

Serving Two Masters: Does CEO Openness Moderate the Relationship Between Audit Committee Support and Internal Auditors' Effectiveness? Ugandan Evidence

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Abstract

Purpose –This study investigates the effect of the interaction between board audit committee support and chief executive officers' (CEOs') openness to internal auditors' ideas on internal auditors' effectiveness

Design/methodology/approach – This explanatory study, based on the positivistic paradigm, surveyed 128 internal auditors of formal financial institutions in Uganda and analysed the data using partial least squares structural equation modelling (PLS-SEM).

Findings – The results suggest that CEO openness enhances the positive relationship between board audit committee support and internal auditors' effectiveness.

Research limitations/implications – A supportive board audit committee is necessary but not sufficient for internal auditors' effectiveness, and CEO openness enhances the board audit committee's support-internal audit effectiveness relationship. This study illuminates the view that internal auditors' effectiveness can be significantly enhanced by leveraging CEO openness and simultaneously calling for audit committee support for internal auditors.

Originality/value –This study contributes to answering the research question of how internal auditors serving two masters, the board's audit committee and the CEO, affect internal auditors' effectiveness.

Keywords: Audit committee support, CEO openness, Internal audit effectiveness, Moderation and developing country

Paper type: Research Paper.

1. Introduction

Internal audit effectiveness, defined as the extent to which internal auditors attain internal audit objectives (Dal Mas & Barac, 2018), is a focus for scholars and practitioners. Effective internal auditors aid in improving internal controls, managerial decision-making, business processes, and governance (Barišić and Tušek, 2016) by providing oversight on behalf of the board's audit committee and rendering consulting services to management. Ultimately, internal auditors are likely to reduce waste and prevent or detect risks such as fraud (Dzikrullah *et al.*, 2020; Mihret & Grant, 2017). However, corporate scandals, especially in the financial services sector, persist worldwide (Steyn, 2020); yet, internal audit failures in the financial services sector have been cited

(Nkundabanyanga, 2016). Internal audit failures in Uganda are highlighted by reports of internal auditors either remaining silent or internal auditors' recommendations not being implemented (Bananuka *et al.*, 2017). For internal auditors to contribute positively to business process improvement, internal control soundness, managerial decision-making, and governance, audit ideas must be generated and implemented. Although, there is scholarly interest in the determinants of internal audit effectiveness (Dal Mas & Barac, 2018; Khelil, 2023), empirical evidence on the determinants of internal auditor effectiveness is scarce, especially in developing countries (Vadasi *et al.* 2019).

Lenz and Hahn (2015) called for studies on the effect of internal auditors reporting to both the board's audit committee and the CEO on the auditors' effectiveness. The literature acknowledges the positive effect of a supportive board audit committee on internal auditors' effectiveness. For instance, Alzeban and Sawan (2015) found a link between board support for internal auditors and improved audit outcomes, such as the increased implementation of audit recommendations, because employees who receive support from their supervisors respond by producing high-quality work (Cropanzano *et al.*, 2017). However, organisational support-employee outcome relationships are often inconsistent because other organisational actors' behaviours modify the supervisor support-employee outcome relationships (Yang *et al.*, 2020). We draw on Yang *et al.* (2020) to argue that the relationship between audit committee support and internal auditor effectiveness, which is also a supervisor-employee outcome relationship, should be modified by executive behaviours. We contend that CEOs, as the most powerful executives in an organisation, have the potential to influence the audit committee support-internal audit effectiveness relationship by influencing internal auditors' feelings of psychological safety to make constructive suggestions, as well as a culture of accepting and implementing suggestions.

Specifically, this study hypothesizes that CEO openness moderates the audit committee support-internal auditors' effectiveness relationship, such that audit committee support has a greater effect on internal auditors' effectiveness in the presence of a more open CEO (Figure 1).

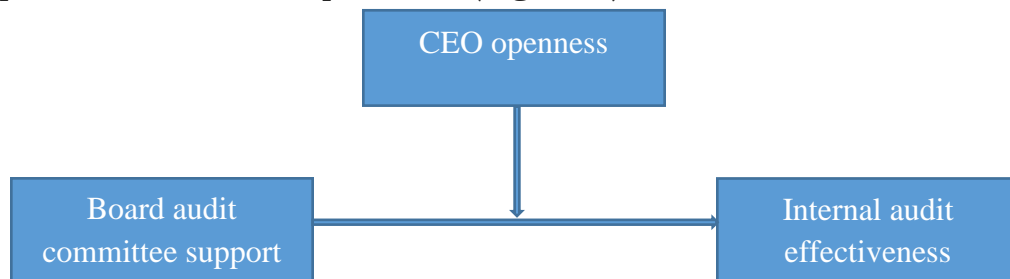


Figure 1. *Hypothesized Moderation Model*

CEO openness, characterized by a willingness to consider internal auditors' ideas should enhance the effect of audit committee support on internal

auditors' effectiveness. Internal auditors drive change (Lenz & Hahn, 2015), and open CEOs encourage a culture valuing change (O'Reilly *et al.*, 2014) and problem-solving (Škerlavaj *et al.*, 2014), which should enhance auditors' effect on decision-making, governance, and process enhancement. Morrison (2011) theorized that a leader's openness to employee ideas enhances effectiveness variables such as managerial decision-making and error correction. Although Bananuka *et al.* (2017) noted Ugandan CEOs' reluctance to accept recommendations from internal auditors, the impact of CEO openness on internal auditors' efficacy has, to our knowledge, not yet been investigated.

