

## Internal Audit Engagement and Risk Management in Public Sector Organizations: Does It Really Exist?

Dhyah Setyorini<sup>1</sup>, Rahmawati<sup>2</sup>, Sri Hartoko<sup>3</sup>, Payamta<sup>4</sup>

### **Abstract**

*Business entities have undergone a shift in the internal audit function towards a more consultative role. Conversely, in public sector institutions like universities, it is not widely recognized. This study investigates how the new paradigm shift in Internal Audit Engagement in Risk Management impacts the Efficiency of Internal Audit. This study introduces Management Support as a moderating variable in the relationship between the two variables. The study included a sample of 51 internal auditors at PTN BLU. Snowball sampling is employed for sampling, and a questionnaire is used for data collection. The data analysis employed Moderated Regression Analysis (MRA). The results indicate that the first hypothesis is confirmed: Internal Audit's participation in Risk Management impacts the Efficiency of Internal Audit. The second hypothesis is confirmed: Management Support influences the relationship between Internal Audit Engagement in Risk Management and Internal Audit Effectiveness. Management support has a substantial impact on the relationship between the two, accounting for 61.1%. This study confirms that cooperation between internal audits and public entity management can enhance the internal audit's effectiveness.*

**Keywords:** Internal Audit, Risk Management, Management Support, Effectiveness.

### **INTRODUCTION**

The controls used in both profit and non-profit organizations serve to ensure that the actions of the organization are effectively monitored and controlled, thereby providing assurance to the public. The control mechanism mentioned is commonly referred to as an internal audit (Ma'ayan & Carmeli, 2016). Internal audit has become an essential and necessary control technique in both public and commercial enterprises. Research indicates that firms with an effective internal audit role outperform organizations without such a function, particularly in terms of detecting and preventing fraud (Coram et al., 2006). Thus, it is crucial for the firm to have an efficient internal audit. Internal audit plays a crucial role in helping organizations achieve their goals (Al-Twaijry et al., 2003). An internal function audit that performs well serves as an excellent instrument for monitoring and supporting sound governance processes in any firm (Belay, 2007). Despite the establishment of internal audit, its duties and roles have not been fully optimized (Asy'ari et al., 2013). The study conducted by Ma'ayan and Carmelli Research (2016) focuses on examining the functions of internal auditors in promoting internal audit learning and enhancing performance improvement. The findings suggest that endorsement from senior management for internal audit and the internal capabilities of auditors (including skills, resources, and behavior) facilitated the acquisition of auditing knowledge and aided the audited unit in enhancing the organization's ethical standards, operational efficiency, and overall effectiveness. This study highlights the importance of recognizing that a successful internal audit relies on the combined efforts of both top management (in terms of providing support) and internal auditors (in terms of their auditing capabilities). Baiden's (2016) does not perceive the internal audit function as a provider of services that provide value to the firm. Meanwhile, Arena and Azzone's (2009) study discovered proof that internal auditors have taken advantage of this newfound interest by modifying their role and broadening their scope of participation to encompass risk management, control, and governance activities. These modifications are intended to enhance the internal organizations value-added. Nevertheless, this alteration necessitates a reconfiguration of procedures, skills, and

---

<sup>1</sup> Student Doctoral Program in Economics Science, Postgraduate School, Universitas Sebelas Maret, Indonesia, Department of Accounting, Faculty of Economics and Business, Universitas Negeri Yogyakarta, Indonesia, E-mail: [dyah\\_setyorini@uny.ac.id](mailto:dyah_setyorini@uny.ac.id)

<sup>2</sup> Department of Accounting, Faculty of Economics and Business, Universitas Sebelas Maret, Indonesia

<sup>3</sup> Department of Accounting, Faculty of Economics and Business, Universitas Sebelas Maret, Indonesia

<sup>4</sup> Department of Accounting, Faculty of Economics and Business, Universitas Sebelas Maret, Indonesia

positions for internal audit, therefore necessitating an evaluation of the efficiency of internal audit. In their study, Badara and Saidin (2014) examined the factors that influence the efficacy of internal audits in Nigeria. They found that risk management factors are positively related to internal audit effectiveness.

The aforementioned research highlights the crucial significance of the internal audit function in many types of organizations, including both business entities and public entities. The internal audit function encompasses the complete process of auditing, assessing, evaluating, monitoring, and supervising the activities and operations of the company. Internal audit will guarantee that the organization's activities are effectively regulated, the security of property and assets is upheld, accurate financial reports are kept, and any abnormalities or non-compliance with regulatory rules are promptly detected. The primary responsibility of the internal audit function is to ensure the successful attainment of internal control objectives. Enhancing the efficiency of internal audits will impact the adherence of organizational members to their responsibilities and roles. The organization's members offer accounting information that deviates from the true conditions. The traditional scope of the internal audit function was primarily focused on safeguarding organizational assets, however the modern scope of the internal audit function is more expansive than its predecessor. Not just ensuring the protection of an organization's or entity's assets, but also serving as a collaborator for senior management in recognizing current dangers. In the new paradigm, the internal audit function has transitioned from being perceived as an adversary to the members of the entity or organization, to being seen as a collaborator who assists them in executing operational activities aligned with the aims of the organization or entity. The consulting role in this new framework is ultimately anticipated to enhance the caliber of financial information generated by businesses or entities. It is essential that the accounting information given adheres to the qualitative qualities of accounting information. One of the key factors is reliability. The value of information diminishes when the user harbors doubts or uncertainty regarding its veracity. The credibility of accounting information is contingent upon the origin of the information and the manner in which the presenter of financial reports portrays, explains, and symbolizes it.

Despite numerous studies highlighting the significance of the internal audit function, particularly in the context of the new paradigm, the findings from an interview survey conducted at two public sector entities indicate that the internal audit function, which is meant to provide consultation and assist in managing risks (risk management) in public sector entities, is not yet operational. The internal audit function is still characterized by the previous paradigm. Further investigation is required to explore the transformation of the internal audit function into a consultative collaborator in the risk management of public entities in Indonesia. There are suspicions that the consultative function has not been performed optimally. Given this context, this study demonstrates that the participation of the internal audit function in risk management has an impact on the efficiency of internal audits. This study must be conducted, taking into account the prevailing opinion that the internal audit function contributes to organizational expenses and frequently leads to internal discord (Baiden, 2016). Hence, the research must exhibit the internal audit's ability to fulfill its new duty as a vital counselor and strategic collaborator with management in risk management.

