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SUSTAINABILITY AUDIT: THREATS AND OPPORTUNITIES IN ACCOUNTING PRACTICAL RELATED TO ITS ROLE AS INFORMATION SYSTEM AUDIT

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ABSTRACT

This research discusses the scientific field of auditing that has a relationship with continuous auditing in terms of opportunities and threats in accounting practice and its relationship with information systems auditing. Nowadays, The growth of information technology has changed auditing procedures. Information system auditing, in particular, focuses on evaluating the appropriate deployment, usage, and management of information system resources within the company. Several frameworks have been developed to help information systems attain better audit performance about information system success, internal control evaluation, and compliance needs. However, the concept of sustainability in information systems audit practice and the development of appropriate frameworks is still a discussion in the literature despite the concept of sustainability being a current topic in achieving the objectives of an entity. Therefore, this study aims to analyze what threats and opportunities exist in the concept of sustainability auditing and use them as a way to formulate an information systems audit by integrating sustainability in the audit process. Thus, it is expected to improve audit performance and increase auditor accountability and integrity.

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INTRODUCTION

Audit is the act of examining and confirming evidence about information to determine and make reports regarding the conformity between the information presented and predetermined criteria or conditions. In the field of examination, audits are generally divided into seven types of audits, namely financial statement audits, operational audits, compliance audits, information system audits, forensic audits, investigative audits and environmental audits. This research focuses on a literature review of system audits, because system audits are continuous audits whose process starts from monitoring accounting procedures, information technology systems, risk controls, compliance, and business processes continuously.

The issue of sustainability reporting in accountability is an absolute when it comes to business decision-making. There are major reporting requirements to support accounting reporting, because it requires hard work and the role of the company to integrate accounting and environmental assessment of the sustainability of the profession. One strategy or technique used by corporations to increase sustainability is sustainability accounting.

Sustainability is one of the major accounting difficulties, and it all begins with a misunderstanding of what sustainable development is (Masiulevičius & Lakis, 2018). Another challenge is that it is difficult to combine the control system and the company as an end goal. This is because traditionally, the goal of a company is to achieve maximum profit, so that it can be realized and seen as an investment of capital for the common good. Although some research shows that it is related to the sustainability of business practices because it can catch up to

achieve greater progress in the long term including in terms of profitability, maintaining good relationships with partners, it is important to do so and every organization needs to consider several factors that are considered increasingly important in maintaining the sustainability of the company.

Audit of the company's assessment system and business practices is the foundation for corporate sustainability, the reporting of which is important for the company's global procedures (DeSimone et al., 2021). According to research by Alsayegh et al., (2020) and Vieira & Radonjič (2020), companies participate in sustainable activities and reporting to promote the company's reputation, legitimacy, competitiveness, inspire workers, and help control company operations. Today, companies are faced with changes and a highly competitive environment. Therefore, the role of information technology is very important for companies to improve business processes and decision making within the company (Wamba-Taguimdje et al., 2020). Correct and effective information technology implementation will enhance business operations and decision making. Therefore, it is necessary to have a good internal control process for applications on information technology within the company and carried out continuously, regularly and the audit process on information systems is carried out independently (Stević et al., 2018).

More modern information technology has a greater impact on the financial industry, where data processing has moved from manual to automated methods. Accounting information systems that have been done manually can now be done with the help of computers. The incorporation of this computer-based information system will affect the preparation of financial statements, which will have an impact on audit procedures. Because it is related to financial statements, the audit process will also be affected by any changes made to the accounting recording process (Wamba-Taguimdje et al., 2020).

Advances in information technology also affect the development of the audit process. Advancements in audit software have made the computer-based audit process easier. This reflects the evolution of auditing from a point-in-time exercise to something that takes place throughout the financial year on a recurring basis. This is facilitated by the availability of more data and more frequent digital audit procedures (Stöckle, 2023). Accountancy is a professional field of work whose activities are related to information technology. These changes bring new data processing methods to auditing. In computerized audit applications, auditors utilize specialized software created just for them. This software is required to organize data within computer files. (Kend & Nguyen, 2020).