Traditional agency (Jensen & Meckling, 1976), behavioural agency (Wiseman & Gomez-Mejia, 1998), and upper-echelon theories (Hambrick, 2007; Hambrick & Mason, 1984) provide a theoretical framework for explaining internal auditors' effectiveness in this study. Internal auditors, as CEOs' consultants and audit committees' independent assurance providers, are considered audit committee's agents. Therefore, both audit committees and CEOs should affect internal auditors' effectiveness. Traditional agency theory assumes selfish agents, necessitating monitoring the agent to align the agent's and the owner's interests. Thus, audit committees monitor internal auditors to align auditors' interests with those of business owners. Behavioural agency theory recognizes monitoring inadequacy and extends traditional agency theory by considering psychological influences on agents' actions and performance. This paradigm asserts that agents' interests are aligned with those of owners through the agents' performance. It emphasises the role of agent performance, evaluated by effectiveness and efficiency, in aligning agents' and principals' interests. The theory proposes that intrinsic and extrinsic motivators influence agents' behaviour and performance (Pepper & Gore, 2015; Wiseman & Gomez-Mejia, 1998). Intrinsic motivators include behavioural and psychological factors. Therefore, this study investigates whether CEO openness and audit committee support are intrinsic motivators that synergistically enhance internal auditors' effectiveness. Upper echelon theory supplements agency theories by explaining the CEO's effect on internal auditors' effectiveness. The upper-echelon theory suggests that effectiveness in organisations is shaped by its top executives' values (Hambrick, 2007; Hambrick & Mason, 1984) who set an organization's tone, culture and conduct (Wang & Fargher, 2017), which should positively affect internal auditors' effectiveness.

This study makes strong contributions to theory and practice. First, it reveals that CEO openness is an important determinant of internal auditors' effectiveness, adding to the scant evidence on the drivers of internal auditors' effectiveness, especially in a developing-country context. Second, the finding that CEO openness enhances the positive relationship between board audit committee support and internal auditors' effectiveness shows that contrary to the assumption of internal auditors' independence from the CEO, an open CEO complements a supportive board in enhancing internal auditors' effectiveness. The moderation result also contributes to answering the research question of

how internal auditors serving two masters, the board's audit committee and the CEO, affect internal auditors' effectiveness. This study reveals that studies explaining internal auditors' effectiveness based solely on board audit committee support and ignoring the synergistic effects of board audit committee support and CEO openness missed the reality that the effectiveness of internal auditors can be significantly enhanced by leveraging CEO openness and simultaneously calling for audit committees' support for internal auditors.

The rest of the paper is organized as follows: Section 2 presents a literature review, Section 3 presents the methodology, Section 4 presents the results, and Section 5 presents discussions, conclusions, and implications.

2. Literature Review

Conceptual Clarity

Internal Auditors' Effectiveness

Effectiveness is the achievement of the desired results (Arena & Azzone, 2009a). Internal audit effectiveness has been studied as an input, a process, an output, or an outcome. As input, it is the ability to obtain resources, such as a skilled internal auditor (Lenz *et al.*, 2014). The input goal is essential for attaining the desired performance (Ahmad 2015). However, resource availability may not guarantee the desired performance; for example, ENRON collapsed despite having highly qualified chartered accountants (Downes & Russ 2005). Internal audit effectiveness as a process variable involves following procedures such as standards (Hakim Fadzil *et al.*, 2005), plans, budgets, techniques, and technology (Lenz *et al.*, 2014). However, the goal of internal auditing has shifted from compliance to improving performance (Bou-Raad, 2000; Arena & Azzone 2009), making effectiveness as a process variable insufficient. Internal audit effectiveness as output is measured by deliverables such as audit reports (Lenz *et al.*, 2017). The value of the report lies in the implementation of its recommendations, which contribute to internal control, governance, management decisions, and business process enhancement (Barišić & Tušek, 2016). The output measure illustrates the value added by internal auditors. Outcome measures, such as share price and profit, reflect the impact of internal audit deliverables (Arena & Azzone, 2009a). However, isolating the impact of internal audit deliverables is challenging. For example, several organisational variables affect profits, and it is difficult to separate the effects of internal audit variables on profits from those of other variables (Arena & Azzone, 2009a).

Like Barišić and Tušek (2016), this study views internal auditors' effectiveness as an output in terms of auditors' contributions to internal control, governance, decision-making, and process improvement. These perceived output measures demonstrate the value that internal auditors add, which is the subject of this study.

Perceived Board Audit Committee Support

Perceived board audit committee support is the degree to which internal auditors perceive the board audit committee to value their opinions and care about their well-being (Khelil *et al.*, 2018). Organisational support theory (OST) defines perceived organisational support (POS) as the employees' perception of "the extent to which the organisation values their contributions and cares about their well-being" (Eisenberger *et al.*, 1986, p.1). Audit committee actions are conceptualised in internal auditing literature as organisational actions (Khelil *et al.*, 2018). Similarly, this study conceptualises the audit committee's actions as organisational actions.