A study conducted by Zamzani and Faiz (2015) investigated the efficacy of the University. Inadequate internal oversight can result in inconsistencies in the administration and resources of higher education institutions (Wulandari et al., 2019). The study conducted by Asy'ari et al., (2013) elucidates that while internal audit has been implemented in higher education, its function and role have not been fully optimized in practice. From 2006 to 2016, there were 37 reported instances of corruption in higher education, substantiated by evidence findings. These incidents resulted in losses amounting to 218.4 billion (Irfan, 2016). A common symptom of fraud in higher education environments is the absence of internal control, which is caused by the lack of separation of functions among budget users at the lower level. Additionally, there is a lack of internal control exercised by the heads of minor dean units when it comes to reporting fund accountability (Harwida, 2015). Internal audits have demonstrated their effectiveness in identifying opportunities for cost reduction, streamlining processes, and perhaps mitigating hazards. Internal audits can also evaluate procedures and performance quality over a period of time, guarantee the attainment of higher education objectives, and serve as a reminder to all members of the company about their responsibilities for operational efficiency. This study provides evidence that internal audits can result in substantial cost reductions. Internal auditors have a crucial role in ensuring the efficiency of internal control in higher education (Wulandari et al., 2019). The job of internal

auditors has a significant impact on enhancing internal control and improving the performance of higher education institutions in combating fraudulent activities. Internal auditors primarily serve as consultants, focusing on proactive measures to prevent issues. In the event that problems are identified, the internal auditor offers suggestions for enhancement. The audit paradigm is indicated by multiple cases in higher education institutions in Indonesia (Asy'ari et al., 2013; Harwida, 2015; Irfan, 2016; Thoyibatun, 2009; Wilopo, 2006; Wulandari et al., 2019; Zamzami & Faiz, 2015). The new internal components are not functioning effectively.

Extensive prior study has been conducted on the internal audit function. However, there is still a lack of extensive research on the role of the internal audit function as a consultative function, particularly in the context of managing risk management in public sector entities, including educational institutions. The findings of prior studies remain broad, focusing on the role of the internal audit function as a public overseer. Research is necessary to examine the role of the internal audit function as a consultative catalyst in managing risks for public institutions. Prior research findings solely indicate the effectiveness of the internal audit function in safeguarding the entity's assets. This research aims to demonstrate the outcomes of inquiries into the implementation of the internal audit function as a consultative partner, assisting in the management of risk management. Furthermore, past studies on the effectiveness of internal audits have predominantly employed an agency or institutional theory framework, but this research will adopt a stakeholder theory framework. Furthermore, this study focused on public institutions, particularly universities, which have not received extensive academic attention.

## **Stakeholder Theory**

Effective organizational governance is a crucial concern for stakeholders, particularly principals (shareholders). Stakeholders, also known as stakeholders, refer to all individuals or groups who have a direct or indirect interest in an organization and can be influenced by or have an influence on the organization's actions, goals, and policies (Freeman et al., 2010). Stakeholders can be classified into different groups, such as primary (major), secondary (supporting), and crucial stakeholders, based on their strengths, important positions, and influence on a stakeholder issue. Key stakeholders are individuals or groups who possess a direct vested interest in a policy, program, or initiative. The major determinants in the decision-making process must be the stakeholders. Secondly, supporting stakeholders refer to individuals or groups who do not possess a direct stake in a policy, program, or initiative, but express concerns and interests regarding the current issues at hand. Their apprehension motivates individuals to actively engage in articulating their viewpoints, which in turn have an impact on public sentiments and governmental legal determinations. Key stakeholders are individuals or groups who possess the requisite legal authority to make decisions. The stakeholders consist of executive entities based on their hierarchy, legislative bodies, and government organizations. The stakeholder approach is employed to evaluate the success of an organization (Parmar et al., 2010). Internal audit effectiveness is a key stakeholder concern in internal control. Stakeholders want complete internal audit effectiveness data. Unfortunately, current data only describes whether an internal audit is effective. Stakeholders need long-term, short-term, subjective, objective, and financial/non-financial information. Internal audits must be effective for the company to succeed.

Freeman and Reed (1983) used stakeholder theory to address three main issues. Let's start with value creation and commerce. In the dynamic global corporate setting, creating and exchanging value is important. How does this happen? The second issue is capitalism's ethics. How do capitalism and ethics relate? Finally, management attitude. How should management increase value creation and establish commercial and ethical links? This method helps identify the unit of analysis for relationships between businesses, groups, and individuals that can influence or be influenced by it. Thus, the three issues can be resolved. The stakeholder theory views business as a network of group interactions influenced by firm activities (Freeman & Reed, 1983).

Customers, employees, suppliers, debtors, and creditors are included. Management and communities cooperate to create and exchange value. Managers must understand a constantly changing business to stay informed about changing relationships and maximize value creation. When stakeholders' interests conflict, management must accommodate all parties to achieve a balance. Managers ensure stakeholder interests are met when forced to make trade-offs to achieve a balanced outcome. The second explanation, which emphasizes stakeholder

relations, helps business survival in a capitalist environment. Managers must consider moral and ethical issues like decision importance, potential negative effects, and stakeholder benefits. Management should prioritize value creation, stakeholder alignment, moral failure prevention, and value creation. According to stakeholder theory, a firm serves its stakeholders—investors, creditors, debtors, suppliers, government, consumers, and the public. Thus, stakeholder support greatly affects the entity's presence. For the entity to survive, it must actively seek stakeholder support and align its operations with this goal (Gray et al., 1995). The more stakeholders support an entity, the more likely it will adapt and survive.

Stakeholders has the authority and capacity to exert control and influence over the individuals who utilize the economic resources employed by the organization. Therefore, the influence of stakeholders is assessed according to the magnitude of their control over these resources. Strength, in this context, refers to the capacity to limit the utilization of scarce resources such as capital and labor, control access to influential media, or exercise authority over the consumption of goods or services provided by an organization (Deegan, 2000). Thus, if stakeholders have control over the crucial resources of an entity, the business will behave in a manner that fulfills the desires of the stakeholders (Ullmann, 1985). According to Ullmann (1985), the entity will choose stakeholders who are deemed crucial and implement measures that can lead to a harmonious relationship between stakeholders and the entity. In the realm of higher education, the primary individuals responsible for overseeing the internal audit function are key executives, including the chancellor, vice-chancellor, dean, vice dean, head and secretary of the institution, head of the bureau, and the head of department and head of study programs. The key stakeholders have a direct interest in the findings and recommendations of the university's internal audit function. Secondary stakeholders, such as the supervisory board and internal audit, play a role in the organization. The secondary stakeholders lack a direct vested interest in the outcomes and suggestions of the internal audit function. Nevertheless, they harbor reservations and apprehensions regarding the conclusions and suggestions put forth by the internal audit function. Their worry motivates them to actively engage in voicing their ideas, which in turn have an impact on the legal attitudes and decisions made by the organization.

