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**| RESEARCH ARTICLE**

# The Internal Audit Roles and Financial Discipline of the Technical Universities in Ghana: The Moderating Role of Effective Leadership

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**| ABSTRACT**
This study examined the relationship between internal audit roles and financial discipline, with effective leadership as a moderating factor, in Ghana's technical universities. Using an explanatory research design, data were collected from 127 key officeholders across the Technical Universities in Ghana. The findings show that internal auditors play a pivotal role in promoting financial discipline through strategic advisory services, operational efficiency, risk management, reporting, and compliance enforcement. More importantly, the results demonstrate that effective leadership practices centred on integrity, transparency, accountability, strategic vision, and sound financial decisions significantly strengthen the positive effects of internal auditing on financial discipline. The financial discipline remains a significant challenge, as evidenced by ongoing issues such as fund misallocation, procurement manipulation, weak budgeting practices, ineffective debt management, and the neglect of internal audit recommendations. The study recommends that technical universities complement national policies and legal frameworks with internally developed financial discipline policies tailored to their specific contexts. Central to this should be the establishment of a comprehensive Code of Ethics for Financial Discipline, with explicit provisions requiring strict adherence by leaders and senior officials and enforcing stringent penalties for breaches. Such context-specific policies, aligned with national directives, will reinforce ethical conduct, strengthen financial integrity, and promote sustainable accountability in technical universities.

**| KEYWORDS**

Financial Discipline**,** Strategic Advisory Services, Risk Management, Policies, Financial Mismanagement, Sound Financial Decisions, budgeting.

**| ARTICLE INFORMATION**

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## 1. Introduction

Effective and efficient financial management practices are essential for achieving organisational goals and ensuring accountability to stakeholders. In recent years, policymakers have introduced various frameworks and reforms to promote sound financial management systems and fiscal discipline, particularly in the public sector, where misuse and mismanagement of financial resources are common (Kisanyanya, 2020; Abdulai, 2020). Business environments without adequate controls often foster financial recklessness, underscoring the importance of robust systems of accountability and control. Many countries, including Rwanda, have pursued reforms to promote fiscal discipline, such as policy visibility, performance standards, and sanctions (Omollo, 2018). However, where reforms are implemented by institutions with overlapping responsibilities and weak coordination, the intended outcomes remain elusive (Raimi et al., 2013).

Ghana has undertaken several public financial management reforms since 1997 to address challenges such as weak budget formulation, inadequate expenditure monitoring, lack of reliable accounting systems, and poor information flow between key institutions (Adzroe, 2015). Legislative frameworks such as the Public Financial Management Act, 2016 (Act 921), the PFM Regulations, 2019, the Internal Audit Agency Act, 2003 (Act 658), and the Ghana Audit Service Act, 2000 (Act 584), alongside the adoption of the Ghana Integrated Financial Management Information System (GIFMIS), were designed to strengthen fiscal order and ensure financial discipline. The Internal Audit Agency Act, for example, requires Ministries, Departments, and Agencies (MDAs) to establish internal audit units. According to the Institute of Internal Auditors (2019), internal audit serves as an independent and objective assurance and consulting function that adds value by strengthening governance, risk management, and control processes.

Despite these reforms, Ghana continues to grapple with fiscal instability. The Auditor-General's reports consistently highlight financial irregularities, suggesting that either reforms are poorly implemented or internal control systems are inadequate (Auditor-General's Report, 2021; Pimpong & Tei, 2022). Public universities, particularly technical universities, have not been immune to these challenges. As institutions mandated to provide technical and vocational education for socio-economic development, technical universities are expected to uphold high standards of financial discipline. However, reports of mismanagement, fraud, and embezzlement persist, raising doubts about their financial governance structures (Wisdom et al., 2024). The Auditor-General's 2022 report revealed financial irregularities amounting to GH¢20,959,765 across Ghana's technical universities, which undermines their credibility and erodes public trust. These irregularities suggest that while internal audit structures exist, their effectiveness may be compromised by weak leadership, insufficient independence, or inadequate support from top management.

Theoretically, Agency Theory provides a lens to explain these challenges, as managers entrusted with public resources may act in ways that diverge from the interests of principals, in this case, citizens (Gwala & Mashau, 2023). Transparent and effective internal audit functions should mitigate such agency problems, but evidence suggests they often fall short. By contrast, Stewardship Theory assumes that managers act as responsible stewards of resources, motivated to achieve organisational goals in alignment with societal interests (Schillemans & Bjurstrøm, 2019). In the context of technical universities, stewardship would require leaders to support and empower internal audit functions, thereby fostering financial discipline. The tension between agency-related opportunism and stewardship-oriented accountability highlights the potential moderating role of leadership. Effective leadership may strengthen the capacity of internal audit functions to deliver their mandate, thereby enhancing financial discipline in technical universities.

