



The Influence of Accounting Information Systems on Internal Audit Effectiveness in Hasanuddin University

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Abstract. This study examines the impact of accounting information systems (AIS) on the effectiveness of internal audits at Universitas Hasanuddin. With the increasing importance of AIS in higher education institutions, especially in managing financial data and ensuring compliance, understanding the role of AIS in enhancing internal audit processes is crucial. The research employs a qualitative approach, analyzing data from interviews with internal audit personnel and reviewing the financial systems in place at Universitas Hasanuddin. The study finds that the implementation of AIS significantly improves internal audit efficiency by enhancing data accuracy, streamlining audit processes, and enabling better monitoring of internal controls. However, the effectiveness of these systems is moderated by factors such as the technical expertise of audit staff and the organizational culture of the university. This paper contributes to the literature by providing insights into how higher education institutions can leverage AIS to improve internal audit effectiveness and overall financial governance.

Keywords: Accounting Information Systems (AIS), Internal Audit, Audit Effectiveness

1 Introduction

Internal audits are a critical mechanism in ensuring the integrity, accuracy, and reliability of financial management systems within organizations. In higher education institutions such as Universitas Hasanuddin, the internal audit function plays an essential role in safeguarding the institution's financial resources, maintaining accountability, and ensuring compliance with both internal policies and external regulatory standards. However, the increasing complexity of financial operations in modern institutions necessitates more advanced tools and systems to support internal audits. One such tool is the Accounting Information System (AIS), which has been widely recognized for its capacity to improve internal audit processes by automating and enhancing financial data management, providing real-time access to information, and enabling more accurate decision-making [2; 10].

As institutions grow, manual processes for financial auditing become increasingly inefficient, prone to error, and time-consuming. The adoption of AIS in such contexts addresses these challenges by integrating technology into financial reporting, auditing, and control systems. By automating routine tasks, such as transaction tracking and report generation, AIS not only reduces the likelihood of human error but also allows

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auditors to focus on more critical analysis and evaluation activities [1]. This is particularly important in complex organizational structures, such as universities, where the volume and variety of financial transactions require robust systems to ensure transparency and accuracy [5].

In the context of Universitas Hasanuddin, the implementation of AIS represents a strategic response to the evolving demands of financial governance. Universities, like other large organizations, are held to high standards of accountability, given their reliance on government funding, tuition fees, and research grants. The failure to maintain rigorous financial oversight can lead to significant financial losses, reputational damage, and legal consequences. Therefore, the use of AIS in internal audit processes helps strengthen the institution's ability to detect financial discrepancies early, manage risk effectively, and ensure that internal controls are functioning as intended [13].

AIS contributes to improving audit quality by enhancing data accuracy, timeliness, and completeness [10]. A well-functioning AIS allows auditors to perform audits more efficiently by providing real-time data access, thus shortening the time needed to complete audits and improving decision-making processes [11]. Furthermore, AIS improves the effectiveness of internal controls by providing tools that allow auditors to monitor financial activities continuously, enabling timely intervention in cases of irregularities [7].

However, the effectiveness of AIS is not solely dependent on the technology itself. The successful integration of AIS in internal audit processes is influenced by several organizational and human factors. Studies have shown that the effectiveness of AIS is significantly enhanced when there is strong management support, a positive organizational culture, and sufficient training for audit personnel [1; 12]. Management plays a crucial role in providing the necessary resources, ensuring proper system implementation, and fostering a culture that encourages the adoption of new technologies [9]. Furthermore, the skills and expertise of auditors in using AIS are vital to maximizing the benefits of the system. Without adequate training, even the most advanced AIS may not deliver the expected improvements in audit quality [14].

The role of organizational culture is another critical factor influencing the success of AIS adoption. Organizations that prioritize transparency, accountability, and continuous improvement are more likely to embrace technological innovations, such as AIS, and fully utilize their potential. In contrast, institutions with a more rigid and hierarchical culture may experience resistance to change, limiting the effectiveness of new systems [8]. At Universitas Hasanuddin, the integration of AIS into the internal audit framework presents an opportunity to assess how the institution's organizational culture, management practices, and auditor capabilities influence the system's impact on audit effectiveness.

