

BEYOND SARBANES-OXLEY: DETERMINANTS OF INTERNAL CONTROL QUALITY IN A CIVIL LAW EMERGING MARKET

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Abstract

How to cite this paper: Samaha, K. (2026). Beyond Sarbanes-Oxley: Determinants of internal control quality in a civil law emerging market. *Corporate Ownership & Control*, 23(1), 102–109.
<https://doi.org/10.22495/cocv23i1art10>

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ISSN Online: 1810-3057

ISSN Print: 1727-9232

Received: 22.12.2025

Revised: 18.02.2026; 02.03.2026

Accepted: 20.03.2026

JEL Classification: D22, G1, G2, G32, G34, M10, M12, M14

DOI: 10.22495/cocv23i1art10

This study examines the principal determinants of internal control quality (ICQ) in Egyptian non-financial listed firms, focusing on corporate governance attributes and firm-specific characteristics. ICQ is measured using survey responses from external auditors for the period 2013–2016, based on a balanced panel dataset of 236 firms listed on the Egyptian Stock Exchange (EGX). The findings indicate that board independence is positively and significantly associated with ICQ under a combined leadership structure, but exhibits a negative association under a separated structure. Ownership dispersion significantly enhances ICQ when leadership roles are separated, but becomes insignificant under a combined structure, suggesting that leadership concentration may empower block holders over minority shareholders, potentially weakening ICQ. Regarding leverage, the association with ICQ is positive under combined leadership and negative under a separated structure, indicating that concentrated leadership may strengthen creditor monitoring in highly leveraged firms, thereby improving ICQ. Overall, the results demonstrate that the effects of corporate governance and firm-level characteristics on ICQ are contingent upon the company's leadership structure. This study contributes to the accounting literature by providing evidence from an emerging civil law environment and by extending the analysis of Chen et al. (2017), originally conducted in the United States. The findings offer policy implications for Egyptian regulators regarding internal control disclosure requirements and challenge the conventional view that combined leadership necessarily undermines transparency in emerging economies.

Keywords: Internal Control Quality, Corporate Governance Characteristics, Firm Specific Characteristics, Egypt

Authors' individual contribution: The Author is responsible for all the contributions to the paper according to CRediT (Contributor Roles Taxonomy) standards.

Declaration of conflicting interests: The Author declares that there is no conflict of interest.

1. INTRODUCTION

Recurring corporate financial scandals suggest that executives retain considerable discretion in

the preparation and presentation of financial statements, which may not faithfully represent firms' underlying economic performance. Such discretion may be exercised either to mislead

shareholders or to secure private benefits at the expense of other stakeholders (Boulhaga et al., 2022; Hu et al., 2014; Kim et al., 2009). Scholars commonly refer to this opportunistic use of accounting discretion as earnings management.

The significance of internal control quality (ICQ) stems from its central role in promoting high-quality financial reporting by constraining earnings management practices (Krishnan, 2005). The internal control system aims to provide reasonable assurance regarding the achievement of organizational objectives, including operational efficiency and effectiveness, the reliability of financial reporting, and compliance with applicable laws and regulations. Prior research indicates that weaknesses in internal control systems increase the risk of material misstatements and financial reporting irregularities (Bell & Carcello, 2000; Ji et al., 2020; Kinney & McDaniel, 1989). Consequently, deficient internal controls may heighten the likelihood of earnings manipulation (Bizarro et al., 2011), as they create greater scope for both intentional earnings management and unintentional errors in accounting estimates (Ashbaugh-Skaife et al., 2009; Doyle et al., 2007a; Ji et al., 2020).

Among the principal criticisms directed at Enron and WorldCom was the failure to establish and maintain effective internal control systems (Verschoor, 2002). Management bears primary responsibility for the design and implementation of internal control systems within organizations (Chen et al., 2017; Li et al., 2022). Given that corporate governance structures play a pivotal role in overseeing managerial actions and enhancing ICQ, various governance attributes may interact to shape ICQ and mitigate risk (Knechel & Willekens, 2006). Accordingly, it is essential to examine board-related monitoring mechanisms that may strengthen ICQ.