### Internal Audit Effectiveness

Several studies have examined internal audits, but few have examined their effectiveness (Cohen & Sayag, 2010). Organizational internal audits must ensure accurate financial data. However, internal audit is seen as a cost and a source of internal conflict (Baiden, 2016). The internal audit function should be clarified to support the new role as a critical advisor and strategic partner to management. Performance can win support for the internal audit function. Thus, internal audits have proven effective. Obeid and Abdelnur (2018) examined Sudanese government internal auditors' objectivity and competence. Internal audits should yield useful results. We must work with government staff and internal auditors. Good cooperation will improve internal audit effectiveness. It shows how objectivity and competence interact. Ma'ayan and Carmelli's (2016) developed and tested top management and internal auditor role models. The survey found an indirect relationship between auditor capacity, auditor-auditee feedback, audit learning, and ethical behavior, efficiency, and effectiveness. This research shows that internal audit, proactive learning, and ethics improve public sector organizational performance. Baiden (2016) also studied internal audit effectiveness. The following is a summary of internal audit effectiveness research:

**Table 1.** Research on Internal Audit Effectiveness for Three Decades (1988-2018).

| No. | Internal Audit Effectiveness  | Researcher Name/year  |
|-----|---|---|
| 1.  | Effective internal audits meet management expectations.   | (Albrecht et al., 1988; Sarens & De Beelde, 2006).                  |
| 2.  | Successful internal audits meet the expectations of the auditee.  | (Arena & Azzone, 2009b; Elliott et al., 2007)                       |
| 3.  | Internal audit is effective when it meets audit committee board expectations.   | (Sarens & Abdolmohammadi, 2009; Soh & Martinov-bennie, 2011)        |
| 4.  | Internal audit is considered effective from the point of view of Marxist theory, namely when it can increase the <i>rate of return</i> of the company's capital so that the company can contribute to social goals such as reducing corruption, eradicating poverty, and maximizing employment rates. | (Yee et al., 2008)  |
| 5.  | Internal audits that meet external auditor expectations are also effective.   | (Cohen & Sayag, 2010; Desai & Desai, 2010; Felix, Jr et al., 2001). |

| No. | Internal Audit Effectiveness  | Researcher Name/year                  |
|-----|---|---------------------------------------|
| 6.  | Internal audit is effective when it adds value to the organization.   | (Arena & Azzone, 2009b; Baiden, 2016) |
| 7.  | Internal audit effectiveness relies on both parties (auditor-auditee): top management support and internal auditor capacity.  | (Ma'ayan & Carmeli, 2016)             |
| 8.  | Effective internal audit improves public service financial management.  | (Baharud-din et al., 2014)            |
| 9.  | Internal audit is effective when it promotes organizational efficiency and effectiveness through planning, communication, approval, resource management, policies and procedures, coordination, reporting to the board and senior management, program development and quality control, and public complaint response. | (Gamayuni, 2018)                      |
| 10. | Internal audit is effective when it achieves public sector governance transparency and accountability.  | (Shamsuddin, 2016)                    |
| 11. | The ability to meet operating and compliance goals determines internal audit effectiveness.   | (Chang et al., 2018)                  |

The results differ from Ma'ayan and Carmelli (2016). Baiden's (2016) does not prove internal audit improves organization effectiveness. Arena and Azzone (2009) examined how the new paradigm of internal audits and its central role in corporate governance affect internal audit effectiveness. The conclusion shows that (1) team characteristics, (2) audit processes and activities, and (3) organizational relationships affect internal audit effectiveness. Some factors could boost internal audit effectiveness. The Chief Audit Executive's affiliation with the Institute of Internal Auditors, control risk self-assessment, and audit committee involvement in internal audits increase the ratio of internal auditors to employees. Alzeban and Gwilliam (2014) examined Saudi internal government audit effectiveness. He found that management support for internal audits affects management and internal auditors' perceptions of the function's effectiveness. Management support includes hiring experienced staff, providing enough resources, improving external auditor relationships, and having an independent internal audit department. Drogas's et al., (2015) examined the factors that affect internal audit effectiveness in Greek businesses. Quality, team competence, independence, and management support are the main factors affecting internal audit effectiveness, according to empirical evidence. Their model shows that internal audit independence is the most important factor in its effectiveness. Internal audit departments/divisions/units prevent and detect errors and fraud and secure organizational assets (Albrecht et al., 1988; Cosserat, 2000; Flesher, 1996; Hayes, 1999; J. Liu et al., 1997; X. K. Liu et al., 2015; Miller, 1999). The second is a performance audit of the organization's economy, efficiency, and effectiveness. The scope can be broad, but the goal is to improve an organization's economy, efficiency, and effectiveness by improving operational performance (Griffiths, 1999; Marks, 2000; Ridley, 1994, 1996; Wynne, 1999).

Stakeholders must follow the Standards for the Professional Practice of Internal Auditing (SPPIA) for an internal audit of value-added activities (Crockett & Albin, 1995; Moeller & Witt, 1999; Montondon, 1995; Ridley, 1993, 1994; Ridley & Chambers, 1998). American internal audit organizations issued internal audit standards in 1978 and updated them in 1997 and 2001. Independence, professional skills, scope of work, performance, and management of the internal audit department/division/unit are the five areas of internal audit standards. The standards enable global internal audit unification, quality measurement, and improvement (Flesher, 1996; Fried et al., 1998). The 1997 IIA Global Forum concluded that global internal audit status must be better understood (Lower, 1997). Furthering the profession in developing countries is a Global Governance Steering Committee priority (International Standards for the Professional Practice of Internal Auditing, 2007). The IIA's development and setting of standards is a major achievement, but ongoing changes in the global commercial environment necessitate revising and updating standards (Miller, 1999). These standards are revised and updated to maintain internal audit effectiveness. Two main approaches to internal audit effectiveness exist (Cohen & Sayag, 2010). First, internal audit effectiveness is determined by its conformity to universal standards extrapolated from its characteristics (White, 1976). Sawyer (1988) proposed five internal auditing standards: interdependence, professional proficiency, scope of work, audit performance, and department management. Glazer & Jaenike (1980) and Anderson (1983) used this method.

The second approach, according to Ransan (1955) and Albrecht et al. (1988) that management subjectively evaluates internal audit effectiveness. Thus, an internal audit's success depends on stakeholder expectations (Albrecht et al., 1988). This method requires systematic and valid measures of internal audit effectiveness (M. Dittenhofer, 2001; Schneider, 1984). Hoag (1981) created a questionnaire to get managerial feedback on internal audits. The questionnaire addressed planning and preparation, audit report quality, audit time, and actor communication. From the manager's responses, an average audit task effectiveness score was calculated. In an

IIA-sponsored study, Albrecht et al., (1988), identified 15 criteria used by 13 large private organizations to evaluate internal audit effectiveness. Results show that effectiveness is primarily determined by the fit between audit work and manager objectives, internal auditor qualifications, management support, and internal audit department characteristics. Lampe and Sutton (1994) list 15 factors that make an audit effective in three stages: planning, fieldwork, and reporting and review. Ziegenfuss (2000) also created a questionnaire with 84 effectiveness criteria in four categories: internal audit environment, audit inputs, audit process, and audit outputs. A comprehensive internal audit effectiveness study is needed. Internal audit effectiveness can be studied qualitatively (Glazer & Jaenike, 1980; White, 1976), quantitatively (Schneider, 1984), or both (M. Dittenhofer, 2001). Only Lampe and Sutton (1994) and Albrecht et al. (1988) attempted to design a large scale that could be validated by examining factor structures and reliability or conceptual correlations. Unfortunately, the study did not test the empirically suggested scale with a valid and reliable scale.

