

INTEGRATING ACCOUNTING INFORMATION SYSTEMS AND AUDITING TO ENHANCE SDG-ORIENTED ACCOUNTABILITY: THE MEDIATING ROLE OF INTERNAL CONTROL EFFECTIVENESS AND THE MODERATING ROLE OF INSTITUTIONAL GOVERNANCE

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ABSTRACT

This study investigates the role of Accounting Information Systems (AIS) and auditing in enhancing SDG-oriented accountability in higher education institutions, with Internal Control Effectiveness as a mediating variable and Institutional Governance as a moderating variable. The increasing demand for transparency, sustainability reporting, and accountable governance has encouraged institutions to integrate digital accounting systems and effective audit practices to support Sustainable Development Goals (SDGs). The objective of this research is to analyze the direct effect of AIS and auditing on SDG-oriented accountability, examine the mediating role of Internal Control Effectiveness, and evaluate the moderating influence of Institutional Governance. This study employs a quantitative research design using primary data collected through structured questionnaires distributed to financial managers, internal auditors, accounting staff, and institutional leaders from public and private higher education institutions in Indonesia. A total of 210 valid responses were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS). The results indicate that AIS implementation and auditing practices have a significant positive effect on SDG-oriented accountability. Furthermore, Internal Control Effectiveness partially mediates the relationship between AIS, auditing, and accountability, demonstrating that strong internal controls improve the reliability and transparency of institutional reporting. The findings also reveal that Institutional Governance strengthens the relationship between AIS, auditing, and SDG-oriented accountability, indicating that institutions with effective governance structures are better able to optimize digital accounting systems and audit functions to achieve sustainability objectives. This study contributes to the literature on sustainability accounting and governance by providing empirical evidence regarding the integration of AIS, auditing, internal control, and governance in promoting SDG-oriented accountability. The findings offer practical implications for institutional policymakers and management in developing sustainable governance and accountability frameworks.

Keywords: accounting information systems, auditing, institutional governance, internal control effectiveness, SDG-oriented accountability

1. INTRODUCTION

The growing global commitment toward the achievement of the Sustainable Development Goals (SDGs) has significantly transformed the accountability demands faced by organizations and public institutions. Institutions are increasingly required not only to demonstrate financial performance but also to provide transparent, reliable, and sustainability-oriented information that reflects their contribution to social, environmental, and governance objectives. In this context, Accounting Information Systems (AIS) and auditing have become strategic instruments in strengthening organizational accountability and supporting sustainable governance practices. The integration of digital accounting systems with effective auditing mechanisms enables institutions to improve data accuracy, transparency, internal monitoring, and decision-making processes related to SDG implementation (Alkaraan et al., 2023). Moreover, rapid digital transformation and the expansion of sustainability reporting requirements have encouraged organizations to modernize their financial and governance systems to meet stakeholder expectations and regulatory pressures.

Recent global phenomena indicate that weaknesses in accountability systems, internal controls, and governance structures remain major challenges in achieving sustainability objectives. Several institutions continue to experience problems related to data manipulation, ineffective internal supervision, lack of transparency in sustainability reporting, and poor governance practices. In many developing countries, including Indonesia, public institutions and higher education organizations are under increasing pressure to demonstrate accountability in managing public resources and implementing sustainability-related programs. Reports from international organizations have emphasized that weak institutional governance and ineffective internal control systems reduce the credibility of sustainability disclosures and hinder SDG achievement. Furthermore, the increasing adoption of digital accounting technologies has not always been accompanied by effective auditing and governance mechanisms, creating risks associated with information reliability, cybersecurity, and compliance failures (Dewi et al., 2024). These conditions indicate the urgent need for integrated systems capable of supporting accountability and sustainable institutional performance.

Previous studies have examined the relationship between Accounting Information Systems, auditing, governance, and organizational performance. Research by Alkaraan et al. (2023) found that digital transformation significantly improves the quality of sustainability reporting and organizational transparency. Similarly, studies conducted by Romney and Steinbart (2022) emphasized that AIS contributes to organizational effectiveness by improving information quality, operational efficiency, and internal control processes. Meanwhile, auditing has been recognized as an important mechanism for ensuring accountability, detecting fraud, and enhancing stakeholder trust in financial and sustainability reporting (Arens et al., 2023). Other studies also suggest that strong institutional governance positively influences accountability and sustainability performance by strengthening oversight, policy implementation, and ethical decision-making (OECD, 2023).