Given these dynamics, this study aims to explore the relationship between AIS and internal audit effectiveness at Universitas Hasanuddin. Specifically, it seeks to understand how AIS contributes to improving the efficiency, accuracy, and overall quality of internal audits in the context of higher education. The research also examines the moderating effects of factors such as auditor expertise, management support, and organizational culture on the success of AIS implementation. By focusing on a university setting, this study adds to the growing body of literature on the role of

technology in enhancing internal audit functions, particularly within complex and multifaceted institutions like universities [3 & Mahanamahewa, 2021).

Furthermore, this research seeks to provide practical insights for other higher education institutions that are considering adopting or improving their AIS. As financial operations become more complex and regulatory requirements more stringent, institutions must invest in systems that can support rigorous auditing practices while minimizing costs and operational inefficiencies. AIS, if implemented correctly, offers a pathway to achieving these goals by improving the reliability and effectiveness of internal audits [6].

2 Literature Review

The role of accounting information systems (AIS) in enhancing internal audit effectiveness has garnered significant attention in recent years, particularly as organizations seek to improve financial governance, efficiency, and accountability. The literature highlights the critical contributions of AIS to various aspects of auditing, from improving data accuracy to streamlining processes and enhancing internal controls. This section reviews the key findings from recent studies on the impact of AIS on internal audits, with a specific focus on how these systems enhance audit effectiveness, the moderating factors involved, and the application of AIS in higher education institutions.

2.1 The Impact of AIS on Internal Audit Effectiveness

Multiple studies confirm that AIS significantly improves the effectiveness of internal audits by providing auditors with enhanced tools for managing financial data. According to Rapani and Malim [10], AIS allows internal auditors to automate routine tasks, such as financial reporting and transaction monitoring, which reduces manual errors and increases the speed and accuracy of audits. This automation is particularly beneficial in large organizations with complex financial structures, where traditional auditing methods may be inefficient and error-prone. Alsabti and Khalid [2] add that the real-time data access provided by AIS enables auditors to detect discrepancies and irregularities more quickly, which improves overall financial transparency and accountability.

Moreover, AIS enhances the ability of auditors to perform more in-depth analysis by providing access to a broader range of financial data. As highlighted by Ahmad et al. [1], the use of AIS allows auditors to focus on higher-level evaluative tasks, such as risk assessment and financial forecasting, rather than being bogged down by data collection and entry tasks. In this regard, AIS not only improves the efficiency of audit processes but also enhances the strategic value of internal audits by equipping auditors with better decision-making tools.

2.2 Improving Internal Controls through AIS

A central theme in the literature is the role of AIS in strengthening internal controls within organizations. Internal controls refer to the policies and procedures implemented to ensure the integrity of financial reporting, prevent fraud, and promote accountability. Several studies have found that AIS plays a vital role in enhancing these controls. For example, Maharani and Damayanthi [7] found that organizations using AIS reported fewer instances of financial mismanagement and fraud, as the system's automated monitoring tools allowed for continuous oversight of financial transactions.

The integration of AIS into internal control systems also allows for more robust risk management. Wahyuni and Rinaldi [13] emphasize that AIS enables auditors to implement proactive measures in identifying potential risks and irregularities before they escalate into significant financial issues. This preventive approach is especially important in complex environments, such as universities, where financial processes involve multiple departments and stakeholders. By providing real-time oversight and reporting capabilities, AIS helps institutions maintain compliance with regulatory standards and improve financial governance.

2.3 The Role of AIS in Higher Education Institutions

While much of the literature on AIS focuses on corporate settings, recent studies have begun to explore its application in higher education institutions. Universities, like other large organizations, manage significant financial resources and are subject to stringent regulatory requirements, making the role of internal audits essential in ensuring financial transparency and accountability. According to Hadiwijaya and Praptapa [5], the use of AIS in universities can streamline financial operations by automating the collection, analysis, and reporting of financial data, thus reducing the workload on auditors and improving the timeliness of audits.