Arena and Azzone (2009a, 2009b) define internal audit effectiveness as the ability to achieve goals. Three methods—process, output, and outcome—measure internal audit effectiveness. The process approach evaluates audit effectiveness by internal audit standard compliance. The output approach evaluates internal auditors' ability to meet auditee needs. Instead, the outcome approach evaluates internal audit based on all factors that affect auditing. Cohen and Sayag (2010) examined the effectiveness of internal audits by comparing them to IIA universal standards. Internal audit effectiveness is measured by auditing quality, auditee evaluation, and added value. Badara and Saidin (2013) also examined the effectiveness of internal audits in local governments by measuring their ability to meet their objectives. Alzeban (2014) evaluates internal audits based on auditees' perceptions of function quality, particularly department managers in examined organizations. Planning, improving organizational productivity, assessing results' consistency with goals and objectives, implementing internal audit recommendations, evaluating and improving risk management, evaluating the internal control system, and improvement recommendations are the department manager's quality assessment.

## **Internal Audit Engagement in Risk Management**

Internal auditing has evolved in recent years. The old paradigm prioritizes compliance and monitoring, while the new paradigm improves performance. Internal audit used to check managers' goals. Short-term effectiveness of the old internal audit paradigm. The new paradigm expanded internal audit to include risk management consulting. The new paradigm internal audit function helps management understand what could prevent them from meeting their goal. The IIA Position Statement (2007) states that internal audit's main role in enterprise risk management (ERM) is to objectively reassure the board of its effectiveness. The board uses that information to manage critical business risks and internal control systems. Internal audit can also consult on risk management methodologies and controls to address major risks (Practice Advisory 2110-1). However, some roles should not be performed by internal audit because they may compromise auditor objectivity and independence. The internal auditor should not assign risks or make risk response decisions because they could compromise objectivity and independence (see IIA Position Statement, 2004 for more on internal audit in ERM.) Internal audit is necessary to avoid inappropriate risk management involvement, but it also aids risk management. Internal audits can help managers achieve their goals by monitoring the internal control system to manage risk and providing feedback on its effectiveness. Sawyer et al., (2003) say clarifying risk-control relationships improves audit reports. IIA (2007) found that internal audit's main role in risk management is to ensure a strategy is properly defined and implemented to reduce risks (Coetzee, 2016).

Does the risk management structure exist before asking the internal audit function to contribute? Does risk management coordinate with internal audit? The presence and maturity of risk management structures affect internal audit. A lower risk maturity level may require consulting, while a higher risk maturity level will require assurance (IIA 2007). Internal audit can ensure risk management and incorporate risk management process results at high-risk maturity. They focus on risk areas and perform risk-based audits, but internal audits must be independent of the structure. The internal audit function must also collaborate with risk management, such as communicating about risk issues. The risk management audit function becomes ambiguous. Internal risk steering committees (Oosthuizen et al., 2016) are becoming popular so role players can discuss risk issues. Few references exist on the level of coordination or involvement between risk management and internal audit,

especially for public sector entities (Coetzee, 2016). IIA members are advised on risk management dos and don'ts (IIA 2007). The core activities include strategic assurance that the risk management framework supports the strategic management framework. Second, assessing risk management as it is done. (M. A. Dittenhofer et al., 2010) state that the IAF should provide overall assurance, including risk management, as part of the public sector internal audit capability model.

*H<sub>1</sub>: The involvement of the internal audit function in risk management affects the effectiveness of the internal audit.*

## **Management Support**

Institute of Internal Audit definition of internal audit includes good governance, which relies on management professionalism to ensure a strict internal audit function. Senior management has shown a growing importance of audit and changing expectations of internal audit (Bronson et al., 2006). Internal audit can recruit qualified staff and provide ongoing training and development with top management support (Alzeban & Sawan, 2013; Cohen & Sayag, 2010). International internal audit standards also require the CAE to report scope or budgetary constraints to senior management. Cohen and Sayag (2010) top management support internal audits. They also provide enough ratios between internal auditors and planned and completed audit work. Internal auditors receive enough funding for staff training and development. Responses to audit findings, commitment to strengthening internal audit, and resources for the department are also forms of management support for internal audit (Alzeban & Gwilliam, 2014; Mihret et al., 2010). How senior management supports internal audits will send a message about their importance throughout the organization. This support can help the internal audit department/division/unit perform its duties. International standards emphasize the relationship between internal audit and senior management and how management can support internal audits. The CAE should consider senior management's input in the internal audit plan (International internal auditing standards, Standard 2010.A1). Senior management must receive good, reliable, and relevant reports from the internal audit department/division/unit on work, conclusions, and recommendations. "The Chief Audit Executive must regularly report to senior management and the board on the objectives, powers, responsibilities, and performance of the internal audit activity as planned" (International internal auditing standard, Standard 2060). Top management support is crucial for internal audit success, according to research. Management support is the second most important factor in Malaysian public sector CAEs after audit staff adequacy. The research also suggests that management support will lead to internal audit recommendations being implemented and well-resourced in terms of staff and budget. Public sector organizations in Ethiopia suffered from management support gaps in internal audit. For instance, the auditee dislikes internal audit. Without influencing senior management's agenda, internal audit is unimportant (Getie Mihret & Wondim Yismaw, 2007). From the previous discussion, the second hypothesis is:

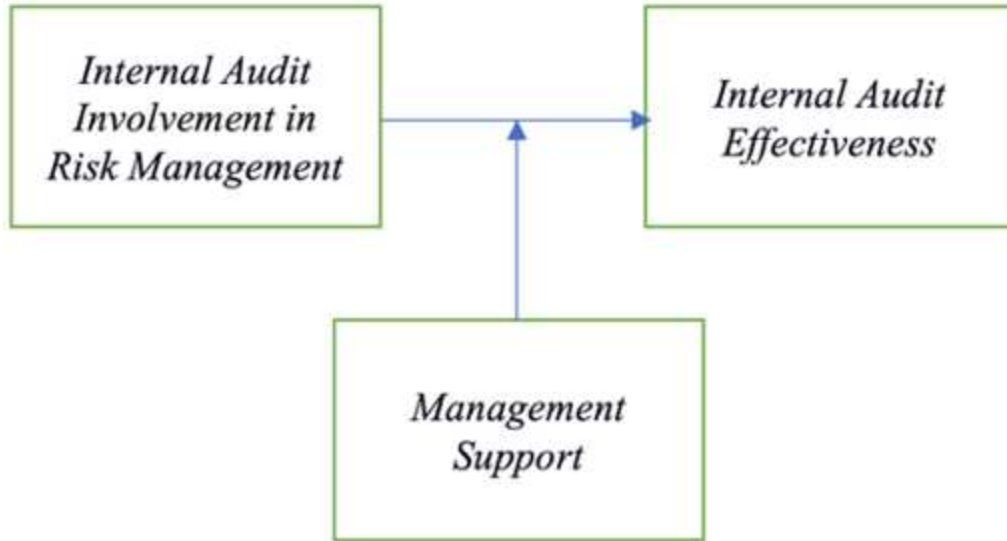
*H<sub>2</sub>: Management support moderates the relationship between internal audit involvement in risk management and internal audit effectiveness.*