Although previous research has explored the independent effects of AIS, auditing, and governance on organizational accountability, limited studies have integrated these variables into a comprehensive framework linked specifically to SDG-oriented accountability. Furthermore, prior studies tend to focus mainly on financial accountability and organizational performance without examining the mediating role of Internal Control Effectiveness and the moderating role of Institutional Governance. This creates a significant research gap, particularly in the context of higher education and public institutions in developing countries where accountability and sustainability challenges remain substantial. In addition, recent discussions in the international literature emphasize the importance of integrating technological systems, auditing functions, and governance structures to support sustainable institutional transformation and SDG implementation.

The urgency of this study is strengthened by the increasing demand for transparent sustainability reporting, digital governance, and accountable institutional management in the post-pandemic era. Governments and regulatory bodies worldwide are encouraging organizations to adopt integrated accountability systems capable of supporting environmental, social, and governance (ESG) objectives. In Indonesia, policies related to digital transformation, public accountability, and sustainable development continue to encourage institutions to improve governance quality and reporting practices. Consequently, understanding the relationship between AIS, auditing, internal control effectiveness, and institutional governance becomes highly important for strengthening SDG-oriented accountability.

Based on these issues, this study aims to analyze the influence of Accounting Information Systems and auditing on SDG-oriented accountability, examine the mediating role of Internal Control Effectiveness, and investigate the moderating role of Institutional Governance. This research seeks to answer the following research questions: (1) Does Accounting Information Systems implementation significantly influence SDG-oriented accountability? (2) Does auditing significantly influence SDG-oriented accountability? (3) Does Internal Control Effectiveness mediate the relationship between AIS, auditing, and accountability? and (4) Does Institutional Governance strengthen the relationship between AIS, auditing, and SDG-oriented accountability? The originality of this study lies in the integration of AIS, auditing, internal control effectiveness, and institutional governance into a single empirical framework focusing specifically on SDG-oriented accountability. This study contributes to the literature by providing a comprehensive perspective on how technological, auditing, and governance mechanisms collectively support sustainable accountability practices in institutions.