Against this background, this study aims to investigate the relationship between internal audit roles and financial discipline in Ghana's technical universities, as well as how effective leadership moderates this relationship. Specifically, it aims to: (1) analyse the roles of the internal audit function in promoting financial discipline; (2) examine leadership attributes that foster a culture of financial discipline; and (3) assess how effective leadership moderates the relationship between internal audit roles and financial discipline. The findings are expected to advance both theory and practice. Theoretically, the study contributes to the discourse on Agency and Stewardship theories by illustrating how leadership shapes the effectiveness of accountability mechanisms in public institutions. Empirically, it provides evidence on the persistent financial governance challenges of technical universities in Ghana. Practically, it offers policymakers, regulators, and university management valuable insights into the leadership qualities and internal audit practices necessary to strengthen financial discipline, thereby restoring public trust in higher education institutions

## 2. Literature Review

### *2.1 Theoretical Framework*

This study is grounded in Agency Theory, Stewardship Theory, and Transformational Leadership Theory, which collectively provide a comprehensive understanding of the dynamics between internal audit roles, leadership, and financial discipline in Ghana's technical universities. Agency Theory argues that organisations consist of principals (citizens, taxpayers, or stakeholders) and agents (public officials and managers) whose incentives may diverge, creating information asymmetry, misuse of resources, and weak accountability (Gwala & Mashau, 2023). In this view, internal audit functions are critical monitoring mechanisms designed to reduce agency costs by ensuring compliance with regulations and safeguarding public resources. However, persistent financial irregularities in Ghana's technical universities indicate that control mechanisms rooted solely in agency monitoring may not be sufficient to guarantee financial discipline.

Stewardship Theory offers a contrasting lens, suggesting that managers can act as responsible stewards of resources, motivated by pro-organisational and collectivist values rather than self-interest (Schillemans & Bjurstrøm, 2019). This perspective assumes that with the right organisational culture and support, managers and auditors will act in ways that align institutional practices with broader societal and stakeholder goals. In the context of technical universities, stewardship would require leaders to support and empower internal audit functions, fostering a culture of transparency, accountability, and ethical financial governance. However, empirical evidence of recurring financial irregularities suggests that this stewardship ideal has not been fully realised in practice.

Transformational Leadership Theory bridges the tension between these two perspectives. Transformational leaders inspire and motivate their followers to transcend self-interest, foster ethical responsibility, and commit to shared organisational goals (Burns, 1978; Bass, 1990). In technical universities, transformational leaders can empower internal auditors to move beyond routine compliance roles toward becoming strategic partners in promoting financial discipline. By articulating a clear vision, modelling ethical behaviour, and fostering innovation, such leaders create an enabling environment in which internal audit recommendations are not only respected but also implemented. Leadership, therefore, becomes the moderating force that determines whether internal audit functions are constrained by agency-based limitations or elevated through stewardship values to deliver sustainable financial discipline.

The integration of these theories reveals a crucial gap. While Agency Theory emphasises control and Stewardship Theory highlights trust, neither sufficiently explains why internal audit roles often fall short of expectations in technical universities, despite extensive financial reforms. Transformational Leadership Theory offers the missing link by demonstrating how leadership behaviours can challenge deep-rooted weaknesses, bolster the credibility of internal audit functions, and ultimately improve financial discipline. This theoretical convergence justifies the focus of this study, which is to investigate the moderating role of effective leadership in strengthening the relationship between internal audit roles and financial discipline in Ghana's technical universities.

### *2.2. Empirical Literature and Hypotheses Development*

Financial discipline has long been recognised as a cornerstone of effective public sector management. Financial irregularities create severe economic consequences and undermine the credibility of government institutions (Rude, 2009). In its broad sense, financial discipline refers to transparent processes and procedures that ensure the prudent management of funds, reduce risks, and enhance accountability in the delivery of public services (Solgi & Ghahraei, 2022). According to Onuorah and Appah (2012), a sound financial management system comprises budget formulation, accounting, payment systems, financial reporting, and audit. Thus, effective financial discipline is not only an assurance of proper use of resources but also a mechanism for boosting stakeholder trust, equity, and service delivery (Ikechi et al., 2021). The importance of financial discipline in the public sector, and in technical universities in particular, cannot be overstated. Effective financial governance ensures that scarce resources are utilised efficiently and transparently to support socio-economic development goals (Kumar, 2022). Weak financial discipline, on the other hand, breeds mismanagement, fraud, and corruption, eroding the credibility of public institutions and diminishing public trust. Studies affirm that transparency and accountability in financial practices enhance good governance and improve the confidence of citizens and investors in public institutions (Adedokun et al., 2021). In technical universities, where resources are directed toward training and skills development, maintaining financial discipline is fundamental to their sustainability and their contribution to national development.

Central to promoting financial discipline is the internal audit function. Internal auditing is defined by the Institute of Internal Auditors (IIA) as an independent, objective assurance and consulting activity designed to add value and improve organisational operations. It functions as a control mechanism that not only safeguards assets but also strengthens governance, risk management, and operational efficiency (Chun, 1997; Dzikrullah et al., 2020). In Ghana, the Public Financial Management Act, 2016 (Act 921) empowers internal auditors to appraise control systems, evaluate risk management and governance processes, assess efficiency and effectiveness in programme administration, and ensure compliance with laws and policies. Internal audit, therefore, plays a pivotal role in curbing financial irregularities and reinforcing accountability within technical universities.