A substantial body of research conducted in the United States has explored the association between board characteristics and internal control weaknesses (Balsam et al., 2014; Chen et al., 2017), yielding mixed evidence regarding the relationship between board independence and ICQ. In emerging market contexts, Hu et al. (2014) and Agyei-Mensah (2016) report a positive association between board independence and internal control disclosures in China and Ghana, respectively. Building on this literature, the present study extends the analysis by investigating the moderating role of chief executive officer (CEO) duality — specifically, combined versus separated leadership structures — on the relationship between board independence and ICQ in Egypt. Prior evidence suggests that CEO duality conditions the impact of board independence on firm outcomes. For instance, Combs et al. (2007) show that CEO duality influences the effect of board independence on corporate performance, while Chen et al. (2017) demonstrate its moderating role in the association between board independence and internal control weakness disclosures in the U.S. setting.

This research question is particularly salient in the Egyptian context, which historically features weaknesses in auditing and accounting infrastructure (Elbannan, 2009; Samaha & Hegazy, 2010). Although governance reforms introduced in 2005 emphasized board independence as a mechanism to enhance transparency (Afify, 2009; Khlif & Samaha, 2014;

Khelif et al., 2021), they did not mandate a specific board leadership structure. Consequently, firms retain discretion to adopt either a combined leadership structure, where the CEO simultaneously serves as board chair, or a separated leadership structure, in which the two roles are distinct.

Using a sample of 236 Egyptian non-financial listed companies over the period 2013–2016, we find that board independence is not significantly associated with ICQ in the baseline analysis. However, when accounting for the moderating effect of leadership structure, the relationship becomes positive and statistically significant under a combined leadership structure and negative and significant under a separated structure.

This study contributes to the extant accounting literature on the relationship between ICQ, firm-specific characteristics, and corporate governance characteristics by providing evidence from an emerging civil law market, thereby extending the empirical analysis of Chen et al. (2017) beyond the U.S. context. To the best of our knowledge, this is the first study to examine the determinants of ICQ in an emerging market setting. The findings are consistent with Brickley et al. (1997), who argue that, for many firms, the costs associated with separating the CEO and chair roles may exceed the benefits, and that combining the two positions can, under certain conditions, be efficient and aligned with shareholder interests. These results offer important implications for Egyptian policymakers seeking to enhance corporate transparency, strengthen governance practices, and improve internal control standards.

The remainder of the paper proceeds as follows. Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 outlines the research methodology. Section 4 presents the empirical results. Section 5 discusses the findings, and Section 6 concludes the study.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Combining the CEO and board chair roles may enhance CEO power (Daily & Johnson, 1997). The literature presents two contrasting perspectives on leadership structure (Combs et al., 2007). Agency theory views managerial power as a potential source of opportunism, requiring effective monitoring mechanisms to constrain it. In contrast, the strategic leadership perspective considers power a valuable resource that can enhance organizational effectiveness (Cannella & Monroe, 1997).

Within the agency framework developed by Fama and Jensen (1983), a combined leadership structure weakens the separation between decision management (the CEO function) and decision control (the board chair function). From this standpoint, combining the two roles may facilitate CEO entrenchment (Pfeffer, 1981). and exacerbate conflicts of interest between managers and shareholders (Kim et al., 2009). Combined leadership structure may therefore undermine the system of checks and balances by compromising board independence and limiting effective oversight of top management (Cerbioni & Parbonetti, 2007). Moreover, because CEOs have superior access to firm-specific private information on competitive

advantages and internal operations, duality may limit the full and transparent transfer of this information to board members (Kim et al., 2009).

Conversely, proponents of combined leadership argue that CEO duality promotes clearer strategic direction and more effective implementation of corporate strategy (Anderson & Anthony, 1986). By consolidating authority, a combined structure may reduce information-sharing costs and mitigate conflicts between the CEO and a non-executive chair. CEO duality can facilitate faster strategic responses, provide a focal point for external accountability, and establish a clear line of authority within the company, thereby minimizing executive conflicts (Finkelstein & D'Aveni, 1994).

