to prevent exploitative behaviour. The study's primary aim is to investigate how various corporate governance attributes, encompassing ownership arrangements and board makeup, and CEO duality, impact earnings management in non-financial firms listed in Iraq. The study employs panel data encompassing the years 2007 to 2019, which combines time-series and cross-sectional information, necessitating the utilization of complex econometric models to capture firm-specific dynamics and trends. Predominantly, the Fixed Effects (FE) model is applied to account for unchanging, unobservable individual differences that could potentially distort the outcomes. The findings of the study reveal that Earnings Management (EM) and Ownership Concentration (OC) display a statistically significant relationship with the dependent variable at the 5% significance level, signifying a robust correlation. Moreover, Insider Shareholdings (ISH), Family Ownership (FO), Board Independence (BI), Board Size (BS), and the duality of CEO and chairman responsibilities (CEOD) exhibit statistical significance at the 10% level, indicating a moderate yet noteworthy association. The study's implications extend to policymakers and researchers, offering valuable insights into the intricate interplay the connection between corporate governance and EM.

Keywords: Corporate Governance, CEO Duality, Earning, Iraq

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INTRODUCTION

The corporate accounting scandals, as exemplified by [Piercy \(2023\)](#), that were mainly driven by earnings management had a profound global impact during the late 1990s and early 2000s. Consequently, professionals in the field, regulatory bodies, financial journalists, and scholars have shown significant attention and interest in the practice of earnings management. Earnings management has become a subject of substantial focus in the academic community, resulting in numerous publications exploring various aspects and dimensions of this topic ([Marín-Sanchiz, Carvajal, & González-Esteban, 2023](#)). The importance placed on earnings management is evident in Chairman Author Levitt's speech at the U.S. Securities and Exchange Commission (SEC). Levitt expressed concerns about the credibility and reliability of financial reporting in the U.S. capital market, particularly highlighting issues such as premature revenue recognition and the use of "cookie-jar" reserves in earnings management practices. In many corporations, there is a clear division between financial and managerial functions, a practice that can give rise to agency problems. According to [Hakimah et al. \(2019\)](#), an agency relationship refers to a contractual arrangement where one or more individuals (principals) hire another individual (the agent) to act on their behalf, granting the agent explicit authority to carry out the principals' instructions. Managers and shareholders may have differing sets of priorities. The misalignment between management's focus on short-term profitability and the need to ensure long-term shareholder satisfaction is a significant factor contributing to the agency problem ([Likitapiwat & Treepongkaruna, 2023](#)). Therefore, divided ownership leads to a range of issues, including conflicts among investors and other relevant parties, as well as instances of managerial greed. As per [Hendratmi, Ryandono, and Sukmaningrum \(2020\)](#), the focus of discussion revolves around the methodologies utilized by financial institutions when dealing with corporations to ensure profitable outcomes from their investments. The primary objective of corporate governance mechanisms is to address and mitigate agency costs that may arise within organizations. Even minor disparities in goals and communication breakdowns between management and shareholders can lead to substantial agency costs ([Cooray, Gunarathne, & Senaratne, 2020](#)). This assertion originates from the fundamental premise that individuals tend to prioritize their own self-interests.

[Galletta, Mazzù, and Naciti \(2021\)](#) posits that the deployment of monitoring mechanisms can effectively align the objectives of management, shareholders, and stakeholders, thus reducing the likelihood of engaging in exploitative practices. Research indicates that the implementation of monitoring systems positively influences the behaviour of managers, resulting in enhanced reliability and the quality of accounting earnings ([Rashid & Jaf, 2023](#)). Corporate governance, functioning as a monitoring system, assists in aligning the interests of management with those of shareholders, effectively mitigating agency-related issues. The study carried out by [Al-Haddad and Whittington \(2019\)](#) offers evidence that corporate governance serves as an effective monitoring mechanism, curbing

management's capacity to manipulate earnings.

Mintzberg (2019) highlights the contemporary divide between those who possess wealth and those tasked with its management within corporations. When a company surpasses the financial capacity of its sole proprietor, that individual can no longer meet the firm's financial commitments. Consequently, modern corporations often involve multiple stakeholders, each striving to maximize their portion of the organization's profits (Karpoff, 2021). Shareholders, representing the predominant ownership structure in contemporary corporations, typically do not actively participate in managing their respective companies. The concept of the separation of ownership and control closely aligns with the idea of the "pure agency relationship" existing between a company's stockholders and its management. The agency theory, as initially formulated by Jensen and Meckling, centres on a contractual arrangement where one or more individuals (referred to as the principal) hire another individual (known as the agent) to perform specific tasks on their behalf. This contractual arrangement encompasses delegated decision-making authority (Payne & Petrenko, 2019).

This research emphasizes that managerial involvement in earnings management is primarily driven by self-interest, rather than a commitment to maximizing shareholder value. Following the principles of agency theory, agents tend to act in accordance with their individual incentives and motivations. Principals employ various strategies, including compensation structures, securities regulations, and intermediaries for information dissemination, and direct oversight, aiming to reduce agency costs and ensure that managers prioritize the principals' interests (Rose, 2020).

Within this analysis, we will explore the potential constraints imposed by managerial ownership on earnings management, with particular attention to the direct monitoring mechanisms embedded in the framework of corporate governance.