CEO Openness

CEO openness derives from managerial openness. Managerial openness is the view of subordinates that "their boss listens to them, is interested in their thoughts, pays fair consideration to suggestions presented, and at least occasionally takes action to address the subject expressed" (Detert & Burris, 2007). Consequently, this study defines a CEO's openness to internal auditors' ideas as the auditors' perception of the extent to which the CEO pays attention to, values their opinions, gives suggestions fair consideration, and occasionally takes action to address the problems they identify. Some CEOs' indifference to internal auditors makes internal auditing challenging (Bananuka *et al.* 2017), making it necessary to examine how CEO openness affects internal auditors' effectiveness.

Theoretical Background and Hypotheses Development

Internal auditors provide independent assurance services to the board's audit committee on behalf of owners, making auditors agents of the owners and board's audit committees. Thus, we examine the relationship between internal auditors' effectiveness, audit committee support, and CEO openness, as well as the interaction effect of these variables, based on the traditional agency (Jensen and Meckling, 1976), behavioural agency (Pepper & Gore, 2015), and upper echelon theories (Hambrick, 2007; Hambrick & Mason, 1984).

Traditional agency theory (Jensen & Meckling, 1976) posits that ownership and control differences create a principal-agent relationship. Agents are assumed to be rational and self-interested; therefore, principals use monitoring, bonding, and financial incentives to ensure that agents act in their best interests. Audit committees monitor internal auditors to ensure auditor performance aligns with the board's and owners' interests. Audit committee costs are typical bonding costs (Adams, 1994).

Behavioural agency theory, which is based on behavioural economics and psychology, recognizes that monitoring, bonding, and financial incentives are insufficient to motivate agents to act in the principals' interests. This theory argues that agents may not always be rational and that cognitive biases, emotions, and social norms can lead to agents' actions that are detrimental to

agents or principals. The theory argues that principals must consider psychological and behavioural aspects when designing mechanisms to align agents' performance with their interests. This study examines supervisor support, such as audit committee support for internal auditors, as a possible psychological mechanism for improving internal auditor effectiveness. Employees reciprocate supervisor support by improving organisational performance (Ebrahimi *et al.*, 2022). Therefore, audit committee support may be positively associated with internal auditor effectiveness. However, this direct link ignores the likely complementary role of CEOs, and we, therefore, add the upper echelon theory.

The upper-echelon theory states that behaviours and effectiveness in organisations are influenced by the values of top executives, such as CEOs (Hambrick, 2007; Hambrick & Mason, 1984). Therefore, the CEO's value of openness is important, as it may be linked to internal auditors' effectiveness. Open CEOs make auditors feel secure enough to suggest ideas without fear of retribution (Nyamuyonjo *et al.*, 2023). Furthermore, open CEOs create an environment in which employees are open to and can implement ideas (Škerlavaj *et al.* 2014). Motivating internal auditors to suggest ideas and other organisational actors to accept and implement ideas could improve their effectiveness. Combining the traditional agency, behavioural agency, and upper-echelon theories may demonstrate that CEO openness strengthens the connection between audit committee support and internal auditors' effectiveness.

Audit Committee Support and Internal Auditors' Effectiveness

Empirical research on the effects of support from the board or board's audit committees, such as Khelil *et al.* (2018), invokes organisational support and social exchange theories, which explain the effects of support from supervisors on followers' behaviours and, ultimately, organisational outcomes.

When a supervisor is supportive by caring about employees and their well-being, the care is likely to motivate employees to engage in beneficial behaviours that could enhance organisational performance. The care provided by supervisors creates in employees a sense of belonging to the organisation, employees' assurance about help in stressful situations, and their motivation to go beyond their routine roles to engage in behaviours that enhance organisational performance (Ebrahimi *et al.*, 2022). This association between supervisor support and organisational outcomes is also aligned with social exchange theory, which posits that meaningful relationships develop as a result of social exchange, whereby individuals swap their reciprocal behaviour for the social benefits they gain (Blau, 1964). Employees' engagement in behaviours that improve organisational performance is a typical way employee reciprocate the support of their supervisor.

Prior empirical research on internal auditing supports the positive association between supervisor support and internal auditors' outcomes. For

instance, Alzeban and Sawan (2015) reveal that a board's audit committee that cares about internal auditors' opinions shared in meetings is associated with the implementation of internal auditors' recommendations in UK-listed companies. Similarly, an empirical study by Ebrahimi *et al.* (2022) on internal auditors in Tunisia revealed that a board's audit committee that supports internal auditors is likely to motivate internal auditors to engage in constructive voice behaviour, which ultimately enhances internal auditors' effectiveness.

Based on the reviewed literature, it is arguable that even in Uganda, a developing country, a supportive board audit committee can influence the contributions of internal auditors to improvements in internal audit effectiveness outputs, such as managerial decision-making, internal control, business processes and governance. Therefore, the following hypothesis was derived:

Hypothesis 1: Perceived audit committee support and internal auditors' effectiveness are positively related.

CEO Openness and Internal Auditors' Effectiveness

Studies on the effects of CEO openness on internal auditors' effectiveness are scarce. Morrison's (2011) voice-behaviour theory is used to explain the theoretical link between CEO openness and internal auditors' effectiveness.

Morrison's (2011) voice behaviour model explains how leader openness affects employees' goal-oriented behaviours and outcomes. It suggests that when leaders show interest in employees' ideas, employees feel psychologically safe to make constructive suggestions, knowing they won't be punished and that their ideas will be implemented. Supervisors' receptiveness to employees' ideas fosters a motivating work environment that encourages idea implementation and problem-solving (Škerlavaj *et al.*, 2014). Thus leader openness may improve organisational effectiveness variables such as managerial decision-making and error correction (Morrison, 2011).