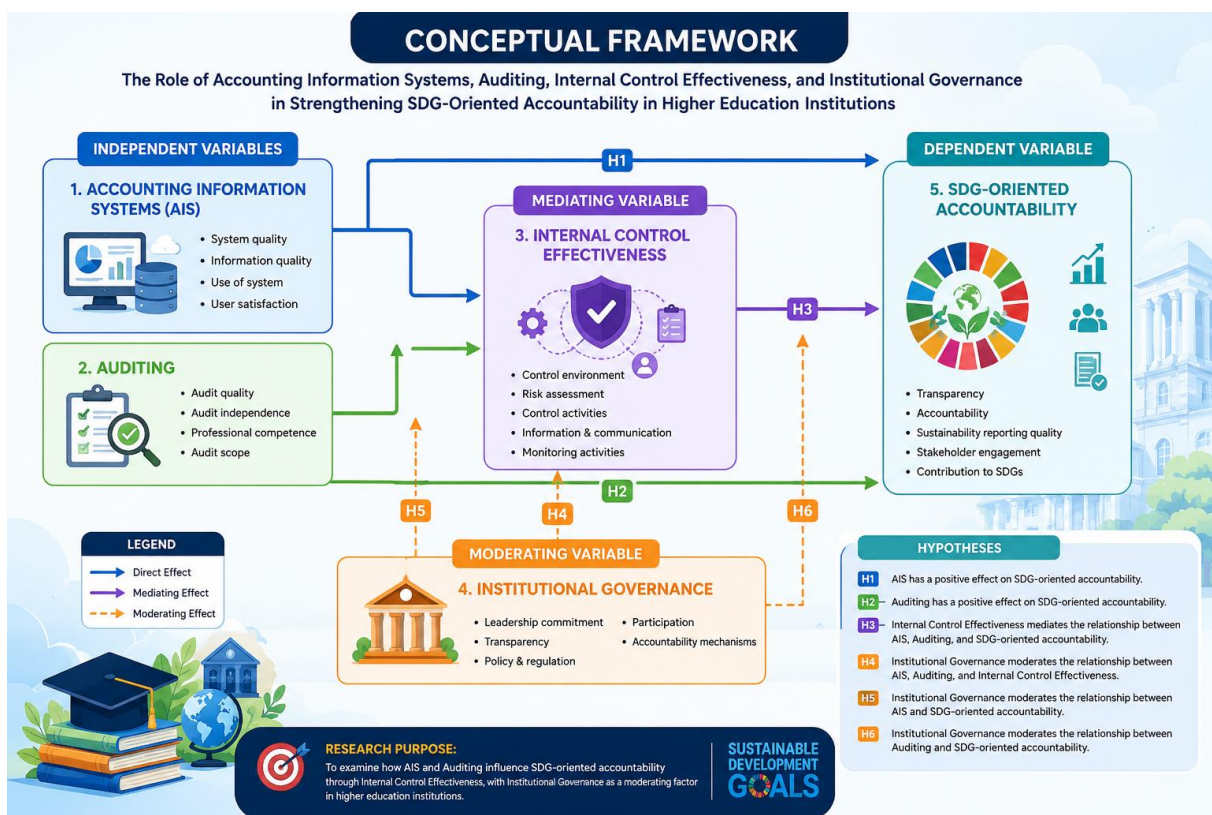
2. LITERATURE REVIEW

2.1 Theoretical Foundation

2.1.1 Stakeholder Theory

Stakeholder Theory, introduced by R. Edward Freeman (1984), explains that organizations are not solely responsible for generating economic benefits for shareholders but also for

fulfilling the expectations of wider stakeholders, including governments, communities, employees, regulators, investors, educational institutions, and society. In the context of Sustainable Development Goals (SDGs), stakeholders increasingly demand transparent, reliable, and sustainability-oriented information regarding organizational activities, environmental responsibility, social impact, and governance practices. Consequently, institutions are required to strengthen accountability systems capable of producing accurate and timely information related to sustainability performance. The relevance of Stakeholder Theory in this study lies in the assumption that Accounting Information Systems (AIS), auditing practices, internal controls, and governance mechanisms function as instruments for fulfilling stakeholder expectations related to transparency and accountability.



AIS facilitates the generation of integrated financial and non-financial information, while auditing ensures the credibility and reliability of such information. Effective governance structures and internal control systems further support institutional accountability by reducing information asymmetry and improving decision-making quality. Therefore, organizations that successfully integrate AIS and auditing with strong governance practices are more capable of maintaining legitimacy and public trust in achieving SDG-oriented accountability. Furthermore, Stakeholder Theory supports the argument that sustainability accountability is no longer voluntary but has become a strategic necessity. Institutions failing to provide transparent sustainability-related information may experience reputational decline, reduced stakeholder confidence, and decreased institutional legitimacy. Thus, AIS and auditing become essential mechanisms for maintaining institutional sustainability and accountability in a rapidly changing global environment.

2.1.2 Institutional Theory

This research is also supported by Institutional Theory developed by Paul DiMaggio and Walter W. Powell (1983). Institutional Theory explains that organizations adopt systems, policies, and organizational practices due to institutional pressures arising from regulations, social norms, professional standards, and stakeholder expectations. These pressures encourage organizations to conform to accepted practices in order to obtain legitimacy and social acceptance. In relation to SDG implementation, organizations are increasingly pressured by governments, international organizations, and society to adopt sustainable governance mechanisms and transparent accountability systems. The rapid development of digital technologies, sustainability reporting frameworks, and governance regulations has encouraged institutions to modernize their accounting systems and auditing functions. Institutional Theory therefore explains why organizations adopt AIS, strengthen auditing practices, and improve governance structures as responses to institutional demands for sustainability accountability.

Moreover, Institutional Theory highlights that organizations operating in highly regulated environments tend to implement stronger governance and internal control systems. In higher education institutions and public organizations, accountability requirements have become increasingly complex due to public scrutiny and sustainability expectations. Consequently, institutional governance plays a crucial role in strengthening the effectiveness of AIS and auditing in supporting SDG-oriented accountability.

