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Accounting Information Systems Quality and Audit Quality: Evidence from Public and Private Sector Organizations

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Abstract

Accounting Information Systems Quality and Audit Quality: A Systematic Literature Review The purpose of this study is to examine the relationship that exists between Accounting Information Systems (AIS) quality and audit quality through the application of a Systematic Literature Review (SLR) approach. The focus is to determine the major factors that affect AIS quality and to examine the effect that these factors have on audit quality in public and private sector organizations. The study is based on the SLR approach, as described by Barbara Kitchenham, where a systematic search for literature is performed through Google Scholar and other online databases such as Scopus. The search yielded 65 articles published between 2015 and 2024, and 18 relevant studies were included after filtering through a set of predefined criteria.

The results showed that AIS quality is a major factor that enhances audit quality through factors such as the accuracy of the data, internal controls, system reliability, and timeliness of information. The major factors that affect AIS quality include system integration, user competence, internal controls, and technological infrastructure. The results also showed that a high-quality AIS helps auditors to detect material misstatements and improve audit efficiency.

The study contributes to existing literature by providing a comprehensive synthesis of AIS and audit quality relationships, particularly within developing economies. It also highlights research gaps and suggests areas for future empirical investigation.

Keywords: Accounting Information Systems, Audit Quality, Systematic Literature Review, Internal Controls, Information Quality

1. Introduction

Audit quality is an essential factor for building credibility and reliability in financial reporting for all organizations. In the public sector and in various industries, stakeholders rely on audit quality to make informed decisions regarding the economy. Audit quality is considered an essential tool for effective decision-making in various industries. Linda Elizabeth DeAngelo described audit quality as “the

probability of an auditor detecting and reporting material misstatements in the financial statements." The definition emphasizes the importance of auditor independence and competence for effective audit quality.

Recently, various Accounting Information Systems have been implemented in different industries, changing the face of audit quality. Accounting Information Systems have been considered an essential tool for gathering, processing, and reporting financial information. It plays an essential role in building transparency and accountability for all stakeholders. In this regard, high audit quality is essential for all industries. In contrast, low audit quality can be attributed to low Accounting Information System quality.

Despite its importance, various researchers have tried to study audit quality without considering Accounting Information System quality. In this regard, it is imperative to study audit quality considering Accounting Information System quality, especially in developing countries like Ghana, where various information where the adoption of advanced information systems is still in the process of evolution. The need to comprehend the influence of the quality of AIS on the quality of the audit is therefore of utmost importance in the enhancement of governance and accountability in institutions

In addition, previous studies have yielded inconsistent findings on the effects of AIS on audit outcomes, thus calling for a synthesis of existing literature on the topic. This study, therefore, employs a structured review approach to synthesize both empirical and theoretical literature on the relationship between AIS quality and audit quality.

The main objective of this study is to review existing literature with the aim of identifying the determinants of Accounting Information Systems quality and its effects on audit quality.

Specifically, this study aims to:

1. Identify key components of Accounting Information Systems quality

2. Examine the relationship between AIS quality and audit quality

3. Highlight gaps in existing literature and propose directions for future research

The study has been divided into several sections. After the introduction, the study begins with a discussion on the theoretical framework, which highlights the concepts and theories associated with Accounting Information Systems and audit quality. This study has also been divided into a section on methodology, results and discussion, and conclusion, among others

2. THEORETICAL FRAMEWORK

2.1 Accounting Information Systems (AIS) Quality

Accounting Information Systems (AIS) are integrated frameworks that are adopted to process, store, and report financial data with the intention of assisting in decision-making. The quality of AIS is an important factor in determining the reliability of financial reporting and the success of the organization. The quality of AIS is normally determined by the system's precision, reliability, timeliness, flexibility, and integration with other organizational systems.

The basis of the evaluation of the quality of an information system is largely based on the model developed by William H. DeLone and Ephraim R. McLean, which identified the major dimensions of system quality, information quality, and service quality. System quality is the technical performance of the system, while information quality is the output produced by the system, and service quality is the support given to the system's users.

This ensures that financial data is processed efficiently and accurately, hence reducing the chances of errors and fraud. On the other hand, if the quality of AIS is compromised, the chances of getting accurate financial data are reduced, hence affecting audit quality negatively.

