Analysis of the Influence of Information Technology on the Effectiveness and Efficiency of the Audit Process

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ABSTRACT: The development of information technology (IT) has brought significant changes to various aspects of life, including in the audit process. This study aims to examine the influence of IT use on the efficiency, effectiveness, and quality of audits. The use of audit software, data analytics, and information management systems allows auditors to access and analyze large amounts of data more quickly and accurately. Information technology not only speeds up the audit process, but also improves the quality and reliability of audit results through a more in-depth and comprehensive approach. The results of the study show that the use of IT provides various advantages in the implementation of audits and the overall audit process. However, the study also identifies challenges that auditors face, such as risks associated with IT usage. In conclusion, the rapid development of IT has a significant influence on the continuity of the company. IT implementation can improve the efficiency, effectiveness, and internal control of the company, thereby assisting the company in obtaining relevant and accurate information and supporting the achievement of the company's goals.

KEYWORDS: Audit Implementation, Audit Process, Audit Risk, Information Technology

INTRODUCTION

In today's digital era, the development of information technology (IT) has brought major changes to almost all aspects of life, including how organizations run their operations. In the world of auditing, the implementation of IT has had a significant impact affecting various stages of the audit process, from planning to reporting. The use of information technology in auditing not only increases efficiency and effectiveness, but also changes the mindset and work approach of auditors. The utilization of audit software, data analytics, and information management systems allows auditors to access and analyze large amounts of data more quickly and precisely. This not only accelerates the implementation of audits but also improves the quality and credibility of audit results. Through information technology, auditors are able to carry out more in-depth and thorough audits, so that risks and errors that were previously difficult to detect with conventional methods can be identified (Setiatin, 2018).

However, despite bringing many benefits, the application of information technology in auditing also presents a number of challenges. Auditors need to have sufficient technical skills to operate software and analytics tools, as well as understand issues related to information security and data protection. In addition, aspects such as data integrity and the reliability of the information systems used by companies are important concerns that must be monitored by auditors. Research shows that information technology helps auditors detect anomalies and fraud more effectively. For example, data analytics allows auditors to examine financial transactions more efficiently, detect suspicious patterns, and provide deeper insights into a company's operations. However, the high reliance on technology also brings new risks, such as cyber threats and system failures, which can hinder the audit process and lower the level of confidence in the results.

In addition to the technical aspects, the adoption of information technology in auditing also affects the social and organizational dimensions. Auditors are required to adapt to technological developments and constantly update their knowledge and skills. This requires continuous training and adaptability to an increasingly digital work environment. In this context, research on the influence of the use of information technology on the audit process is very relevant and important.

LITERATURE REVIEW

The Role of Information Technology in the Audit Process

Information technology (IT) has revolutionized the audit process by providing tools that improve the efficiency and effectiveness of auditors' work. IT enables real-time data analysis, automation of data collection processes, and anomaly detection with analytical data-based methods (Vasarhelyi et al., 2017). The use of audit software such as Computer-Assisted Audit Techniques (CAATs) has been shown to reduce human error and speed up audit cycles (Yoon et al., 2020).

Efficiency and Effectiveness of Audit through IT

Previous studies have shown that the adoption of IT in the audit process improves operational efficiency and reliability of audit results. For example, the application of big data technology allows auditors to process large volumes of data in a shorter time compared to traditional methods (Alles et al., 2018). In addition, the use of blockchain as an auditing tool has become a trend to improve transparency and data security (Dai & Vasarhelyi, 2017).

Risks of Using Information Technology in Auditing

Although it provides many benefits, the use of IT in auditing also presents new risks such as data security threats, information manipulation, and system failures (Kuhn & Sutton, 2010). Therefore, it is important to implement adequate IT controls such as IT General Controls (ITGC) and risk mitigation strategies (Chan & Vasarhelyi, 2011).

Improving Auditor Competence

In the digital era, auditors are expected to have qualified technical skills to use modern audit software and understand the company's information systems. Continuous training is indispensable to ensure auditors are able to face the challenges of new technologies (Brown-Liburd et al., 2015).