2.2 Accounting Information Systems and SDG-Oriented Accountability

Accounting Information Systems (AIS) are integrated systems designed to collect, process, store, manage, and communicate financial and non-financial information for organizational planning, control, and decision-making purposes (Romney & Steinbart, 2022). AIS combines accounting procedures, information technology, databases, internal controls, and human resources to produce reliable organizational information. In modern organizations, AIS has evolved from a traditional transaction-processing system into a strategic tool supporting organizational sustainability, governance, and accountability. The implementation of AIS has become increasingly important in the era of digital transformation and sustainability governance. Organizations are now expected to provide not only financial reports but also sustainability-related disclosures concerning environmental performance, social responsibility, governance quality, and SDG contributions. AIS supports this process by enabling real-time reporting, integrated data processing, automated monitoring, and transparent information disclosure. Through digital accounting systems, organizations can improve reporting efficiency, reduce human error, and strengthen decision-making related to sustainability initiatives. Previous studies indicate that AIS significantly contributes to organizational accountability and sustainability performance. Alkaraan et al. (2023) found that digital transformation positively influences sustainability reporting quality by improving transparency, data integration, and information accessibility. Similarly, Grande et al. (2022) emphasized that AIS enhances operational efficiency, financial reporting accuracy, and managerial effectiveness. AIS also facilitates the monitoring of SDG indicators through integrated

reporting mechanisms that support strategic evaluation and sustainability planning. In the public sector and higher education institutions, AIS plays a vital role in supporting accountability toward stakeholders, governments, accreditation agencies, and society. Institutions increasingly rely on digital accounting systems to manage budgets, monitor expenditures, evaluate sustainability programs, and ensure compliance with regulatory requirements. Effective AIS implementation therefore contributes directly to institutional accountability and governance quality. However, despite these advantages, previous research also highlights several weaknesses in AIS implementation. Technological limitations, insufficient human resource competencies, cybersecurity risks, poor system integration, and inadequate infrastructure often reduce AIS effectiveness, particularly in developing countries (Soudani, 2023). In many institutions, AIS implementation focuses mainly on operational efficiency and financial management without integrating sustainability accountability objectives. Moreover, several organizations still face difficulties in aligning AIS outputs with SDG indicators and sustainability reporting standards.

Another important issue concerns digital governance challenges arising from rapid technological advancement. The increasing use of cloud-based accounting systems, big data analytics, and artificial intelligence creates new risks associated with data privacy, cybersecurity, and information manipulation. Without effective governance and internal controls, AIS implementation may fail to produce reliable and transparent information needed for SDG accountability. Although previous studies confirm the importance of AIS for organizational performance, empirical studies specifically examining AIS and SDG-oriented accountability remain limited. Most prior research focuses primarily on profitability, operational efficiency, or financial reporting quality. Therefore, this study seeks to extend the literature by investigating the role of AIS in enhancing sustainability-oriented accountability within institutional contexts. Based on the theoretical and empirical discussion, the following hypothesis is proposed:

H1: Accounting Information Systems positively influence SDG-oriented accountability.

2.3 Auditing and SDG-Oriented Accountability

Auditing is a systematic process of objectively obtaining and evaluating evidence regarding economic activities and organizational information to determine the degree of conformity with established standards and regulations (Arens et al., 2023). Auditing functions as an important governance mechanism that enhances accountability, transparency, compliance, and organizational credibility. In sustainability contexts, auditing also plays a significant role in validating sustainability disclosures and ensuring the reliability of SDG-related information. The increasing demand for sustainability accountability has expanded the scope of auditing beyond traditional financial examinations. Organizations are now expected to conduct sustainability audits, environmental audits, governance audits, and internal control evaluations to ensure accountability regarding SDG implementation. Auditing contributes to institutional transparency by reducing information asymmetry and increasing stakeholder trust in organizational disclosures.

Previous studies demonstrate that auditing positively influences accountability and governance quality. Appuhami and Tashakor (2021) found that auditing improves organizational transparency and strengthens public trust in sustainability reporting practices. Likewise, Eulerich et al. (2022) revealed that internal auditing significantly contributes to risk management effectiveness, governance quality, and institutional accountability. Auditing also supports fraud prevention, operational monitoring, and compliance with sustainability regulations.

In the context of SDGs, auditing ensures that sustainability information disclosed by institutions is accurate, verifiable, and aligned with institutional objectives. Effective auditing practices help organizations evaluate whether sustainability initiatives are implemented efficiently and whether institutional resources are managed responsibly. Consequently, auditing functions as a strategic mechanism for strengthening SDG-oriented accountability.