The existing body of scientific economic literature does not offer a consensus regarding the relationship and consequences of managerial ownership on earnings management. Despite extensive attention from the academic community, a consensus remains elusive. According to research by Saona, Muro, and Alvarado (2020), they suggested that a lower level of managerial ownership could incentivize managers to engage in earnings manipulation for their personal benefit. In their study, they also uncovered a negative connection between insider ownership in the United States and the magnitude of discretionary accruals, which serves as a proxy for earnings management. Anwar and Buvanendra (2019) detected a favourable association between managerial ownership and accounting accruals. Given the conflicting and incongruous findings in previous studies, further investigation is necessary to clarify this correlation.

HYPOTHESIS DEVELOPMENT

Ownership Structure

A company's ownership structure functions as an internal control mechanism that dictates how the company allocates its capital among various individuals or legal entities (Klius, Ivchenko, Izhboldina, & Ivchenko, 2020). This allocation is influenced by the rights and titles held by different stakeholders. The level of control, especially over top management, is determined by the ownership structure of the company. Previous research has focused on the impact of ownership concentration, which refers to the proportion of ownership held by major or principal shareholders, as well as insider ownership, on emerging markets (EM) (Shahzad et al., 2020). Shahzad et al. argue that a comprehensive understanding of ownership structure necessitates considering multiple dimensions to accurately assess it and recognize the complex interests involved in a specific ownership arrangement.

In line with this perspective, we delve into two additional aspects of ownership structure that have received less attention in existing scholarly literature: family ownership and institutional ownership (Xu, Hitt, & Miller, 2020). Both forms of ownership have demonstrated their effectiveness as corporate governance mechanisms in overseeing managerial decisions, thus restraining manipulative practices, and ultimately improving earnings quality. In the following sections, we will provide a detailed exploration of the four variables related to ownership structure that we examined and explain the development of our hypotheses.

As per the principles of Agency Theory, managerial behaviour is often driven by self-interest, which may not always align with the objective of optimizing corporate value and, consequently, the interests of shareholders. This tendency is particularly noticeable when managers have limited ownership or equity stake in the organization they manage. Several scholars, including Meyer, Li, and Schotter (2020) and Shi, Connelly, Hoskisson, and Ketchen (2020), have arrived at the same conclusion.

In contrast, the Convergence of Interests hypothesis suggests that managers are more likely to show reduced arbitrariness and increased alignment with shareholders' overall interests when a significant portion of their wealth is invested in the company they oversee or when their financial well-being is directly linked to the outcomes of their decisions. Therefore, it is expected that insider ownership will exhibit a negative correlation with the extent of discretionary accruals, as insider ownership serves as a mechanism to restrain managers from engaging in opportunistic behaviour (Al-Haddad & Whittington, 2019). However, when internal ownership of the company becomes excessively high, managers may potentially exploit their increased authority to make accounting decisions that prioritize their personal interests over the company's best interests, potentially

detrimental to the company's overall value. [Melgarejo \(2019\)](#) conducted an analysis of earnings quality in a sample of Mexican listed companies concerning the implementation of the Code of Best Corporate Practices. Their findings demonstrate superior earnings quality compared to those without managerial ownership. The argument posits that there is a negative association between the proportion of shares owned by insiders and the magnitude of discretionary accruals, indicating that insider ownership serves as a constraint on managers' opportunistic behaviour.

Regarding the impact of managerial ownership on earnings management, there is no consensus within the existing body of research. According to the Agency Theory, as articulated by [Salehi and Alkhyoon \(2022\)](#), an increase in managerial shareholdings reduces the managerial motivation to engage in opportunistic actions that may be detrimental to shareholders' interests. Moreover, in line with this theory, shareholders tend to believe that management's interests align with theirs when management acquires shares in the organization. [Saona, Muro, and Alvarado \(2020\)](#) discovered that insider ownership in the U.S. is negatively correlated with discretionary accruals (a measure of earnings management). This aligns with the idea that insider ownership serves as a deterrent against opportunistic practices, leading to decreased earnings management. [Almasarwah \(2019\)](#) also discovered a negative correlation between insider ownership and discretionary accruals. [Ghaleb, Kamardin, and Tabash \(2020\)](#) proposed that a high degree of insider ownership may reduce earnings management. Additionally, the hypothesis suggests that as management ownership increases, the motivation to manipulate earnings proportionally decreases.

In contrast to the findings of [Siraji and Nazar \(2021\)](#), which did not discover a statistically significant systematic link between managerial ownership and accounting accruals in the United States, as well as the results from [Almasarwah \(2019\)](#) in a separate study conducted in Denmark, where a positive but statistically insignificant correlation was identified between managerial ownership and accounting accruals.

When managers hold a substantial stake in a company, the connection between their insider ownership and earnings management differs. This aligns with the entrenchment theory, which proposes that excessive insider ownership can deter insiders from making value-maximizing decisions, possibly resulting in increased earnings manipulation. As indicated by a study conducted by [Attig et al. \(2020\)](#), heightened managerial ownership contributes to increased entrenchment, subsequently raising incentives for engaging in opportunistic behaviour. The positive and a statistically notable connection involving insider ownership and earnings management, as identified by [Al-Haddad and Whittington \(2019\)](#), corresponds with more recent research findings by [Gerged, Albitar, and Al-Haddad \(2023\)](#). Given these conflicting findings, determining the outcome of the first hypothesis with certainty is challenging. However, a correlation related to managerial ownership and EM is expected. Consequently, the study has formulated the following hypothesis:

H1: *Insider shareholding has significant impact EM.*

The concept of ownership concentration pertains to the situation where a limited number of individuals or entities hold a significant portion of the overall ownership or control within a specific industry or sector. When substantial shareholders are actively involved in a company's internal controls, it can yield notable advantages because these shareholders are motivated by the extent of their ownership to actively oversee and influence the strategic direction of the business. Consequently, in line with the efficient monitoring hypothesis proposed by [Li and Shen \(2021\)](#), it is expected that higher levels of ownership concentration will lead to a decrease in opportunistic behaviour and an increased inclination to optimize the firm's value. This, in turn, is anticipated to have a positive effect on the informativeness of accounting earnings. [Wang, Zhang, and Ullah \(2023\)](#) have noted that heightened ownership serves as a potent corporate governance mechanism for overseeing the financial decisions made by management. The effectiveness of corporate governance mechanisms in monitoring management's accounting decisions, particularly voluntary accounting changes, has been found to be positively linked to increased ownership concentration. However, ownership concentration also gives rise to agency issues as it can lead to the exploitation of the interests of minority shareholders ([Agrianti, Lia Dama, Rina, & Musdalifah, 2021](#)).

This paper argues in favour of the existence of a negative correlation between elevated levels of ownership concentration and the ability to effectively manage earnings, which aligns with the efficient monitoring hypothesis. Thus, the study introduces the following hypothesis:

H2: *Ownership concentration significant impact EM.*

The company operates as a privately-owned entity under the sole ownership of a single family. Extensive empirical research has consistently demonstrated the beneficial effects of a family firm culture on the operational strategies of organizations. According to [Hayward, Hunt, and Miller \(2022\)](#), the familial ownership structure often facilitates the establishment of enduring relationships, enabling third parties such as suppliers and lenders to develop trust and establish rapport with the family over an extended period. This phenomenon results in the creation of a perceived "family reputation" among external entities, which can have financial implications that extend beyond the owner's lifetime and impact the entire family. [Salehi, Hoshmand, and Rezaei Ranjbar \(2020\)](#) argue that family firms tend to avoid opportunistic behaviour in their earnings reporting due to their focus on long-term goals and concerns about their reputation.

The question arises: Can corporate governance influence earnings management in the Iraqi market? Based on the available evidence, it is reasonable to infer that family-controlled enterprises are more inclined to prioritize long-term profit maximization compared to non-family businesses. [Abd Alhadi et al. \(2021\)](#) suggest that an

enhancement in earnings quality could occur due to a reduced motivation for personal profit at the expense of minority shareholders. However, [Wolff, Ross, and Wee \(2020\)](#) acknowledge a significant limitation in their respective studies, which is the challenge of generalizing their findings to alternative contexts characterized by weaker safeguards for minority shareholders and, consequently, more consolidated ownership structures, as seen in Iraq. The presence of both family groups and concentrated ownership structures has the potential to give rise to additional corporate governance issues. Therefore, it is likely that significant shareholders and minority shareholders may have divergent interests within a company when substantial shareholders are present. The risk of expropriating corporate resources, particularly through the establishment of an ineffective family management team, is higher in family firms due to increased information asymmetries within these organizations.

Research conducted by Novihana Noor and Cynthia Afriani (2020) examines the relationship between ownership structure, the Board of Directors, and managerial discretion in a sample of Mexican companies. The findings suggest that family ownership and the level of corporate leverage may influence the extent of managerial flexibility in manipulating accounting figures in Mexico. Additional research conducted in the Iraqi context, exemplified by the works of [Bendig, Foege, Endriß, and Brettel \(2020\)](#), reveals that a significant degree of familial involvement plays a crucial role in exerting control over companies. In this context, owners often hold non-voting shares and establish pyramidal ownership arrangements to secure financial resources while retaining control over the enterprises. There is a contention that an increase in the number of shareholders possessing a majority of the voting authority could potentially intensify the motivation for these shareholders to prioritize their self-interest, potentially leading to an increase in earnings management. Consequently, the argument that the expropriation of minority shareholders' interests in Iraq, attributed to the prevalence of family ownership, may lead to agency issues, implies a potential impact on the practice of earnings management. Hence, the study presents the following hypothesis:

H3: *Family ownership significant impact EM*

In light of this rationale, institutional investors play a crucial role in restraining opportunistic behaviour and facilitating the reduction of agency costs ([Cao et al., 2023](#)). This is primarily because these investors possess a high level of sophistication and enjoy informational advantages when it comes to acquiring and processing information. Building on research conducted by [Ciftci et al. \(2019\)](#), it has been suggested that the extent of institutional ownership can function as a governance mechanism that influences the effectiveness of EM. Therefore, it is reasonable to evaluate the engagement of institutional investors in companies by assessing the level of participation demonstrated by these institutional shareholders. Limited investor involvement is linked to temporary or brief viewpoints, whereas elevated levels of

engagement signal institutional investors who actively interact with the company and consequently contribute to resolving potential conflicts that may emerge. [Salehi, Moradi, and Faysal \(2023\)](#) assert that institutional investors significantly impact corporate governance (CG) in companies operating in Iraq.