THEORETICAL STUDIES

Definition of Information Technology (IT)

Information technology (IT) is a technology that humans use to manage, organize, store, communicate, and disseminate information (Sukandani et al., 2023). IT is based on computer technology as its main foundation. In the modern world, especially in the business sector, computer-based technology has a great influence. Companies need to make optimal use of information technology to improve the efficiency and effectiveness of their operational processes. However, to minimize risks related to business activities, the application of technology must be accompanied by appropriate and strategic management.

Advances in computer technology that continue to develop have a significant impact on the processing of data that produces information. With the rapid development of information technology, now every individual can access the latest information in real-time without geographical restrictions. The use of information technology in companies is very important to support more efficient and effective business processes. Companies strive to utilize this technology to improve service quality, so that they can achieve organizational goals and reduce potential risks in business processes (Yudistira et al., 2022).

Definition of Audit

An audit is a structured and objective step to collect and review evidence of economic actions aimed at providing assertions, assessing how far economic actions have met applicable standards, and communicating the results to relevant parties (Sukandani et al., 2023). Audit is an organized process carried out by individuals who have competence, professionalism, and an independent attitude. Audits are carried out by collecting evidence or information that can be refuted and related to facts, the economy in one unit (Yudistira et al., 2022). In PSAK, an audit is a systematic step that has the purpose of reviewing the evidence collected about statements or assertions about various economic actions, events, and the degree of relationship between statements or assertions and reality, as well as providing information about the results to the responsible parties. In the audit process, it is important to pay attention to the use of computer-assisted techniques to improve the efficiency of the audit process (Wulandari et al., 2023).

Risks of Using Information Technology

Auditors still ignored computers in the 1960s; to conduct an examination, so that the examination is carried out only around the computer (Auditing Around The Computer). The auditors found that there was usually enough evidence to audit effectively without being directly involved in assessing the controls in the computer system. Not a few entities have a lot of control outside of the computer application, which gives the auditor enough confidence that the system has been operating correctly. The number and frequency of non-computer evidence declined as the complexity and cohesion of computer systems increased. Auditors face increasing demands to select data from computer applications. A new method is needed because existing audit techniques cannot obtain computer data (Yudistira et al., 2022).

The theory of information technology environmental control underlines the importance of risk management related to the use of information technology in business processes. Organizations need to implement appropriate controls to manage new risks that arise along with the integration of information technology in internal control systems (Punu et al., n.d.) These controls include measures to identify, evaluate, and mitigate risks related to data security, system reliability, and information privacy. By implementing appropriate controls, organizations can ensure that they can keep their data secure, face increasingly complex security threats, and meet applicable compliance standards. Therefore, awareness of risks and the implementation of appropriate controls in the information technology environment are the main keys in maintaining the integrity and security of organizational information systems (Syaiful & Anwar, n.d.)

Information Technology in the Audit Process

The concept of information technology integration in the audit process highlights the importance of understanding the role of IT in improving the efficiency and accuracy of supervision of financial information compliance, reliability, and security (Saipudin et al., 2023). With the right IT adoption, auditors can collect, analyze, and verify data more quickly and accurately, allowing them to gain deep insights into an organization's financial performance and compliance.

In addition, it is important to understand the role of information technology in strengthening the internal control system. The integration of IT in an organization can add new internal control procedures that are carried out automatically by computer systems, but also bring new risks that need to be carefully managed (Amani et al., 2017). The positive impact of information technology in the audit process must also be balanced with a deep understanding of the security of audited data and information privacy. Therefore, it is important for auditors to develop expertise in audit information technology, including an in-depth understanding of data analysis tools, network security systems, and applicable compliance rules (Amelia Zaleha 2020).