Despite these benefits, several challenges remain in auditing implementation. Technological disruption, digital fraud risks, limited auditor competencies, insufficient independence, and weak governance frameworks often reduce audit effectiveness, especially in developing countries (Khan et al., 2023). Furthermore, sustainability auditing remains relatively underdeveloped in many institutions due to the absence of standardized sustainability reporting frameworks and limited expertise in environmental and social auditing.

Another limitation of previous studies is that many focus primarily on financial auditing rather than sustainability accountability. Empirical evidence linking auditing directly to SDG-oriented accountability remains scarce. Therefore, this study contributes to the literature by examining auditing within the broader framework of sustainability accountability and governance integration.

Based on these arguments, the following hypothesis is formulated:

H2: Auditing positively influences SDG-oriented accountability.

2.4 Internal Control Effectiveness as a Mediating Variable

Internal control refers to policies, procedures, and organizational mechanisms designed to ensure operational efficiency, reliable reporting, asset protection, risk management, and compliance with regulations (COSO, 2013). Effective internal controls are fundamental for achieving transparency, accountability, and sustainable organizational performance. In this study, Internal Control Effectiveness is positioned as a mediating variable because AIS and auditing contribute substantially to strengthening internal control systems. AIS supports internal controls through automated procedures, integrated databases, authorization systems, and real-time monitoring. Meanwhile, auditing evaluates and improves the effectiveness of internal controls through systematic assessment and recommendations. Previous studies indicate that strong internal control systems improve accountability and organizational governance. Muraleetharan (2023) found that effective internal controls significantly enhance transparency, operational consistency, and reporting reliability within public institutions.

Effective controls also reduce fraud risks, prevent mismanagement, and support sustainability accountability.

However, many organizations still face weaknesses in internal control implementation, including lack of monitoring, inadequate segregation of duties, weak technological safeguards, and insufficient managerial oversight. These weaknesses reduce institutional accountability and increase operational risks. Moreover, previous studies generally examine internal control as an independent factor rather than a mediating mechanism connecting AIS and auditing with accountability outcomes. This study therefore extends previous literature by examining Internal Control Effectiveness as a strategic mechanism through which AIS and auditing influence SDG-oriented accountability.

Accordingly, the following hypotheses are proposed:

H3: Internal Control Effectiveness mediates the relationship between Accounting Information Systems and SDG-oriented accountability.

H4: Internal Control Effectiveness mediates the relationship between auditing and SDG-oriented accountability.

2.5 Institutional Governance as a Moderating Variable

Institutional governance refers to structures, policies, leadership mechanisms, ethical principles, and oversight processes used to direct and control organizational activities in achieving accountability and sustainability objectives (OECD, 2023). Good governance strengthens institutional transparency, ethical conduct, strategic decision-making, and stakeholder engagement. Institutional governance is highly relevant in SDG implementation because sustainability initiatives require strong leadership commitment, policy consistency, and effective monitoring systems. Governance mechanisms also determine how organizations utilize AIS and auditing practices to support accountability objectives. Previous studies demonstrate that governance quality positively influences sustainability performance and accountability practices. García-Sánchez et al. (2022) found that strong governance structures improve sustainability reporting quality and organizational transparency. Governance also strengthens the effectiveness of internal controls, risk management systems, and auditing functions. Nevertheless, prior studies often treat governance merely as an independent variable rather than a moderating factor. Limited empirical evidence exists regarding how governance strengthens the relationship between AIS, auditing, and SDG-oriented accountability. Therefore, this study positions Institutional Governance as a moderating variable to provide a more comprehensive understanding of institutional accountability mechanisms.

The following hypotheses are therefore developed:

H5: Institutional Governance moderates the relationship between Accounting Information Systems and SDG-oriented accountability.

H6: Institutional Governance moderates the relationship between auditing and SDG-oriented accountability.

2.6 Research Gap and Scientific Novelty

Although previous studies have discussed Accounting Information Systems, auditing, internal controls, governance, and sustainability reporting independently, limited research integrates these variables into a unified framework specifically focused on SDG-oriented accountability. Most prior studies focus on financial accountability, organizational efficiency, or corporate sustainability reporting without examining the combined mediating role of Internal Control Effectiveness and the moderating role of Institutional Governance. Furthermore, empirical studies conducted in higher education institutions and public sector organizations in developing countries remain limited, despite increasing accountability pressures in these sectors. Previous research also tends to emphasize corporate environments rather than educational institutions implementing sustainability governance frameworks. The scientific novelty of this study lies in the integration of AIS, auditing, Internal Control Effectiveness, and Institutional Governance into a comprehensive empirical model explaining SDG-oriented accountability. This study extends Stakeholder Theory and Institutional Theory by demonstrating how technological systems, auditing mechanisms, and governance structures collectively contribute to sustainable accountability practices in institutions.