Mansyuri et al. [8] highlight that the implementation of AIS in higher education institutions, such as Universitas Hasanuddin, has the potential to significantly enhance the quality of internal audits by ensuring that financial data is accurately recorded and easily accessible for review. This is particularly important in higher education settings, where financial processes are often decentralized across various faculties, departments, and research centers. The use of AIS in such contexts helps to standardize financial reporting practices, enabling auditors to carry out their duties more efficiently and effectively.

2.4 Factors Influencing the Effectiveness of AIS

While the benefits of AIS are well-documented, several factors influence its successful implementation and the degree to which it enhances audit effectiveness. One key factor is the level of technical expertise and training among auditors. Ahmad et al. [1] argue that auditors who are well-versed in using AIS are more likely to maximize the system's capabilities and deliver high-quality audits. In contrast, auditors with limited knowledge of AIS may struggle to fully utilize the system, thereby limiting its potential impact.

Similarly, Yusuf and Kanji [14] emphasize the importance of management support in ensuring the successful adoption of AIS. Without the backing of top management, organizations may face challenges in securing the necessary resources for implementing AIS or in fostering a culture that supports technological innovation. This finding aligns with earlier studies, which suggest that management's commitment to AIS adoption is crucial for overcoming resistance to change and ensuring that the system is integrated into the organization's broader financial governance framework [12].

Organizational culture is another critical factor that shapes the effectiveness of AIS. Nusa [9] found that institutions with a culture of accountability, transparency, and continuous improvement are more likely to leverage AIS successfully in their internal audit processes. In contrast, institutions with rigid, hierarchical structures may encounter resistance to the adoption of new technologies, as employees and auditors may be reluctant to change established practices. This underscores the importance of fostering a positive organizational culture that encourages innovation and supports the use of advanced technologies such as AIS.

2.5 The Moderating Role of Experience and Organizational Culture

Several studies highlight the moderating role of auditor experience and organizational culture in determining the success of AIS in improving internal audit effectiveness. Shafwan et al. [11] found that auditors with more experience in financial analysis and auditing were better able to leverage the full potential of AIS, particularly in identifying discrepancies and optimizing internal controls. Experienced auditors are not only more familiar with auditing principles but also more adept at using technology to enhance their work.

Organizational culture also plays a moderating role. Mansyuri et al. [8] and Islam [6] found that organizations with a culture that supports innovation, transparency, and continuous improvement were more likely to realize the benefits of AIS. In these organizations, employees and auditors were more open to learning and adopting new technologies, resulting in a smoother transition to AIS and better audit outcomes.

3 Research Methodology

This study employs a qualitative approach with a case study design to explore the influence of Accounting Information Systems (AIS) on the effectiveness of internal audits at Universitas Hasanuddin. The case study design was chosen as it allows for an in-depth investigation of the implementation and use of AIS within the context of a higher education institution, particularly in a real-life setting involving various contextual factors (Yin, 2018). This approach is well-suited to understanding the details of AIS implementation at the university and the factors influencing its success.

Data were collected through a combination of semi-structured interviews, document analysis, and participant observation. Semi-structured interviews were conducted with key stakeholders, who were directly involved in AIS implementation and in internal audit. This interview format allows flexibility in exploring their experiences and perceptions regarding AIS use while maintaining a structured framework to cover key

topics such as AIS integration, audit process efficiency, and challenges in its use (Bryman, 2016). In addition, document analysis was conducted on internal audit reports, financial statements, and system documentation related to AIS implementation. This analysis provided insight into how AIS supports internal audit functions and strengthens the university's internal controls [13]. Participant observation was also employed to observe audit activities involving the use of AIS in real-time, offering practical insights into the operational benefits and limitations of the system [12].

The purposive sampling strategy was used to select participants directly involved in AIS implementation and internal audit processes. This ensured that the data collected were highly relevant to the research focus.