In the internal auditing context, available empirical evidence (Nyamuyonjo *et al.*, 2023) reveals that open CEOs encourage internal auditors to break their silence and make constructive suggestions due having no fear of repercussions. but its effect on output has not been explored to our knowledge.

Drawing on the reviewed literature, we argue that an open CEO motivates internal auditors to provide constructive suggestions, and a culture of idea generation and implementation which affect internal audit outputs such as improved internal controls, managerial decision-making, governance, and business processes. Therefore, the following hypothesis was developed:

Hypothesis 2: CEO openness and internal auditors' effectiveness are positively related.

The Moderating Effect of CEO Openness on the Relationship Between Perceived Board Audit Committee Support and Internal Auditors' Effectiveness

Hypothesis 1 contends that perceived board audit committee support is likely positively related to internal audit effectiveness. However, scholars have

noted that the behaviours of other organisational actors may modify the effects of perceived supervisory support on employee outcomes (Yang *et al.*, 2020). Thus, the relationship between perceived board audit committee support and the effectiveness of internal auditors could be modified by top executive behaviour. Consequently, this study selects CEO openness as a possible boundary condition for the association between perceived board audit committee support and internal auditor effectiveness.

For CEOs who are open to internal auditors' ideas, we expect a positive relationship between perceived board audit committee support and internal auditors' effectiveness to be amplified. As noted in Hypothesis 2, we expect a positive relationship between CEO openness and internal audit effectiveness. This is because an open CEO creates an increased sense of psychological safety among internal auditors to make constructive suggestions that could enhance organisational outcomes such as improved internal controls, managerial decision-making, and governance, as no repercussions are expected. Additionally, as previously stated, open CEOs would improve internal auditors' motivation to engage in goal-oriented behaviours and go beyond their routine roles in offering constructive suggestions since there is trust that the suggestions will be implemented. Furthermore, supervisors' openness to employees' ideas encourages a workplace culture that motivates the implementation of ideas and problem-solving (Škerlavaj *et al.*, 2014).

Drawing on the arguments above, we contend that the degree of the positive relationship between board audit committee support and internal auditors' effectiveness is contingent on the openness of CEOs to internal auditors' ideas. When internal auditors perceive the support of CEOs in the form of CEOs' openness to internal auditors' ideas, the benefits of support from the board's audit committee will be enhanced. However, when CEOs do not show openness to internal auditors' ideas, the benefits of support from the board's audit committee will be insufficient. Therefore, we propose the following hypothesis:

Hypothesis 3: CEO openness moderates the positive relationship between perceived board audit committee support and internal auditors' effectiveness, such that the effect of the audit committee support on internal auditors' effectiveness is higher with more open CEOs.

3. Methodology

Study Setting, Research Design, Target Population and Sample

This study focuses on internal auditors in Uganda's formal financial sector, including insurance companies, microfinance institutions, banks, brokerage firms, and pension funds (Iwumbwe, 2015). The financial services sector was selected because of the need for strong corporate governance and value addition by internal auditors in the sector. Financial institutions contribute 44% of the nation's GDP (László *et al.*, 2021). However, financial scandals have led to closures that threaten the sector's benefits (Sendyona,

2020). Tumusiime-Mutebile (2012) stresses the need for effective internal auditing to prevent scandals. However, Bananuka *et al.* (2017) found that Ugandan firms frequently disregard internal auditors' suggestions, which is an indication of ineffectiveness. In response to the 2005 financial crisis, Uganda enacted the Financial Institutions Act and the Corporate Governance Regulations to enhance auditing and corporate governance. The Act mandates the audit committees to supervise internal auditors to ensure they perform well as the internal auditors remain independent of CEOs. However, Bananuka *et al.* (2017) found that auditors often feel dependent on CEOs who control their tenure and pay but also tend to disregard their recommendations. The Bank of Uganda's 2020 Supervision Report highlights CEOs' tendency to usurp the board's authority. In such an environment with dominant CEOs, an understanding of how the CEOs and audit committees jointly affect the effectiveness of internal auditors is value-adding. To this end, we used a sample of internal auditors as respondents because of their perception of the extent to which their recommendations are implemented and of openness and supportiveness of CEOs and audit committees respectively.

We used Yamane's (1973) formula to arrive at a sample size of 135 from a population of 203 internal auditors in formal financial institutions, where n is the sample size, N is the population, and e is the type 1 error, which is 0.05 in this study.

$$n = \frac{N}{1 + N(e)^2}$$

We calculated the proportion of internal auditors in each financial institution category relative to the total population of 203 internal auditors. We then multiplied this proportion by the total sample size to obtain the desired sample size for each category. Finally, we randomly selected the required number of auditors from each category using random numbers generated in Microsoft Excel. A sample of 135 internal auditors was obtained by aggregating subsamples from financial institution categories (see Table 1).