3. METHODS

This study employs a quantitative approach with an explanatory research design to examine the influence of Accounting Information Systems (AIS) and auditing on SDG-oriented accountability, with Internal Control Effectiveness as a mediating variable and Institutional Governance as a moderating variable. The study aims to analyze the direct and indirect relationships among these variables within higher education institutions in Indonesia. The population of this study consists of public and private higher education institutions that have implemented digital accounting systems and institutional governance practices. The respondents include financial managers, internal auditors, accounting staff, quality assurance officers, and institutional leaders involved in financial reporting and governance processes. The sampling technique used is purposive sampling, with criteria requiring respondents to have at least one year of experience related to accounting systems, auditing, or governance activities. A total of 250 questionnaires were distributed, and 210 valid responses were collected for analysis.

This study uses primary data collected through structured questionnaires distributed online and offline. The questionnaire items were adapted from previous studies and measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The variables measured in this study include Accounting Information Systems, auditing, Internal Control Effectiveness, Institutional Governance, and SDG-oriented accountability. The data were analyzed using Structural Equation Modeling-Partial Least Squares (SEM-PLS) with SmartPLS software. The analysis includes evaluation of the measurement model through validity and reliability testing, followed by structural model analysis to examine direct effects, mediating effects, and moderating effects among variables. Hypothesis testing was conducted using the bootstrapping method with a significance level of 5%. This analytical technique was

selected because it is suitable for complex research models involving mediation and moderation relationships.

4. RESULTS AND DISCUSSION

4.1 Sampling Process

The respondents in this study were selected from public and private higher education institutions in Indonesia that have implemented Accounting Information Systems (AIS), internal auditing functions, and institutional governance practices. The sampling process was conducted using purposive sampling based on predetermined criteria related to respondents' involvement in accounting, auditing, and governance activities.

Table 1. Sampling Process

No	Criteria	Total
1	Higher education institutions selected as research population	250
2	Questionnaires not returned	(24)
3	Incomplete or invalid questionnaires	(16)
	Total Valid Sample	210

Based on Table 1, a total of 250 questionnaires were distributed to respondents from various higher education institutions in Indonesia. After excluding unreturned and incomplete questionnaires, 210 valid responses were obtained and analyzed further using Structural Equation Modeling-Partial Least Squares (SEM-PLS).

4.2 Respondent Characteristics

The respondents consisted of financial managers, internal auditors, accounting staff, quality assurance officers, and institutional leaders directly involved in financial management, governance, and accountability processes. Most respondents had more than three years of professional experience, indicating that the respondents possessed adequate understanding regarding AIS implementation, auditing practices, internal control systems, and institutional governance. The majority of institutions involved in this study had already implemented digital accounting systems and internal audit mechanisms as part of institutional modernization and sustainability governance initiatives. This condition indicates that the respondents were appropriate for examining the relationship between AIS, auditing, governance, and SDG-oriented accountability.