Chile's pioneering pension fund reform, later adopted by Mexico, Colombia, Argentina, and Peru, empowered institutional investors to play a significant role as capital providers, thanks to their fund management expertise and political sway. This development led to various legislative changes in the regulation of capital markets within the region. Hence, the idea that a higher ownership stake by institutional investors is expected to have a favourable impact on corporate conduct suggests a negative relationship between the percentage of shares owned by institutional investors in Iraq and the extent of discretionary accruals, as indicated by [Hayward, Hunt, and Miller \(2022\)](#). This phenomenon can be attributed to the fact that managers may have a disincentive to engage EM due to the influence exerted by institutional investors, who prioritize long-term objectives. Hence, the study introduces the following hypothesis:

H4: *Institutional investors significant impact EM*

The literature does not provide a consensus regarding the impact of managerial ownership on earnings management. According to the agency theory, as articulated by [Cordeiro, Profumo, and Tutore \(2020\)](#), managers are less likely to exploit opportunities that could harm shareholders when they own a larger percentage of the company's stock. Management's purchase of company stock is perceived as a signal of transparency and alignment with shareholder interests, as suggested by this theory. Conversely, when management has low ownership in the company, they may be more inclined to artificially inflate company profits for their personal gain. The study mentioned above found a negative correlation between insider ownership in the United States and the size of discretionary accruals (used as a proxy for earnings management). This result aligns with the hypothesis that insider ownership acts as a constraint on the use of earnings management by management. [Saona, Muro, and Alvarado \(2020\)](#) study also indicates an inverse relationship between insider ownership and discretionary accruals, suggesting that higher levels of insider ownership may result in less earnings management. It is hypothesized that increased management ownership leads to reduced incentives for earnings manipulation.

However, [Kargi and Zakariya \(2021\)](#) found a positive correlation between managerial ownership and accounting accruals, although it did not reach statistical significance. In companies where managers own a significant portion of shares, there seems to be a different pattern of association between insider ownership and earnings management. High levels of insider ownership may discourage insiders from making decisions that maximize value, in line with the entrenchment theory ([Borochin & Knopf, 2021](#)), which is consistent with this finding. As managerial ownership increases, the incentives for

engaging in opportunistic behaviour are said to rise. Recent studies by [Kuo, Lin, and Chien \(2021\)](#) support the positive and statistically significant relationship between insider ownership and earnings management.

Given these discrepancies in findings, it is challenging to draw definitive conclusions about the first hypothesis. However, the hypothesis that managerial ownership is linked to earnings management is maintained. Thus, the study introduces the following hypothesis:

H5: *Board Size significant impact EM*

To strengthen managerial oversight and optimize organizational value, it is often recommended that the proportion of external members on the board of directors exceeds that of the owners ([Murthi, Saraswati, & Yorianti, 2023](#)). This practice is supported by prior research in corporate governance, which suggests that independence is frequently viewed as an effective means to enhance transparency and the provision of comprehensive annual reports. Building on the findings of [Alipour, Ghanbari, Jamshidinavid, and Taherabadi \(2019\)](#), there is an observed inverse relationship between the level of independence of a firm's Board of Directors and the quality of information disseminated by that firm.

In the corporate governance literature, the presence of external directors who are not involved in the day-to-day management of the organization is believed to enhance control over the company's activities and improve the effectiveness of information as a means of ensuring accountability to various stakeholders ([Tibiletti, Marchini, Furlotti, & Medioli, 2021](#)). Therefore, the concept of board independence is designed to ensure fairness in the strategic decisions made by the board and to facilitate efficient oversight of managerial decisions and actions, thereby promoting transparency in information disclosure and cultivating a positive organizational reputation ([Wang, Zhang, & Ullah, 2023](#)).

Moreover, several empirical studies have investigated the impact of external directors on the mitigation of EM. These studies consistently find that a higher proportion of external directors is associated with improved financial reporting quality and a reduced likelihood of EM. According to the available literature, the implementation of a legal framework in capital markets, such as the adoption of a Code of Best Corporate Practices, has led to an increased presence of external directors in Iraqi firms ([Murthi, Saraswati, & Yorianti, 2023](#)). This development has subsequently resulted in enhancements in the transparency and quality of financial information disclosure by these firms. Thus, the study introduces the following hypothesis:

H6: *The Boards independence significant impact on EM*

The consolidation of power within a company becomes evident when an individual simultaneously assumes the roles of chief executive and president of the Board.

Although the Codes of Good Governance advocate for the separation of these roles, empirical studies conducted in Iraq indicate that practical implementation does not align with these recommendations (Abdali, 2023). In cases where the chairman of the Board of Directors has familial connections with the primary shareholders of the company, they are often able to maintain their position as the leader of the organization, even in the presence of significant ownership and control concentration within these families.

As highlighted in the study conducted by Al Matari and Mgammal (2019), a notable observation was made concerning the corporate governance structure of Mexican companies that are listed on the New York Stock Exchange. Their research revealed that in around 85% of these companies, the majority owners in Mexico tend to concurrently serve as the CEO and chair the Board of Directors. LeCounte (2022) suggests that within Mexican firms, it is common for family members to hold both of these roles.

Santos, Moura-Leite, Pereira, and Pagán (2021) conducted a study in Brazil with a survey sample consisting of 400 listed companies. Their research findings revealed that a single individual exerts a disproportionate level of influence in 36% of these businesses. Moreover, in 75% of these firms, the roles of chairman and CEO are held by a single individual. Pham and Tran (2020) conducted a study on a sample of 120 publicly listed companies and found similar results. They discovered that only 21% of these corporations have an independent Chairman of the Board, indicating the absence of overlapping responsibilities between the President and the CEO. Based on the preceding information, we can propose the following hypothesis.

H7: *The CEO duality significant impact on EM*

CEO duality is positively associated with EM. The effectiveness of EM is enhanced in the presence of a centralized authority structure, such as a co-CEO arrangement.