The role of independent (outside) directors further complicates this debate. Outside directors often lack firm-specific knowledge, which may hinder their ability to distinguish between managerial performance and external factors affecting outcomes (Baysinger & Hoskisson, 1990). Boards dominated by outside directors may focus disproportionately on short-term financial indicators, such as accounting figures and stock market performance, rather than long-term organizational effectiveness grounded in robust internal control systems. In this context, a combined leadership structure may strengthen the CEO's influence during board deliberations and enable the alignment of outside directors toward enhancing organizational effectiveness through improvements in ICQ. When duality exists within a board dominated by independent directors, the potential efficiency gains may outweigh the associated governance risks (Finkelstein & D'Aveni, 1994). Consistent with this view, Chen et al. (2017) suggest that if a combined structure enhances operational efficiency, management may have stronger incentives to promote a robust internal control system to improve internal operations and decision-making processes.

Against this theoretical background, the present study addresses the following research questions:

RQ1: Is there a relationship between internal control quality, corporate governance characteristics, and firm characteristics in Egyptian listed firms?

RQ2: Does the leadership structure moderate the relationship between internal control quality and corporate governance characteristics in Egyptian listed firms?

Empirical evidence on the moderating role of leadership structure in the relationship between board independence and accounting-related outcomes remains limited. Combs et al. (2007), for example, examine whether a combined leadership structure moderates the association between board independence and company performance, measured by abnormal returns. Their findings indicate that the proportion of outside directors does not significantly affect abnormal returns, while the interaction between outside directors and the combined leadership structure is negatively associated with abnormal returns.

Focusing specifically on internal controls, Chen et al. (2017) investigate the moderating effect of combined leadership structure on the relationship

between board independence and the disclosure of internal control weaknesses in the United States. They report a negative association between board independence and internal control weakness disclosures, with this relationship stronger in firms with a combined leadership structure than in those with a separated leadership structure.

Drawing on this literature, the present study formulates the following hypotheses:

H1: There is a relationship between internal control quality, corporate governance characteristics, and firm characteristics.

H2: The leadership structure moderates the relationship between internal control quality and corporate governance characteristics.

3. RESEARCH METHODOLOGY

3.1. Sample and data

The sample comprises firms listed on the Egyptian Stock Exchange (EGX) over the period 2013-2016. The analysis excludes financial institutions and insurance companies due to their industry-specific accounting standards and their classification as highly regulated sectors.

For the remaining firms, two criteria determine the final selection: 1) the availability of annual reports at the stock exchange, and 2) continuous listing throughout the entire study period (2013-2016). Application of these criteria results in a final sample of 236 firm-year observations over the four-year period (59 per year x 4 years). Table 1 provides detailed information on the non-financial EGX-listed companies included in the analysis.

Table 1. Sample characteristics

Industry	Initial listed companies	Final sample	Inclusion rate (%)
Commercial and services	45	32	71%
Industrial	39	27	69%
Total	84	59	70%

Source: Author's elaboration.

Table 2 below provides the definitions and measurements of all variables in this study (dependent, independent, and control), along with their respective data sources.

3.2. Dependent variable

Information on the dependent variable in our model – internal control quality (ICQ) – is not directly observable and is generally unavailable in public disclosures (Krishnan, 2005). In the United States, the enactment of the Sarbanes-Oxley Act of 2002 (SOX)¹, particularly Sections 302 and 404, mandated the disclosure and assessment of internal controls, thereby enhancing the availability of ICQ-related information. However, no equivalent regulatory requirement exists in emerging economies such as Egypt, which has a relatively underdeveloped accounting and auditing infrastructure (Khlif & Samaha, 2014).

¹ Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (2002). <https://www.govinfo.gov/content/pkg/COMPS-1883/pdf/COMPS-1883.pdf>