Empirical studies outline several dimensions of the internal audit function that are directly linked to financial discipline. First, internal auditors evaluate and monitor internal control systems, which are crucial for ensuring data accuracy, promoting accountability, and preventing fraud (Herawaty & Hernando, 2021). Effective internal control practices have been found to reduce risks of financial irregularities and enhance organisational discipline (Badara, 2013; Solgi & Ghahraei, 2022). Budgetary control is a critical mechanism through which internal auditors ensure compliance with expenditure and revenue policies. Evidence suggests that institutions with strong budgetary control systems are more likely to achieve sound financial performance and discipline (Adongo & Jagongo, 2013). In Ghana, reforms such as the introduction of accrual accounting and the adoption of the Ghana Integrated Financial Management Information System (GIFMIS) were implemented to enhance transparency; however, their effectiveness largely depends on internal audit oversight (Rahaman & Lawrence, 2001). Again, the internal auditors are increasingly recognised as central to risk management. Their role includes identifying high-risk activities, assessing controls, and advising on mitigation strategies to protect institutional objectives (Sarens & De Beelde, 2006). The IIA emphasises that risk management is a governance process that requires continuous monitoring and improvement. Empirical studies confirm that internal auditors enhance organisational resilience by evaluating risk frameworks (Radu & Ramona, 2013). Compliance with laws, rules, and regulations is another critical mandate of auditors. By independently assessing adherence to statutory frameworks, auditors ensure accountability and transparency in financial practices, thereby reducing opportunities for fraud and mismanagement. The internal auditors also play a crucial role in strengthening corporate governance. They provide boards and audit committees with assurance on risk management, ethical conduct, fraud prevention, and the efficient use of resources (Radu & Ramona, 2013). Studies emphasise that robust internal audit systems form the backbone of strong governance, which in turn fosters financial discipline (Sarens et al., 2012). Additionally, internal auditors evaluate operational activities, verify alignment with institutional objectives, and propose improvements to enhance efficiency (Fernández-Laviada, 2007).

Despite the critical roles played by internal audit functions, several factors hinder their effectiveness in ensuring financial discipline. Ghana's persistent fiscal instability has been linked to mismanagement and financial indiscipline (Brenya Bonsu et al., 2023). Studies suggest that integrity, strong internal control systems, and exemplary leadership are crucial in fostering accountability and discipline (Kong et al., 2018). Transparency and disclosure of financial information also remain indispensable. Chen and Neshkova (2020) argue that fiscal transparency, particularly the disclosure of budgetary information, is central to reducing corruption, while Mnif and Gafsi (2020) emphasise the importance of international standards such as IPSAS in promoting accountability. However, political culture, institutional weaknesses, and leadership deficits persist in undermining adherence to these standards.

The consequences of financial indiscipline are far-reaching. Prior studies highlight its link to corruption, excessive debt accumulation, unrealistic planning, and poor employee morale (Okpala, 2012). Indiscipline fosters fraud, wastage, and poor service delivery, while undermining public trust. Conversely, sound financial management and disciplined practices reduce budget deficits, enhance equity, and strengthen service delivery in the public sector (Ikechi et al., 2021). Financial discipline enables organisations to anticipate and address irregularities, thereby supporting sustainability and growth (Solgi & Ghahraei, 2022).

Drawing from this literature, it is evident that internal auditors are expected to play a pivotal role in ensuring financial discipline through the implementation of internal controls, risk management, compliance, budgetary oversight, governance, and operational evaluations. However, empirical evidence from Ghana's technical universities indicates persistent irregularities despite these established roles. This creates a gap that calls for further investigation. Specifically, the moderating influence of effective leadership remains underexplored, even though leadership is widely recognised as essential for empowering internal audit functions and fostering accountability. Based on this, the study hypothesises that:

*H1: Internal audit roles positively influence financial discipline in technical universities.*
*H2: Effective leadership positively influences financial discipline in technical universities.*
*H3: Effective leadership moderates the relationship between internal audit roles and financial discipline in technical universities.*

### *2.3. Conceptual Framework*
This conceptual framework serves as a guide to financial discipline in the public sector. To achieve financial discipline in the public sector, institutions or organisations must focus on best financial management practices through effective leadership. Figure 1 below presents the details.