Data were analyzed using thematic analysis, which involved identifying, coding, and interpreting key themes from the collected data. Interview transcripts and documents were systematically analyzed to identify recurring patterns related to the influence of AIS on internal audit effectiveness. Themes such as "increased audit efficiency" and "challenges in AIS adoption" emerged from this analysis [4]. Thematic analysis was chosen for its flexibility in handling qualitative data and its ability to generate rich, detailed descriptions of the studied phenomena. To ensure validity, the study employed triangulation, collecting data from multiple sources (interviews, documents, and observations) to ensure consistency of findings.

This qualitative methodology provided an in-depth exploration of how AIS influences the effectiveness of internal audits at Universitas Hasanuddin. Through data triangulation and thorough thematic analysis, this research ensures the credibility and richness of findings, offering valuable insights into the application of AIS in internal auditing at higher education institutions.

4 Results. And Discussion

This study reveals several key findings regarding the influence of Accounting Information Systems (AIS) on the effectiveness of internal audits at Universitas Hasanuddin. The analysis from semi-structured interviews, document reviews, and participant observations indicates that AIS significantly enhances efficiency, accuracy, and strengthens internal controls in the university's audit processes. Although the benefits of AIS are widely recognized, challenges related to auditor expertise and organizational culture emerged as critical factors moderating the effectiveness of AIS implementation.

One of the main findings of this study is that AIS substantially improves the efficiency and accuracy of internal audits. Respondents consistently stated that the adoption of AIS accelerated the audit process by automating routine tasks such as data collection, transaction tracking, and financial reporting. The system reduces the auditors' workload by eliminating the need to manually verify financial transactions, allowing auditors to focus on higher-level analysis. This finding is in line with research by Rapani and Malim [10], which showed that AIS reduces manual errors and accelerates audit timelines by providing real-time access to financial data. At Universitas Hasanuddin, internal auditors reported that AIS allowed them to detect discrepancies earlier, enabling intervention before financial issues escalated.

AIS also significantly improved the accuracy of financial reports. By automating data entry and reconciliation processes, AIS substantially reduced human errors and inconsistencies in financial record-keeping, resulting in more reliable financial reports. This finding aligns with Wahyuni and Rinaldi [13], who stated that AIS enhances the accuracy of financial reporting by standardizing data collection and validation processes. At Universitas Hasanuddin, AIS implementation allowed internal auditors to work more efficiently, reducing errors in financial reports and ensuring faster audit processes.

In addition to efficiency, AIS played a crucial role in strengthening internal controls at the university. AIS users at Universitas Hasanuddin reported that the system provides continuous monitoring capabilities, allowing real-time oversight of financial transactions and ensuring compliance with established policies and procedures. This finding confirms the study by Maharani and Damayanthi [7], which demonstrated that AIS strengthens internal controls by automating monitoring functions, allowing auditors to detect anomalies or deviations from standard practices more easily.

Improved transparency in financial operations was also identified as a key benefit of AIS. Internal auditors at Universitas Hasanuddin reported that the system provides detailed audit trails, which can be easily accessed and reviewed. This increased visibility into the university's financial processes allowed auditors to conduct more thorough investigations when necessary. This finding is consistent with the research by Alsabti and Khalid [2], who found that AIS enhances internal controls by improving the traceability and accountability of financial transactions. Auditors at Universitas Hasanuddin reported significant improvements in reporting accuracy and compliance, particularly in meeting financial reporting deadlines.

However, despite the acknowledged benefits of AIS, challenges related to auditor expertise and organizational culture were identified as major obstacles to effective AIS implementation. Internal auditors at Universitas Hasanuddin reported that the lack of adequate training and experience in using AIS was a primary barrier to fully utilizing the system's potential. This finding is consistent with Ahmad et al. [1], who showed that the effectiveness of AIS is highly dependent on the technical proficiency of auditors in using the system. Some auditors who were not proficient in AIS tended to revert to manual processes for certain audit tasks, ultimately limiting the efficiency gains that AIS could offer.

