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Digitalization and Operational Performance of the Audit Service of Ghana

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Abstract

The study examines the influence of digitalization on the operational performance of the audit service of Ghana. The study relied on quantitative method in which multiple regression was employed. Purposive sampling was employed to obtain a sample size of 120. The findings of the study revealed that digitalization significantly enhances the accuracy of audit processes, the volume of work handled, and the adherence to timelines within audit services. The adoption of digital tools is expected to streamline audit processes and reduce the time required for data collection, analysis, and reporting.

Keywords: *Digitalization, Accuracy of Audit Processes, Work Handled, Timelines of Audit Processes*

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1.0 INTRODUCTION

The Audit Service of Ghana operates under the constitutional mandate to audit public accounts and institutions to promote transparency and accountability (Audit Service of Ghana, 2020). Traditionally, audit processes have been manual, characterized by extensive paperwork, prolonged audit cycles, and a higher risk of human error. In recent years, however, there has been a concerted effort to incorporate digital technologies such as Audit Management Systems (AMS), Electronic Working Papers (EWP), and data analytics tools into audit practices (Mensah, 2021). Despite the anticipated benefits, the actual impact of digitalization on the operational performance of the Audit Service of Ghana remains inadequately explored. The adoption of digital tools is expected to streamline audit processes and reduce the time required for data collection, analysis, and reporting. However, there is limited empirical evidence on the extent to which these efficiency gains have been realized.

According to a report by the World Bank (2021), the implementation of digital audit tools has cut down audit turnaround time by approximately 30%. This efficiency gain allows the Audit Service to conduct more audits within a given period, thus enhancing its coverage and effectiveness. Accuracy in audit findings is paramount for ensuring accountability and financial integrity. Digital tools, particularly data analytics, have enhanced the accuracy of audits by enabling auditors to process large volumes of data quickly and identify anomalies that may indicate fraud or errors. A study by Appiah and Asante (2022) found that the use of data analytics in the Audit

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Service of Ghana has improved the detection of financial discrepancies by 40%. This increased accuracy not only strengthens the credibility of audit reports but also helps in early detection and correction of financial misstatements. Transparency in audit processes and reporting is crucial for building public trust. Digital platforms facilitate real-time communication and reporting, allowing stakeholders to access audit findings and recommendations promptly. The Audit Service of Ghana has developed an online portal where audit reports are published, enhancing transparency and public accountability (Audit Service of Ghana, 2021). This initiative aligns with global best practices and reinforces the Service's commitment to openness and transparency.

The shift towards digitalization necessitates continuous training and capacity building for auditors. The Audit Service has invested in training programs to equip its staff with the necessary skills to use digital tools effectively. These training programs cover areas such as data analytics, cybersecurity, and the use of AMS and EWP (Gyamfi, 2023). By building the digital capacity of its workforce, the Audit Service ensures sustained improvement in its operational performance. Despite the significant benefits, the digitalization journey of the Audit Service of Ghana is not without challenges. Issues such as inadequate infrastructure, cybersecurity threats, and resistance to change among staff have posed hurdles.

However, continuous investment in technology and training, coupled with strong leadership and policy support, can mitigate these challenges. Looking ahead, the future of digitalization in the Audit Service of Ghana appears promising. Emerging technologies such as artificial intelligence (AI) and blockchain hold potential for further enhancing audit processes. This problem statement sets the stage for a comprehensive investigation into the influence of digitalization on the operational performance of the Audit Service of Ghana.

2.0 MATERIALS AND METHODS

2.1 Auditing and Digitalization

Kishore and Peshori (2014) describe auditing as a procedure designed to ensure the accuracy, security, and reliability of the accounts or reports under review. Flint (1988) posits that the primary aim of auditing is to assess whether specific responsibilities have been conducted honestly, appropriately, and in accordance with established regulations and guidelines. He characterizes auditing as an independent examination that ensures accountability by having an impartial individual compare actual performance with expectations, subsequently reporting the results. Furthermore, Wallerstedt et al. (2006) emphasize the vital role of auditing in society.

Gartner (2020) defines digitalization as "the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business." The ongoing advancements in information technology are revolutionizing all aspects of society and business, introducing new methods of working, communicating, and collaborating (Loebbecke & Picot, 2015). These technological developments, along with the digitization of data and processes, have significantly influenced the resources, tools, and information available to auditors during the audit process. Consequently, digital advancements in recent decades have profoundly transformed audit practices, which are now predominantly conducted with the aid of computers (Handoko & Lindawati, 2021). Digitalization enhances the capacity of audit firms to deliver greater value to their clients (DeFond & Zhang, 2014).

2.2 The Audit Process

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Understanding the audit process is crucial for grasping how digitalization has impacted auditing. The primary objective of auditing is to instill confidence in the accuracy and reliability of financial reports, ensuring they are free from material misstatements (Porter et al., 2014). Audit processes involve the steps auditors take to gather evidence, enabling them to form informed opinions on an entity's financial statements. While audit processes may vary depending on factors like client risk and the effectiveness of internal controls (Kearney, 2013), there is a general consensus that certain key procedures collectively define the audit process. However, there is some debate among authors regarding the number of steps involved. Knechel and Salterio (2016) identify seven main stages in the audit process: pre-planning (pre-engagement), planning, understanding the entity, risk assessment, documentation, completion, and reporting. In contrast, Carrington (2014) suggests that the audit process consists of only four steps: evaluating management's statements, taking affirmative actions, documentation, and reporting.

2.2.1 Pre-Engagement

Several authors emphasize that the initial step in the audit process involves becoming familiar with a potential client and determining whether it is wise to proceed with that client (Porter et al., 2014). Knechel and Salterio (2016) refer to this as the pre-engagement phase. Professional standards mandate that audit firms establish policies and procedures for deciding whether to accept a new client or continue with an existing one (Eilifsen et al., 2013). According to Eilifsen et al. (2013), these policies aim to reduce the risk of an auditor being associated with clients who lack integrity. As part of this process, auditors typically consult with the predecessor auditor and perform background checks on the prospective client's top management. Equally important is ensuring that the audit team gains a thorough understanding of the entity and its operating environment. This includes knowledge of the industry, the entity's performance measurement methods, and the quality of its internal controls (Eilifsen et al., 2013; Knechel & Salterio, 2016). This understanding is crucial for assessing the risk of material misstatements and defining the audit's scope. Additionally, an audit firm should not accept a client if it cannot adequately staff the audit with personnel who possess the required independence, competence, and capabilities (Porter et al., 2014).