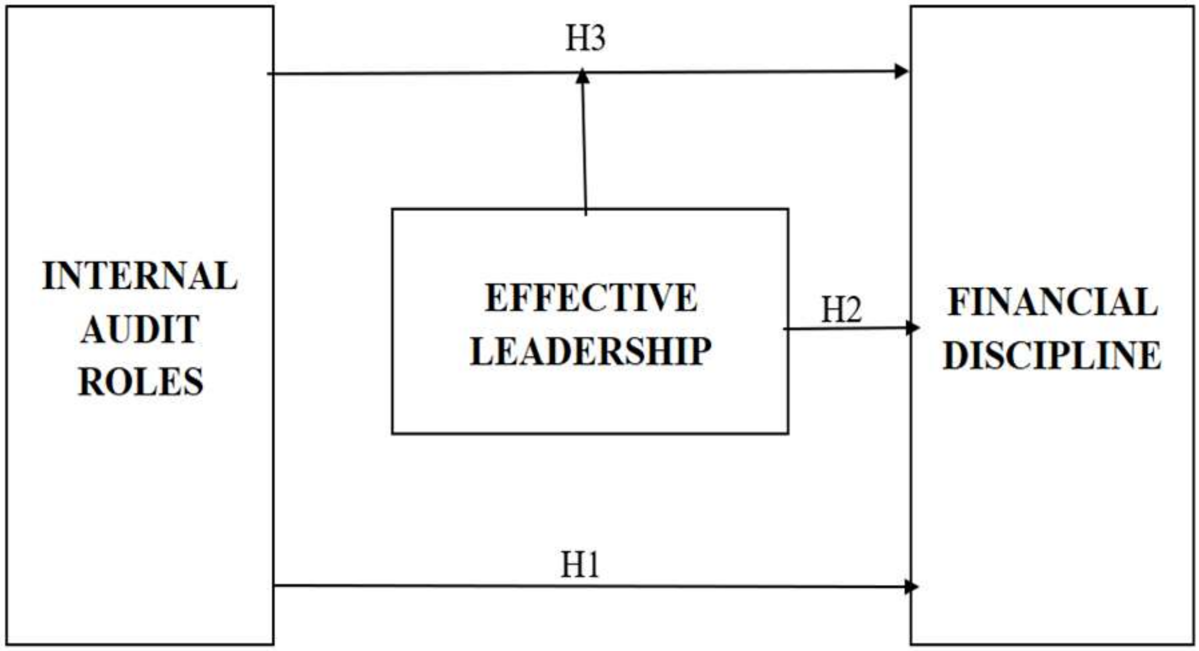


**Figure 1: Conceptual Framework**

From Figure 1**,** the internal audit function plays a significant role in achieving financial discipline by ensuring the effective implementation of best financial management practices. The conceptual framework requires university leadership to create an environment that enables effective financial management practices. To achieve financial discipline, the internal audit function must be empowered to ensure that best financial management practices are implemented across all business processes. In this conceptual framework, the key roles the internal auditor should play to ensure financial discipline are risk management (RM), Operational Efficiency and Effectiveness (OEE), Strategic Advisory Services (SAS), Financial Reporting Integrity (FRI), Compliance Management (CM) and Fraud Detection and Prevention (RDP). The leadership must demonstrate Integrity, Transparency, and Accountability (ITA), as well as Strategic Vision (SV) and Sound Financial Decisions (SFD), to promote financial discipline. The financial discipline, according to this conceptual framework, includes Debt and Financial Risk Management (DFRM), Cost and Revenue Management (CRM), Capital Planning and Management CPM), Transparency and Accountability in Financial Reporting (TAFR), Strategic Investment in Academic and Research Activities (SIARA) and Budget Management and Control (BMC)

## 3. Research Methodology

The study examined the moderating role of effective leadership in the relationship between the internal audit function and the financial discipline of technical universities in Ghana. The study deployed an explanatory research design. The target population consisted of the key officers and sectional heads. A purposive sampling technique was employed to ensure the relevance and applicability of the responses, resulting in a sample size of 150 participants. These participants were chosen based on their significant knowledge and expertise in auditing, finance and accounting. The data was collected using structured questionnaires, and XLSTAT was used to analyse it.

### *3.1. Model Specification*

The model for this study specifies three latent variables: Internal Audit Function (IAF), Effective Leadership (EL), and Financial Discipline (FD). The Internal Audit Function is conceptualised as a multidimensional construct comprising six indicators: risk management (RM), operational efficiency and effectiveness (OEE), strategic advisory services (SAS), financial reporting integrity (FRI), compliance management (CM), and fraud detection and prevention (FDP). Effective leadership is represented by three key dimensions: integrity, transparency, and accountability (ITA); strategic vision (SV); and sound financial decisions (SFD). Financial Discipline, the dependent construct, is measured through six indicators: debt and financial risk management (DFRM), cost management and revenue diversification (CMRD), capital planning and management (CPM), transparency and accountability in financial reporting (TAFR), strategic investment in academic and research activities (SIARA), and budget management and control (BMC). Together, these constructs form the structural model used to examine the relationships between internal audit functions, effective leadership, and financial discipline in Ghana's technical universities.

### *3.2. Measurement Model*

1. $IAF = \lambda 1RM + \lambda 2OEE + \lambda 3SAS + \lambda 4FRI + \lambda 5CM + \lambda 6RDP$
2. $EL = \lambda 7ITA + \lambda 8SV + \lambda 9^{*}SFD$
3. $FD = \lambda 10DFRM + \lambda 11CMRD + \lambda 12CPM + \lambda 13TAFR + \lambda 14SIARA + \lambda 15BMC$

Where:
$\lambda 1$ to $\lambda 15$ are factor loadings representing the relationships between the latent variables and their manifest indicators.

**a) Structural Model**
$FD = \beta 1IAF + \beta 2EL + \varepsilon$
Where:
$\beta 1$ and $\beta 2$ are the regression coefficients representing the relationships between IAF, EL, and FD.
$\varepsilon$ represents the error term.

**b) Moderating Role**
$FD = \beta 1IAF + \beta 2EL + \beta 3(IAFEL) + \varepsilon^{**}$
Where:
$\beta 3$ represents the interaction effect between IAF and EL

### 4. Results and Discussion

### *4.1. Results*

This section presents the empirical findings derived from the study. The data were analysed using descriptive statistics and PLS path modelling to establish the relationship between the internal audit role and financial discipline, with effective leadership as a moderating factor. Out of a sample size of 150 respondents, 127 participants responded, translating to a response rate of 84.7%. Therefore, the analysis was based on the response rate.