Table 1: *Sample Size*

<i>Financial Institution category</i>	<i>Population size of Internal auditors</i>	<i>Proportion</i>	<i>Target sample size of Internal Auditors</i>
Commercial Banks	76	76/203	135*76/203=51
Credit Institutions	14	14/203	135*14/203=9

Micro finance Deposit taking institutions	12	12/203	$135 \times 12 / 203 = 8$
Insurance	90	90/203	$135 \times 90 / 203 = 60$
Development Banks	5	5/203	$135 \times 5 / 203 = 3$
Capital markets advisor/brokerage firms	3	3/203	$135 \times 3 / 203 = 2$
Pension Fund	3	3/203	$135 \times 3 / 203 = 2$
Total	203		135

Source: *Human Resource Records*

A total of 128 internal auditors responded, representing a response rate of 95% which exceeded the 50% minimum suggested by Mellahi and Harris (2015).

Data Collection Instrument and Measurement of Variables

We collected data on the study variables using a closed-ended questionnaire anchored on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The internal audit effectiveness was measured using seven items that were adapted from Barišić and Tušek (2016), such as 'In this firm, internal auditor information is valuable to managerial decision-making' and 'In this firm, internal auditor information is valuable to internal control improvement.' The perceived board audit committee support measurement items were adapted from Khelil *et al.* (2018) with statements such as 'my audit committee/board of directors cares about my opinions.' CEO openness was measured using five items from Grant *et al.* (2011), with statements such as 'My CEO is open to new ideas and 'My CEO is receptive to suggestions'.

Measurement Model Assessment

We checked the quality of the measurement model by looking at the relationships between latent constructs and indicators using item loadings, construct reliability, convergent validity, and discriminant validity. The ideal item loading is at least 0.708, but loadings between 0.4 and 0.708 are acceptable if the average variance extracted for a construct is at least 0.5, while items with loadings below 0.4 are always discarded (Hair *et al.*, 2019; Hair *et al.*, 2017b). In this study, one measurement item, "My audit committee or board of directors is willing to help me if I need a special favour," was discarded owing to a loading of < 0.4. The remaining items (Table 2) were maintained since all the construct average variances exceeded 0.5 and all items had loadings of at least 0.4.

Construct reliability was evaluated using Cronbach's α and composite reliability to measure the consistency of the scale's items. Hair *et al.* (2019) suggested values of at least 0.7 for reliability and average variance extracted of

at least 0.5 for convergent validity. Our latent constructs met the construct reliability criteria (Table 3).

Table 2: *Loadings*

	Board Audit Committee Support	Loading
ACS1	My audit committee/board of directors strongly considers my goals and value	0.6
ACS2	Help is available from my audit committee/board of directors when I have a problem	0.693
ACS3	My Audit Committee/Board of Directors really cares about my well-being	0.747
ACS4	My Audit Committee/Board of Directors would forgive an honest mistake on my part.	0.717
ACS5	If given the opportunity, my Audit Committee/Board of directors would take advantage of me.	0.733
ACS7	My Audit Committee/Board of Directors shows very little concern for me	0.771
ACS8	My Audit Committee/Board of Directors cares about my opinions	0.614
ACS9	My audit committee/Board of Directors would protect me against any retaliation by co-workers, if I express ethical concerns	0.892
ACS10	In case top management retaliates if I express ethics concerns, the audit committee/the board would protect me	0.852
	CEO Openness	
COPEN1	Our CEO is open to new ideas	0.916
COPEN2	Our CEO is receptive to our suggestions	0.832
COPEN3	Our CEO is interested in our ideas	0.898
COPEN4	Our CEO has often rejected our ideas	0.799
COPEN5	Our CEO has often dismissed suggestions	0.819
	Effectiveness of Internal Auditors	
IAE1	In this firm, internal auditors' recommendations have a major impact on business processes	0.652
IAE2	In this firm, internal auditors' recommendations greatly impact the improvement of the governing process.	0.824
IAE3	In this firm, improvements in internal control are a direct consequence of the internal auditors' activity.	0.836
IAE4	In this firm, the information from the internal auditors is valuable input into the managerial decision-making process	0.901
IAE5	In the managerial decision-making process, management considers internal auditors' recommendations	0.901
IAE6	The internal auditors in this firm provide the firm with the benefits that are expected from them	0.838

IAE7	In this firm, the internal auditors' recommendations are underutilized (Reverse coded)	0.529
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Source: Primary data

Table 3. Construct Reliability and Convergent Validity

	Cronbach's alpha	Composite reliability (rho_c)	Average variance extracted (AVE)
Board audit committee support	0.896	0.915	0.549
CEO openness	0.906	0.931	0.729
Internal auditors' effectiveness	0.895	0.921	0.63

Source: Primary data

Discriminant Validity

We calculated discriminant validity statistics to verify the distinctness of audit committee support, CEO openness, and internal auditors' effectiveness constructs. An HTMT ratio under 0.90 suggests that constructs are distinct (Hair *et al.*, 2019). Our results (Table 4) show HTMT ratios below 0.90, indicating the constructs are significantly distinct.

Table 4: Discriminant Validity Using the HTMT Ratio of Correlations

	Board audit committee support	CEO openness	Internal auditors' effectiveness
Board audit committee support			
CEO openness	0.535		
Internal audit effectiveness	0.677	0.494	
CEO openness x Board audit committee support	0.11	0.077	0.364

Source: Primary data

This study analysed data using PLS-SEM utilizing SMART-PLS4 software developed by Ringle *et al.* (2022). PLS is ideal for small samples (under 250) and complex relationships as it forms partial regressions for each path (Hair *et al.*, 2017b).