2.2.2 Planning

If the auditor decides to accept a client, the subsequent step in the audit process is to plan the audit, focusing on developing an overall audit strategy (Carrington, 2014; Eilifsen et al., 2013; Kearney, 2013). The auditor must determine what evidence to collect to form an opinion on whether the financial statements present a true and fair view of the entity's financial position and performance, as well as when and how to gather that evidence (Porter et al., 2014). Proper planning is crucial for conducting the audit effectively and efficiently, as emphasized by Carrington (2014) and Eilifsen et al. (2013). This step involves a preliminary assessment of the client's business risks and the determination of materiality, based on the auditor's understanding of the entity. These judgments help the audit team assess the risk of material misstatements in the financial statements (Eilifsen et al., 2013). Porter et al. (2014) note that planning materiality refers to the level of error the auditor is willing to accept in the financial statements while still concluding that they present a true and fair view of the entity's financial position. This assessment guides the planning of the nature, timing, and extent of audit procedures (Porter et al., 2014).

Additionally, during the audit planning process, the auditor follows a risk assessment process to identify the risk of material misstatements in the financial statements, known as the audit

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risk model (Eilifsen et al., 2013; Houston et al., 1999). Audit risk represents the risk that the auditor will issue an inappropriate opinion when the financial statements are materially misstated (Porter et al., 2014). As Eilifsen et al. (2013) explain, audit risk is a fundamental concept underpinning the audit process. Auditors are only required to provide reasonable assurance, not absolute assurance, that the financial statements are free of material misstatements, due to the nature of audit evidence and the potential for management fraud. Therefore, auditors consider audit risk at the assertion level, as this directly informs the planning of appropriate audit procedures. Audit risk is composed of three main components: inherent risk, control risk, and detection risk (Carrington, 2014; Eilifsen et al., 2013; Porter et al., 2014; Houston et al., 1999). Inherent risk is the likelihood that the financial statements are materially misstated before considering the effectiveness of internal controls. Control risk is the possibility that a material misstatement will not be prevented or detected in a timely manner by the entity's internal controls. Detection risk refers to the risk that the auditor will fail to detect a material misstatement that exists and was not corrected by the entity's internal controls (Carrington, 2014). The relationship among these risks is expressed as: Audit risk = Inherent risk × Control risk × Detection risk (Carrington, 2014).

Once the auditor has gained an understanding of the client, including its internal and external environment, and identified and assessed the risk of material misstatements in the financial statements, the next step is to evaluate the entity's internal controls (Bailey et al., 2018; Eilifsen et al., 2013; Porter et al., 2014). As noted in the previous sections, a significant part of the auditor's understanding of the entity involves knowledge of its internal controls. Internal controls play a critical role in helping management fulfill its responsibilities, providing reasonable assurance that assets and records are safeguarded and that the entity's information systems generate reliable data (Eilifsen et al., 2013). The quality of the entity's internal controls over its financial reporting is directly relevant to auditors and usually has a significant impact on the audit.

The design of the entity’s internal control system forms the basis for the auditor’s preliminary assessment of internal control risk. If internal controls are effective, the auditor can be reasonably confident that material errors and irregularities in the accounting data are prevented, leading to a lower control risk (Porter et al., 2014). Moreover, many companies have adopted increasingly sophisticated information systems as part of their internal controls. According to Chen et al. (2014), IT capability can enhance the effectiveness of internal controls, thereby reducing audit risk.

2.2.3 Evidence

The subsequent step in the audit process is to collect audit evidence, which involves conducting various tests to gather information that supports the audit opinion. At this point, the auditor can choose between two primary audit strategies: a reliance strategy and a substantive strategy (Carrington, 2014; Eilifsen et al., 2013). A reliance strategy implies that the auditor plans to rely on the entity’s internal controls, while a substantive strategy involves using substantive procedures as the main source of evidence. The primary objective of substantive testing is to verify the accuracy and validity of the entity's financial statements (Porter et al., 2014). As noted by Porter et al. (2014), the auditor's evaluation of the entity's internal controls greatly influences the nature and scope of the substantive tests to be performed. If the auditor determines that the entity's internal control systems are effective and the associated control risk is low, the need for expensive and time-consuming substantive audit procedures is reduced (Bailey et al., 2018).

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Additionally, sampling methods enable auditors to concentrate on key control accounts or areas where weaknesses are likely to occur (Shen et al., 2017). Auditors are not required to ensure absolute accuracy of the statements; therefore, sampling techniques are employed to draw conclusions about the overall population.

2.3 New Technologies in the Context of Auditing

When discussing new technologies in the context of auditing, the focus is on how advancements such as data analytics, artificial intelligence (AI), blockchain, and robotic process automation (RPA) are transforming the audit profession. These technologies are reshaping the way auditors conduct their work, offering new tools to enhance the accuracy, efficiency, and overall effectiveness of audits.

2.3.1 Artificial Intelligence

Artificial Intelligence (AI) is undeniably one of the most transformative and, at times, daunting disruptive technologies to emerge in recent years (Clifford, 2019). AI, which was first conceptualized in 1955, has evolved through several phases of innovation (Huang & Smith, 2006). As described by O'Leary (1987), AI encompasses a broad spectrum of activities, including deep learning, pattern recognition, and reasoning by computers. Ransbotham et al. (2018) offer a more modern perspective, defining AI as the integration of human-like intelligence into machines. The core concept of AI involves making intelligent decisions within a given context based on available data. AI has become crucial across numerous industries, including marketing, healthcare, and cybersecurity (Nadikattu, 2016). Nadikattu (2016) explains that AI utilizes algorithms to perform tasks based on explicit instructions that computers can execute. Similar to how humans use their intelligence and experience to analyze situations, AI algorithms learn from data, evolving by identifying successful strategies or autonomously modifying algorithms (Katsikeas et al., 2016).

AI advancements are revolutionizing the field of auditing (Agnew, 2016). In auditing, AI primarily focuses on automating labor-intensive tasks (Rapoport, 2016), particularly those that are structured and repetitive as part of the audit process (Kokina & Davenport, 2017). Agnew (2016) argues that AI's impact will be most significant in audit tasks that were previously manual but have already been supplemented with computer assistance. Currently, AI's influence is particularly evident in data acquisition processes within audits (Brennan et al., 2017). According to Kokina and Davenport (2017), AI-powered technology can identify relevant information, process it, and make it accessible for auditors, allowing them to concentrate on more complex, judgment-based areas. For example, AI enables the full automation of substantive audit tests, such as payment transaction testing.

AI technologies that auditors can adopt include deep learning, natural language processing, and machine learning (SAS, 2018). Sun and Vasarhelyi (2018) note that deep learning can alert auditors to potential threats within a client's internal controls, while natural language processing, when combined with machine learning, can aid in extracting pertinent information. According to Yordanov (2018), natural language processing (NLP) is particularly important to auditors due to its ability to operate at speeds that were previously unimaginable. Additionally, machine learning can be utilized in auditing tasks like ratio analysis and journal entry testing (Hoogduin, 2019).