To operate efficiently in a computerized business environment, auditors need to pick up new skills. These new abilities cover three areas: learning how to use computers for the audit process; recognizing new risks and knowing what controls would effectively minimize those risks; and comprehending computer ideas and system architecture. Continuous auditing is now seen as a way to help companies prevent future failures and errors from appearing in the financial statements. In addition, the company will also have a valid database that will assist the company in producing accurate internal management decisions and external financial statement figures that are close to present value. So that it becomes a competitive advantage for the company compared to other companies. But on the other hand, in addition to providing opportunities for system audits, it also has several obstacles and threats for companies because of the ease of data access so that there is a possibility of leaking company information (Martusa et al., 2011).

Based on this background description, it explains how continuous auditing provides both opportunities and threats at the same time to company financial information, but information systems auditing on the one hand is also a revolution that arises due to shifts and advances in technology. So that the discussion of " Sustainability Audit : Threats and Opportunities in Accounting Practical Related to Its Role as Audit Information System" is interesting to research and examine further.

LITERATURE REVIEW

Audit is a fundamental activity carried out on business activities and companies. Auditors use their knowledge, skills and experience to produce high quality audits by prioritizing independence, integrity, objectivity and professional skepticism. Because a high-quality audit will help companies increase stakeholders' trust and confidence in their business. System audit is a data-driven audit supported by the latest technology.

Accounting, Accounting Information System, Auditing

Weygandt, et al., (2018) state Accounting is the process of identifying, documenting, and informing information consumers about economic activities that occur within a company or non-business. Accounting is a science that studies the engineering of providing services in the form of quantitative financial information on organizational units within a certain country and the method of delivering (reporting) this information to interested parties so that it can be used as a basis for making decisions on the course of a company's economy. The accounting information system is a collection of two or more components or sub-systems that are interrelated and work together to achieve the same goal (Achadiyah & Mentari, 2022).

An audit is a systematic process carried out by a competent person independently in obtaining and assessing evidence objectively. This activity is carried out by collecting and evaluating quantifiable evidence and quantitative information related to the economic level of a particular entity regarding reporting on financial actions and events. This auditing process plays a role by identifying the level of conformity between statements and established criteria and informing the audited entity of the findings found by the auditor (Chen et al., 2020).

Sustainability Audit

A compliance audit's purview is dynamic and ever-evolving. The International Accounting Standard (IAS) Committee and the International Federation of Accountants (IFAC) have also occasionally expanded the scope of a compliance audit and issued regulatory statements and advisories. Since consumers would pay extra for products that are sustainable and have indigenous histories, audits might be beneficial. The main objection to sustainability auditing is that its outcomes are neocolonial and neoliberal.

Organizations heavily rely on audits and sustainability accounting-related initiatives to demonstrate competence, credibility, and commercial performance. Sustainability audits are complex since they frequently span whole supply chains because of the global nature of supplier networks and the broad concept of sustainability, which includes audits related to industrial, social, environmental, and financial aspects.

After defining sustainability and outlining pertinent considerations, it's critical to investigate sustainability assessment methods. According to (Piotrowicz & Cuthbertson, 2009), conventional performance measurements are insufficient for evaluating sustainability. The measurement of sustainability must take into account the economy, environment, and social dimensions because sustainability is a holistic term that entails system integration and interdependence.

Information System Audit

Weber (2007), suggests that an information system audit is the procedure of gathering and evaluating data to ascertain if computer systems can effectively use resources, preserve data integrity, safeguard assets, and promote the accomplishment of business goals. Based on the definition of information systems audit above, it can be concluded that there are at least 4 (four) objectives of information systems audit, namely: 1) Securing assets, 2) Maintainance of data integrity, 3) Maintainance of system effectiveness, 4) Achieving resource efficiency.