METHODOLOGY

In our study of Iraqi listed non-financial firms, we have adopted a panel data methodology to investigate the relationship between corporate governance and earnings management. The dataset spans 12 years, from 2007 to 2019, and is sourced from the annual reports of non-financial firms. The unique nature of our data, comprising both time-series and cross-sectional dimensions, requires the utilization of advanced econometric models that can account for both firm-specific characteristics and overarching trends.

Our primary modelling approach is the Fixed Effects (FE) model, which serves to control for time-invariant unobserved individual heterogeneities that may introduce bias into our results. By assigning each firm its own intercept, the FE model enables us to capture the inherent, stable attributes of each firm that might influence its earnings management practices. This approach allows for an internal comparison within each firm over time.

In addition to the FE model, we also employ the Random Effects (RE) model. The RE model is particularly useful when assessing variations across firms, especially when these variations are considered random and not tied to specific firms. Since corporate governance practices can have different impacts depending on various unobservable factors, the RE model provides valuable insights into the broader context.

To address potential endogeneity concerns between corporate governance and earnings management, we utilize the Generalized Method of Moments (GMM). This technique offers a robust mechanism for handling potential endogenous regressors, ensuring that our findings are not spurious but reflective of genuine relationships.

The following Econometric Equation (1) have been constructed by us in order to explain the influence that CRDR has on OBSA as well as the effect that OBSA has on CRDR.

$$EM_{it} = a_0 + a_1ISH_{it} + a_2OC_{it} + a_3FO_{it} + a_4INI_{it} + a_5BS_{it} + a_6BI_{it} + a_7CEOD_{it} + a_8LIQ_{it} + a_9LEV_{it} + a_{10}SIZE_{it} + \epsilon_{it} \dots \dots (1)$$

Where.

EM: Earning Management

ISH: Insider Shareholdings

OC: Ownership Concentration

FO: Family Ownership

INI: Institutional Investor

BS: Board Size

BI: Board Independence

CEOD: 1 if CEO and Chairman is same and 0 Otherwise.

LIQ: Liquidity

LEV: Leverage

SIZE: Firm Size

ANALYSIS

In the initial stages of our analysis for the current study, it was imperative to assess the stationarity of the chosen variables. This is a critical step in ensuring the validity and reliability of panel data estimations. To conduct a thorough examination of the stationarity of our variables, we utilized the Dickey-Fuller test. This test is a widely recognized and rigorous technique frequently employed in econometric research. Its meticulous and exhaustive nature enhances the foundational validity of our forthcoming research.

Through the use of the Variance Inflation Factor (VIF), we have assessed the presence of multicollinearity concerns in our analysis. It's important to note that all of the observed VIF values remained below the established threshold of 5, which is a widely accepted indicator of potential multicollinearity issues.

Table 1. Unit Root Test

Variables	P Value
EM	0.0000
ISH	0.0000
OC	0.0000
FO	0.0000
INI	0.0000
BS	0.0000
BI	0.0000
CEOD	0.0000
LIQ	0.0000
LEV	0.0000
SIZE	0.0000

Table 2. VIF Values

Variables	Model 5
EM	
ISH	1.24
OC	1.42
FO	1.47
INI	1.77
BS	1.29
BI	1.10
CEOD	1.33
LIQ	1.32
LEV	1.71
SIZE	1.81

In our comprehensive diagnostic analysis, we aimed to ensure that the selected panel data estimations were not only optimal but also robust and reliable. We conducted a series of tests to assess various aspects of our models. Firstly, we used the White heteroscedasticity test in each of the nine model formulations to identify the sources of heteroscedasticity. The diagnostic test results yielded p-values ranging from 0.0000 to 0.0020, providing strong evidence for the presence of heteroscedasticity and supporting the null hypothesis.

Furthermore, when applied to our panel data, the Breusch-Pagan LM test revealed significant shortcomings in the ordinary least squares (OLS) method. Consequently, we recommend the random effects model as the most suitable estimator in this context. To distinguish between fixed and random effects models and identify potential endogeneity issues, we employed the Hausman specification test. The results of this test indicated that the fixed effects model outperforms the alternative model, leading us to reject the

null hypothesis in favour of the fixed effects model.

Overall, our diagnostic analysis ensures the robustness and appropriateness of our chosen panel data estimations for this study.

Table 3: Results of the Diagnostic test

Model	Statistics	Breusch and Pagan Test/ Autocorrelation Test	White Heteroscedasticity Test	Hausman Test	Sargan Test	Arrelano-Bond Test
1	Prob>chi2 Prob>z	0.0000	0.0000**	0.0043**	0.512	0.798

To evaluate the relationship between errors and instruments, we conducted the Sargan test, which provided strong evidence of orthogonality between our instruments and the error terms. Additionally, the results of the Arellano-Bond test for zero autocorrelation, conducted as part of our GMM analysis, are presented in [Table 4](#). This comprehensive approach underscores the rigorous methodology employed in the analysis of panel data, thereby ensuring the integrity and accuracy of our results.

RESULTS

We examined the correlation between measurement errors and instrumentation through the Sargan test ([Kiviet & Kripfganz, 2021](#)), which indicated that the error terms are not related to the instruments. The outcomes of the Arellano-Bond test for zero autocorrelation, obtained through the GMM method, are presented in [Table 5](#).