2.3.2 Big Data Analytics

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Big data is characterized by its "high-volume, high-velocity, and high-variety information assets that require innovative and cost-effective approaches to information processing for enhanced insight and decision-making" (Gartner, 2013). Alles and Gray (2014) highlight these three Vs—volume, velocity, and variety as the defining features of Big Data. However, for Big Data to be truly valuable in decision-making, it must be processed and analyzed in a novel manner (Earley, 2015). Consequently, discussions of Big Data often emphasize its analytical potential. In the accounting field, Big Data is frequently associated with the types of analyses it enables, such as data analytics (DA) and predictive analytics, rather than the nature of the data itself (Alles & Gray, 2014).

Meuldijk (2017) suggests that Big Data is a critical tool for auditors, aiding in tasks like scoping, risk assessment, trend analysis, and making informed judgments. Earley (2015) notes that as the volume of computerized data within companies has grown, advancements in processing speeds and cloud storage have made data more accessible, allowing organizations to capture and store vast amounts of information for future use. Additionally, data mining tools have enhanced the ability of Big Data to add value by improving companies' understanding of the narratives their data reveals (Capriotti, 2014; Whitehouse, 2014). As a result, Big Data enables auditors to perform prescriptive analytics (Holsapple et al., 2014; Delen & Demirkan, 2013; Lee et al., 2014) and implement practices that computationally verify existing actions and outcomes (Lee et al., 2014).

Following major accounting scandals, such as Enron in 2001 and WorldCom in 2002, auditors have been urged to integrate Big Data into their practices to enhance the quality and integrity of their services (Alles, 2015). According to Earley (2015), Big Data offers four key benefits in auditing: it allows auditors to test more transactions, improves audit quality by offering deeper insights into clients' processes, enhances fraud detection capabilities, and enables auditors to provide services and solve problems that extend beyond current capabilities by leveraging external data.

2.3.3 Block Chain Technology

Blockchain technology has gained significant popularity over the years, primarily as the foundational technology behind Bitcoin (Bonyuet, 2020). However, its advantages extend beyond supporting cryptocurrencies. Blockchain can be described as a digital ledger that captures transactions among multiple parties in real-time, serving as a decentralized database where each participant maintains an identical copy of the ledger (Bonyuet, 2020; Jansen et al., 2019; Narayanan et al., 2016). Vaidyanathan (2017) explains that blockchain enables all participants in the distributed ledger to have a unified view of the records. Transactions are validated by multiple users without the need for intermediaries, and once validated, all ledger copies are updated. Transactions are grouped into blocks that form a "chain" (hence the term "blockchain"), which cannot be altered or deleted.

This provides several advantages, including the authentication of peer-to-peer transactions and the automated, encrypted, and real-time recording of these transactions (Bible et al., 2017). Blockchain networks are categorized into two main types: public and private (Bonyuet, 2020). A public blockchain, or permissionless blockchain, allows anyone with internet access to view the data. Conversely, a private or permissioned blockchain restricts access to certain participants who have specific reading and writing rights (Jansen et al., 2019). Despite both types employing similar consensus mechanisms, private blockchains, such as Hyperledger, are designed to be

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more efficient than public ones (Vaidyanathan, 2017). Hyperledger focuses on developing an open-source distributed ledger technology (DLT) network to facilitate business transactions (Hyperledger, 2018).

Blockchain technology represents a revolutionary approach to recording, processing, and storing financial transactions and information (Liu et al., 2019). It has the potential to transform the ecosystem for handling accounting information (Dai & Vasarhelyi, 2017; Kokina et al., 2017). Major auditing firms and institutions are increasingly recognizing the benefits of blockchain technology and actively participating in its development (Bajpai, 2017). Deloitte launched its first blockchain initiative in 2014 (Deloitte, 2016), while Ernst & Young (EY) became the first advisory firm to accept bitcoin for services in 2017 and has since introduced several blockchain-related services (EY, 2017). In the accounting and auditing literature, blockchain is noted for its potential benefits.

Appelbaum and Smith (2018) suggest that blockchain transactions could become the "single source of truth" due to their automatic, encrypted, and immutable recording. Blockchain allows for detailed audit trails (Liu et al., 2019) and the ability to detect irregularities across an entire population rather than just a sample (Kokina et al., 2017). Consequently, blockchain could fundamentally alter the audit process, enabling continuous audits based on trusted data, potentially eliminating the need for tasks such as reconciliations and confirmations (Bonyuet, 2020). This shift would allow auditors to allocate more resources to complex judgmental areas.

2.3.4 Automation

According to FAR (2006), auditing involves various routine and labor-intensive activities, such as reconciliations and confirmations. However, advances in technology have enabled auditors to automate several aspects of the audit process, reducing the need for repetitive tasks (Kokina & Davenport, 2017; Raphael, 2017; Banker et al., 2002; Agnew, 2016; Lombardi et al., 2015; Tiberius & Hirth, 2019). Lombardi et al. (2015) note that new technologies help auditors perform mundane tasks more efficiently, allowing them to dedicate more time to complex judgmental areas. Tiberius and Hirth (2019) support this view, arguing that automation alleviates auditors from routine tasks, enabling a focus on more intricate responsibilities. Ghasemi et al. (2011) highlight that advancements in IT have offered companies significant time and cost savings in accounting functions and facilitated the move toward paperless offices, which benefits auditors by automatically maintaining audit trails and details. Raphael (2017) also emphasizes that digitization enhances audit efficiency and quality, providing clients with more relevant and valuable information.

In auditing, artificial intelligence (AI) is primarily utilized to automate routine and labor-intensive tasks (Rapoport, 2016). AI technology can identify, process, and present relevant information, enabling auditors to concentrate on more complex tasks (Kokina & Davenport, 2017). For instance, AI can fully automate substantive audit procedures, such as testing payment transactions. Additionally, Big Data analytics and blockchain technology also offer automation capabilities (Appelbaum & Smith, 2018; Liu et al., 2019; Earley, 2015). Blockchain technology automatically records transactions, ensures encryption, and maintains immutability (Appelbaum & Smith, 2018), which supports detailed audit trails (Liu et al., 2019) and allows for the detection of anomalies across an entire population rather than just a sample (Kokina et al., 2017). Similarly, Big Data analytics facilitates automation in transaction testing and enables testing of the entire population (Earley, 2015). However, it appears that auditors in less developed

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countries may not view new technologies, such as AI, as beneficial for automating audit processes (Albawwat & Al Frija, 2021; Afroze & Aulad, 2020; Ismail & Abidin, 2009). The adoption of these technologies tends to be lower in less developed countries compared to their developed counterparts. For example, Albawwat and Al Frija (2021) report that auditors in Jordan find autonomous AI systems to be complex and thus perceive them as not useful.