Table 2. Variables measurement and data sources

Variables	Description and measurement	Sources of information
Dependent variable		
<i>ICQ</i>	<i>Internal control quality</i> : Score, ranging from 0 to 2.	Survey of Egyptian auditors
Independent variables		
<i>Blnd</i>	<i>Board independence</i> : The percentage of independent directors on the board.	Board of directors reports (EGID*)
<i>LeadS</i>	<i>Leadership structure</i> : 1 if the CEO is also the Chairman of the board and 0 otherwise.	Board of directors reports (EGID)
Control variables		
<i>AudS</i>	<i>Auditor's size</i> (dummy variable): 1 if Big Four and 0 otherwise.	Auditor report (firm's website and EGID)
<i>BSize</i>	<i>Board size</i> : Number of board members.	Board of directors reports (EGID)
<i>FF</i>	<i>Free float</i> : A measure of the percentage of shares held by individual (retail) investors to assess liquidity.	Ownership structure data (EGID)
<i>Loss</i>	A binary indicator (dummy variable) for negative net income or negative earnings per share (EPS): 1 if the company reports negative earnings and 0 otherwise.	Annual reports: Income statement (firm's website and EGID)
<i>FSize</i>	<i>Firm size</i> : The natural logarithm of market capitalization.	EGID
<i>Lev</i>	<i>Financial leverage</i> : The total debt-to-total-asset ratio is calculated by dividing a company's total debts by its total assets.	Annual report: Balance sheet (firm's website and EGID)
<i>ROA</i>	<i>Return on assets</i> : The net income to total assets ratio, measures a company's profitability relative to its total resources.	Annual reports (firm's website and EGID)

Note: * Egypt for Information Dissemination (EGID).

Source: Author's elaboration.

Consistent with Khlif and Samaha (2014), we adopt a survey-based approach to obtain information on ICQ. Specifically, we surveyed 17 Egyptian external auditors who audited the listed firms in our sample between 2013 and 2016. The survey instrument follows the internal control checklist developed by Hwang et al. (2004), incorporating 23 items that cover six key dimensions:

- 1) organizational structure, roles, and responsibilities;
- 2) risk management;
- 3) overall monitoring;
- 4) information technology (IT) function and organization;
- 5) system characteristics;
- 6) IT monitoring controls.

To administer the survey, we first reviewed audit reports to identify the external auditors and their contact details. Following this, we arranged meetings with the respective auditors to evaluate each firm's ICQ using the specified checklist. These meetings took place between June 2023 and September 2023. We asked auditors to rate each item on a three-point scale: 0 – not effective, 1 – moderately effective, and 2 – highly effective. All participating auditors confirmed that they based their evaluations on archived audit files for the years under examination.

The ICQ score for each firm is computed as follows:

$$ICQ_i = \frac{\sum_{j=1}^{23} Score_{ji}}{23} \quad (1)$$

Accordingly, the ICQ score ranges from 0 to 2. Controlling for the internal validity of the ICQ variable, Cronbach's alpha ranged from 0.745 in 2016 to 0.871 in 2013, confirming its internal validity.

3.3. Independent and control variables

We incorporate two key corporate governance attributes as the independent variables: board independence (*Blnd*) and leadership structure (*LeadS*). Additionally, we include seven control variables capturing corporate governance attributes

(board size – *BSize* and ownership structure – *FF*), firm-specific characteristics (firm size – *FSize*, financial performance – *Loss*, return on assets – *ROA*, and leverage – *Lev*), and auditor type (*AudS*, Big Four vs non-Big Four auditors).

With respect to governance variables, board size is commonly viewed as an important monitoring mechanism that may enhance corporate transparency. The notion of expert power suggests that larger boards benefit from a broader range of expertise, experience, and perspectives, thereby strengthening their supervisory capacity (Samaha et al., 2015). Accordingly, a positive association between board size and ICQ is anticipated.

Ownership dispersion, proxied by free float, may also influence ICQ. Greater dispersion can exacerbate information asymmetry between small and large shareholders. To mitigate such asymmetry, management may have stronger incentives to enhance transparency through improvements in ICQ. Therefore, a positive relationship between ownership dispersion and ICQ is expected.

Regarding firm-specific characteristics, prior literature offers mixed predictions concerning firm size. On the one hand, larger firms may exhibit stronger internal control systems due to greater resources and formalized procedures (Krishnan, 2005). On the other hand, increased organizational complexity in large firms may create additional internal control challenges, potentially leading to lower ICQ (Zhang et al., 2007). Consistent with Doyle et al. (2007b), firm size is measured as the natural logarithm of market capitalization. Given the inconclusive theoretical and empirical evidence (Kinney & McDaniel, 1989), no directional prediction is formulated for this variable.

Leverage is also expected to affect ICQ. Elbannan (2009) finds that weaker internal controls are associated with lower credit ratings and reduced access to debt financing. In emerging markets, where banks constitute a primary source of external finance (Barako et al., 2006), highly leveraged firms may face stronger monitoring by creditors and, consequently, stronger incentives to maintain effective internal control systems. Thus, a positive association between leverage and ICQ is expected.

