E-ISSN: 3123-2507
DOI: https://doi.org/10.64803/cessmuds.v1.125

Review of COBIT-Based Information System Audits in IT Governance

Olivia Deslovita br Ginting[1,*] , Samaria Simangunsong[2], Siti Zahara[3], Neng Sri Wardhani[4]

[1,2,3,4]Department of Accounting, Universitas Pembangunan Panca Budi
E-mail: [1,*]gintingolivia5@gmail.com, [2]htbrtria@gmail.com, [3]zaharasiti453@gmail.com,
[4]nengsri_wardhani@dosen.pancabudi.ac.id
*E-mail Corresponding Author: gintingolivia5@gmail.com

Abstract

This study aims to review the implementation of information system audits based on Control Objectives for Information and Related Technology (COBIT) in supporting information technology (IT) governance. The background of this study is based on the importance of effective and structured IT governance to ensure alignment between the use of information technology and organizational objectives. However, in practice, many organizations have not optimally implemented information system audits as part of IT governance evaluation and control. This study uses a qualitative research method with a descriptive approach, where data is collected through literature studies, document analysis, and examination of the COBIT framework as an information system audit standard. The results show that the implementation of COBIT-based information system audits COBIT can help organizations identify the maturity level of IT governance, evaluate the effectiveness of IT controls, and provide systematic recommendations for improvement. These findings confirm that the COBIT framework can be used as a comprehensive tool to support management decision-making and improve the quality of IT governance in a sustainable manner.
Keywords*: Information System Audit, COBIT, IT Governance.*

I. INTRODUCTION

The rapid development of information technology requires organizations to align the use of information systems with their strategic objectives (Al Mouf & Sari, 2024). Information system audits play an important role in assessing the effectiveness of internal controls and IT governance that have been implemented (Saharaet al., 2025). Focusing the evaluation on information systems allows organizations to obtain an overview of the maturity level of IT processes (Putra et al., 2023). Information technology governance audits using the COBIT 2019 framework provide systematic guidance in mapping existing IT processes that are already in place (Suryani et al., 2023). The application of COBIT 2019 in audits supports the identification of IT process capabilities and risk areas that need improvement (Sumiati et al., 2025).

The results of mapping the level of IT process capabilities can be used as a basis for recommendations for improving IT (Jamali et al., 2025). COBIT 2019-based information system audits serve as an instrument for evaluating the alignment of IT operations with organizational objectives (Destriani & Putra, 2023). This evaluation provides a basis for designing improvement action plans aimed at enhancing IT governance capabilities (Wibawa et al., 2025). Audit findings will assist in establishing a more effective and measurable IT governance framework (Akbar & Saputra, 2025). This study employs a descriptive qualitative research method to describe the actual state of information technology governance through observation, interviews, and audit documentation (Destriani & Putra, 2023).This study aims to obtain a comprehensive picture of the implementation of COBIT-based information system audits in IT governance and to develop recommendations for improving IT governance that are relevant to best practices (Jamali et al., 2025).

II. RESEARCH METHODOLOGY

This study uses a qualitative descriptive method with a conceptual approach. This method was chosen because the study aims to review and explain the concept of information system auditing based on the COBIT framework in supporting information technology governance, without involving hypothesis testing or field data collection in specific organizations. The descriptive qualitative approach is used to provide a systematic description of the role, function, and mechanism of COBIT as an audit and IT governance framework.