2.4 Stakeholder Theory

Stakeholder theory examines the relationship between organizations and the individuals or groups affected by their activities, referred to as stakeholders. The concept that organizations engage with a diverse range of stakeholders is well-established in management literature (Donaldson & Preston, 1995). This theory posits that organizations must negotiate various social contracts with different stakeholder groups due to their diverse perspectives on business operations (Harrison & van der Laan, 2015; Hörish et al., 2020). The goal of stakeholder theory is to identify these actors to enhance understanding of the factors influencing organizational management decisions (Jensen, 2002). Organizations interact with both internal stakeholders, such as employees, managers, and owners, who have a vested interest in the firm's performance, and external stakeholders, including suppliers, customers, creditors, and the broader society, on whom the organization relies (Wicks et al., 1994).

Auditors are tasked with ensuring the reliability of financial reports, meeting the informational needs of investors and creditors (Porter et al., 2014). Thus, addressing the information needs of various stakeholders is a central aspect of auditing. The reporting environment has evolved significantly due to global emphasis on environmental sustainability, with traditional accounting practices criticized for focusing predominantly on financial stakeholders (Harrison & van der Laan, 2015; Brown & Dillard, 2015; Mitchell et al., 2015). Over the past decade, stakeholder theory has gained prominence in accounting literature, particularly in relation to Corporate Social Responsibility and Sustainability Reporting (Jachi & Yona, 2019). Silva et al. (2019) argue that current performance measurement systems often overlook stakeholder expectations, failing to adequately address environmental and social issues.

With advancements in information technology, audit firms are adopting tools that enhance auditing capabilities (DeFond & Zhang, 2014). The value of an audit is largely determined by its quality, which is increasingly influenced by new technologies that streamline and automate the audit process (Banker et al., 2002). Automation of previously manual tasks (Sjöberg & Johansson, 2016) facilitates faster and more accurate audits while preserving data integrity. For example, artificial intelligence (AI) can automate the analysis of accounting entries, reducing human error and detecting fraudulent activities (Baldwin et al., 2006; Moffitt et al., 2018). Consequently, the digitization of auditing improves the transparency of financial statements, enabling stakeholders to make more informed decisions (Manita et al., 2020). Jachi and Yona (2019) highlight that AI tools enhance audit effectiveness and quality, thereby benefiting stakeholders by increasing the reliability of financial reports.

2.5 Empirical Review

Data analytics tools have significantly improved the accuracy of audits by enabling auditors to process vast amounts of data with greater precision. According to Alles et al. (2008), the use of data analytics in auditing allows for a more thorough examination of entire datasets rather than just samples. This comprehensive approach reduces the risk of overlooking anomalies and errors, thereby increasing audit accuracy. Similarly, Vasarhelyi et al. (2015) found that the

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integration of continuous auditing techniques facilitated by data analytics helps in real-time detection of discrepancies, leading to more accurate and timely audit outcomes. AI technologies, including machine learning algorithms, have also been pivotal in enhancing audit accuracy. AI can analyze complex patterns and large volumes of data more effectively than traditional methods. For instance, Kotsiantis et al. (2006) demonstrated that machine learning models can improve fraud detection by identifying subtle patterns indicative of fraudulent activity that might be missed by human auditors. Moreover, Moffitt et al. (2018) highlighted that AI-driven tools enhance the accuracy of predictive analytics in audits, providing more reliable forecasts and assessments of financial statements.

Blockchain technology has introduced a new dimension to audit accuracy by providing a transparent and immutable record of transactions. According to Wüst and Gervais (2018), the decentralized nature of blockchain ensures that all transactions are verifiable and cannot be altered retroactively, which enhances the accuracy and integrity of financial records. This technology allows auditors to trace transactions more efficiently and verify the accuracy of financial data directly from the blockchain ledger (Peters & Panayi, 2016). Despite the advantages, the integration of digital technologies into auditing processes is not without challenges. For example, Kokina and Davenport (2017) found that while digital tools improve accuracy, they also introduce complexities in terms of technology integration and the need for auditors to acquire new skills. Additionally, some studies have noted that there is a gap in how well auditors adapt to new technologies, which can impact the overall effectiveness of digital tools in auditing (Pizzini et al., 2015).

The impact of digitalization on audit accuracy may vary between developed and developing countries. For instance, Albawwat and Al Frija (2021) found that in Jordan, the complexity of AI systems has led to skepticism among auditors about their usefulness, affecting the perceived accuracy of these technologies. Similarly, Afroze and Aulad (2020) observed that auditors in Bangladesh have been slow to adopt AI, which may hinder the accuracy of audit processes due to limited technological integration. The integration of data analytics has markedly affected the volume of work handled by audit services. Data analytics tools enable auditors to process and analyze large datasets efficiently, thereby streamlining the audit process. According to Alles et al. (2008), data analytics allows auditors to perform more comprehensive tests of data, which increases the volume of work that can be handled within a given timeframe. Vasarhelyi et al. (2015) further confirm that the use of data analytics leads to more extensive coverage of audit areas, as auditors can now examine entire populations of transactions rather than relying on samples. This increased coverage effectively allows audit firms to handle larger volumes of work.

Automation technologies have transformed the auditing profession by reducing the time required to complete routine tasks. Automation tools, such as Computer-Assisted Audit Techniques (CAATs), automate repetitive processes, which allows auditors to focus on more complex and value-added tasks. Sirisomboonsuk et al. (2018) highlight that the automation of tasks like data extraction and processing has led to a significant increase in the volume of work that audit services can manage. Automation reduces manual effort and accelerates the audit process, enabling firms to handle larger client portfolios. AI technologies have also contributed to an increased volume of work managed by audit services. AI-powered tools, such as machine learning algorithms, enhance auditors' ability to analyze complex data sets and identify anomalies with greater accuracy. According to Kotsiantis et al. (2006), AI systems can process vast amounts of data quickly, allowing auditors to handle more extensive audits and manage larger volumes of

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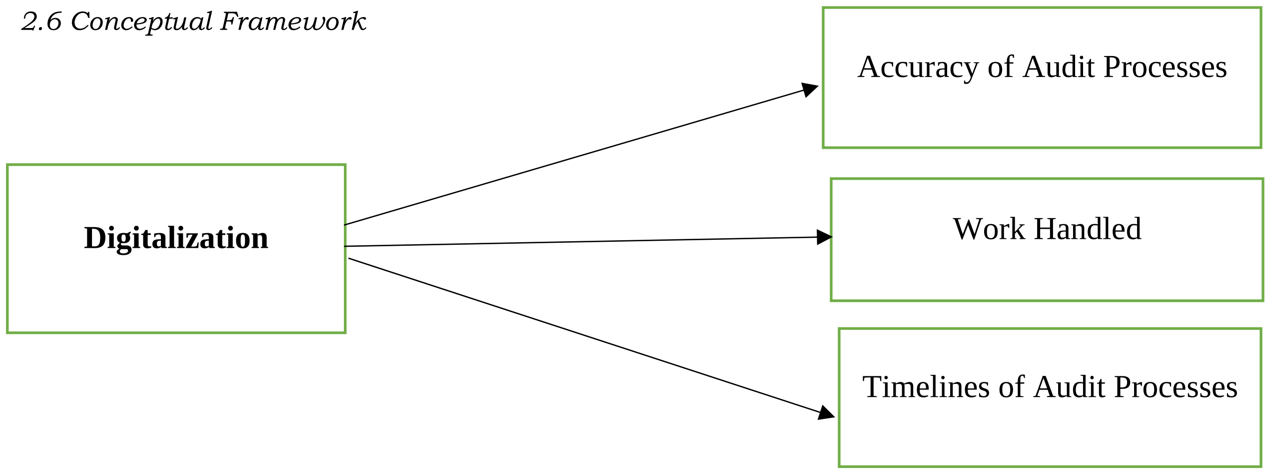
work. Additionally, AI tools facilitate more sophisticated analyses and predictions, which can expand the scope of audits (Moffitt et al., 2018).