Financial distress may further influence ICQ, as firms experiencing poor financial performance may

reduce investments in maintaining robust internal control systems (Krishnan, 2005). Financial distress is measured using a dummy variable equal to 1 if the firm reports negative earnings and 0 otherwise.

Finally, auditor size is included as a control variable. Evidence from the Egyptian context indicates that larger audit companies are positively associated with higher ICQ (Khlif & Samaha, 2016). Accordingly, auditor size, measured by a dummy variable equal to 1 if the auditor belongs to the Big Four and 0 otherwise, is expected to be positively related to ICQ.

$$ICQ_{it} = \alpha_0 + \alpha_1 BInd_{it} + \alpha_2 LeadS_{it} + \alpha_3 AudS_{it} + \alpha_4 BSize_{it} + \alpha_5 FF_{it} + \alpha_6 Loss_{it} + \alpha_7 FSize_{it} + \alpha_8 Lev_{it} + \alpha_9 ROA_{it} + \sum_{t=1}^3 \alpha_{t+9} YEAR_Dummy_t + \varepsilon_{it} \quad (2)$$

where,

- *Dependent variable:* ICQ_{it} is internal control quality.

- *Independent variables:* $BInd_{it}$ is board independence proxied by the percentage of independent directors on the board; $LeadS_{it}$ is leadership structure proxied (dummy variable: 1 if the CEO and Chairman are the same person, 0 otherwise).

- *Control variables:* $AudS_{it}$ is external auditor's size (dummy variable: 1 for Big Four firms and 0 otherwise); $BSize_{it}$ is the board size, measured by the number of board members; FF_{it} is the free float, proxied by the percentage of shares held by individual (retail) investors; $Loss_{it}$ is a binary indicator (dummy variable) for negative earnings (1 if a firm reports negative earnings, 0 otherwise); $FSize_{it}$ is the natural logarithm of the firm's market capitalization; Lev_{it} is the leverage ratio measured as the total debt divided by total assets; ROA_{it} is the profitability ratio measured as the net income divided by total assets.

To test $H1$, we first estimate the baseline model (Model 1) to examine the effect of board independence and leadership structure, representing two key corporate governance characteristics, on ICQ .

To test $H2$, we differentiate between firms with a combined CEO and Chairman roles and those with a separated leadership structure. We then re-estimate the model after removing the $LeadS_{it}$ variable to assess whether leadership structure moderates the relationship between ICQ and the remaining key governance characteristic (i.e., board independence) under the two leadership structures (Models 2 and 3).

3.4. Model specification

To empirically test the hypotheses outlined above, we employ a panel data approach using a balanced dataset. Panel data analysis allows us to observe the same firms over multiple time periods, providing both cross-sectional and time-series variation.

Specifically, we estimate a fixed-effects regression model, including year-specific indicator (dummy) variables for all years except one ($t - 1$) to control for unobserved time effects. The regression model is specified as follows:

Finally, a sensitivity analysis is conducted to further investigate the moderating effect of leadership structure on $H2$. This involves introducing an interaction term ($BInd \times LeadS$), defined as the proportion of outside directors on the board for firms with combined CEO and Chairman roles and zero for firms with separated leadership (Model 4). This approach allows us to explicitly test whether the influence of board independence on ICQ varies depending on the shape of the leadership structure.

4. EMPIRICAL RESULTS

4.1. Descriptive statistics

Table 3 presents descriptive statistics for the continuous variables in our sample. The ICQ variable has a mean of 1.148 and a range of 0 to 2. The average board independence ratio ($BInd$) is 14.777%, with a minimum of 0% and a maximum of 89%, and the proportion of companies with a combined leadership structure is 61.864%.

Among the control variables, board size ($BSize$) ranges from three to 21 members, with an average of 9.165. Ownership dispersion, measured by free float (FF), has a mean of 34.028%, and spans from 5% to 60%. The leverage ratio (Lev), defined as total debt divided by total assets, averages 12.299% and ranges from 0 to 67.110%. Firm size ($FSize$), measured as the natural logarithm of market capitalization, has a mean of 17.124, with a minimum of 11.423 and a maximum of 22.543.