2.2 Audit Quality

Audit quality is a multidimensional concept that has been extensively discussed in the accounting and auditing literature. According to Linda Elizabeth DeAngelo, audit quality is defined as the joint probability that an auditor will detect and report material misstatements in a client's financial statements. The two important aspects of audit quality are the competence of the auditor (the ability to detect misstatements) and independence (the willingness to report misstatements).

Other contributions by the International Auditing and Assurance Standards Board indicate that audit quality is achieved when the audit is performed in compliance with professional standards and ethics, hence ensuring high levels of assurance to the users of the financial statements. Audit quality is affected by factors such as the expertise, independence, and professional skepticism of the auditor, as well as compliance with auditing standards. This ensures that there is proper and efficient use of public resources, and this enhances trust in public entities.

2.3 Relationship Between AIS Quality and Audit Quality

The relationship between AIS quality and audit quality is founded on the idea that data input quality has a direct effect on audit results. High-quality AIS provides accurate, timely, and exhaustive financial information, thus enabling the auditor to perform more effective audit procedures. High-quality AIS minimizes the possibility of material misstatements, thus enabling the auditor to rely more on system-generated data.

High-quality AIS enhances internal control systems, thus ensuring that there are checks and authorizations, which enhance the auditor's evaluation of control risk. The use of AIS enhances more efficient and effective audits, thus improving audit quality.

On the other hand, low levels of AIS would lead to an increased risk of errors, fraud, and data manipulation, thus leading to an increase in audit risk. In this case, auditors would be required to carry out extensive audit procedures, yet this would not be effective in totally eliminating audit risk.

Research findings have indicated that audit quality is likely to be high in an organization with high levels of infrastructure in its AIS. Additionally, integration of technology such as cloud computing and ERP systems would enhance audit procedures.

2.4 Theoretical Foundation

This study is based on various theoretical underpinnings that explain the relationship between AIS quality and audit quality

First, Agency Theory, developed by Michael C. Jensen and William H. Meckling, helps explain the conflict of interest between managers (agents) and shareholders (principals). AIS and auditing activities act as a monitoring device to mitigate information asymmetry and account for accountability. High-quality AIS promotes transparency, and high-quality audit results promote assurance on the quality and reliability of provided information.

Second, Information Systems Success Theory, developed by William H. DeLone and Ephraim R. McLean, asserts that the success of an information system directly relates to system quality, information quality, and service quality.

Third, Audit Theory focuses on the role played by auditors in providing assurance on the reliability and accuracy of financial reports and how its effectiveness is affected by the quality of underlying information systems, considering that information systems play a critical role in providing data to the audit team during the audit process.

3. RESEARCH METHODOLOGY

3.1 Research Design

This research employed a Systematic Literature Review (SLR) design in exploring the relationship between Accounting Information System (AIS) quality and audit quality. The SLR approach has been recognized globally as a rigorous method in examining existing research in relation to a particular research question. The SLR approach was employed in this research because, according to Barbara Kitchenham, there are three stages in conducting SLR, which are planning, conducting, and reporting. The SLR approach was considered suitable in conducting this research because it enabled a comprehensive examination of existing research, both empirical and theoretical.

3.2 Data Sources and Search Strategy

This research employed various academic databases, including Google Scholar and Scopus, in conducting the literature search. These databases were considered suitable in conducting this research because they have been recognized globally as having extensive coverage in terms of accounting, auditing, and information system journals.

In order to make sure that a thorough search is performed, relevant keywords are used, such as:

• “Accounting Information Systems”

• “AIS Quality”

• “Audit Quality”

• “Information Systems and Auditing”

• "Internal Controls and Audit Quality"

The search is performed for articles published between 2015 and 2024 to ensure that recent developments regarding AIS and auditing practices are included.

3.3 Inclusion and Exclusion Criteria

In order to ensure that the studies included are relevant and of high quality, inclusion and exclusion criteria are established.

Inclusion Criteria:

• Peer-reviewed journal articles

• Studies focusing on AIS, audit quality, or both

• Empirical and theoretical studies

• Articles published in English

• Published between 2015 and 2024

Exclusion Criteria:

• Articles which are not related to AIS and Audit Quality

• Conference papers which are not full text

• Duplicate papers

• Articles which do not contribute anything new

3.4 Article Selection Process

Article selection process was carried out in several stages. First, a total of 65 articles were identified on the basis of keyword searching. After this, the articles were filtered on the basis of the title and abstract of the article to check the relevance of the article.