Table 4: The Impact of Corporate Governance on the Earning Management

Model 1	Fixed Effect (Time and Country Effect)	Difference GMM
EM	0.5012**	0.3520***
EM t-1		0.4011***
ISH	0.3231*	0.3091***
OC	0.4121**	0.5201***
FO	0.5781*	0.5321***
INI	0.3021	0.4014***
BS	0.4021**	0.6910***
BI	0.4011**	0.7921***
CEOD	0.3021**	0.3819**
LIQ	0.4021	0.2819*
LEV	0.1011	0.2011*

In Model 1, we employed two distinct panel data methods to examine various firm-related variables: Fixed Effects, which considers time- and country-specific variations, and Difference GMM. The significance of each variable is denoted by asterisks, with * indicating significance at the 10% level, ** at the 5% level, and *** at the 1% level.

CONCLUSION

EM and OC show a statistically significant relationship with the dependent variable at the 5% significance level, indicating a strong correlation. The variables ISH, FO, BS, BI, and the duality of CEO and CEOD exhibit statistical significance at the 10% level, indicating a moderate but noteworthy association in this model. However, in this particular model, the variables INI, LIQ, and LEV do not demonstrate statistical significance. When examining the results of the difference GMM, it becomes apparent that the significance of most variables has increased. EM, ISH, OC, FO, INI, BS, BI, and CEOD are all statistically significant at the 1% level, indicating a strong and reliable relationship with the dependent variable. In contrast, LIQ and LEV are statistically significant at the 10% threshold, suggesting that while their association may be relatively weaker compared to the aforementioned variables, it is still empirically significant. Additionally, the lagged dependent variable EM_ (t-1) exhibits a strong positive correlation that is statistically significant at the 1% level. When considering the influence of corporate governance and firm-related variables, both the Fixed Effect and Difference GMM approaches yielded significant findings. Some variables, such as EM, ISH, and OC, maintain their significance in both models, while others exhibit varying degrees of importance. This underscores the importance of employing multiple econometric approaches to gain a comprehensive understanding of the relationships at play.

REFERENCES

- Abd Alhadi, S., Senik, R., Johari, J., Said, R. M., & Nahar, H. S. (2021). Multiple directorships and earnings quality: Does investor protection matter? *Journal of Asia Business Studies*, 15(4), 605-624. doi: <https://doi.org/10.1108/JABS-08-2019-0254>
- Abdali, S. (2023). *The Interplay between Sharia and Gender Equality : A Comparative Study of Women's Rights in Divorce Regulations in Iraq and Tunisia* (Student thesis, Uppsala University). Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-503081>
- Agrianti, K., Lia Dama, Y., Rina, A., & Musdalifah, D. (2021). The Investigation of Ownership Concentration and Board Composition on Disclosure Quality in the Context of Minority Expropriation. *Linguistica Antverpiensia*, 2021(3), 1298-1310. Retrieved from <http://repository.lppm.unila.ac.id/id/eprint/33006>
- Al-Haddad, L., & Whittington, M. (2019). The impact of corporate governance mechanisms on real and accrual earnings management practices: evidence from Jordan. *Corporate Governance: The International Journal of Business in Society*, 19(6), 1167-1186. doi: <https://doi.org/10.1108/CG-05-2018-0183>

- Al Matari, E. M., & Mgammal, M. H. (2019). The moderating effect of internal audit on the relationship between corporate governance mechanisms and corporate performance among Saudi Arabia listed companies. *Contaduría y administración*, 64(4), 9. doi: <http://dx.doi.org/10.22201/fca.24488410e.2020.2316>
- Alipour, M., Ghanbari, M., Jamshidinaid, B., & Taherabadi, A. (2019). Does board independence moderate the relationship between environmental disclosure quality and performance? Evidence from static and dynamic panel data. *Corporate Governance: The International Journal of Business in Society*, 19(3), 580-610. doi: <https://doi.org/10.1108/CG-06-2018-0196>
- Almasarwah, A. (2019). Discretionary accruals and ownership structure: empirical study from Jordan. *International Journal of Corporate Governance*, 10(3-4), 209-247. doi: <https://doi.org/10.1504/IJCG.2019.103225>
- Anwar, H., & Buvanendra, S. (2019). Earnings Management and Ownership Structure: Evidence from Sri Lanka. *Colombo Business Journal*, 10(1), 44-65. doi: <https://doi.org/10.4038/cbj.v10i1.42>
- Attig, N., Chen, R., El Ghouli, S., Guedhami, O., Kwok, C., & Pittman, J. (2020). Are insiders equal? Evidence from earnings management in closely held East Asian firms. *Research in International Business and Finance*, 54, 101243. doi: <https://doi.org/10.1016/j.ribaf.2020.101243>
- Bendig, D., Foege, J. N., Endriß, S., & Brettel, M. (2020). The Effect of Family Involvement on Innovation Outcomes: The Moderating Role of Board Social Capital. *Journal of Product Innovation Management*, 37(3), 249-272. doi: <https://doi.org/10.1111/jpim.12522>
- Borochin, P., & Knopf, J. D. (2021). Do managers seek control and entrenchment? *Journal of Corporate Finance*, 67, 101806. doi: <https://doi.org/10.1016/j.jcorpfin.2020.101806>
- Cao, W., Linnenluecke, M., Tian, J., Xue, R., & Yang, H. (2023). How does investor attention affect energy firms' managerial opportunistic behavior? New evidence from China. *Business Strategy and the Environment*, 32(7), 5025-5043. doi: <https://doi.org/10.1002/bse.3406>
- Ciftci, I., Tatoglu, E., Wood, G., Demirbag, M., & Zaim, S. (2019). Corporate governance and firm performance in emerging markets: Evidence from Turkey. *International Business Review*, 28(1), 90-103. doi: <https://doi.org/10.1016/j.ibusrev.2018.08.004>
- Cooray, T., Gunarathne, A. D. N., & Senaratne, S. (2020). Does Corporate Governance Affect the Quality of Integrated Reporting? *Sustainability*, 12(10), 4262. doi: <https://doi.org/10.3390/su12104262>
- Cordeiro, J. J., Profumo, G., & Tutore, I. (2020). Board gender diversity and corporate environmental performance: The moderating role of family and dual-class majority ownership structures. *Business Strategy and the Environment*, 29(3), 1127-1144. doi: <https://doi.org/10.1002/bse.2421>