For the dummy variables, approximately 44% of firms are audited by Big Four firms, and about 3% report negative earnings, indicating financial distress.

Table 3. Descriptive statistics

Panel A: Continuous variables				
Variable	Mean	Standard deviation	Min	Max
ICQ	1.148	0.752	0.000	2.000
$BInd$	14.777	13.854	0.000	89.000
$BSize$	9.165	4.998	3.000	21.000
FF	34.028	22.353	5.000	60.000
Lev	12.299	28.455	0.000	67.110
$FSize$	17.124	1.781	11.423	22.543
ROA	2.234	7.789	-08.000	46.000
Panel B: Proportions for dummy variables				
Variable	Definition			Percentage (%)
$AudS$	1 if Big Four and 0 otherwise			43.690%
$LeadS$	1 if the CEO is also the Chairman of the board (combined leadership structure) and 0 otherwise			61.864%
$Loss$	1 if a firm reports negative earnings, 0 otherwise			2.988%

Source: Author's elaboration.

4.2. Multivariate analysis

In Model 1 of Table 4, the results indicate that neither board independence nor leadership structure has a statistically significant effect on *ICQ*, although the coefficients are positive, providing partial support for *H1*.

To examine the moderating role of leadership structure on the *ICQ-Blnd* relationship, we split the sample into two subgroups: 1) firms with a combined leadership structure (*LeadS* = 1), and 2) firms with a separated leadership structure (*LeadS* = 0).

For the combined leadership group (Model 2), the association between board independence and *ICQ* becomes positive and statistically significant ($t = 3.419$; p -value = 0.000), inconsistent with findings reported by Chen et al. (2017) in the U.S. context. For the separated leadership group (Model 3), the relationship turns negative and significant ($t = -2.990$; p -value = 0.000), consistent with findings reported by Chen et al. (2017) in the U.S. context. These results demonstrate that leadership structure

moderates the effect of board independence on *ICQ*, as the initially non-significant relationship in the full sample becomes positive under combined leadership structure and negative under separated leadership, thereby supporting *H2* in the presence of combined leadership structure.

Regarding control variables, auditor type consistently exhibits a significant positive effect on *ICQ* across all models. Ownership dispersion is positively associated with *ICQ* in Model 1, with this relationship becoming stronger under a separated leadership structure, but it is insignificant under a combined leadership structure. Board size is significant in Model 1 ($t = 2.389$; p -value = 0.007) but loses significance in both the combined and separated leadership subgroups. Leverage is insignificant in Model 1 but becomes positive and significant under combined leadership, and negative and significant under separated leadership.

The adjusted R-squared values range from 48.22% to 57.85%, indicating that the models have good explanatory power.

Table 4. Multiple regression analysis

Variables	Model 1 Full sample	Model 2 Combined leadership structure	Model 3 Separated leadership structure	Model 4 Interaction variable
Constant	1.798 (7.180)***	1.294 (3.540)***	0.797 (2.385)**	1.679 (7.090)***
Independent variables				
<i>Blnd</i>	0.133 (1.141)	0.534 (3.419)***	-0.424 (-2.990)***	
<i>LeadS</i>	0.043 (0.617)			
Interaction variable				
<i>Blnd</i> × <i>LeadS</i>				0.571 (3.780)***
Control variables				
<i>AudS</i>	0.429 (11.615)***	0.421 (9.008)***	0.449 (10.111)***	0.492 (12.212)***
<i>BSize</i>	0.007 (2.389)**	0.008 (1.047)	0.004 (0.039)	0.022 (2.001)**
<i>FF</i>	0.151 (1.680)*	0.037 (0.422)	0.488 (3.470)***	0.172 (2.099)**
<i>Loss</i>	-0.081 (-0.335)	0.041 (0.774)	-0.069 (-0.695)	-0.061 (-0.555)
<i>Lev</i>	0.052 (0.751)	0.127 (1.871)*	-0.304 (-2.561)**	0.049 (0.721)
<i>FSize</i>	-0.039 (-2.390)**	-0.037 (-1.670)	0.028 (0.980)	-0.033 (-2.090)**
<i>ROA</i>	-0.818 (-4.075)***	-0.958 (-4.205)***	0.254 (0.646)	-0.853 (-4.372)***
Time fixed effects				
2014	-0.562 (-10.790)***	-0.349 (-0.600)	-0.556 (8.523)***	-0.546 (-11.598)***
2015	-0.599 (-11.780)***	0.188 (2.510)**	-0.589 (-9.324)***	-0.591 (-12.678)***
2016	-0.402 (-7.590)***	0.529 (8.141)***	-0.399 (-6.245)***	-0.405 (8.444)***
Model diagnostics				
No. of observations	236	146	90	236
Adj. R-square	48.220%	51.667%	57.850%	51.891%
F (p-value)	31.333 (0.000)***	19.494 (0.000)***	26.221 (0.000)***	33.879 (0.000)***
Max VIF	1.920	2.600	4.100	1.800