Based on the background and literature study above, this research aims to empirically prove whether internal audit's consultative role in risk management affects its effectiveness at BLU universities. This research may demonstrate a function paradigm shift internal audit. This research can also encourage entities that have not empowered their internal audit function (if any) to optimize it as a consultative risk management function, as the internal audit function is optimally empowered and not just a complement to organizational organs.

## **RESEARCH METHOD**

### **Research Design**

The research design is quantitative. Figure 1 shows the research model for this study, which will examine how Internal Audit Involvement in Risk Management and Management Support Affects BLU State University Internal Audit Effectiveness:



**Figure 1.** Research Model.

### Population And Sample

This study included 24 BLU State University internal auditors. This study includes 51 auditors. The sampling method was snowballing sampling. The questionnaire was sent to the Head of SPI and then to SPI members or internal audit staff. We use primary data came from the deployment questionnaire. The following table shows respondent demographics.:

**Table 2.** Demographic Data of Respondents.

| Respondent Demographics    |       |
|----------------------------|-------|
| Sex                        |       |
| Man                        | 53%   |
| Woman                      | 47%   |
| Age (in years)             |       |
| Youngest                   | 27    |
| eldest                     | 55    |
| Average                    | 43.24 |
| Work Experience (in years) |       |
| Minimum                    | 2     |
| Maximum                    | 32    |
| Average                    | 15.67 |

### Definition of Variables and Measurements

This study's dependent variable is internal audit effectiveness. Management Support and Internal Audit Engagement with Risk Management are the independent variables in this study. Variables Internal audit effectiveness is the ability of internal audit to increase organizational efficiency and effectiveness through planning, communication and approval processes, resource management, policies and procedures, coordination, reporting to the board and senior management, program development, quality control, and public complaint follow-up—measured using instruments from Gamayuni (2018). Internal auditor engagement with risk management is their role in identifying and managing risks to achieve organizational goals. The Risk Management Internal Audit Engagement variable uses an instrument from Coetze (2016). Management Support is management's contribution to internal audit work, such as providing adequate audit staff, budget for training and development, response (follow-up) to audit findings, commitment to strengthening internal audit, and department resources. In-house audit. Instrument Management Support measurement from Alzeban and Gwilliam (2014b). Then, the product-moment Pearson correlation test connected each item's score to the respondents' total score to test the research instrument's validity. The validity test results show that all question



items are valid (above r table 0.274) except for one Internal Audit Effectiveness and Audit Engagement question in Risk Management. It was tested for reliability using Cronbach's Alpha.

**Data Analysis**

To prove the hypothesis, simple regression analysis was used to test whether PTN BLU internal audit effectiveness is affected by risk management. A Moderated Regression Analysis interaction test will test the second hypothesis. Study the regression equation model below.:

Regression equation model 1:

$$Y = a + b1x1 + e \tag{1}$$

Regression equation model 2:

$$Y = a + b1x1 + b2(x1 * x2) + e \tag{2}$$

Descriptions:

Y : Internal Audit Effectiveness.

a : constant.

b : regression coefficient.

X1 : involvement of internal audit in risk management (KAIMR).

X2 : management support (DM, moderating variable).

**RESULTS AND DISCUSSION**

In Table 3, descriptive statistics show that Internal Audit Effectiveness ranges from 39 to 63. Its average value is 52.9, with a standard deviation of 0.901. Internal Audit Involvement in Risk Management ranges from 70 to 129. The variable averages 96.7 with a standard deviation of 2.272. Finally, Management Support ranges from 19 to 35. The variable averages 27.8 with a standard deviation of 0.723.

**Table 3.** Descriptive Statistics.

| Variable                          | N  | Range | Min | Max | Average | Standard Deviation |
|-----------------------------------|----|-------|-----|-----|---------|--------------------|
| Internal Audit Effectiveness      | 51 | 24    | 39  | 63  | 52.9    | 0.901              |
| AI Involvement in Risk Management | 51 | 59    | 70  | 129 | 96.7    | 2.272              |
| Management Support                | 51 | 16    | 19  | 35  | 27.8    | 0.723              |

Results indicate a good fit model with an F-value of 79.76 and significant at 0.000 alpha level. The R square for this model was 0.612, indicating that two independent variables—involvement in Internal Audit and Risk Management Support Management—explained 61.2% of internal audit effectiveness variables. The regression model predicts Audit Internal effectiveness, according to the F-test.

**Table 4.** Results of the First Hypothesis Regression Analysis.

| Variable   | Coefficient | Standard Error | t Table | p-Value | adj. R square |
|--|-------------|----------------|---------|---------|---------------|
| Constant   | 35.133      | 4.922          | 7.137   | 0.000   |               |
| AI Involvement in Risk Management (X1)<br>n=51, 2-tailed | 0.184       | 0.05           | 3,655   | 0.001   | 0.198         |

Table 4 supports hypothesis one regarding the impact of internal audit involvement in risk management on its effectiveness. Risk Management Involvement Coefficient Internal Audit variable t-test value is 3,655 or greater than t-table 2,009. A probability p-value of 0.001 indicates significance at 0.05. The regression equation for the first hypothesis yields:  $Y = 35,133 + 0,184 x1 + e$

**Table 5.** Results of the Second Hypothesis Regression Analysis.

| Variable  | Coefficient | Error Standard | t-Table | p Value | Adj. R square |
|---|-------------|----------------|---------|---------|---------------|
| Constant  | 32.362      | 2.365          | 13.682  | 0.000   |               |
| AI Engagement in Risk Management *Supporting Management (X1*X2) | 0.004       | 0.00           | 8.931   | 0.000   | 0.612         |

n=51, 2-tailed

In hypothesis two, management support moderates the relationship between internal audit risk management involvement and effectiveness. The variable's involvement in Risk Management Internal Audit with Management Support had a t-table of 8.931 and a p-value of 0.000. T-table 8,931 is greater than the t-table and the p-value is smaller than 0.05 ( $p < 0.05$ ), indicating Management Support moderates the relationship between Internal Audit involvement in Risk Management and Audit Internal Effectiveness Audit. The regression equation for the second hypothesis yields:  $Y = 32,362 + 0,184 x_1 + 0,004 (x_1 * x_2) + e$ .