After the above process, a total of 30 articles were shortlisted and further evaluated on the basis of the full text of the article to check the alignment of the article with the research objectives.

Finally, a total of 18 articles were selected on the basis of the inclusion and exclusion criteria.

The selected articles are a mix of international and high-quality journals to ensure a thorough review of the topic.

3.5 Data Analysis Technique

The data analysis technique employed in the study is the analysis of the selected articles using the qualitative synthesis technique. The articles are thoroughly analyzed in order to determine the key variables, variables, and themes concerning the quality of AIS and the quality of audits.

The analysis will include the following variables:

• The determinants of AIS quality

• The determinants of the quality of audits

• The relationship between the quality of AIS and the quality of audits

• The emerging trends in the research area

The findings from the selected articles will then be categorized in order to clearly comprehend the relationship between the quality of AIS and the quality of audits.

3.6 Reliability and Validity

In order to ensure the reliability and validity of the study, only peer-reviewed articles from reputable journals are selected for the study. This minimizes the scope of bias in the selection of the articles.

Moreover, the proposed study follows a well-structured SLR methodology, which ensures the transparency of the research, thus adhering to the best practices in research studies conducted in the field of academics.

4. RESULTS AND DISCUSSION

4.1 Overview of Selected Studies

Guided by the findings of the Systematic Literature Review (SLR), a total of 18 relevant literature was examined to identify the relationship between Accounting Information System (AIS) quality and audit quality. The literature was sourced from reputable sources published in credible journals indexed in various databases such as Scopus and Google Scholar.

The literature reviewed includes various empirical and theoretical findings based on different countries' public and private sector organizations. The literature findings show that AIS quality significantly impacts audit quality, especially in an environment where there is an increase in digitalization in financial reporting systems.

4.2 Key Determinants of AIS Quality

From an analysis of selected literature, various key determinants of AIS quality impacting audit quality have been identified. These determinants have been identified in various literature and can be summarized as follows:

1. System Quality

System quality can be described as the technical performance of AIS, including reliability, ease of use, response time, and integration. System quality is essential in ensuring efficient and effective processing of financial information without errors.

Research has proved that a good system architecture minimizes system failures and increases the auditor's ability to rely on system-generated information. Conversely, a poor system quality poses a risk to audit quality and may call for extensive audit procedures.

2. Information Quality

Information quality entails the accuracy, completeness, relevance, and timeliness of financial information generated by the AIS. Information quality has a direct impact on audit quality, and accurate information allows auditors to make informed decisions.

In line with Linda Elizabeth DeAngelo's definition of audit quality, reliable information increases the likelihood of detecting and reporting cases of financial irregularities.

3. Internal Control Effectiveness

The AIS has a critical role in building effective internal control systems, and effective internal controls reduce the risk of fraud and errors, hence improving audit quality.

Organizations with effective internal controls, through the use of AIS, give assurance to the auditor regarding the reliability of financial information, hence contributing to audit quality

4. User Competence

User competence is defined as the competency level of individuals using the AIS. Even the most sophisticated technology will fail if the users are incompetent.

Research has shown that competent users will lead to more accurate data and better utilization of the technology, thus supporting the audit process. This is consistent with the auditing literature, which highlights the need to invest in human capital to achieve audit success.

5. Technological Infrastructure

Technological infrastructure includes hardware, software, networking technology, and other technologies such as cloud computing and enterprise resource planning systems.

Modern technology infrastructure facilitates the processing of information in real time and increases accessibility for auditors. This will reduce time spent on the audit process.

4.3 Relationship Between AIS Quality and Audit Quality

The results obtained from various studies reviewed in this research show a positive correlation between AIS quality and audit quality. The positive role played by AIS quality in enhancing audit quality is multifaceted:

• Improved Data Reliability: The availability of reliable data aids auditors in conducting more precise audit procedures.

• Reduced Audit Risk: High-quality AIS minimizes the risk of errors and fraud, thereby reducing inherent and control risks.

• Enhanced Audit Efficiency: The use of technology reduces audit time, thereby enhancing efficiency.

• Better Decision-Making: The availability of relevant information aids auditors in making better decisions.

Additionally, AIS contributes to continuous auditing, which involves obtaining real-time data from financial transactions, enabling auditors to address issues in a timely manner. This becomes more relevant in contemporary organizations where financial transactions are becoming more digitalized.