The information systems audit approach consists of two different emphases, namely: 1) Exposures Approach, the main focus is on the types of errors (losses) that occur in an information system. After that, controls are determined that can be used to reduce these errors to acceptable levels, 2) Control approach, the main focus is on the controls in an information system that can be used to reduce errors to acceptable levels. Audits of information technology generally cover four main areas, namely: 1) Planning, 2) Organization and Management, 3) Policies and procedures, 4) Security, 5) Regulation and standards.

Information system audits are primarily conducted to ensure that the organization's goals are being met by the information systems in an effective and efficient manner. Given the interdependence of information systems, Sayana (2002) proposed that an integrated evaluation of all information system components should be used to carry out information systems assessment. Physical and environmental, systems and administration, application software, network security, business continuity, and data integrity are, in general, the main components. Since each component could have a distinct priority, the most important components might be chosen for auditing.

Indicated that controls, computing resources, operation, and information system implementation are all evaluated as part of information system audits. Furthermore, several audit methods are employed to collect proof, including document examination, interviewing, and automated program data analysis. (Abdolmohammadi & Boss, 2010).

RESEARCH METHODS

This research is descriptive in nature with a literature review research method which is a certain research methodology or research and development done in order to gather and assess data pertaining to the subject matter of a specific topic. This literature review process is carried out by searching, summarizing and comparing several journals, books or other information from various relevant and accurate sources related to "Sustainability Audit: Threats and Opportunities in Accounting Practical Related to Its Role as Audit Information System ".

RESEARCH RESULTS AND DISCUSSION

Accounting Practical in View of Contemporary Auditing

Nowadays, accounting practices are influenced by improvements in information technology such as Artificial Intelligence (AI) technology which is now widely used in all lines of activity, especially for finance in dealing with financial difficulties, financial fraud, stock market forecasting, and auditing (Gepp et al., 2018). AI itself is the application of big data and Machine Learning (ML) technology. Big data can have an impact on improving the accounting field as a financial resource to support business decision making, while in management accounting practices ML can assist in classifying transactions with the scope of the control function, such as in planning or analyzing company finances (Alghafiqi & Munajat, 2022).

Robotic Process Automation (RPA) is a development of AI technology that deals with looping processes and automation in information used to mimic human behavior such as sending electronic mail, completing spreadsheets and recording or re-entering data for other tasks. AI uses new technologies like speech and facial recognition to execute judgment-based replies, replacing the rule-based engine of RPA. RPA uses rule-based techniques that enable software to collect data, trigger reactions, and initiate new operations. AI and RPA integration speeds up the automation process and creates a continuous automation flow (Alghafiqi & Munajat, 2022). In a survey PWC (2017), found that 30% of respondents have at least incorporated RPA into their business.

The development and progress of practices in the field of accounting today can be seen from four major accounting companies that apply technology as a tool in handling all forms of activities in the financial sector, namely:

1. Ernst & Young (EY) is using a range of new technologies in its corporate activities. In improving professional efficiency for the audit process, EY uses drones to assist with inventory observation and real-time analysis transmitted directly to the EY canvas, EY Assurance's global audit digital platform that connects more than 80,000 auditors seamlessly (EY, 2017a). has also further adopted ML technology for fraud detection, with its Fraud Investigation and Dispute Service (FIDS) already achieving a 97% accuracy rate in identifying suspicious invoices during the audit process (EY, 2017b).
2. Deiloitte which developed several technologically advanced applications in developing a cloud-driven organizational framework to help organizations achieve strategic goals. Insight-Driven Organization (IDO) is an application developed by Doilette that embeds data analytics and daily reasoning into decision-making processes that are able to translate increasing volumes of data into measurable business value to create long-term competitive advantage from existing assets. In addition, IDO also helps to increase the speed of data and quality of decision making and reduce the costs arising from decision making (Deloitte, 2018).
3. Pricewaterhousecoopers (PwC) which uses RPA technology to collect data and determine the filing status of all entities, review trial balance and convert data into a tax base. In audit activities, PwC has an AI audit lab to improve audit quality, automation levels and operational efficiency and maximize the ability of AI to collect information along with