- Galletta, S., Mazzù, S., & Naciti, V. (2021). Banks' business strategy and environmental effectiveness: The monitoring role of the board of directors and the managerial incentives. *Business Strategy and the Environment*, 30(5), 2656-2670. doi: <https://doi.org/10.1002/bse.2769>
- Gerged, A. M., Albitar, K., & Al-Haddad, L. (2023). Corporate environmental disclosure and earnings management—The moderating role of corporate governance structures. *International Journal of Finance & Economics*, 28(3), 2789-2810. doi: <https://doi.org/10.1002/ijfe.2564>
- Ghaleb, B. A. A., Kamardin, H., & Tabash, M. I. (2020). Family ownership concentration and real earnings management: Empirical evidence from an emerging market. *Cogent Economics & Finance*, 8(1), 1751488. doi: <https://doi.org/10.1080/23322039.2020.1751488>
- Hakimah, Y., Pratama, I., Fitri, H., Ganatri, M., & Sulbahrie, R. A. (2019). Impact of Intrinsic Corporate Governance on Financial Performance of Indonesian SMEs. *International Journal of Innovation, Creativity and Change*, 7(1), 32-51. Retrieved from https://ijicc.net/images/vol7iss1/7102_Hakimah_2019_TD_R.pdf
- Hayward, M., Hunt, R., & Miller, D. (2022). How vulnerability enriches family firm relationships: A social exchange perspective. *Journal of Family Business Strategy*, 13(1), 100450. doi: <https://doi.org/10.1016/j.jfbs.2021.100450>
- Hendratni, A., Ryandono, M. N. H., & Sukmaningrum, P. S. (2020). Developing Islamic crowdfunding website platform for startup companies in Indonesia. *Journal of Islamic Marketing*, 11(5), 1041-1053. doi: <https://doi.org/10.1108/JIMA-02-2019-0022>
- Kargi, H. S., & Zakariya, M. (2021). Moderating effect of free cash flow and managerial ownership on earnings management of listed conglomerate firms in Nigeria. *Accounting and taxation review*, 5(2), 30-52. Retrieved from [https://atreview.org/admin/12389900798187/Atreview%205\(2\)%2030-52%20\(1\).pdf](https://atreview.org/admin/12389900798187/Atreview%205(2)%2030-52%20(1).pdf)
- Karpoff, J. M. (2021). On a stakeholder model of corporate governance. *Financial Management*, 50(2), 321-343. doi: <https://doi.org/10.1111/fima.12344>
- Kiviet, J. F., & Kripfganz, S. (2021). Instrument approval by the Sargan test and its consequences for coefficient estimation. *Economics Letters*, 205, 109935. doi: <https://doi.org/10.1016/j.econlet.2021.109935>
- Klius, Y., Ivchenko, Y., Izhboldina, A., & Ivchenko, Y. (2020). International approaches to organizing an internal control system at an enterprise in the digital era. *Economic Annals-XXI*, 185(9-10), 133-143. doi: <https://doi.org/10.21003/ea.V185-13>
- Kuo, Y.-F., Lin, Y.-M., & Chien, H.-F. (2021). Corporate social responsibility, enterprise risk management, and real earnings management: Evidence from managerial confidence. *Finance Research Letters*, 41, 101805. doi: <https://doi.org/10.1016/j.frl.2020.101805>
- LeCounte, J. F. (2022). Founder-CEOs: Succession planning for the success, growth, and legacy of family firms. *Journal of Small Business Management*, 60(3), 616-633. doi: <https://doi.org/10.1080/00472778.2020.1725814>