In addition to technical limitations, organizational culture was another critical factor influencing the success of AIS adoption. At Universitas Hasanuddin, resistance to change was evident in some departments, particularly among staff who were accustomed to traditional, manual audit processes. This resistance hindered AIS adoption in certain areas, as employees were reluctant to embrace new technologies. This finding aligns with the research by Nusa [9] and Mansyuri et al. [8] which demonstrated that organizational culture plays a significant role in determining the success of AIS adoption. Organizations that support innovation and continuous improvement are more likely to succeed in integrating systems like AIS, while those with rigid, hierarchical structures are more likely to experience greater resistance to change.

At Universitas Hasanuddin, departments with strong management support and a culture of accountability were more successful in adopting AIS and realizing its benefits. Conversely, departments with less engaged leadership or a lack of emphasis

on technological innovation faced greater difficulties in fully implementing AIS. This supports the conclusions of Syahputra [12], who emphasized that management support and organizational culture are crucial in overcoming resistance and ensuring the successful integration of AIS into internal audit processes.

Management support emerged as another key factor in determining the success of AIS adoption. At Universitas Hasanuddin, departments with strong management support reported higher levels of AIS acceptance, as management provided the necessary resources for system implementation and auditor training. Alsabti and Khalid [2] also found that management plays a crucial role in facilitating AIS adoption by ensuring that auditors receive the necessary training and support to use the system effectively. Continuous investment in training and professional development for auditors is a crucial element in ensuring the long-term success of AIS at Universitas Hasanuddin, as noted by Shafwan et al. [11].

5 Conclusion

This study provides important insights into the influence of Accounting Information Systems (AIS) on the effectiveness of internal audits at Universitas Hasanuddin. The findings highlight that AIS plays a vital role in improving audit processes by automating repetitive tasks, increasing the accuracy of financial data, and strengthening internal controls. The integration of AIS has enabled auditors to shift their focus from labor-intensive manual processes to more strategic tasks such as data analysis and decision-making, thus enhancing the overall efficiency and accuracy of the audit process.

One of the most significant contributions of AIS is its ability to enhance transparency and accountability within the financial operations of the university. Through real-time access to financial data and continuous monitoring, AIS allows auditors to detect and address discrepancies early, thereby mitigating risks and improving the integrity of financial reports. The system's capacity to ensure compliance with internal policies and external regulatory requirements further underscores its importance in supporting the university's financial governance.

However, the study also identifies several challenges that limit the full potential of AIS. A key issue is the lack of sufficient training and expertise among some auditors, which hampers their ability to fully utilize the system's capabilities. While AIS offers powerful tools for data analysis, auditors who are not proficient in its use tend to rely on traditional manual methods, thus diminishing the efficiency gains that could be achieved through the system's automation features. This highlights the need for ongoing training and professional development to ensure that auditors are equipped with the necessary skills to maximize the benefits of AIS.

In addition to auditor expertise, organizational culture emerged as a critical factor influencing the success of AIS implementation. Resistance to change, particularly in departments that have long relied on manual auditing practices, was identified as a barrier to the effective adoption of AIS. This resistance points to the importance of fostering a culture that embraces innovation and is open to technological advancements. Such a culture, supported by strong leadership and management commitment, is

essential for overcoming resistance and ensuring the successful integration of AIS into internal audit processes.

Management support was also identified as a crucial factor in the successful implementation of AIS. Departments that received strong backing from leadership, including resources for system implementation and auditor training, reported more positive outcomes in terms of AIS utilization and audit effectiveness. This finding underscores the role of management in facilitating the adoption of technology within financial operations, as well as the importance of continuous support and investment in training and development.

AIS has proven to be an invaluable tool for enhancing the effectiveness of internal audits at Universitas Hasanuddin, its success depends on a combination of technological, human, and organizational factors. The system's potential to improve audit efficiency, financial accuracy, and internal controls is evident, but its full impact can only be realized through skilled auditors, a supportive organizational culture, and strong management leadership. The findings of this study provide practical recommendations for higher education institutions looking to improve internal audit practices through the adoption of AIS. Looking ahead, there is an opportunity for future research to explore the role of emerging technologies, such as artificial intelligence and machine learning, in further enhancing the capabilities of AIS and improving internal audit effectiveness in complex organizational environments.

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