2.6 Conceptual Framework



2.6.1 Relationship between Digitalization and Accuracy of Audit Processes

One of the primary ways digitalization has improved audit accuracy is through enhanced data analysis capabilities. Data analytics tools allow auditors to process and scrutinize large volumes of data with high precision. Vasarhelyi et al. (2015) emphasize that advanced data analytics enable auditors to perform comprehensive tests across entire datasets rather than relying on traditional sampling methods. This shift not only broadens the scope of the audit but also increases the likelihood of detecting anomalies and inaccuracies within financial data. Automation technologies have further contributed to the accuracy of audits by minimizing human error and increasing the efficiency of routine tasks. Computer-Assisted Audit Techniques (CAATs) automate repetitive tasks such as data extraction and processing, which reduces the potential for manual errors. According to Sirisomboonsuk et al. (2018), the automation of these processes ensures that data handling is more consistent and less prone to errors, thereby enhancing the overall accuracy of the audit.

Artificial intelligence (AI) and machine learning have introduced advanced analytical capabilities that significantly enhance audit accuracy. AI algorithms can analyze complex data patterns and detect anomalies that might be missed by traditional methods. Moffitt et al. (2018) highlight that AI tools facilitate more accurate and timely identification of fraudulent activities and errors by learning from historical data and adapting to new patterns. This capability enables auditors to provide a higher degree of assurance in their findings. Digitalization also enables real-time monitoring of financial transactions and processes. This continuous oversight allows auditors to detect and address issues as they arise, rather than after the fact. Kim et al. (2016) point out that real-time data analysis improves the accuracy of audits by providing immediate insights into financial operations, thus reducing the likelihood of overlooking discrepancies. Based on the arguments, this study hypothesized that:

H1: digitalization has a positive relationship with accuracy of audit processes

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2.6.2 Relationship between Digitalization and Work Handled

Digital tools and automation have drastically improved the efficiency of audit processes. Automation technologies, such as Computer-Assisted Audit Techniques (CAATs), allow auditors to process large datasets quickly and accurately. According to Vasarhelyi et al. (2015), the automation of routine tasks such as data extraction, reconciliation, and analysis accelerates audit workflows and enables auditors to handle a higher volume of work within shorter timeframes. This increased efficiency allows audit firms to scale their operations and take on more clients or larger audits without a proportional increase in resources. The integration of digital technologies has expanded the scope of audit activities. Tools like data analytics and AI provide auditors with the capability to analyze entire datasets rather than relying on traditional sampling methods. As noted by Kim et al. (2016), the use of advanced data analytics enables auditors to perform more thorough and comprehensive audits, covering a broader range of transactions and controls. This expanded scope increases the volume of work handled, as auditors are now able to perform more detailed examinations and address a wider array of issues.

Digitalization enhances the scalability of audit services. Cloud-based technologies and integrated audit management systems allow audit firms to manage larger volumes of data and streamline collaboration among team members (Sirisomboonsuk et al., 2018). These technologies facilitate the handling of audits for large multinational corporations and complex financial structures by providing scalable solutions that adjust to the size and complexity of the audit. Digital tools have also improved the management of complex audit tasks. For instance, AI and machine learning algorithms can process and analyze complex patterns and anomalies within financial data (Moffitt et al., 2018). This capability enables auditors to address more intricate audit issues and manage a greater volume of work that involves sophisticated data analysis. The ability to handle complex data enhances the overall effectiveness and thoroughness of the audit process.
this study hypothesized that:

H2: digitalization has a positive relationship with work handled

2.6.3 Relationship between Digitalization and Timelines of Audit Processes

Digital tools and automation have significantly accelerated audit procedures. Automation of routine tasks, such as data extraction, testing, and reconciliation, reduces the time required for manual processing. According to Vasarhelyi et al. (2015), the use of automated audit software enables auditors to perform tasks more rapidly compared to traditional manual methods. This acceleration leads to faster completion of audit engagements and a reduction in the overall time required for the audit process. Digitalization facilitates real-time access to financial data and information. Cloud-based platforms and integrated audit management systems allow auditors to access and analyze data instantly from any location (Sirisomboonsuk et al., 2018). This capability shortens the time needed for data collection and analysis, as auditors can immediately review and verify information, leading to quicker decision-making and reporting.

The integration of data analytics and artificial intelligence (AI) into audit processes enhances efficiency in data processing. Advanced analytics tools can analyze large volumes of data and detect anomalies or patterns more swiftly than traditional methods (Moffitt et al., 2018). This improved efficiency reduces the time spent on data examination and allows auditors to address issues more promptly. Digital tools improve workflow management by streamlining communication and collaboration among audit team members. Integrated audit management systems and collaborative platforms enable seamless coordination, task tracking, and document

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sharing (Kokina & Davenport, 2017). This improved coordination helps to minimize delays and ensures that audit tasks are completed in a timely manner. Given the transformative effects of digitalization on audit processes, the following hypothesis can be proposed:

H3: The integration of digital technologies in audit processes significantly reduces the time required to complete audits, leading to improved timeliness in audit engagements.

3.0 METHODOLOGY

3.1 Research Design

According to Bless and Higson-Smith (2004), research design involves a series of procedures that guide researchers in validating specific assumptions while excluding alternative explanations. It serves as a strategic framework directing the researcher in answering research questions. Essentially, research design is an arrangement of conditions for data collection and analysis that aligns with the research objectives. It functions as the conceptual structure within which research is conducted, and it is described as the plan or outline used to address research problems (Orodho, 2000). Kothari (2003) emphasizes that a research design acts as a blueprint for collecting, measuring, and analyzing data, representing the methodology for carrying out the research.

In this study, an explanatory research design was chosen due to the use of inferential statistics to determine the causal relationship between dependent and independent variables. Research design dictates the approach and style for conducting a study, typically based on the research objectives (Polit & Beck, 2004). As defined by De Vaus (2001), research design includes the overall plans and techniques used in conducting a study, with Kothari (2004) noting that it is the conceptual framework guiding the research. In simpler terms, it can be described as a master plan outlining the strategies for conducting research (Kumar, 2008), encompassing all techniques used in the research process.