4. Empirical Results

Descriptive Results

We begin by describing the study variables using means and standard deviations (Table 5). According to the results (Table 5), the standard deviation for each of the three latent variables was less than the respective mean. A small standard deviation relative to the mean indicates that the mean accurately represents the data (Field, 2018). Thus, the mean of each latent construct in this study represents the respective construct well.

Using a 5-point Likert scale, we assessed latent variables. Table 5 reveals that CEO openness, audit committee support, and internal auditors' effectiveness have mean values above 3. This suggests agreement that CEOs are receptive to internal auditors, boards back internal auditors, and that internal auditors' ideas effectively enhance business processes, controls, decision-making, and governance.

Table 5: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
CEO openness	1.00	5.00	3.7594	0.84718
Board audit committee support	2.00	5.00	3.7275	0.73499
Internal audit effectiveness	2.00	5.00	4.0246	0.62027

Source: Primary data

Structural Model Assessment

We analysed relationships between latent constructs, including endogeneity bias, multi-collinearity, and the significance of path coefficients of direct and interaction effects.

Structural Model Robustness: Endogeneity Bias

We used Gaussian copula beta coefficients as recommended by Hult *et al.* (2018) to check for endogeneity bias to confirm that independent variables are not highly correlated with the error term to bias parameter estimates. Insignificant Gaussian Copula coefficients signify the absence of endogeneity bias and omitted variable bias, and that control variables are not necessary for the study (Hult *et al.*, 2018). The results of this study (Table 6) reveal that all the Gaussian copula coefficients are insignificant, implying this study is free from endogeneity and omitted variable bias. For this reason, control variables were not included in this study.

Table 6: Structural Model Robustness: Endogeneity Bias Assessment Using Gaussian Copulas

Single Copula		
Model 1: CEO openness		
	Beta	P values
GC (COPEN) -> IAE	0.245	0.142
Model 2: Audit Committee support		
GC (ACS) -> IAE	0.299	0.553
Double copula		
Model 3 (ACS and IAE together)		
Path	Beta	P values
GC (ACS) -> IAE	0.27	0.584
GC (COPEN) -> IAE	0.252	0.146

Source: Primary data

ACS, COPEN and IAE represent audit committee support, CEO openness and Internal auditors' effectiveness respectively.

Multi Collinearity

To prevent multicollinearity between the interaction term and predictor variables, we utilized an orthogonalizing approach to create an interaction term (board audit committee support \times CEO openness), as advised by Hair *et al.* (2017b). Subsequently, we confirmed the absence of multicollinearity using variance inflation factors (VIF) with $VIF < 3$ indicating no multicollinearity (Hair *et al.*, 2019). Table 7 shows that all VIFs are below three, suggesting no strong correlation among predictor variables, implying no biased predictor variable coefficients.

Table 7: Multi collinearity

	Collinearity statistics	
	Tolerance	VIF
Board audit committee support	0.74	1.351
CEO openness	0.74	1.351
Board audit committee support * CEO's openness	0.981	1.019

Source: Primary data

Direct and Interaction Effects of Audit Committee Support and CEO Openness on Internal Auditors' Effectiveness

We analyse the relationships between audit committee support (ACS) and internal auditors' effectiveness (IAE), CEO openness (COPEN) and IAE, and the moderating effect of CEO openness on the ACS -IAE relationship (Table 8).

The relationship between board audit committee support (ACS) and internal auditors' effectiveness (IAE) is positive and significant ($\beta=0.514$; $P < 0.001$; confidence interval: 0.351–0.655), implying that internal auditors' effectiveness increases with more supportive audit committees.

The relationship between CEO openness and internal auditors' effectiveness was positive and significant ($\beta=0.21$; $P < 0.05$; confidence interval: 0.068–0.336). This means that internal auditors' effectiveness improves with CEOs who are more open to internal auditors' ideas.

The moderating effect of CEO openness on the relationship between perceived board audit committee support and internal auditors' effectiveness was positive and significant ($\beta = 0.36$; $P < 0.05$; confidence interval: 0.015–0.56), implying that the effect of board audit committee support is stronger in the presence of more open CEOs. The positive moderation coefficient ($\beta = 0.36$) implies that when audit committee support and CEO openness are both high,

the effect on internal auditors' effectiveness is even stronger than what could be expected from individual effects. Thus, audit committee support and CEO openness have a synergistic effect on internal auditors' effectiveness.

Table 8: Direct and Interaction Effects of Audit Committee Support and CEO Openness

	Beta	P-Values	Confidence Intervals	
			2.50%	97.50%
ACS -> IAE	0.514	0.0000	0.351	0.655
CEO openness -> IAE	0.21	0.002	0.068	0.336
CEO openness x ACS -> IAE	0.36	0.011	0.015	0.56

Source: Primary data

The results in Table 7 are further displayed in a path diagram (Figure 2)