#### *4.1.1. Existence of Financial Indiscipline*

The study began by soliciting the participants' views on financial indiscipline in technical universities. The detailed results are presented in Figure 2 below.

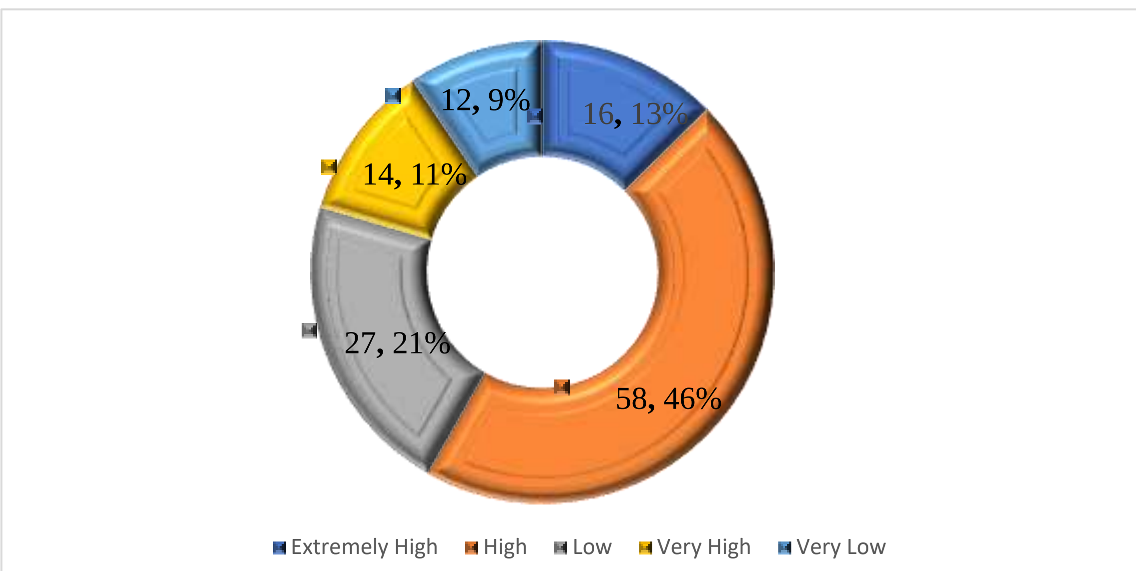


**Figure 2: Level of Financial Indiscipline**

Figure 2 revealed that the majority (88), representing 69.3% of the respondents, rated financial indiscipline as high. The predominant reasons cited include misallocation and misuse of funds, manipulation of procurement processes, inadequate budget preparation and implementation, ineffective debt management, and neglect of audit recommendations. Although 30.7% of respondents perceived financial indiscipline as low, the overall data suggest that financial indiscipline significantly threatens optimal public financial management practices within technical universities. The views expressed by the participants highlight critical areas that require immediate attention to uphold and enhance financial discipline within technical universities.

#### *4.1.2. Internal Audit Roles, Effective Leadership Practice and Financial Discipline*

The primary objective of the internal audit function is to enhance organisational value, which is achievable within a conducive environment. Leaders play a crucial role in creating an environment that fosters productivity and innovation. Accordingly, this study investigates the relationship between the internal audit function and financial discipline, with effective leadership as a moderating variable. Partial Least Squares (PLS) path modelling was employed to test the formulated hypotheses. The analysis included examining the cross-loadings of the manifest variables associated with Internal Audit Roles (IAR), Effective Leadership Practice (ELP), and Financial Discipline. Details of the analysis are presented in Table 1.

**Table 1: Cross-loadings (Monofactorial manifest variables)**

| | IAR | ELP | FD | **IAR * ELP** |
|---|---|---|---|---|
| RM | **0.965** | 0.584 | 0.825 | 0.828 |
| OEE | **0.980** | 0.613 | 0.851 | 0.852 |
| SAS | **0.979** | 0.580 | 0.830 | 0.838 |
| FRI | **0.869** | 0.528 | 0.689 | 0.763 |
| CM | **0.962** | 0.563 | 0.800 | 0.818 |
| FDP | **0.919** | 0.557 | 0.761 | 0.788 |
| ITA | 0.570 | **0.944** | 0.744 | 0.838 |
| SV | 0.532 | **0.861** | 0.717 | 0.775 |
| SFD | 0.521 | **0.885** | 0.657 | 0.791 |
| DFRM | -0.637 | -0.743 | **-0.885** | -0.747 |
| CMRD | 0.574 | 0.683 | **0.804** | 0.699 |
| CPM | -0.603 | -0.671 | **-0.852** | -0.687 |
| TAFR | 0.329 | 0.170 | **0.331** | 0.249 |
| SIARA | 0.738 | 0.699 | **0.863** | 0.786 |
| BMC | 0.957 | 0.606 | **0.854** | 0.835 |
| RM*ITA | 0.822 | 0.882 | 0.860 | **0.966** |
| RM*SV | 0.804 | 0.815 | 0.846 | **0.916** |
| RM*SFD | 0.785 | 0.846 | 0.793 | **0.934** |
| OEE*ITA | 0.823 | 0.880 | 0.865 | **0.964** |
| OEE*SV | 0.807 | 0.821 | 0.852 | **0.921** |
| OEE*SFD | 0.783 | 0.845 | 0.797 | **0.932** |
| SAS*ITA | 0.833 | 0.854 | 0.864 | **0.958** |
| SAS*SV | 0.817 | 0.805 | 0.850 | **0.922** |
| SAS*SFD | 0.800 | 0.826 | 0.801 | **0.934** |
| FRI*ITA | 0.800 | 0.835 | 0.806 | **0.936** |
| FRI*SV | 0.773 | 0.789 | 0.785 | **0.896** |
| FRI*SFD | 0.765 | 0.806 | 0.746 | **0.908** |
| CM*ITA | 0.824 | 0.844 | 0.846 | **0.946** |
| CM*SV | 0.822 | 0.802 | 0.845 | **0.922** |
| CM*SFD | 0.798 | 0.820 | 0.792 | **0.928** |