The special and strategic role of information technology in supporting the audit process of computerized accounting information systems is very important. Information technology has become an important tool in auditing activities, contributing significantly to fundamental changes in organizational structures, operations, and management. When auditing computerized accounting information systems, information technology allows audit trails on computerized accounting information systems, making them vulnerable to unauthorized access. When a company uses information technology properly and correctly, its business processes and decisionmaking become better. This requires establishing a good internal control process for the company's information technology applications, as well as conducting a continuous, regular, and independent audit process for existing information systems. Therefore, IT plays a very important role in supporting the audit process of computerized accounting information systems, both in facilitating the audit process and influencing the development of the audit process (Dewi Muyasaroh Wulandari, Imelda Choirul Ummah, Kusnul Khotimah, Kharisma Khoirun Nisa, 2023).

Operational Efficiency and Effectiveness
Information technology can improve operational efficiency in the audit process In several ways, including:
a. The use of Computer-Aided Audit Techniques (TABK) and TABK Digital Applications is the use of computers in audit activities. In accounting computerized information system audits, TABK allows auditors to conduct tests automatically, reducing the time and effort required to conduct manual testing. As well as the use of digital tools and applications, auditors can increase effectiveness in identifying risks and analyzing data. b. Electronic Data Processing
The application of information technology through electronic data processing will have an impact on the auditing process and the company's internal control process. This can help auditors analyze data more effectively. Business processes and decision-making will be better if companies apply information technology properly and correctly. c. Good Internal Control

A good internal control process is needed for information technology applications in the company and continuous, regular, and independent of the existing information system. Thus, information technology can help improve operational efficiency and effectiveness in the audit process by speeding up the audit process, reducing human error and risk in analyzing data, and improving data accuracy.

RESEARCH METHODS
This research uses a qualitative method based on the opinion of Sukmadinata (2005), which states that the qualitative approach is based on constructivism, assuming that reality has many dimensions and is formed through the interaction and interpretation of social experiences by individuals. In addition, this research is also carried out through literature studies, such as ebooks, news articles, and journals. Data sources are obtained from various journal providers on the internet, both at the national and international levels, as well as a number of online news sites.

TYPES OF RESEARCH DATA
This study uses qualitative data types with primary data sources to analyze the influence of information technology (IT) on the effectiveness and efficiency of the audit process.

DATA PRIMER
The information collected includes the experiences, insights, and first-hand evaluations of respondents on how IT can play a role in increasing transparency, speeding up the audit process, and reducing the potential for errors. This data provides a contextual and up-to-date picture that is relevant to the research topic, while helping researchers identify challenges and opportunities in the application of IT to the audit process.

RESEARCH LOCATION
This research was conducted as a desk study by analyzing various scientific articles, journals, and relevant literature sources obtained from national and international databases. The data and information used come from online journal platforms, such as Google Scholar, ScienceDirect, and other trusted sources, without any specific geographical restrictions.

DATA COLLECTION METHODS
The research is entitled *Analysis of the Influence of Information Technology on the Effectiveness and Efficiency of the Audit Process* using a data collection method based on literature and document analysis. Data is collected from a variety of secondary sources, including published audit reports, internal company policy documents, and academic literature such as journals, books, and scientific articles that discuss the role of information technology in the audit process. This approach aims to comprehensively analyze the

influence of information technology on the effectiveness and efficiency of the audit process based on empirical evidence available in various sources.

DATA ANALYSIS TECHNIQUES

This study uses qualitative data analysis techniques to explore the influence of information technology on the effectiveness and efficiency of the audit process. The data that has been collected is analyzed in depth through several stages, namely:

1. Data Reduction
   This process is carried out by sorting and simplifying relevant data from secondary sources, such as audit reports, policy documents, and academic literature. Irrelevant information is ignored to ensure a focus on the information technology aspect of the audit process.

2. Cryptic Analysis
   This technique is used to describe in detail the influence of information technology in the audit process, including its impact on the time it takes to complete the audit, the error rate, and the quality of the report produced. Descriptive techniques help in providing a clear picture of how information technology affects the audit process in a practical way.