Adjusted value. While the first regression had an R-square of 0.198 (19.8%), the second regression equation resulted in an Adj. R-square of 0.612 (61.2%). Through Management Support, connections can be strengthened. Risk Management and Internal Audit Effectiveness. The first hypothesis testing shows that Internal Audit improves internal audit effectiveness. The Institute of Internal Audit (IIA) and Coetzee (2016) found that internal audit plays a role in risk management, primarily to ensure that a strategy has been properly defined and implemented to help organizations mitigate risks. Seventy percent believe Internal Audit's involvement in PTN BLU Risk Management does not compromise its independence. BPK, Inspectorate General, KAP, and public sector management should not influence internal audits. However, 12% believe Internal Audit is not independent of these parties, and 18% doubt it. It may happen because Internal Audit staff cannot avoid rolling policies out to other departments. There are concerns that Internal Audit staff will be assigned (rolling) assignments to units they have audited, compromising management independence. Establishing rules for staffing divisions or Internal Audit units without rolling positions or work to other units can eliminate such doubts. Of course, leadership must support this policy. This shows that regulations affect internal audit effectiveness. The second hypothesis test shows that Management Support moderates Internal Audit Involvement and Risk Management Effectiveness. Management support strengthens internal audit and preventive actions (Novriansa & Riyanto, 2016). Preventing PTN BLU program or activity errors is preventive action. This study confirms previous findings that Management Support affects internal audit effectiveness (Cohen & Sayag, 2010; D. G. Mihret & Yismaw, 2007). Management support provides enough staff, budget for training, and development for internal audit staff. Management responses (follow-up) to audit findings, commitment to strengthening internal audit, and resources for PTN BLU's internal audit department will improve internal audit professionalism and effectiveness (Sudsomboon & Ussahawanitchakit, 2009). This study shows that Management Support is crucial to Internal Audit Effectiveness (D. G. Mihret & Yismaw, 2007).

**CONCLUSIONS**

This study examined how Risk Management Internal Audit Involvement affects Internal Audit Effectiveness with Management Support as a moderating variable. This study supports the hypothesis that Management Support moderates the relationship between Risk Management Internal Audit Engagement and Effectiveness. This research also confirms a paradigm shift in internal audit. The hypothesis that Internal Audit Risk Management affects Internal Audit effectiveness is supported. The limitation in this study is the length of time for returning the questionnaire, so it takes a long time to obtain adequate data from this study. The use of snowball sampling has limitations, namely the researcher has little control because he only chooses the sample at the beginning (the head of the SPI). The sample is selected by subjects who have been previously selected. Suggestions for further research should be to add samples from the auditee side so that the level of generalization is higher, not only from the internal auditor's point of view.

**Declaration of competing interest**

The authors declare that they have no known financial or non-financial competing interests in any material discussed in this paper.

### Funding information

No funding was received from any financial organization to conduct this research.

### Acknowledgements

The authors would like to thank Universitas Sebelas Maret for providing the facilities also support for this research.

### Author contribution

The contribution to the paper is as follows: Dhyah Setyorini, Rahmawati, Sri Hartoko, Payamta: study conception and design; Dhyah Setyorini: data collection; Dhyah Setyorini, Rahmawati, Sri Hartoko, Payamta: analysis and interpretation of results; Dhyah Setyorini: draft preparation. All authors approved the final version of the manuscript.”

### Ethical approval statement

Ethical approval is not applicable for this research.

### Informed consent

Informed consent for the publication of personal data in this article was not obtained because by obtaining consent might pose a risk of harm to the individuals involved or may compromise the integrity of the study.

### REFERENCES

- Albrecht, W. S., Howe, K. R., & Schueler, D. R. (Eds.). (1988). *Evaluating the Effectiveness of Internal Audit Departments*. Institute of Internal Auditors Research Foundation.
- Alfaiza, S. A., Abed, A. Y., Sultan, A. A., & Riyadh, H. A. (2023). Moderating role of leadership between mass collaboration and quality of knowledge: a case of Iraq's pharmaceutical sector. *International journal of organizational analysis*, 31(4), 988-1000.
- Al-Twaijry, A. A. M., Brierley, J. A., & Gwilliam, D. R. (2003). The development of internal audit in Saudi Arabia: An institutional theory perspective. *Critical Perspectives on Accounting*, 14(5), 507–531. [https://doi.org/10.1016/S1045-2354\(02\)00158-2](https://doi.org/10.1016/S1045-2354(02)00158-2)
- Alzeban, A., & Gwilliam, D. (2014a). Factors affecting the internal audit effectiveness: A survey of the Saudi public sector. *Journal of International Accounting, Auditing and Taxation*, 23(2), 74–86. <https://doi.org/10.1016/j.intaccaudtax.2014.06.001>
- Alzeban, A., & Gwilliam, D. (2014b). Factors affecting the internal audit effectiveness: A survey of the Saudi public sector. *Journal of International Accounting, Auditing and Taxation*, 23(2), 74–86. <https://doi.org/10.1016/j.intaccaudtax.2014.06.001>
- Alzeban, A., & Sawan, N. (2013). The role of internal audit function in the public sector context in Saudi Arabia. *African Journal of Business Management*, 7(6), 443–454.
- Anderson, U. (1983). *Quality Assurance for Internal Auditing*. Institute of Internal Auditors. Florida: Altamonte Springs.
- Arena, M., & Azzone, G. (2009a). Identifying Organizational Drivers of Internal Audit Effectiveness. *International Journal of Auditing*, 13, 43–60. <https://doi.org/10.1111/j.1099-1123.2008.00392.x>
- Arena, M., & Azzone, G. (2009b). Internal Audit Effectiveness: Relevant Drivers of Auditees Satisfaction. *International Journal of Auditing*, 13(1), 43–60.
- Asy'ari, M. A., Prasetyono, & Hartadi, B. (2013). Peran dan Fungsi Pengawasan Intern dalam Pencegahan Fraud Pada Perguruan Tinggi X. *Jaffa*, 01(2), 99–112.
- Badara, M. azu S., & Saidin, S. Z. (2014). Empirical Evidence of Antecedents of Internal Audit Effectiveness from Nigerian Perspective. *Middle-East Journal of Scientific Research*, 19(4), 460–471. <https://doi.org/10.5829/idosi.mejsr.2014.19.4.1783>
- Baharud-din, Z., Shokiyah, A., & Ibrahim, M. S. (2014). Factors that Contribute to the Effectiveness of Internal Audit in Public Sector. *International Proceedings of Economics Development and Research*, 9. <https://doi.org/10.7763/IPEDR>.
- Baiden, J. N. E. (2016). Assessing the Balance Score Card of the Internal Audit Performance-Value Addition or Destruction : An Empirical Study of Firms in Sekondi-Takoradi , Ghana. *European Journal of Business and Management*, 8(20), 75–89. <https://doi.org/10.2752/175169712X13182754067340>
- Belay, Z. (2007). A Study on Effective Implementation of internal Audit Function to Promote Good Governance in the Public Sector. In *The Achievements, Challenges, and Prospects of the Civil Service Reform Program Implementation in Ethiopia*” Conference Ethiopian Civil Service College Research, Publication & Consultancy Coordination Office.
- Bronson, S. N., Carcello, J. V., & Raghunandan, K. (2006). Firm characteristics and voluntary management reports on internal control. *Auditing*, 25(2), 25–39. <https://doi.org/10.2308/aud.2006.25.2.25>
- Chang, Y.-I., Chen, H., Cheng, R. K., & Chi, W. (2018). The impact of internal audit attributes on the effectiveness of internal control over operations and compliance. *Journal of Contemporary Accounting & Economics*. <https://doi.org/10.1016/j.jcae.2018.11.002>