3.2 Research Approach

Researchers may choose between quantitative, qualitative, or mixed methods for their research design. In this study, a quantitative approach was utilized through a survey questionnaire to examine the impact of demand and supply chain characteristics on business performance, including the mediating role of supply chain strategy. This choice aligns with the research hypotheses, which are best addressed using quantitative data. Primary data was gathered through questionnaires to compare and analyze the collected information. The quantitative approach provided insights into people's habits, opinions, attitudes, and various social or educational issues, enhancing the understanding of the research problem (Namusonge, 2010).

3.3 Sampling Technique and Sample Size

Purposive sampling was used to select 120 respondents from the Ghana Audit Service. This approach ensures that the study focuses on individuals who have the most relevant experience with digitalization, leading to more accurate and meaningful findings regarding the impact of digital tools on operational performance. Purposive sampling ensures that the study focuses on respondents who are directly involved in digitalization efforts at the Ghana Audit Service. This is crucial because the impact of digitalization on operational performance may vary across different departments. By selecting audit professionals, IT staff, and management officials who are implementing or using digital tools in their work, the study captures the experiences of

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individuals who are most affected by or responsible for digital transformation (Etikan, 2016). This sampling method ensures that the data collected is directly relevant to the research questions. Purposive sampling allows researchers to efficiently use resources by targeting individuals who are likely to provide high-quality, relevant data. By focusing on 120 carefully selected respondents, the research can avoid the time and costs associated with random sampling, which might include participants with little or no relevant experience (Patton, 2015). This sample size is adequate for exploring patterns and drawing insights while ensuring the study remains manageable.

4.0 RESULTS AND DISCUSSIONS

This chapter presents the results and discussions on the data postulated in the research methods section of the study. This study was geared towards the outcome of digitalization on the accuracy of audit processes, volume of work handled by the audit service and the timelines of audit processes. The chapter covers the respondents' demographics, descriptive statistics of the variables for the study, validity and reliability tests, correlations among the variables, testing of the hypothesis and discussion of the results.

Table 4.1 Respondents Demographics

Profile	Categorization	Frequency	Percentage
Age band	20-29	16	13
	30-39	42	35
	40-49	53	44
	50 or more	9	8
	Total	120	100
Gender	Male	78	65
	Female	42	35
	Total	120	100
Working Experience	1-5 years	11	9.2
	6-10	34	28.3
	11-15	40	33.3
	16-20	30	25
	20+	5	4.2
	Total	120	100
Level Of Education	HND/Diploma	36	30
	Bachelor	54	45
	Master	28	23.3
	PhD	2	1.7
	Total	120	100

The distribution shows a predominance of respondents in the 40-49 age range (44%), followed by the 30-39 age group (35%). This indicates that the sample is skewed towards more experienced individuals. The lower representation of those aged 50 or older might reflect a potential gap in capturing insights from more senior professionals who may have a different perspective. There is a clear male dominance in the respondent pool, with men making up 65% compared to 35% women. This gender imbalance could influence the findings, particularly in studies where gender diversity is crucial for understanding different perspectives or experiences.

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The majority of respondents have between 11 and 15 years of experience (33.3%), suggesting a fairly experienced group overall. The smaller proportion of individuals with over 20 years of experience may indicate fewer very senior professionals are represented, potentially limiting insights into long-term career perspectives. Most respondents hold a Bachelor's degree (45%), followed by those with an HND/Diploma (30%). The lower percentage of respondents with advanced degrees (Master's and PhD) suggests that the sample is largely composed of individuals with undergraduate or diploma-level education, which may influence their perspectives and expertise on certain issues.

The demographic data reveals that the study sample is predominantly middle-aged, male, and has a significant proportion of respondents with extensive working experience and undergraduate education. This profile could impact the generalizability of the findings, particularly in terms of gender diversity and educational background. Understanding these demographics helps in contextualizing the study results and assessing how well they might apply to different groups or settings.

4.1 Reliability and Validity Test

The generally accepted benchmark for reliability is a Cronbach's Alpha of 0.7 or above. However, in exploratory research, a lower value, such as 0.6, might still be deemed acceptable. A high Cronbach's Alpha signifies that the items within a construct are strongly correlated, reflecting internal consistency. This metric evaluates whether the items designed to measure a particular construct are consistently aligned in their measurement. For factor analysis, the Kaiser-Meyer-Olkin (KMO) value should ideally be 0.6 or higher, which suggests that the data is appropriate for this type of analysis. The KMO statistic assesses the proportion of variance among variables that may be attributed to common factors. A higher KMO value indicates that the data is suitable for factor analysis, reflecting a robust correlation among variables. Factor loadings of 0.5 or greater are typically viewed as acceptable. These loadings indicate the strength and direction of the relationship between an item and the underlying construct. A loading of 0.5 or more signifies that the item has a significant contribution to the construct.

Table 4.2 KMO and Bartlett's Test KMO

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.952
Bartlett's Test of Sphericity	Approx. Chi-Square	2300.189
	df	136
	Sig.	.000

Table 4.2.1 Reliability Results

Construct	Number of items	Cronbach's Alpha
Digitalization	6	.931
Accuracy	6	.963
Work Handled	10	.926
Timelines in the Workplace	10	.921

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4.2.3 Factor Loadings

Digitalization		Accuracy		Work Handled		Timelines in the Workplace	
Items	Loadings	Items	Loadings	Items	Loadings	Items	Loadings
DIT1	.728	ACC1	.765	WH1	.672	TWP1	.794
DIT2	.761	ACC1	.734	WH2	.864	TWP2	.827
DIT3	.674	ACC1	.772	WH3	.827	TWP3	.661
DIT4	.764	ACC1	.740	WH4	.743	TWP4	.707
DIT5	.845	ACC1	.734	WH5	.737	TWP5	.751
DIT6	.798	ACC1	.771	WH6	.750	TWP6	.646
				WH7	.884	TWP7	.843
				WH8	.694	TWP8	.844
				WH9	.748	TWP9	.761
				WH10	.728	TWP10	.748

The threshold for acceptable reliability is generally considered to be 0.7 or higher. The construct digitalization of 6 items recorded a Cronbach's Alpha of = .931; the construct Accuracy of 6 items recorded a Cronbach's Alpha of = .963; the construct work Handled of 10 items recorded a Cronbach's Alpha of = .926 and the construct Timelines in the Workplace of 10 items recorded a Cronbach's Alpha of =.921. All the three constructs for the study recorded above the recommended threshold of 0.7 to affirm that the items measuring the three constructs are highly reliable. The KMO value should ideally be 0.6 or higher, indicating that the data is suitable for factor analysis. The items for the constructs recorded = .952 indicate that the data is highly suitable for factor analysis. A factor loading of 0.5 or higher is often considered acceptable. Factor loadings represent the strength and direction of the relationship between an item and the underlying construct. A loading of 0.5 or higher indicates that the item contributes significantly to the construct. All the items for three constructs loaded above 0.5 to indicate that the items highly contribute significantly to the construct.