3. Drawing conclusions
   Based on the data that has been analyzed, conclusions are drawn to answer the research question. This process involves a critical interpretation of the findings with reference to relevant theories and literature.

This technique ensures that the results of the analysis can provide an in-depth understanding of the contribution of information technology in improving the quality and productivity of the audit process.

RESULTS AND DISCUSSION

The Effect of the Use of Information Technology on the Audit Process

Advances in IT have changed the methods companies use to collect data, process and report financial information (Sukandani et al., 2023). As a result, auditors often find places where more data is stored electronically than on paper. The auditor must assess the company's procedures in the use of IT systems to initiate, record, process and present transactions in financial statements. Actually, there is no difference in the concept of audit between a complex system and a manual system, but rather a special process that suits the existing accounting information system situation.

The use of IT in a company has an impact on the efficiency and effectiveness of the company's operations so that it can improve the quality of the company's operations and achieve business goals and can produce more accurate and relevant information. However, this needs to be accompanied by relevant and appropriate management so that it can minimize the risks that can arise in a company. In addition, the use of information technology in companies also has an impact on improving internal control by adding new control techniques that are carried out by computers and replacing controls that are usually carried out manually which are at high risk of errors caused by human error. On the other hand, the use of IT can also cause specific new problems that can cause huge losses to the company. To minimize this, auditors will conduct an information technology audit. Information technology audit is an audit approach by making computers a black box and IT audits only focus on outputs and inputs from computer systems (Sukandani et al., 2023). The aspects examined in the IT audit include matters related to effectiveness, efficiency, system availability, confidentiality, integrity, and reliability, as well as security aspects, (Muhammad Fauzi Ilmi, Rifda Aliyatul Bilbina Achmadi 1, Siti Ayu Pramudita 2 3, Sarah Putri Aurellia 4, YuniSukandani 5 2024).

The integration of information technology brings a positive impact on internal control by increasing efficiency and accuracy through automated procedures. Data analysis shows that information technology is not only a productivity tool, but also a fundamental pillar that strengthens the internal control system (Yulias, 2021). The automation process helps organizations overcome transaction monitoring challenges, reduce human error, and improve the timeliness of decision-making. The success of this integration lies in simplifying processes, providing real-time information, in-depth understanding of business operations, and proactive identification of risks. The use of information technology is not only an operational tool, but also as a strategic innovation that strengthens organizational competitiveness in this digital era (Prima Kharismaputra et al., 2022

The growth of information technology brings new risks such as data security, information manipulation, and system disruptions. Organizations need to focus on identifying and managing these risks to face challenges as technology develops (Dhaniawaty, n.d.). Data analysis shows that in addition to positive impacts, possible risks related to data security, information manipulation, and system disruptions need to be of primary concern. Data security is critical because of the value and sensitivity of information managed by information technology. The risk of security breaches, unauthorized access, data theft, and information manipulation can harm customer reputation and trust (Amirinnisa1 & Bisma2, 2023). System disruptions such as cyberattacks can lead to financial losses. Therefore, organizations must proactively identify, assess, and manage these risks. Risk prevention and mitigation measures, including strengthening internal controls, need to be taken to ensure smooth operational sustainability and optimize the benefits of information technology in a secure manner.

In the audit process, it is important to pay attention to the use of computer-assisted techniques to improve the efficiency of the audit process. The auditor must determine whether the audit process requires special skills to assess the use of computers in the audits conducted. In addition, auditors need to understand the concept of data management and company control which will then be reviewed continuously both general control and application control to ensure that the system used supports management regulations and obtains reliable results. In a study conducted by Tutu Setiatin (2018) entitled The Impact of Information Technology on the Audit Process, auditors must be able to understand computer systems because computer systems have an important impact on the operations of a company in running its business. Information technology improves the internal control of a company by replacing manual systems with computerized systems. However, auditors cannot rely too much on information provided by computers because information technology can also pose new risks. The auditor must understand and test the system on the computer before concluding that the information provided by the computer is trustworthy. So, the impact obtained is very diverse depending on the level of complexity in the information technology environment.