| | | | | |
|---|---|---|---|---|
| FDP*ITA | 0.799 | 0.862 | 0.821 | **0.943** |
| FDP*SV | 0.785 | 0.801 | 0.817 | **0.898** |
| FDP*SFD | 0.780 | 0.841 | 0.779 | **0.929** |

Statistical evidence from Table 1 indicates that Compliance Management (CM), Risk Management (RM), Operational Efficiency and Effectiveness (OEE), and Strategic Advisory Services (SAS) exhibit high loadings (0.962, 0.965, 0.980, 0.979, respectively) on IAR. These values indicate that these dimensions are strongly associated with the internal audit role, reflecting their importance in risk management, operational efficiency, and strategic advice. Financial Reporting Integrity (FRI) also shows significant loadings of 0.869. respectively), though slightly lower. From the other perspective, Integrity, Transparency, and Accountability (ITA) shows a high loading (0.944) on effective leadership practice (ELP), suggesting that these variables are central to effective leadership. Sound Financial Decisions (SFD) and Strategic Vision (SV) also exhibit substantial loadings (0.885 and 0.861, respectively), highlighting their importance in effective leadership. Again, the variables such as Debt and Financial Risk Management (DFRM), Strategic Investment in Academic and Research Activities (SIARA), Budget Management and Control, Cost Management and Revenue Diversification (CMRD) exhibit high loadings, indicating their significant role in financial discipline.

After assessing the significance of the cross-loadings for the manifest variables, the study's hypotheses were subsequently tested. Table 2 and Figure 3 depict the details.

**Table 2: Model Assessment and Impact**

**$R^2$ (FD / 1):**

| $R^2$ | $R^2$ (Bootstrap) | Standard error | Critical ratio (CR) | Lower bound (95%) | Upper bound (95%) |
|---|---|---|---|---|---|
| 0.816 | 0.822 | 0.029 | 27.740 | 0.746 | 0.871 |

**Path coefficients (FD / 1):**

| Latent variable | Value | Value (Bootstrap) | Standard error (Bootstrap) | Critical ratio (CR) | Lower bound (95%) | Upper bound (95%) |
|---|---|---|---|---|---|---|
| IAR | 0.326 | 0.325 | 0.009 | 38.130 | 0.309 | 0.341 |
| ELP | 0.306 | 0.309 | 0.010 | 29.886 | 0.281 | 0.330 |
| IAR * ELP | 0.342 | 0.344 | 0.009 | 39.716 | 0.328 | 0.365 |

**Impact and contribution of the variables to FD (1):**

| | IAR * ELP | IAR | ELP |
|---|---|---|---|
| Correlation | 0.881 | 0.839 | 0.789 |
| Path coefficient | 0.342 | 0.326 | 0.306 |
| Correlation * path coefficient | 0.301 | 0.273 | 0.241 |
| Contribution to $R^2$ (%) | 36.926 | 33.491 | 29.583 |
| Cumulative % | 36.926 | 70.417 | 100.000 |