4.3 The influence of digitalization on the accuracy of audit processes, volume of work handled by the audit service and timelines of audit processes

The analysis explores the impact of digitalization on three key aspects of audit services: the accuracy of audit processes, the volume of work handled by the audit service, and the timelines of audit processes. The statistical results provided in the model summary, ANOVA, and coefficients tables help to understand the strength and significance of these relationships.

Table 4.3 The influence of digitalization on the accuracy of audit processes, volume of work handled by the audit service and timelines of audit processes

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.750[a]	.563	.553	.757	
		ANOVA[a]			
	Sum of Squares	df	Mean Square	F	Sig.
Regression	101.838	3	33.946	59.187	.000[b]
Residual	79.148	138	.574		
Coefficients[a]					
Unstandardized Coefficients			Standardized Coefficients		

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	B	Std. Error	Beta	**t**	**P**
(Constant)	.243	.233		1.042	.299
Accuracy of audit processes	.480	.095	.453	5.066	.000
Volume of work handled	.311	.084	.316	3.691	.000
Timelines of audit processes	.421	.083	.457	5.082	.000

a. Dependent Variable: Accuracy of audit processes, Volume of work handled by the audit service and Timelines of audit processes
b. Predictors: (Constant), Digitalization

The R Square value indicates that approximately 56.3% of the variance in the dependent variable (influence on audit processes, work volume, and timelines) can be explained by the independent variable (digitalization). This is a significant proportion, highlighting that digitalization is a key factor in these areas. The value adjusts R Square to account for the number of predictors in the model.

The adjusted R Square of 0.553 indicates a slight reduction from R Square, which is normal, and confirms that the model is still a good fit. The value provides an estimate of the standard deviation of the residuals (the difference between observed and predicted values). A lower value would indicate a better fit, so 0.757 suggests a moderate level of unexplained variance in the model. The F-test measures whether the overall regression model is a good fit for the data. A higher F value indicates a significant model. With an F-statistic of 59.187 and a significance level (Sig.) of 0.000, the model is statistically significant, meaning digitalization significantly influences the audit processes, work volume, and timelines.

The regression sum of squares (101.838) is notably higher than the residual sum of squares (79.148), further indicating that the model explains a substantial portion of the variance in the dependent variables. The constant represents the expected value of the dependent variable when all predictors are set to zero. The p-value of 0.299 suggests that the constant is not statistically significant, meaning it doesn't contribute much to the model.

Accuracy of audit processes (B = 0.480, Beta = 0.453, p = 0.000): This coefficient indicates that a one-unit increase in digitalization is associated with a 0.480 increase in the accuracy of audit processes, holding other factors constant. The Beta value of 0.453 shows a strong positive impact, and the p-value of 0.000 indicates that this relationship is statistically significant. Volume of work handled (B = 0.311, Beta = 0.316, p = 0.000): A one-unit increase in digitalization is associated with a 0.311 increase in the volume of work handled. The Beta value of 0.316 suggests a moderate positive impact, with the p-value confirming statistical significance. Timelines of audit processes (B = 0.421, Beta = 0.457, p = 0.000): The model shows that a one-unit increase in digitalization corresponds to a 0.421 improvement in meeting timelines. The Beta value of 0.457 indicates a strong positive effect, and the p-value signifies statistical significance.

The findings demonstrate that digitalization significantly enhances the accuracy of audit processes, the volume of work handled, and the adherence to timelines within audit services.

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The strong R Square value, significant F-statistic, and high Beta coefficients for all three variables underscore the positive influence of digitalization. This implies that investments in digital tools and systems could lead to more accurate, efficient, and timely audit processes, ultimately improving the overall performance of audit services.

Table 4.4 Hypothesis Testing and Findings

Hypothesis	Relationship	Beta	T	P<	Decision
H1	Digitalization - - > Accuracy of audit processes,	.453	5.066	.000	Supported
H2	Digitalization - - > Volume of work handled	.316	3.691	.000	Supported
H3	Digitalization - - > Timelines of audit processes	.457	5.082	.000	Supported

5.0 CONCLUSIONS

Digitalization has a positive relationship with the accuracy of audit processes due to several key factors. Firstly, digital tools enhance data accuracy by reducing human errors, which are often prevalent in manual data entry and processing (Issa et al., 2016). Automation through digitalization ensures that repetitive tasks, such as data entry, are performed with greater precision, minimizing the chances of mistakes that can occur due to fatigue or oversight (Smith, 2018). Moreover, digital systems offer advanced data validation techniques, which further ensure the integrity and accuracy of the data being audited (Yigitbasioglu, 2015).

In addition, the use of digital audit tools enables real-time data analysis and continuous monitoring, which significantly improves the detection of discrepancies and errors at an early stage, leading to more accurate audit outcomes (Rozario & Vasarhelyi, 2018). These systems also streamline the audit process, allowing auditors to focus on more complex tasks that require human judgment while relying on digital systems for routine accuracy checks (Moffitt & Vasarhelyi, 2013).

Overall, the integration of digital technologies into audit processes not only enhances accuracy but also increases efficiency, consistency, and reliability, thereby supporting a positive relationship between digitalization and audit accuracy (Alles, 2015). Digitalization positively impacts the volume of work handled by improving efficiency and enabling better management of tasks. One of the key reasons is that digital tools and systems automate routine and repetitive tasks, freeing up time for employees to focus on more complex and high-value activities (Schwab, 2017). This automation allows organizations to handle a larger volume of work without a corresponding increase in labor costs, as digital systems can process data and complete tasks much faster than manual methods (Brennen & Kreiss, 2016).

Moreover, digitalization enhances the ability to manage and organize large volumes of information, making it easier for employees to access and utilize the data they need to perform their tasks effectively (Zuboff, 2015). Digital platforms often come with features like task tracking, project management tools, and real-time communication, all of which contribute to better workflow management and allow teams to handle more work efficiently (DeSanctis & Poole, 2016).

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In addition, digitalization supports scalability, meaning that as the volume of work increases, digital systems can scale up to accommodate this growth without significant disruptions (McAfee & Brynjolfsson, 2017). This scalability ensures that organizations can handle increased workloads without sacrificing quality or accuracy, which would be challenging with traditional, non-digital methods (Bughin et al., 2017). Overall, the adoption of digital tools and processes leads to a more efficient and organized approach to managing work, resulting in a positive relationship between digitalization and the volume of work handled.

Digitalization positively influences the timelines of audit processes by streamlining and automating various aspects of the auditing workflow. One primary reason is that digital tools can significantly reduce the time required to collect, process, and analyze data, which are core activities in auditing (Manita et al., 2020). By automating data extraction and analysis, digital systems eliminate much of the manual effort that traditionally slows down the audit process, enabling auditors to work more efficiently and meet deadlines more consistently (Soh & Martinov-Bennie, 2015).