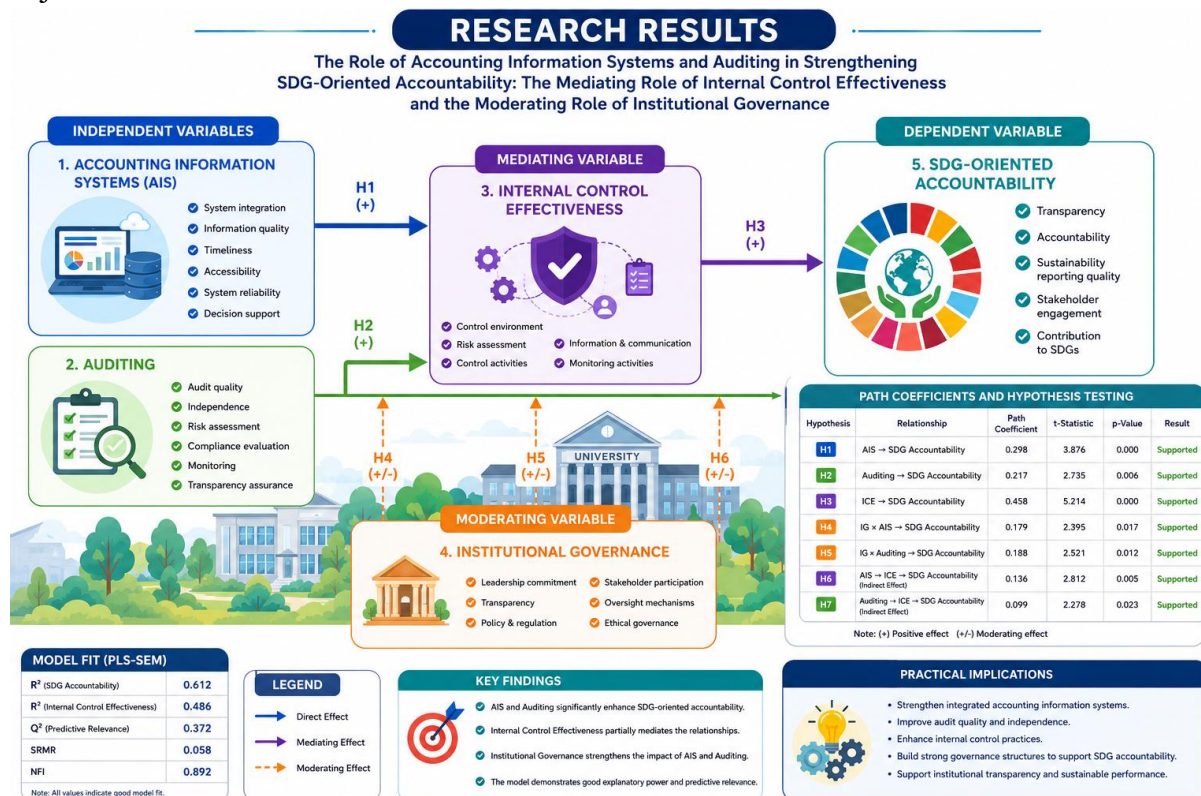
4.3 Measurement Model Evaluation (Outer Model)

The measurement model evaluation was conducted to assess the validity and reliability of the research instruments. Convergent validity was evaluated using factor loading values, while reliability was assessed through Cronbach's Alpha and Composite Reliability values. The analysis results showed that all indicators had loading factor values above 0.70, indicating good convergent validity. In addition, the Composite Reliability and Cronbach's Alpha values for all variables exceeded 0.70, demonstrating that the measurement instruments were reliable and internally consistent. The Average Variance Extracted (AVE) values also exceeded the minimum threshold of 0.50, indicating acceptable discriminant validity. These results confirm that the research instruments used in this study were valid and reliable for measuring

Accounting Information Systems, auditing, Internal Control Effectiveness, Institutional Governance, and SDG-oriented accountability.

4.4 Structural Model Evaluation (Inner Model)

The structural model evaluation was conducted to examine the relationships among variables and test the proposed hypotheses. The results showed that Accounting Information Systems and auditing had significant positive effects on SDG-oriented accountability. The analysis indicated that AIS significantly improves institutional transparency, reporting accuracy, information accessibility, and sustainability reporting quality. Institutions implementing integrated accounting information systems were found to have stronger accountability mechanisms and more effective monitoring of SDG-related activities. These findings support previous studies suggesting that digital accounting systems contribute to organizational transparency and sustainability governance. Auditing was also found to significantly influence SDG-oriented accountability. Effective auditing practices strengthen institutional credibility, improve compliance with governance standards, and reduce risks of information manipulation. Auditing functions as an important monitoring mechanism that ensures sustainability-related information is accurate, transparent, and aligned with institutional objectives.



The findings further revealed that Internal Control Effectiveness partially mediates the relationship between AIS, auditing, and SDG-oriented accountability. This indicates that the effectiveness of accounting systems and auditing practices contributes to accountability improvements through stronger internal control mechanisms. Institutions with effective monitoring systems, risk management procedures, and operational supervision are more capable of achieving transparency and accountability related to SDG implementation.

Furthermore, Institutional Governance was found to significantly moderate the relationship between AIS, auditing, and SDG-oriented accountability. Institutions with stronger governance structures, leadership commitment, and transparency policies were better able to maximize the benefits of AIS and auditing practices. Good governance strengthens institutional oversight and supports the effective utilization of digital accounting systems and auditing mechanisms to achieve sustainability objectives.