Note: * significant at 10%; ** significant at 5%; *** significant at 1%. VIF — variance inflation factor.

Source: Author's elaboration.

5. DISCUSSION OF THE RESULTS

The empirical findings indicate that a combined leadership structure enhances the monitoring role of the board of directors, particularly that of outside directors, in the Egyptian context. Outside directors are often limited in their knowledge of a firm's operations, which can lead them to prioritize short-term indicators such as accounting figures and stock market performance over long-term organizational effectiveness, including the strengthening of internal control systems (Baysinger & Hoskisson, 1990). Under a combined leadership structure, however, the combined leadership structure appears to motivate outside directors to exert greater pressure on management to improve internal controls, thereby supporting more effective internal operations

and decision-making. In contrast, a separated leadership structure increases information-sharing costs and potential conflicts between the CEO and non-executive chair, which may redirect outside directors' attention toward short-term metrics and reduce their focus on internal control improvements, resulting in lower *ICQ*.

The lack of significance for ownership dispersion under a combined leadership structure may be explained by the fact that it can strengthen stockholder influence at the expense of minority shareholders, thereby potentially lowering *ICQ*. The positive and significant relationship between leverage and *ICQ* under a combined leadership structure suggests that concentrated leadership amplifies the monitoring role of creditors in highly leveraged firms, improving *ICQ*.

To further validate the moderating effect of leadership structure on the relationship between ICQ and board independence, we introduce an interaction term ($LeadS \times BInd$) in Model 4. This variable captures the influence of board independence on ICQ, specifically for firms with a combined leadership structure, taking the value of the proportion of outside directors on the board under a combined leadership structure and setting it to zero otherwise. The results show that the interaction term has a significant positive effect on ICQ ($t = 3.780$; $p\text{-value} = 0.000$), providing additional evidence that a combined leadership structure strengthens the impact of outside directors on ICQ.

6. CONCLUSION

Our study contributes to the growing body of African research on the determinants of ICQ, particularly regarding the moderating effects of leadership structure. Previous studies have examined aspects such as CEO influence on board compensation and corporate performance in South Africa (Ntim et al., 2017) and the impact of leadership structure on board strategic involvement in Kenya (Tuwey & Tarus, 2016). Our findings indicate that the effect of board independence on ICQ is contingent on the firm's leadership structure (combined versus separated), highlighting that the effectiveness of internal control should be evaluated within the broader corporate governance framework.

These results carry potential policy implications for Egyptian regulators, particularly regarding the possible adoption of regulations similar to the SOX that mandate disclosure of internal control weaknesses in annual reports. Notably, our findings challenge the conventional view that a combined leadership structure adversely affects corporate transparency, particularly regarding voluntary disclosure (Samaha et al., 2015). In the Egyptian context, CEO power under a combined board structure may, in fact, strengthen the monitoring role of independent directors, enhancing ICQ in an emerging market environment.

This study has several limitations. First, our hypotheses are largely derived from corporate governance frameworks developed in advanced economies, focusing primarily on agency and information asymmetry issues between firms and external financiers (shareholders or debtholders). Future research could explore demand from other stakeholders, such as employees, suppliers, or regulators, to provide a more comprehensive understanding of internal control mechanisms. Second, our analysis is restricted to Egyptian firms. While we believe the findings offer valuable insights, it would be worthwhile to test the hypotheses in other emerging and developed markets, where stronger investor protections and more developed capital markets may result in higher levels of ICQ.

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