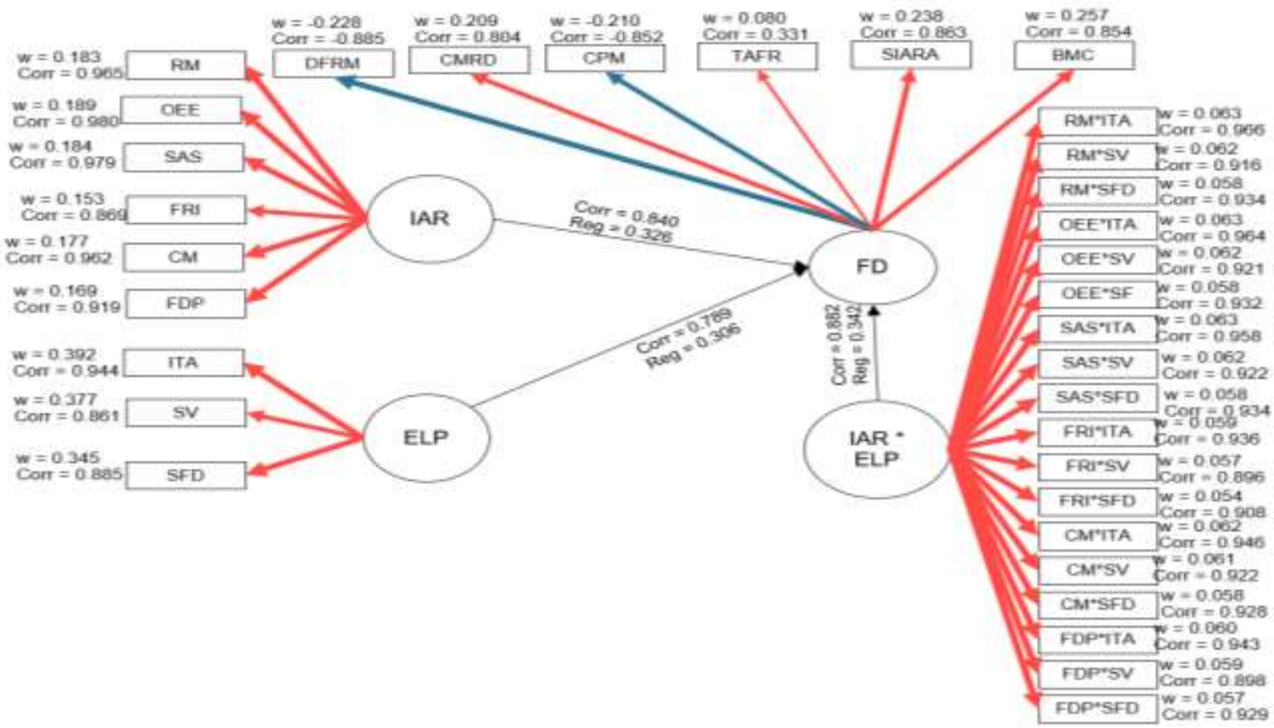


**Figure 3: Path Coefficient**

Statistical evidence from Table 2 and Figure 3 revealed that, the structural model explains a substantial proportion of the variance in financial discipline, with an $R^2$ value of 0.816 (bootstrap = 0.822, SE = 0.029, CR = 27.740, 95% CI [0.746, 0.871]), indicating that internal audit roles, effective leadership, and their interaction collectively account for over 81% of the variation in financial discipline in technical universities. For the first hypothesis (H1), which predicted that internal audit roles have a positive influence on financial discipline, the results show a statistically significant positive path coefficient ($\beta$ = 0.326, *bootstrap* = 0.325, *SE* = 0.009, *CR* = 38.130, 95% *CI* [0.309, 0.341]). This confirms that internal audit roles significantly enhance financial discipline, thereby supporting H1. The second hypothesis (H2), which proposed that effective leadership practices positively influence financial discipline, is also supported. The path coefficient is positive and significant ($\beta$ = 0.306, *bootstrap* = 0.309, *SE* = 0.010, *CR* = 29.886, 95% *CI* [0.281, 0.330]), confirming that leadership practices such as integrity, transparency, and accountability contribute to improving financial discipline in technical universities. The third hypothesis (H3) predicted that effective leadership moderates the relationship between internal audit roles and financial discipline. The interaction term is statistically significant, with a positive path coefficient ($\beta$ = 0.342, *bootstrap* = 0.344, *SE* = 0.009, *CR* = 39.716, 95% *CI* [0.328, 0.365]). This suggests that the impact of internal audit roles on financial discipline is enhanced under conditions of effective leadership, thereby supporting H3.

In terms of relative contributions, the moderation effect of effective leadership on the internal audit–financial discipline relationship accounts for the highest share of explained variance (36.9%), followed by internal audit roles (33.5%) and effective leadership practices (29.6%). This confirms that leadership not only has a direct impact on financial discipline but also substantially enhances the effectiveness of internal audit functions in ensuring fiscal accountability.

### *4.2 Discussion of Findings*

The findings provide strong empirical support for the first hypothesis, which posited that internal audit roles positively influence financial discipline. The results show that internal audit functions significantly enhance financial discipline in technical universities, with operational efficiency and strategic advisory services making the strongest contributions. This finding is consistent with the Agency Theory, which emphasises the role of internal audit in reducing information asymmetry and aligning managerial actions with stakeholder interests (Jensen & Meckling, 1976). By ensuring compliance, safeguarding assets, and improving efficiency, internal auditors mitigate the risk of resource misuse that often characterises agent–principal relationships. At the same time, the evidence extends the Stewardship Theory perspective by showing that internal audits are not limited to monitoring but also provide strategic guidance that supports long-term organisational objectives (Schillemans & Bjurstrøm, 2019). Empirically, these results are consistent with prior studies that demonstrate how internal audit functions strengthen internal control, promote accountability, and improve financial management in public institutions (Badara, 2013; Herawaty & Hernando, 2021). Thus, this study contributes to the literature by reaffirming the internal audit's evolving role from compliance assurance to a strategic partner in financial governance, particularly in the under-researched context of Ghana's technical universities.

The second hypothesis, which examined the impact of effective leadership on financial discipline, is also supported by the results. Leadership practices, including integrity, transparency, and accountability, emerged as the strongest predictors of financial discipline. This aligns with the Transformational Leadership Theory, which stresses that leaders who demonstrate ethical values and inspire commitment can shape organisational culture and embed accountability in financial practices (Bass, 1990). From a Stewardship Theory lens, effective leaders act as responsible custodians of institutional resources, ensuring that decisions are made in the interest of the wider stakeholder community. The findings also reinforce empirical evidence from studies that identify leadership integrity as fundamental to achieving fiscal accountability and reducing financial irregularities in public sector organisations (Brenya Bonsu et al., 2023; Adedokun et al., 2021). This study, therefore, contributes to both theory and practice by demonstrating that leadership qualities are not peripheral but central determinants of financial discipline in higher education institutions.