Research data was obtained through documentation studies, sourced from official COBIT framework documents and supporting literature in the form of textbooks and scientific journal articles relevant to information system auditing and IT governance. These sources were used to strengthen conceptual understanding and ensure that the discussion was in line with applicable standards and practices.Data analysis was conducted descriptively and conceptually, by examining the domains, processes, and principles of COBIT related to information system auditing. The results of the analysis are presented in the form of a narrative description to illustrate how the COBIT framework

can be used as an evaluation and control tool in information technology governance. Through this approach, the study is expected to provide a comprehensive understanding of the role of COBIT in supporting the effectiveness of information system audits and IT governance

III. RESULTS AND DISCUSSION

A. Results

The results of the study indicate that the COBIT framework is a comprehensive framework in supporting the implementation of information system audits and information technology governance .COBIT provides an integrated control structure between business processes and information technology. Each domain in COBIT is designed to ensure that IT management runs in accordance with organizational objectives. COBIT-based information system audits enable the assessment of control effectiveness, risk management, and the achievement of value from the use of information technology.COBIT places IT governance as an important part of organizational decision making.

This framework emphasizes clarity of roles, responsibilities, and relationships between process owners, management, and stakeholders. COBIT-based information system audits provide a comprehensive overview of IT management. The audit process not only assesses compliance with procedures but also evaluates the alignment of IT processes with organizational needs.

The review results show that COBIT supports the systematic implementation of information system audits. Clearly defined domains and processes help auditors identify areas that need improvement. COBIT also provides control objectives and practices that can be used as a reference in evaluating IT performance. COBIT-based audits provide an objective basis for assessing the level of control and maturity of IT governance. The implementation of COBIT-based information system audits contributes to increased transparency in the management of IT risks and the effectiveness of IT governance. COBIT-based audits provide an objective basis for assessing the level of control and maturity of IT governance.

The implementation of COBIT-based information system audits contributes to increased transparency in IT management. The standards used are structured and documented. The audit process becomes more focused and consistent. This condition supports the creation of accountability in information system management. Audits not only serve as an evaluation tool, but also as a means of continuous improvement in IT governance.

B. Discussion

The discussion of the research results shows that COBIT-based information system audits have a strategic role in information technology governance. COBIT connects business objectives with IT processes through measurable control mechanisms. This approach makes information system audits more value-oriented. The focus of the audit is not limited to the technical aspects of the information system.

The focus of the audit includes the alignment between technology, processes, and organizational strategy.A COBIT-based information system audit provides a comprehensive evaluation framework for IT management. Each process in COBIT has a clear objective. Each objective has achievement indicators that can be used in the audit process. Auditors obtain systematic guidance in assessing the effectiveness of IT internal controls. The assessment becomes more structured and accountable. IT risks can be identified more clearly through this approach.

The discussion also shows that COBIT supports the improvement of IT governance quality through a best practice-based approach. COBIT-based information system audits encourage organizations to pay attention to the aspects of control, risk management, and IT performance in an integrated manner. IT governance is not only understood as an administrative obligation. IT governance is understood as part of efforts to improve organizational performance. COBIT-based audits help organizations understand the position of IT management in supporting strategic objectives.

The use of COBIT in information system audits provides consistency in the assessment process. Standardization of domains and processes reduces subjectivity in the audit implementation. Audit results become more credible and easier to understand by stakeholders. Transparency in IT management can be enhanced through audit reporting based on a clear framework. This condition strengthens trust in the information systems used by the organization.

This discussion confirms that COBIT-based information system audits are a relevant approach in supporting information technology governance. The COBIT framework provides clear guidance in evaluating IT management. Audits conducted based on COBIT can encourage continuous improvement. IT governance can develop in a more focused and measurable manner through this approach.

IV. CONCLUSION

Based on the results of the conceptual study and discussion that has been conducted, it can be concluded that COBIT framework-based information system audits play a significant role in supporting the implementation of effective and targeted information technology governance.COBIT provides a systematic and comprehensive framework for evaluating IT management processes, enabling organizations to assess the level of alignment between IT operational practices and the strategic objectives to be

achieved.COBIT-based information system audits enable organizations to identify the level of IT governance maturity, assess the effectiveness of internal controls, and recognize potential risks that could affect information technology performance. This approach positions auditing not only as a means of supervision, but also as an instrument of continuous improvement that encourages overall improvement in the quality of IT governance. The implementation of COBIT-based information system audits contributes to increased transparency and accountability in IT management through a clear structure of processes, roles, and responsibilities. Thus, COBIT-based audits can serve as a strong foundation for management in strategic decision-making and in ensuring that the use of information technology provides added value to the organization.