*Internal Audit Engagement and Risk Management in Public Sector Organizations: Does It Really Exist?*

- Coetzee, P. P. (2016). Contribution of internal auditing to risk management: perceptions of public sector senior management. *International Journal of Public Sector Management*, 29(4).
- Cohen, A., & Sayag, G. (2010). The effectiveness of internal auditing: An empirical examination of its determinants in Israeli organisations. *Australian Accounting Review*, 20(3), 241–255. <https://doi.org/10.1111/j.1835-2561.2010.00097.x>
- Coram, P., Ferguson, C., & Moroney, R. (2006). The value of internal audit in fraud detection. *Papers Presented at the 2006 AFAANZ Conference*, 48(4), 1–32.
- Cosserat, G. W. (2000). *Modern Auditing*.
- Crockett, J. R., & Albin, M. J. (1995). The “Roundtable” in the classroom. *Managerial Auditing Journal*.
- Deegan, C. (2000). *Financial Accounting Theory*. McGraw Hill Book Company.
- Desai, R., & Desai, V. (2010). Towards a Decision Aid for External Audit Evaluation of the Internal Audit Function. *Journal of Global Business Issue*, 4(1), 69.
- Dittenhofer, M. (2001). Internal auditing effectiveness: An expansion of present methods. *Managerial Auditing Journal*, 16(8), 443–450. <https://doi.org/10.1108/EUM000000006064>
- Dittenhofer, M. A., Ramamoorti, Sridhar., Ziegenfuss, D. E., Evans, R. Luke., & Institute of Internal Auditors. Research Foundation. (2010). *Behavioral dimensions of internal auditing: a practical guide to professional relationships in internal auditing*. Institute of Internal Auditors, Research Foundation.
- Drogalas, G., Karagiorgos, T., & Arampatzis, K. (2015). Factors associated with Internal Audit Effectiveness: Evidence from Greece. *Journal of Accounting and Taxation*, 7(7), 113–122. <https://doi.org/10.5897/JAT2015.0182>
- Elliott, M., Dawson, R., & Edwards, J. (2007). An improved process model for internal auditing. *Managerial Auditing Journal*, 22(6), 552–565.
- Felix, Jr, W. L., Gramling, A. A., & Maletta, M. J. (2001). The Contribution of Internal Audit as A Determinant of External Audit Fees and Factors Influencing this Contribution. *Journal of Accounting Research*, 39(3), 513–534.
- Flesher, D. L. (1996). Internal Auditing: Standards and Practices: a One-semester Course. Institute of Internal Auditors. In *Institute of Internal Auditors*. Institute of Internal Auditors.
- Freeman, R. E., Harrison, J. S., Wicks, A. C., Parmer, B. L., & de Colle, S. (2010). The development of stakeholder theory: A brief history. In *Stakeholder theory: The state of the art* (Issue 1984).
- Freeman, R. E., & Reed, D. L. (1983). Stockholders and Stakeholders: A new Perspective on Corporate Governance. *California Management Review*, 25(3), 88–106.
- Fried, Y., Ben-David, H. A., Tieg, R. B., Avital, N., & Yeverechyahu, U. (1998). The interactive effect of role conflict and role ambiguity on job performance. *Journal of Occupational and Organizational Psychology*, 71(1), 19–27. <https://doi.org/10.1111/j.2044-8325.1998.tb00659.x>
- Gamayuni, R. R. (2018). The effect of internal auditor competence and objectivity , and management support on effectiveness of internal audit function and financial reporting quality implications at local government. *Int. J. Economic Policy in Emerging Economies*, 11(3), 248–261.
- Getie Mihret, D., & Wondim Yismaw, A. (2007). Internal audit effectiveness: an Ethiopian public sector case study. *Managerial Auditing Journal*, 22(5), 470–484. <https://doi.org/10.1108/02686900710750757>
- Glazer, A. S., & Jaenike, H. R. (1980). *A Framework for Evaluating an Internal Audit Function, Foundation for Audit Ability Research and Education*.
- Gray, R. H. , Kouhy, R. , & Lavers, S. (1995). Corporate Social and Environmental Reporting: A Review of the Literature and a longitudinal study of United Kingdom Disclosure. *Accounting, Auditing, and Accountability Journal*, 8(2), 47–79.
- Griffiths, P. (1999). Understanding the Expectations of Finance Directors towards Internal Audit and its Future. *Managerial Auditing Journal*, 14, 489-496.
- Harwida, G. A. (2015). Mengulik Peran Auditor Internal Dalam Melakukan Deteksi Dan Pencegahan Fraud Di Perguruan Tinggi. *InFestasi Jurnal Bisnis Dan Akuntansi*, 11(1), 16. <https://doi.org/http://dx.doi.org/10.21107/infestasi.v11i1.1123>
- Hayes, R. S. (1999). *Principles of Auditing: An International Perspective*. Chicago, IL: Irwin.e.
- Hoag, D. A. (1981). Measuring Audit Effectiveness. *Internal Auditor*, 70–78.
- International Standards for the Professional Practice of Internal Auditing (2007).
- Irfan, M. (2016). *ICW Temukan 12 Pola Korupsi di Kalangan Perguruan*. Pikiran Rakyat. <https://www.pikiran-rakyat.com/pendidikan/2016/11/01/icw-temukan-12-pola-korupsi-di-kalangan-perguruan-tinggi-383648>
- Lampe, J. C., & Sutton, S. G. (1994). Evaluating the Work of Internal Audit: A Comparison of Standards and Empirical Evidence. *Accounting and Business Research*, 24(96), 335–348.
- Liu, J., Woo, H. S., & Boakye-Bonsu, V. (1997). Developing Internal Auditing Procedures in UK Organizations Using a Benchmarking Approach. *Managerial Auditing Journal*. <https://doi.org/10.1108/02686909710185198>
- Liu, X. K., Wright, A. M., & Wu, Y. J. (2015). Managers’ Unethical Fraudulent Financial Reporting: The Effect of Control Strength and Control Framing. *Journal of Business Ethics*, 129(2), 295–310. <https://doi.org/10.1007/s10551-014-2156-1>
- Lower, M. (1997). The World Comes to Florida. *Internal Auditing*, February, 23.
- Ma’ayan, Y., & Carmeli, A. (2016). Internal Audits as a Source of Ethical Behavior, Efficiency, and Effectiveness in Work Units. *Journal of Business Ethics*, 137(2), 347–363. <https://doi.org/10.1007/s10551-015-2561-0>
- Marks, N. (2000, February). How Much is Enough? *Internal Auditing*, 28–34.