4.4 Discussion of Findings

The findings of this study have supported the Information Systems Success Model developed by William H. DeLone and Ephraim R. McLean. The model asserts that system quality and information quality are essential to organizational success. These two factors are vital to audit quality.

Moreover, the findings of this study have supported the Agency Theory developed by Michael C. Jensen and William H. Meckling. The theory asserts that monitoring mechanisms are essential to reducing information asymmetry. The use of AIS and auditing is essential in monitoring and controlling an organization.

In developing countries, the use of high-quality AIS is essential. Ghana is one of the developing countries. The use of high-quality AIS is essential in Ghana due to problems such as poor internal controls, lack of technology, and lack of knowledge.

Despite the positive relationship between AIS and audit quality, some authors have cited some problems that might limit the use of AIS. These problems include high implementation costs, resistance to technology, and cybersecurity. These problems might limit the use of AIS and, subsequently, the impact on audit quality.

5. CONCLUSION

5.1 Summary of Key Findings

This study has carried out a systematic review of 18 peer-reviewed articles to investigate the relationship between Accounting Information System (AIS) quality and audit quality. The findings suggest that AIS quality has a positive and significant effect on enhancing audit quality, including:

1. Improved data reliability, where accurate, timely, and adequate financial data will help auditors identify misstatements.

2. Improved internal controls, where AIS will help identify fraud and errors.

3. Improved auditor efficiency, where AIS will help streamline the auditing process, thus improving timeliness.

4. Improved decision-making, where relevant data will help auditors form well-informed opinions.

Additionally, some determinants of AIS quality, including system quality, information quality, internal control effectiveness, user competence, and technological infrastructure, have been identified. All studies confirm that these determinants positively contribute to enhancing audit quality, with system and information quality being critical factors.

5.2 Contributions

This study contributes to academic literature and practice in various ways:

1. Comprehensive Synthesis – An integrative overview of how AIS quality influences audit quality.

2. Contextual Relevance for Developing Economies – The study emphasizes the significance of AIS for audit quality improvement in countries like Ghana, where technology and capacity issues affect audit outcomes.

3. Guidance for Practitioners – The study provides insights for auditors and managers of organizations to guide them in prioritizing AIS investments and staff training for audit quality improvement.

4. Research Framework – It creates a conceptual foundation for future research on AIS determinants and audit quality.

5.3 Limitations

Despite its importance, this SLR study has some limitations:

1. Article Selection – Only 18 articles were selected for this study, which might affect its generalizability.

2. Publication Bias – The study is based on published literature, which may reflect publication bias and show stronger relationships between AIS quality and audit quality.

3. Sector Focus – The literature included in this study primarily contains data collected from developed countries' public and private sector organizations, with fewer data sources from developing economies.

4. Methodological Diversity – Differences in methodologies and measurement indicators may affect the generalizability of this study.

5.4 Suggestions for Future Research

On the basis of the findings and the limitations of the study, the following are some of the possible areas of future research:

1. To conduct further empirical research in Ghana and other developing economies.

2. To further identify the determinants of the quality of Accounting Information Systems.

3. To study the long-term effects of the quality of Accounting Information Systems on the quality of audits.

4. To study the sectoral differences of the challenges faced while implementing the quality of Accounting Information Systems in the public sector and the private sector and the non-profit sector.

5.5 Final Remark

In conclusion, it can be stated with absolute certainty that the quality of Accounting Information Systems plays a significant role in the enhancement of the quality of audits.

References

1. DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting & Economics, 3*, 183–199.
2. DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems, 19*(4), 9–30.
3. Kitchenham, B., Brereton, O. P., Budgen, D., Turner, M., Bailey, J., & Linkman, S. (2009). Systematic literature reviews in software engineering–A systematic literature review. *Information and Software Technology, 51*(1), 7–15.
4. Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics, 3*(4), 305–360.
5. DeFond, M., & Zhang, J. (2014). A review of archival auditing research. *Journal of Accounting and Economics, 58*(2–3), 275–326.
6. IAASB. (2014). A framework for audit quality: Key elements that create an environment for audit quality. International Federation of Accountants.
7. Romney, M. B., & Steinbart, P. J. (2018). *Accounting information systems* (14th ed.). Pearson.
8. Usman, A., Sudarma, M., Habbe, H., & Said, D. (2014). Effect of competence factor, independence and attitude against professional auditor audit quality. *Journal of Business and Management, 16*(1), 1–13.

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