The third hypothesis explored the moderating effect of leadership on the relationship between internal audit roles and financial discipline. The results confirm that effective leadership significantly strengthens the impact of internal audit functions on financial discipline. This finding has important theoretical implications. While Agency Theory explains the monitoring role of internal audit, and Stewardship Theory highlights the moral responsibility of managers, the significant moderating effect underscores the bridging role of leadership in reconciling these perspectives. Without leadership support, internal audit functions risk being reduced to compliance exercises with limited influence. However, under transformational leadership, auditors are empowered, their recommendations are implemented, and their capacity to influence financial discipline is amplified. This extends the literature by empirically validating leadership as the "missing link" that explains why internal audit reforms in many emerging economies, including Ghana, have not yielded the anticipated results, despite the presence of institutional and legal frameworks.

Overall, the findings fill both theoretical and empirical gaps. Theoretically, the study integrates Agency, Stewardship, and Transformational Leadership theories to explain how leadership conditions determine the effectiveness of internal audit in fostering financial discipline. Empirically, it contributes to the limited body of research on internal audit and financial governance in African higher education institutions, where persistent financial irregularities have raised concerns about accountability. By highlighting leadership as a moderating mechanism, the study offers a nuanced understanding of why internal audit alone has not been sufficient to ensure financial discipline in Ghana's technical universities. This has important practical implications: strengthening leadership integrity and commitment is as critical as empowering internal audit functions if financial governance reforms are to achieve their intended outcomes.

## 5. Conclusions and Recommendations

### *5.1. Conclusion*

This study concludes that internal auditors play a vital role in promoting financial discipline within Ghana's technical universities through their involvement in risk management, strategic planning, reporting, compliance enforcement, and ongoing monitoring. The financial discipline remains a significant challenge, as evidenced by ongoing issues such as fund misallocation, procurement manipulation, weak budgeting practices, ineffective debt management, and the neglect of internal audit recommendations. The findings also indicate that effective leadership practices, especially those based on integrity, transparency, and accountability, substantially strengthen the positive impact of internal auditing on financial discipline. In this context, leadership integrity is a key factor in financial governance, as leaders who demonstrate integrity are more likely to make decisions that benefit the organisation while maintaining transparency and accountability in all financial dealings.

### *5.2. Recommendations*

In light of the study's conclusions, several recommendations are advanced for both practitioners and policymakers:

1. At the institutional level, technical universities should complement national policies and legal frameworks with internally developed financial discipline policies tailored to their specific contexts. Strengthening the independence and resourcing of Internal Audit Directorates is essential to ensure that auditors can operate effectively and enforce accountability.
2. University management must also prioritise robust budget preparation, implementation, and monitoring processes, while regularly assessing how leadership practices influence both internal audit effectiveness and financial discipline.
3. At the policy level, the establishment of a comprehensive Code of Ethics for Financial Discipline is recommended, with explicit provisions mandating adherence by leaders and senior officials, alongside stringent penalties for breaches to reinforce ethical conduct and financial integrity.

4. Furthermore, the Ghana Tertiary Education Commission (GTEC) should intensify its oversight role by regularly monitoring universities to ensure strict compliance with the Public Financial Management Act, 2016 (Act 921), and the Public Procurement Act, 2003 (Act 663). Together, these measures will strengthen governance, enhance accountability, and build sustainable financial discipline within Ghana's technical universities.

## 6. Contribution of the Study

This study makes significant contributions to both practice and scholarship by analysing the relationship between internal audit roles, effective leadership practices, and financial discipline. It provides valuable insights into how these factors collectively shape sound financial management practices, particularly within technical universities. The findings underscore that leadership practices rooted in integrity, transparency, and accountability are crucial for cultivating a culture of financial discipline, providing practical guidance for leaders seeking to enhance governance within their institutions. The study further highlights the crucial role of internal audit functions in promoting accountability and emphasises the need for the development of robust auditing processes to prevent financial mismanagement. From a theoretical perspective, the research advances academic literature by examining the synergistic relationship between internal audit and leadership, demonstrating how their interaction enhances financial discipline. By addressing this intersection, the study extends existing knowledge on financial governance and provides a foundation for future research in higher education and public sector contexts.

## 7. Originality of the Study

This study contributes to knowledge by integrating Agency, Stewardship, and Transformational Leadership theories to explain how leadership strengthens the impact of internal audit on financial discipline. It is original in context by focusing on Ghana's technical universities, an underexplored setting where financial irregularities remain a concern. Methodologically, it advances the literature by testing leadership as a moderating variable, offering new insights into financial governance in higher education.

## 8. Limitations and Future Research

This study is limited to technical universities in Ghana, which may affect the generalisability of the findings. It relies on cross-sectional, perception-based data that cannot fully establish causality. Future research should adopt longitudinal designs, incorporate objective financial indicators, and extend the analysis to other universities and public sector entities to provide broader and more robust insights into the interplay between internal audit, leadership, and financial discipline.

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