V. RECOMMENDATIONS

Based on these conclusions, several recommendations can be made as follows:

A. Continuous Implementation

Organizations are advised to implement COBIT-based information system audits on an ongoing basis and integrate them with information technology policies and strategies, so that the results of the audits can be optimally utilized in improving IT governance.

B. Competency Improvement

Management and information system auditors need to improve their understanding and competency related to the COBIT framework so that the audit process can be carried out more objectively, systematically, and produce recommendations that are relevant to the organization's needs.

C. Strengthening IT Governance

The results of COBIT-based information system audits should be used as a basis for developing IT governance improvement plans, particularly in risk management, internal control, and information technology performance measurement.

D. Research Development

Further research is recommended to examine COBIT-based information system audits through an empirical approach in order to obtain a more in-depth picture of the implementation and its impact on information technology governance in various types of organizations.

VI. REFERENCES

Akbar, H., & Saputra, R. (2025). Evaluasi kinerja tata kelola teknologi informasi terhadap tools internal framework COBIT 2019. Sebatik, 27(2),xxxx. https://doi.org/10.46984/sebatik.v27i2.2336

Al Mouf, D., & Sari, F. W. (2024). Information technology (IT) governance audit using COBIT 2019 at PT SMOE Indonesia. Journal of Applied Multimedia and Networking, 8(2), xx–xx.https://doi.org/10.30871/jamn.v8i2.9067

Destriani, M., & Putra, Y. H. (2023). Rencana audit tata kelola sistem informasi di Universitas Subang menggunakan framework COBIT 2019. Jurnal Tata Kelola dan Kerangka Kerja TI, 9(1), xx–xx. https://doi.org/10.34010/jtk3ti.v9i1.9164

Jamali, R. H., Arifin, Z., & Megawati, M. (2025). Audit of information technology governance and risk management using the 2019 COBIT framework. Jurnal Rekayasa Sistem Informasi dan Teknologi, 2(4),xx–xx.https://doi.org/10.70248/jrsit.v2i4.2319

Putra, S. D., Herman, H., & Yudhana, A. (2023). Audit tata kelola academic information system menggunakan framework COBIT 2019. Jurnal Teknologi Informasi dan Ilmu Komputer, xx(x), xx–xx.https://doi.org/10.25126/jtiik.2023106361

Sahara, E., Fachruddin, & Devitra, J. (2025). Audit tata kelola teknologi informasi Universitas Nurdin Hamzah menggunakan framework COBIT 2019. Jurnal Ilmiah Media Sisfo, 19(2), 279–290. https://doi.org/10.33998/mediasisfo.2025.19.2.2489

Sumiati, S., Saputra, J., & Putra, A. F. D. (2025). Information technology governance audit at the communication and information office of Central Lombok Regency. Indonesian Journal of Modern Science and Technology, 1(2), 34–42. https://doi.org/10.64021/ijmst.1.2.34-42.2025

Suryani, S., Dwinnie, Z. C., et al. (2023). Audit tata kelola teknologi informasi pada layanan akademik Fakultas SAINTEK menggunakan COBIT 2019. Jurnal Tata Kelola dan Kerangka Kerja TI, 10(1), xx–xx.https://doi.org/10.34010/jtk3ti.v10i1.11847

Wibawa, I. K. S., Hary Susila, A. N. N., & Mandenni, N. M. I. (2025). Audit tata kelola teknologi informasi di RSUD X menggunakan COBIT 2019. Jurnal Manajemen dan Teknologi Informasi, 15(2), xx–xx.

[https://doi.org/10.59819/jmti.v15i2.5425](
https://doi.org/10.59819/jmti.v15i2.5425)