- Mihret, D. G., & Yismaw, A. W. (2007). Internal audit effectiveness: An Ethiopian public sector case study. *Managerial Auditing Journal*, 22(5), 470–484. <https://doi.org/10.1108/02686900710750757>
- Mihret, D., James, K., & Mula, J. (2010). Antecedents and Organizational Performance Implication of Internal Audit Effectiveness: Some Proposition and Research Agenda. *Pacific Accounting Review*, Vol. 22 No.3, Pp.224-252, 22(3), 224–252.
- Miller, L. (. (1999, August). The Internal Audit Profession—Redefined. *The Internal Auditor*, 11.
- Moeller, R., & Witt, H. (1999). *Brinke's Modern Internal Auditing*. New York: Wiley.
- Montondon, L. (1995). Accountability in Municipalities: the Use of Internal Auditors and Audit Committees. *The American Review of Public Administration*, 25(1), 59–69.
- Novriansa, A., & Riyanto, B. (2016). Role Conflict and Role Ambiguity on Local Government Internal Auditors : the Determinant and Impacts. *Journal of Indonesian Economy and Business*, 31(1), 63–82.
- Obeid, O. A., & Abdelnur, A. (2018). *An Evaluation of Objectivity and Competence of Internal Audit Departments in Sudanese Government Units*. 8(3), 9–16.
- Oosthuizen, J., Rensburg, J. Van, & Coetzee, P. (2016). ■ *Academic Paper Internal audit public sector capability : a case study*. 16(2), 181–191. <https://doi.org/10.1002/pa>
- Parmar, B. L., Freeman, R; Edward, Harrison, J. S., Wicks, A. C., Purnell, L., & De Colle, S. (2010). The Academy of Management Annals Stakeholder Theory: The State of the Art. *The Academy of Management Annals*, 4(1), 403–445. <https://doi.org/10.1080/19416520.2010.495581>
- Ransan, T. H. (1955). Effectiveness of Internal Auditing. *14th Annual Conference of the IFA*.
- Ridley, J. (1993, September). Strong Support for Quality Assurance Review Service. *Internal Auditing*, 23.
- Ridley, J. (1994). The Pinnacle of Professional Status? *Internal Auditing*, 14–16.
- Ridley, J. (1996, January). One, Two and Many. *Internal Auditing*.
- Ridley, J., & Chambers, A. (. (1998). *Leading Edge Internal Auditing*. London: ICSA.
- Saidu Badara, azu, & Zabedah Saidin, S. (2013). Impact of the Effective Internal Control System on the Internal Audit Effectiveness at Local Government Level. *Journal of Social and Development Sciences*, 4(1), 16–23.
- Sarens, G., & De Beelde, I. (2006). The Relationship between Internal Audit and Senior Management: A Qualitative Analysis of Expectations and Perceptions. *International Journal of Auditing*, 10(3), 219–241.
- Sawyer, L. B., Dittelhopfer, M. A., & Scheiner, J. H. (2003). *Sawyer's Internal Auditing* (5th ed.). Salemba Empat.
- Schneider, A. (1984). Modeling External Auditors' Evaluations of Internal Auditing. *Journal of Accounting Research*, 657–678.
- Shamsuddin, A. (2016). Factors that determine the effectiveness of internal audit functions in the malaysian public sectors. *International Journal of Business, Economics and Law*, 5(1).
- Sudsomboon, S., & Ussahawanitchakit, P. (2009). Professional audit competencies: the effects On Thai's CPAS audit quality, reputation, and success. *Review of Business Research*, 9(3), 66–85.
- Sultan, A. A., Alfaiza, S. A., & Riyadh, H. A. (2022). Impact of mass collaboration on knowledge sharing process using mediating role of innovation capability. *International journal of organizational analysis*, 30(5), 1085-1099.
- Sultan, A. A., & Noor, S. M. (2017). Absorptive capacity, civil conflict and e-commerce adoption among Iraqi firms. *Advanced Science Letters*, 23(8), 7992-7995.
- Sultan, A. A., Noor, S. M., & Nasirun, N. (2018). Technological factors and e-commerce adoption among small medium enterprises in Kurdistan, Iraq. *Int. J. Eng. Technol*, 7(3.5), 98-101.
- Thoyibatun, S. (2009). Faktor-Faktor yang Berpengaruh terhadap Perilaku Tidak Etis dan Kecenderungan Kecurangan Akuntansi serta Akibatnya terhadap Kinerja Organisasi. *Outlook*, 110.
- Ullmann, A. (1985). Data in search of a theory: A critical examination of the relationship among social performance, social disclosure and economic performance. *Academy of Management Review*, 10(3), 540–577.
- White, A. W. (1976, April). The Essentials for the Effective Internal Audit Department. *Internal Auditor*, 30–33.
- Wilopo. (2006). *Analisis Faktor-Faktor Yang Berpengaruh Terhadap Kecenderungan Kecurangan Akuntansi Studi Pada Perusahaan Publik dan Perusahaan Badan Usaha Milik Negara*.
- Wulandari, P., Hasan, A., & Rasuli, M. (2019). Pengaruh Independensi, Kompetensi Kerja, Peran Auditor Internal terhadap Efektivitas Sistem Pengendalian Internal dengan Kinerja Auditor Internal sebagai Pemoderasi (Studi Empiris pada Perguruan Tinggi se Sumatera). *Jurnal Akuntansi*, 8(1), 52–66.
- Wynne, A. (1999, January). Draft Revised Definition of Internal Audit. *Internal Auditing*, 21.
- Yee, C. S. L., Sujan, A., James, K., & Leung, J. K. S. (2008). Perceptions of Singaporean Internal Audit Customers Regarding the Role and Effectiveness of Internal Audit. *Asian Journal of Business and Accounting*, 1(2), 147–174.
- Zamzami, F., & Faiz, I. A. (2015). Evaluasi Implementasi Sistem Pengendalian Internal: Studi Kasus pada Sebuah Perguruan Tinggi Negeri. *Jurnal Akuntansi Multiparadigma*, 6(1), 20–27. <https://doi.org/10.18202/jamal.2015.04.6003>
- Ziegenfuss, D. E. (2000). Developing an internal auditing department balanced scorecard. *Managerial Auditing Journal*, 15, 12–19. <https://doi.org/10.1108/EUM000000005305>