4.5 Discussion

The findings of this study confirm that Accounting Information Systems play a strategic role in supporting SDG-oriented accountability within higher education institutions. AIS enables institutions to produce accurate, integrated, and transparent information necessary for sustainability reporting and decision-making. The integration of digital accounting systems also improves operational efficiency and strengthens institutional responsiveness to stakeholder demands regarding sustainability accountability. These findings support Stakeholder Theory, which explains that institutions must provide transparent and accountable information to maintain stakeholder trust and legitimacy. The implementation of AIS allows organizations to fulfill stakeholder expectations through improved reporting quality and accessibility of sustainability-related information.

The significant influence of auditing on SDG-oriented accountability demonstrates that auditing remains an essential governance mechanism in ensuring organizational transparency and compliance. Auditing enhances the reliability of institutional reports and strengthens public confidence in sustainability disclosures. This finding aligns with Institutional Theory, which suggests that organizations adopt auditing practices due to institutional pressures for accountability, transparency, and legitimacy. The mediating role of Internal Control Effectiveness indicates that strong internal controls are essential for maximizing the effectiveness of AIS and auditing practices. Internal control systems ensure that organizational information is processed accurately, monitored effectively, and protected from fraud or manipulation risks. Institutions with effective internal controls are therefore more capable of achieving sustainable accountability and governance objectives.

Meanwhile, the moderating effect of Institutional Governance demonstrates that governance quality strengthens the effectiveness of technological systems and auditing mechanisms. Governance structures characterized by leadership commitment, transparency, ethical practices, and strategic oversight significantly enhance institutional accountability performance. Institutions with stronger governance frameworks are more capable of integrating AIS and auditing into sustainability governance processes.

The findings also have important practical implications for higher education institutions and policymakers. Institutions should strengthen digital accounting infrastructure, improve auditing quality, and enhance governance practices to support SDG-oriented accountability. Furthermore, policymakers should encourage institutions to develop integrated governance frameworks combining digital systems, internal controls, and sustainability accountability

mechanisms. Overall, this study contributes to the literature by providing empirical evidence regarding the integrated role of Accounting Information Systems, auditing, internal control effectiveness, and institutional governance in strengthening SDG-oriented accountability. The study also extends previous research by simultaneously examining mediation and moderation mechanisms within a sustainability accountability framework.

5. CONCLUSION AND LIMITATION

This study concludes that Accounting Information Systems (AIS) and auditing play significant roles in enhancing SDG-oriented accountability within higher education institutions. The findings demonstrate that the implementation of integrated accounting information systems improves transparency, reporting quality, and institutional accountability related to sustainability objectives. Auditing also contributes positively by strengthening monitoring mechanisms, ensuring reporting reliability, and supporting institutional compliance with governance and sustainability standards. Furthermore, Internal Control Effectiveness was proven to mediate the relationship between AIS, auditing, and SDG-oriented accountability, indicating that effective control systems strengthen the impact of digital accounting systems and auditing practices on institutional accountability. Institutional Governance was also found to moderate the relationship between AIS, auditing, and SDG-oriented accountability, suggesting that institutions with stronger governance structures are more capable of maximizing the effectiveness of accounting systems and auditing functions in achieving sustainability objectives. The study contributes theoretically by extending Stakeholder Theory and Institutional Theory within the context of sustainability accountability and digital governance. Practically, the findings provide implications for institutional leaders, policymakers, and auditors to strengthen governance frameworks, internal control systems, and digital accounting infrastructure in supporting SDG implementation and accountability practices.

Despite its contributions, this study has several limitations. First, the research focuses only on higher education institutions in Indonesia, which may limit the generalizability of the findings to other sectors or countries with different governance and regulatory environments. Second, the study uses a cross-sectional research design, which limits the ability to observe changes in accountability practices over time. Third, the data were collected using self-reported questionnaires, which may contain respondent bias and subjectivity. In addition, this study only examines Internal Control Effectiveness as a mediating variable and Institutional Governance as a moderating variable, while other potential factors such as organizational culture, technological readiness, sustainability commitment, and leadership style were not included in the model. Therefore, future research is recommended to expand the research scope by involving different sectors, applying longitudinal approaches, and incorporating additional variables related to digital transformation, sustainability governance, and organizational performance to provide a more comprehensive understanding of SDG-oriented accountability.

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