comprehensive data for fast and accurate analysis. In addition, PwC also collaborates with H2O.ai which is a company in Sillicon Valley to develop applications that adopt ML to absorb PwC's global knowledge and experience to stimulate the thinking process and make decisions based on the auditor's experience, where this application is programmed to examine each uploaded transaction within milliseconds to identify anomalies and transactions that are considered suspicious in the ledger, so that this becomes a competitive advantage for PwC in increasing company value (PWC, 2018). PwC also uses the power of Narrative Science (Quill) to automate customer insight reporting, which develops autimatic narratives highlighting the potential of customers based on risk models and data to reduce the time required to generate reports from hours to minutes and improve the overall consistency and quality of financial reports (Keeney, 2018).

4. Klynveld Peat Marwick Goerdeler (KPMG) developed one of the RPA-based technologies called "K-analyzzer" which is used for tax analytics capable of analyzing thousands of transactions in minutes capable of downloading data from the company's Enterprise Resource Planning (ERP) system to reduce errors and using automation for the analysis of large amounts of data and then summarizing the results. This process produces a clear audit trail that is acceptable to tax authorizations and is able to analyze tax-sensitive data at minimal cost (KPMG, 2018). In the audit reporting process, KMPG uses an Automatic Exchange of Information (AEoI) reporting tool that aims to simplify the reporting process by using hundreds of data validation checks to create and embed the XML files required for submission, and KPMG also offers licensing solutions and hosting services to translate system data into relevant reporting formats, such as Common Reporting Standard (CRS) and Foreign Account Tax Compliance Act (FATCA) (KPMG, 2017).

Examination or audit with the use of the latest technology in accounting by the Big Four public accounting firms above, in general, uses two trends, namely investment and application of AI. This is as expressed by (Alghafiqi & Munajat, 2022), where the examination of Two broad patterns can be seen in the Big Four accounting companies' employment of BG, ML, and AI technologies. First, the accounting industry is investing more in AI and integrating it into core operations; second, the Big Four assert that AI is essential to accounting's success going forward. The following sections outline predictions for future developments in these areas.

Application of Information System Audit to Audit Sustainability

As more and more businesses utilize increasingly sophisticated technologies, auditors need to adopt these emerging technologies not only to offer assurance services that match their clients' expectations, but also to enable auditors to respond adequately to the risks associated with their clients using more complex technologies (Appelbaum et al., 2017). Audit system has the ability to help organizations amid the pressure currently faced by the audit profession to improve the quality of its services, reduce audit costs (Botic, 2018; Asthana et al., 2019)

The application of information systems auditing for sustainable auditing in this era has been reflected in the four big four audit companies, namely Ernst & Young (EY), Deiloitte, Pricewaterhousecoopers (PwC) and Klynveld Peat Marwick Goerdeler (KPMG). These companies have conducted audits using the latest technology in accounting. Penerapan audit sistem untuk audit berkelanjutan merupakan indikator penting yang harus dipikirkan organisasi untuk terus bersaing. System auditing should be applied to continuous auditing in the era of industrial revolution, because it is an important indicator that organizations must think about to continue to compete.

Aida et al., (2014), in his research explains that sustainability auditing is becoming an important issue in many organizations, because the integration of sustainability into audit work with the application of information technology is very important to produce reliable reports and objective reports to the public. The integration of sustainability into audit work with the application of information technology is very important to produce reliable reports and objective reports to the public. The application of sustainable auditing to achieve strategic sustainability strategic objectives in information systems auditing is considered to have advantages for auditors and has a major impact on the information systems audit process, where the implementation of audit procedures and audit assurance as a whole.

Sustainability Audit Opportunities

There are several reasons why system audits need to be carried out according to Weber (2007), namely losses due to data loss, errors in decision making, risk of data leakage, computer misuse, losses due to miscalculations and high investment in computer hardware and software. Implementing a comprehensive sustainability plan is a major problem for many firms, as current projects are frequently incorporated into operational initiatives, infrastructure, or information technology.