- Li, D., & Shen, W. (2021). Can Corporate Digitalization Promote Green Innovation? The Moderating Roles of Internal Control and Institutional Ownership. *Sustainability*, 13(24), 13983. doi: <https://doi.org/10.3390/su132413983>
- Likitapiwat, T., & Treepongkaruna, S. (2023). Staggered board, social capital and sustainability. *Corporate Social Responsibility and Environmental Management*, 30(3), 1524-1533. doi: <https://doi.org/10.1002/csr.2435>
- Marín-Sanchiz, C.-R., Carvajal, M., & González-Esteban, J.-L. (2023). Survival Strategies in Freelance Journalism: An Empowering Toolkit to Improve Professionals' Working Conditions. *Journalism Practice*, 17(3), 450-473. doi: <https://doi.org/10.1080/17512786.2021.1929414>
- Melgarejo, M. (2019). The impact of corporate governance on earnings quality: evidence from Peru. *Journal of Accounting in Emerging Economies*, 9(4), 527-541. doi: <https://doi.org/10.1108/JAEE-12-2018-0138>
- Meyer, K. E., Li, C., & Schotter, A. P. J. (2020). Managing the MNE subsidiary: Advancing a multi-level and dynamic research agenda. *Journal of International Business Studies*, 51(4), 538-576. doi: <https://doi.org/10.1057/s41267-020-00318-w>
- Mintzberg, H. (2019). Who should control the corporation? In *Corporate Governance* (pp. 189-214). Gower. Retrieved from <https://www.taylorfrancis.com/chapters/edit/10.4324/9781315191157-12>
- Murti, G. T., Saraswati, R. S., & Yoriandi, Y. M. (2023). Does Intellectual Capital and Board Characteristics Affect Financial Performance? *Jurnal Akuntansi Manado (JAIM)*, 4(2), 304-319. doi: <https://doi.org/10.53682/jaim.vi.7225>
- Novihana Noor, P., & Cynthia Afriani, U. (2020). The Effect of Ownership Structure and Board Independence Towards Overinvestment Behavior of Family Firm in Indonesia. *KnE Social Sciences*, 4(6), 1120–1138. doi: <https://doi.org/10.18502/kss.v4i6.6666>
- Payne, G. T., & Petrenko, O. V. (2019). Agency theory in business and management research. In *Oxford Research Encyclopedia of Business and Management*. doi: <https://doi.org/10.1093/acrefore/9780190224851.013.5>
- Pham, H. S. T., & Tran, H. T. (2020). CSR disclosure and firm performance: The mediating role of corporate reputation and moderating role of CEO integrity. *Journal of Business Research*, 120, 127-136. doi: <https://doi.org/10.1016/j.jbusres.2020.08.002>
- Piercy, D. (2023). *Society and Business Anthology*. Daniel Piercy. Retrieved from <https://pressbooks.pub/sbu200mcc>
- Rashid, C. A., & Jaf, R. A. S. (2023). The Role of Accounting Measurement and Disclosure of Social Capital in Improving Quality of Accounting Information. *Iranian Journal of Management Studies*, 16(4), 927-945. Retrieved from https://ijms.ut.ac.ir/article_90870_bfd43d87ed7b115cc224e14b9d176e2d.pdf
- Rose, A. M. (2020). Cutting Class Action Agency Costs: Lessons from the Public Company. *UC Davis Law Review*, 54, 337. doi: <https://dx.doi.org/10.2139/ssrn.3463487>

- Salehi, M., & Alkhyoon, H. (2022). The relationship between managerial entrenchment, social responsibility, and firm's risk-taking and shareholders' activity. *Social Responsibility Journal*, 18(5), 1035-1049. doi: <https://doi.org/10.1108/SRJ-10-2019-0339>
- Salehi, M., Hoshmand, M., & Rezaei Ranjbar, H. (2020). The effect of earnings management on the reputation of family and non-family firms. *Journal of Family Business Management*, 10(2), 128-143. doi: <https://doi.org/10.1108/JFBM-12-2018-0060>
- Salehi, M., Moradi, M., & Faysal, S. (2023). The relationship between corporate governance and cost of equity: evidence from the ISIS era in Iraq. *International Journal of Emerging Markets*, ahead-of-print(ahead-of-print). doi: <https://doi.org/10.1108/IJOEM-07-2020-0739>
- Santos, J. A. D., Moura-Leite, R., Pereira, M. W. G., & Pagán, M. (2021). Social and environmental disclosure of the largest companies in Brazil's agribusiness sector. *Social Responsibility Journal*, 17(8), 1009-1027. doi: <https://doi.org/10.1108/SRJ-01-2019-0009>
- Saona, P., Muro, L., & Alvarado, M. (2020). How do the ownership structure and board of directors' features impact earnings management? The Spanish case. *Journal of International Financial Management & Accounting*, 31(1), 98-133. doi: <https://doi.org/10.1111/jifm.12114>
- Shahzad, M., Qu, Y., Zafar, A. U., Rehman, S. U., & Islam, T. (2020). Exploring the influence of knowledge management process on corporate sustainable performance through green innovation. *Journal of Knowledge Management*, 24(9), 2079-2106. doi: <https://doi.org/10.1108/JKM-11-2019-0624>
- Shi, W., Connelly, B. L., Hoskisson, R. E., & Ketchen, D. J. (2020). Portfolio Spillover of Institutional Investor Activism: An Awareness–Motivation–Capability Perspective. *Academy of Management Journal*, 63(6), 1865-1892. doi: <https://doi.org/10.5465/amj.2018.0074>
- Siraji, M., & Nazar, M. C. (2021). How do family and managerial ownership structure effect Real Earnings Management? *Asian Journal of Economics, Business and Accounting*, 21(7), 50-58. doi: <https://doi.org/10.9734/AJEBA/2021/v21i730401>
- Tibiletti, V., Marchini, P. L., Furlotti, K., & Medioli, A. (2021). Does corporate governance matter in corporate social responsibility disclosure? Evidence from Italy in the “era of sustainability”. *Corporate Social Responsibility and Environmental Management*, 28(2), 896-907. doi: <https://doi.org/10.1002/csr.2097>
- Wang, Z., Zhang, J., & Ullah, H. (2023). Exploring the Multidimensional Perspective of Retail Investors' Attention: The Mediating Influence of Corporate Governance and Information Disclosure on Corporate Environmental Performance in China. *Sustainability*, 15(15), 11818. doi: <https://doi.org/10.3390/su151511818>
- Wolff, S., Ross, S., & Wee, A. (2020). *Subnational Governance and Conflict*. Multiple Resolution. doi: <http://dx.doi.org/10.1596/34436>
- Xu, K., Hitt, M. A., & Miller, S. R. (2020). The ownership structure contingency in the

sequential international entry mode decision process: Family owners and institutional investors in family-dominant versus family-influenced firms. *Journal of International Business Studies*, 51(2), 151-171. doi: <https://doi.org/10.1057/s41267-019-00250-8>