Furthermore, digitalization enhances real-time communication and collaboration among audit teams. With cloud-based platforms and digital communication tools, auditors can easily share documents, track progress, and collaborate on tasks regardless of their physical location. This real-time interaction reduces delays that often occur due to the need for physical meetings or document exchanges (Issa et al., 2016). Digital tools also provide auditors with advanced analytics capabilities, enabling them to identify potential issues or anomalies quickly, rather than relying on time-consuming manual reviews. These capabilities allow auditors to focus on critical areas, reducing the time spent on less relevant data and thus speeding up the overall audit process (Alles, 2015).

Moreover, digital audit tools often include automated reporting features, which streamline the creation of audit reports by automatically generating required documentation based on the data collected. This reduces the time auditors spend on report preparation, allowing for faster completion and submission of audit reports (Wang & Cuthbertson, 2015). Overall, digitalization contributes to more efficient and timely audit processes by automating routine tasks, enhancing collaboration, and providing advanced tools for data analysis and reporting, which collectively shorten the timelines required to complete audits.

5.1 Managerial Implication

Given the clear benefits, managers should prioritize investment in digital audit tools and technologies. These tools not only improve the accuracy of audits but also enable the handling of larger volumes of work and better adherence to timelines. This is essential for maintaining the competitive edge of audit firms in a fast-paced and increasingly digital business environment.

Managers need to allocate resources effectively for the acquisition, implementation, and continuous upgrading of digital tools. This includes budgeting for software, hardware, and training, ensuring that the audit team is equipped with the latest technology. As digital tools are integrated into audit processes, there is a need for ongoing training and development to ensure that auditors can effectively utilize these technologies. Managers should develop training programs focused on digital competencies, data analytics, and the use of specific audit software. To facilitate smooth transitions, managers should implement change management strategies that address resistance to new technologies. This includes clear communication about the benefits of digitalization and providing support during the transition period.

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Digitalization allows for the optimization of audit processes by automating routine tasks and enhancing data accuracy. Managers should review and redesign audit workflows to fully leverage these efficiency gains, focusing on areas where digital tools can replace manual processes. The improved accuracy brought by digitalization enhances the reliability of audit outcomes. Managers should establish robust quality control mechanisms to monitor and maintain the high standards enabled by digital tools.

With the ability to handle larger volumes of work, managers can optimize workforce planning by reallocating tasks and resources based on the enhanced capabilities provided by digital tools. This can lead to more balanced workloads and reduced stress among audit staff.
Digitalization frees up time for auditors by automating repetitive tasks, allowing them to focus on more complex, value-added activities. Managers should identify opportunities to redeploy skilled auditors into roles that require critical thinking and judgment, thereby maximizing the value derived from human capital.

5.2 Theoretical Contribution

The results support the Technology Acceptance Model (TAM), which posits that perceived usefulness and perceived ease of use significantly influence technology adoption. Digitalization's positive impact on audit accuracy, workload management, and timelines reinforces the idea that digital tools are perceived as highly useful and effective in improving audit processes (Davis, 1989). This contributes to the theoretical understanding that enhanced performance outcomes drive greater acceptance and use of technology.

Stakeholder Theory (Freeman, 1984) posits that organizations should create value for all stakeholders, not just shareholders. The finding that digitalization improves audit accuracy, workload management, and adherence to timelines highlights how digital tools can enhance the value delivered to various stakeholders, including clients, regulatory bodies, and internal teams. By improving these aspects of audit services, digitalization helps meet stakeholder expectations for high-quality, efficient, and timely audits, thereby aligning with the principles of stakeholder value creation. The positive relationship between digitalization and audit outcomes underscores how meeting stakeholder expectations (such as accuracy and timeliness) through technological advancements can improve organizational legitimacy and stakeholder satisfaction. This supports the idea that aligning organizational processes with stakeholder needs through digitalization fosters stronger relationships and better organizational performance.

Agency Theory (Jensen & Meckling, 1976) focuses on the relationship between principals (owners) and agents (managers), highlighting issues such as agency costs due to information asymmetry and misalignment of interests. Digitalization contributes to reducing agency costs by enhancing the accuracy of audit processes, managing workload effectively, and ensuring timely completion of tasks. Improved accuracy and adherence to timelines mitigate the risks of misreporting and inefficiencies, thereby reducing the potential for conflicts and agency costs. The enhanced accuracy and efficiency of audits through digital tools support the notion that technology improves monitoring and accountability in the principal-agent relationship. By providing better data and analytics, digitalization allows for more effective oversight of managerial performance and audit quality, which aligns with the objectives of reducing agency costs and improving transparency.

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The Theory of Inspired Confidence (Cohen & Holder, 2013) emphasizes that confidence in the auditing process is influenced by the effectiveness and reliability of the audit mechanisms. Digitalization, by improving the accuracy of audit processes, managing workload, and adhering to timelines, contributes to greater confidence among stakeholders in the audit results. Enhanced technological capabilities provide more reliable and precise audit outcomes, thereby inspiring confidence in the auditing process and reinforcing the credibility of financial reporting. The theory suggests that stakeholders' trust and confidence in audit services are built on the reliability and effectiveness of the audit process. Digitalization's impact on improving accuracy, handling workload, and meeting deadlines strengthens audit credibility, which in turn builds greater trust and confidence among stakeholders, such as investors, regulators, and management.

The theoretical contribution of these frameworks to the finding demonstrates that digitalization not only improves operational efficiency and effectiveness in audit services but also addresses key concerns related to stakeholder value, agency costs, and confidence in the auditing process.

5.3 Recommendation

Organizations should invest in advanced audit management software and tools that offer features such as automated data entry, real-time analytics, and comprehensive reporting capabilities. This can significantly improve the accuracy of audit processes by reducing manual errors and ensuring data integrity.

Utilizing AI and machine learning can enhance the accuracy of audits by identifying patterns, anomalies, and potential risks more effectively than traditional methods. These technologies can automate routine tasks, allowing auditors to focus on complex analyses.

Regular training programs should be implemented to ensure that audit professionals are proficient in using new digital tools and technologies. Training should cover not only the technical aspects but also best practices for integrating digital solutions into audit processes.

5.4 Limitations and suggestions for future Study

The study is limited by its scope, which can affect the generalizability of the findings. It does not fully represent the diversity of organizations or audit services across different geographical locations. Future research could involve larger and more diverse samples to improve the generalizability of the findings. Including organizations from various industries and regions can provide a more comprehensive understanding of digitalization's impact.

The study primarily focuses on short-term outcomes of digitalization, without considering long-term effects on audit processes and organizational performance. Longitudinal studies could be conducted to assess the long-term impacts of digitalization on audit processes. This would provide insights into how the benefits of digitalization evolve over time.

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