These activities are identified by the sustainability audit, which also offers a chance for the sustainability program to explain them. This makes it possible for efficient planning, a methodical approach, and responsibility to transcend organizational borders. Based on the results of research conducted by (Hiererra & Sarayar, 2014), explains that information technology allows companies to store company data in electronic format which requires auditors to develop ways of conducting audits because conventional audits that have since auditors to develop ways of conducting audits because conventional audits that have long been done by auditors will gradually be left behind and are no longer effective and efficient. audits that have been carried out by auditors will eventually be left behind and are no longer effective and efficient. In solving this problem, continuous audit is the right answer in solving it.

Besides that, through sustainability audit, it also improve sustainability in action. An ongoing audit might help your company achieve better overall performance over time. You already own all the necessary data to enhance the preparation, execution, and monitoring of diverse projects. You'll be ready to appreciate the main advantages of sustainability in this method. such as cost, compliance, reputational risk, competitive advantage and innovation (Handoko & Lindawati, 2020).

Based on the description above, continuous audit practices provide an opportunity to speed up the audit process and also prevent errors during the audit process, as well as find problems that arise during the audit process. In addition, system audits also assist auditors in identifying fraud in financial statements and analyzing sensitive data from financial statements, so this is the key to future accounting success with the implementation of system audits.

Sustainability Audit Threats

Continuous auditing is very helpful in overcoming all audit problems whether carried out conventionally or traditionally. In Indonesia itself, based on research conducted by (Hiererra & Sarayar, 2014), explained as follows sustainable audits depend on the development of technological systems from companies in Indonesia. In addition, the development of SAP implementation in Indonesian companies also only takes place in a few large companies. So, continuous auditing has not become the main need for all companies in Indonesia, because the majority of business developments in Indonesia are dominated by Micro, Small and Medium Enterprises (MSMEs). So with this, auditors are indirectly challenged to how to disseminate an understanding of continuous auditing which must also be accompanied by up-to-date information technology in its implementation. It is the auditors who prepare themselves to be competitive, that continuous auditing is needed by all companies in Indonesia. In this era of global competition, both internal and external auditors are required as continuous learners. Auditors are required to continuously follow the development of the accounting world, all facilities and infrastructure that support the implementation of accounting science and client requests. Competitive auditors will always prepare themselves to meet the development of accounting science and the needs of the business world that occur in the future. Auditors who do not keep up with developments will be left behind and will not be able to compete.

In addition, (McGregor & Carpenter, 2020) found threats related to systems auditing namely relating to reliability, compatibility, and security of data input that concern auditors placing too great a reliance on technology, lack of skills required to use emerging technologies effectively, emerging technology costs creating potential barriers to adoption, auditors becoming redundant or having to fundamentally change their current roles and professional auditing standards not providing sufficient guidance to enable auditors to use new technologies.

In an ever-changing environment, it is imperative for auditors to maintain relevance to continue providing valuable services. Not only will this enhance the credibility of the financial statements as a whole, but it will also contribute to the overall overall financial statements, but will also contribute to the long-term viability of the auditing profession. Persellin et al., (2019) also

stated that there are limitations in the implementation of system audits on an ongoing basis, namely limited resources and limited time.

Based on this description, it can be seen that the biggest obstacle in the implementation of sustainable audits, namely system audits, lies in human resources. In addition, limited knowledge of information technology is also one of the causes, so in this case auditors need to increase knowledge and skills in the field of technology and information to be able to compete in the face of the industrial revolution.

CONCLUSION

In conclusion, sustainability audit are an essential tool for companies looking to improve their sustainability practices. They provide a comprehensive assessment of a company's operations, policies, and procedures, and identify opportunities for improvement You can assess if your company is operating at the standard required for business sustainability by conducting a sustainability audit. An audit is the first step, and it yields information on the intended effects. Using this information, a plan for gradually enhancing sustainability performance can be developed. The use of technology in this digitalization era is able to enter various elements including accounting and auditing. This will have a strong relation with the use of applications to input, process and produce output in the form of audit reports. Eventhough there are some threats that may occur related to the use of information system, but compare to its function it will provide more opportunities and benefits to keep up with the times.

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