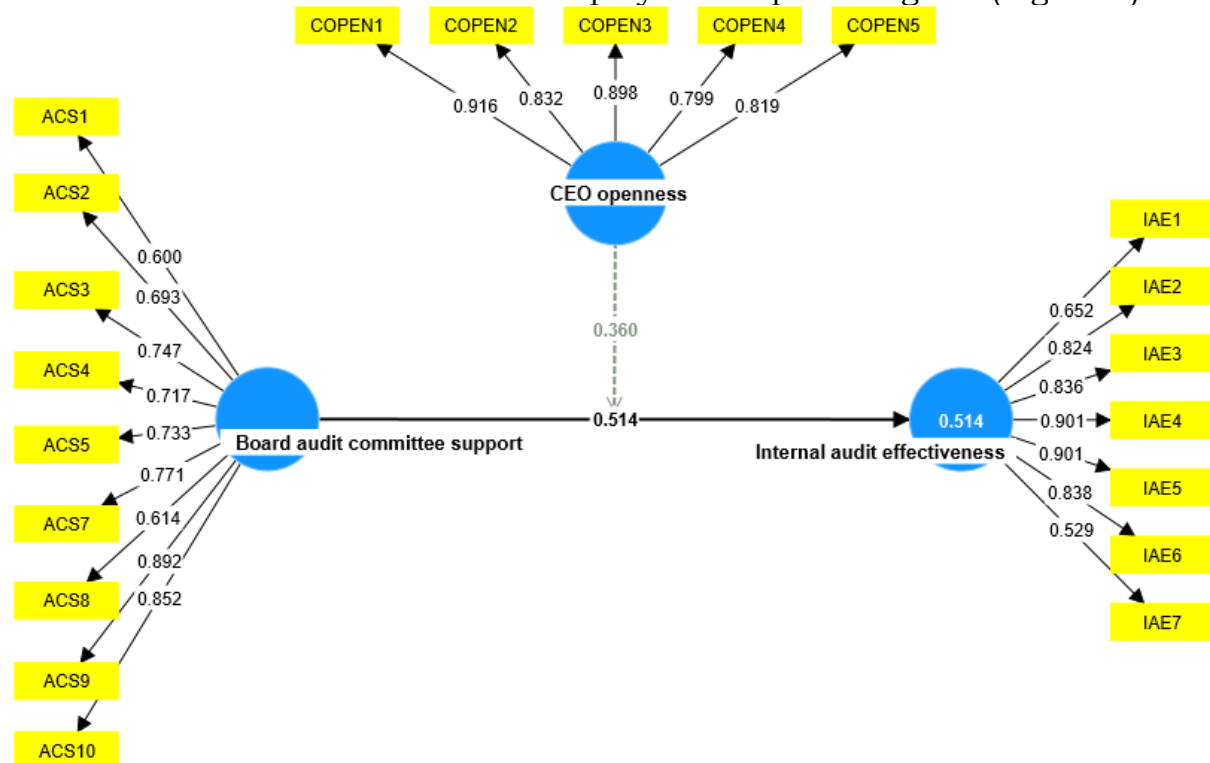


Figure 2: Path Diagram for Direct and Interaction Effects of Audit Committee Support and CEO openness

We complemented the interpretation of the moderation results by using simple slopes (Figure 3). Our simple slopes (Figure 3) show that the relationship between audit committee support and internal auditors' effectiveness is stronger in the presence of more open CEOs (+1 standard deviation), confirming that CEO openness amplifies the positive relationship between audit committee support and internal auditor effectiveness.



Figure 3: Simple-Slope Analysis of Moderation Results

Source: Primary data

5. Discussion of Findings

This study examined the effect of internal auditors serving both the audit committee and the CEO on internal auditors' effectiveness, considering CEO openness as a possible moderating factor in the relationship between audit committee support and internal auditors' effectiveness. The findings revealed a positive relationship between board audit committee support and internal auditors' effectiveness; a positive relationship between CEO openness and audit effectiveness; and CEO openness positively moderating the relationship between audit committee support and audit effectiveness. These results are discussed further.

The finding that internal auditors' effectiveness increases with an increase in audit committees' support is consistent with empirical research based on organisational support and social exchange theories to demonstrate a positive relationship between supervisor support and employee outcomes (Alzeban & Sawan, 2015; Ebrahimi *et al.*, 2022). Social exchange theory posits that individuals exchange their beneficial behaviours for the social benefits they gain (Blau, 1964). Support from supervisors, which means supervisors' care about employees' opinions and well-being, is such a benefit that employees reciprocate by engaging in organizationally beneficial behaviours, such as making constructive suggestions to improve organisations (Cropanzano *et al.*, 2017).

This study also aligns with the social exchange theory by revealing that a board that is supportive by caring about the internal auditor's ideas and well-being is linked to internal auditors' effectiveness in terms of positive contributions to business processes, managerial decision-making, internal controls, and governance. This is because internal auditors reciprocate the care of the audit committee by going beyond the routine and doing quality work. As such, this study also shows the wider application of social exchange theory.

The finding that internal auditors' effectiveness increases with increasing CEO openness, is consistent with Morrison's (2011) voice behaviour and upper-echelon theories. Morrison's (2011) voice behaviour theory posits that when leaders are open to the suggestions of employees, employees perceive lower retaliation costs and an increased likelihood of ideas being implemented. This, in turn, motivates employees to voice constructive, goal-oriented suggestions that could improve effectiveness, such as improved managerial decision-making and the correction of errors. This is also aligned with the upper-echelon theory, which posits that behaviours and effectiveness in organisations are influenced by the values, attitudes, and behaviours of top executives (Hambrick, 2007; Hambrick & Mason, 1984). CEOs with a value of openness to employees' ideas lead by example in creating an organisational culture in which organisational actors appreciate and implement ideas and solve problems (Škerlavaj *et al.*, 2014). This study reveals that CEOs' demonstration of interest in the ideas of internal auditors motivates internal auditors to speak about ethical issues with a feeling of psychological safety, and a culture of idea generation and implementation, which positively influences business processes, managerial decision making, internal controls and governance. This novel finding underscores the importance of a CEO creating a culture of candid talk with internal auditors to foster internal auditors' effectiveness.