In line with previous research, Dwiki Yudistira (2022) in his research entitled The Influence of Information Technology on the Audit Process obtained the result that information technology is very important for business development and in overcoming risks that arise within the company.

However, information technology poses new risks for auditors because they must be careful in conducting audits and not fixated on the information provided by computers. Auditors must understand information technology before concluding that the information provided by the computer is reliable so that it can produce accurate and relevant affirmations. With the existence of information technology, it is hoped that it can speed up the audit process carried out by auditors.

The application of information technology (IT) is the main foundation in improving the efficiency and effectiveness of audit practices. This discussion explores the critical role of IT, emerging challenges, successful implementation strategies, and policies for managing risk and information security in internal audits. The integration of information system technology with IT General Control (ITGC) allows for the automation of data collection, processing, and analysis processes, thus supporting auditors in providing a more comprehensive review.

ITGC is a set of policies designed to ensure the effectiveness of a company's control system (Pathlock, 2021). As an important element in audits, ITGC plays a role in the evaluation of financial statements and internal controls (consistency with SOX Compliance). ITGC's focus includes the development and implementation of applications that comply with regulations and guidelines, ensuring the integrity of data, programs, and process results. The ineffectiveness of the ITGC can pose a risk of inaccurate results, affecting the reliability of the information generated through the IT system.

ITGC is the basis for evaluating IT Application Control (ITAC), with an emphasis on the availability, integrity, and confidentiality of transaction data. The implementation of ITGC is based on standards such as COBIT, SP 800-34 Contingency Planning Guide for Information Technology Systems, and ITIL, to ensure that information systems support business objectives and meet applicable regulations. Before implementing ITGC, it is important to understand the control strategy and processes to be used. The integration of IT with business processes makes ITGC relevant across all organizational units, so ITGC process design must align with the organization's operational model. Documentation of policies, rules, and guidelines is an important element to ensure the consistency of the ITGC process (Altha, 2022).

Thus, ITGC not only ensures regulatory compliance, but also affirms its role as a strategic foundation that supports the company's operations. The implementation of ITGC provides a structured framework, ensures effective control, and guarantees the reliability of information systems. Overall, ITGC is not just an audit tool, but rather an important foundation that ensures IT integration runs efficiently, reduces risk, and provides accurate information to support decisionmaking. The application of IT in internal auditing is not just an evolution, but a revolutionary transformation that improves auditors' ability to face modern business challenges. By facing the challenges and maximizing their benefits, organizations can ensure that IT becomes a key force in improving the quality and effectiveness of their internal audits.

CONCLUSION

The use of information technology (IT) in the audit process has a significant impact on the effectiveness and efficiency of audits. IT enables process automation that speeds up data collection, processing, and analysis, resulting in more accurate and relevant information. In addition, IT improves internal control by replacing manual processes that are prone to human error with computerized systems.

However, the implementation of IT also brings new challenges, such as threats to data security, information manipulation risks, and system disruptions. Therefore, auditors must thoroughly understand information technology and apply appropriate audit approaches, such as IT General Control (ITGC), to ensure system reliability and mitigate potential risks.

Overall, IT is not only a tool to increase productivity, but also a strategic pillar that supports strengthening internal controls, audit quality, and organizational competitiveness. The implementation of IT in auditing is a revolutionary step that

helps organizations face the challenges and dynamics of modern business more effectively and efficiently.

SUGGESTION

To optimize the use of IT in audits, auditors need intensive training related to data management, IT-based internal controls, and risk management. Companies must design ITGC policies that are integrated with business processes to ensure the security and reliability of information systems. In addition, IT risk identification and mitigation need to be carried out through strengthening cybersecurity, periodic audits, and system evaluations. Adopting international standards such as COBIT and ITIL is also important to ensure information systems support business objectives and meet regulations. Adequate investment in software and IT infrastructure will increase the effectiveness and efficiency of the audit process, resulting in more reliable and relevant results for decision-making.

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