Lastly, CEO openness moderates the relationship between board audit committee support and internal auditors' effectiveness, such that the effect of board audit committee support on internal auditors' effectiveness is higher in the presence of CEOs who are more receptive to internal auditors' ideas. This is corroborated by Yang *et al.* (2020), who found that organisational support-employee outcome relationships are inconclusive because other organisational actors' behaviours modify the relationships. Consistent with Yang *et al.* (2020), the results of this study demonstrate that the effect of supervisor support, which in this case is audit committee support, on internal auditors' effectiveness is enhanced when CEOs show openness to internal auditors' ideas because as supportive audit committee enhance internal auditors' effectiveness, open CEOs complement by motivating internal auditors' constructive idea generation and implementation, that improves business processes, internal controls, governance and managerial decision making.

This study is noteworthy for theoretical and practical reasons. First, this study reveals that CEO openness is positively associated with internal auditors' effectiveness and responds to Lenz and Hahn's call for empirical studies on the

executive behaviours that matter for internal auditors' effectiveness. Moreover, this study used empirical evidence from a developing country, where evidence of the drivers of internal auditors' effectiveness is scant. Second, the moderating effect of CEO openness on the relationship between board audit committee support and internal auditors' effectiveness implies that a supportive audit committee has a greater effect on internal auditors' effectiveness when CEOs are open to internal auditors' ideas. Thus, a supportive board audit committee is necessary but not sufficient for effective internal auditors since open CEOs enhance the positive effect of board audit committee support. Third, this study illustrates the limitations of relying solely on traditional agency mechanisms such as monitoring and financial incentives. The behavioural agency theory emphasises the significance of psychological factors in influencing employee outcomes. The integration of traditional agency, behavioural agency, and upper-echelon theories into our research provides a more comprehensive understanding of the intricate organisational dynamics at play. This integration allows us to consider not only the rational aspects of agency relationships but also the effects of psychological and behavioural factors, such as the support of the audit committee and the openness of CEOs, on internal auditors' effectiveness. This study further contributes to the understanding of how internal auditors serving two masters, the CEO and the board, affect internal auditors' effectiveness in response to calls by Lenz and Hahn (2015). This study reveals that studies explaining internal auditors' effectiveness based solely on audit committee support and ignoring the synergistic effects of audit committee support and CEO openness miss the reality that the effectiveness of internal auditors can be significantly enhanced by leveraging CEO openness and simultaneously calling for audit committee support for internal auditors.

Conclusions and Implications

This study examined the relationships between audit committee support, CEO openness, and internal auditors' effectiveness and whether CEO openness moderates the relationship between audit committee support and internal auditors' effectiveness.

Based on survey data from 128 internal auditors in Uganda's formal financial institutions analysed using partial least squares structural equation modelling, this study provides empirical evidence that both board audit committee support and CEO openness are positively related to internal auditors' effectiveness, and CEO openness moderates the relationship between board audit committee support and internal audit effectiveness, meaning that a supportive audit committee and an open CEO provide a synergistic effect on internal auditors' effectiveness.

This study reveals that CEO openness is a key executive behaviour that positively affects internal auditors' effectiveness, using evidence from a developing world where empirical evidence of internal auditors' effectiveness determinants is scarce. Additionally, it shows that a supportive audit committee

and an open CEO have a synergistic effect on internal auditors' effectiveness. A supportive audit committee encourages internal auditors to make constructive suggestions with a sense of psychological safety. Open CEOs also guarantee psychological safety as well as implementation of ideas, by creating a culture of acceptance and implementation of internal auditors' ideas. These ultimately positively affect internal auditors' contributions to internal controls, business processes, managerial decision-making, and governance. The positive moderating effect of CEO openness on the board audit committee support-internal audit effectiveness relationship shows that board audit committee support is necessary but not enough. CEOs who are open to internal auditors' ideas strengthen the board support-internal audit effectiveness connection. The study also showed that the integration of traditional agency, behavioural agency, and upper-echelon theories aided the explanation of internal auditors' effectiveness using psychological and behavioural factors, such as the openness of the CEOs. This adds to the scanty evidence of internal auditors' effectiveness determinants, especially in the developing world.

This study provides practitioners with insightful information. CEOs should actively develop an environment that strongly encourages open communication with internal auditors, and audit committees should concurrently support internal auditors by caring about their innovative ideas and well-being. This alignment between CEOs and audit committees can enhance internal auditors' effectiveness in terms of positive contributions to business processes, internal controls, managerial decision-making, and governance because it motivates internal auditors' idea generation and implementation.

Despite its strong contributions to theory and practice, this study has some limitations. It was limited to one country and sector, which may not reflect other countries and sectors due to cultural and legal differences. It also did not investigate the mediating mechanisms through which CEO openness moderates the relationship between audit committee support and internal auditors' effectiveness.

Future studies could replicate this study across various countries and sectors, examining cultural influences on the relationships between audit committee support, CEO openness, and auditors' effectiveness. Additionally, studies could investigate mediating mechanisms through which CEO openness affects the link between audit committee support and internal auditors' effectiveness.

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