

Impact of Digitalisation on Accounting and Auditing in a Developing Country Context

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Abstract

Objective: The study explores the transformative consequences of digitalization on accounting and auditing practices, with a particular focus on the context of Bangladesh. This research offers a comprehensive analysis of how digital tools and technologies have revolutionized traditional accounting and auditing processes, enhancing efficiency, accuracy, and transparency, while also introducing new challenges, such as cybersecurity risks and the need for new competencies among professionals. **Theoretical Framework:** This research is grounded in the theoretical framework of critical dialogic accounting, which emphasizes the significance of diverse ideological orientations and the inclusion of multiple stakeholders in the digital transformation process. **Method:** The study utilized a qualitative methodology, employing semi-structured interviews with professionals from various backgrounds to gain insights into the practical implications of digitalization. **Results and Discussion:** The findings of the research indicate that while digitalization has significantly enhanced the operational aspects of accounting and auditing, including the automation of processes and improved transparency, it has also highlighted significant challenges. These include financial and technical constraints, a knowledge gap between IT professionals and accountants, and concerns over cybersecurity. The research underscores the necessity for ongoing education and training, governmental support, and robust security measures to fully realize the benefits of digitalization in developing countries like Bangladesh. **Research Implications:** The study asserts that despite the inherent challenges, the advantages of digitalization in accounting and auditing such as increased efficiency, improved transparency, and better financial management outweigh the disadvantages. It advocates for a balanced approach that addresses these challenges through strategic investments in training, technology, and security, thereby enabling a successful transition to digital accounting and auditing practices in emerging

economies. **Originality/Value:** The study contributes to the growing body of literature of the transition of accounting and auditing practices in emerging economies and the adaptability of technological roles.

Keywords

Digitalisation, Accounting, Auditing, Transparency, Efficiency, Knowledge Gap, Bangladesh

1. Introduction

This study explores the overwhelming impact of digitalization on accounting and auditing practices in Bangladesh to ensure accountability. Digitalization refers to strategically utilizing digital technologies to restructure existing businesses and engender novel revenue generation and value creation avenues. According to [Gartner \(2012\)](#), digitalization in this context refers to the strategic infusion of digital technologies into traditional accounting and auditing practices, thereby reshaping their operational frameworks. This evolution has been fueled by technological advancements and evolving business paradigms, redefining the contours of business and accounting practices and giving rise to a novel terrain of possibilities ([Awang et al., 2022](#)). The integration of digital tools and technologies has led to the revolutionary automation of hitherto labor-intensive and repetitive tasks endemic to the traditional accounting and auditing domains, such as data entry and record-keeping ([Babayeva & Manousaridis, 2020](#); [Melin & Toezay, 2022](#)). Against the mounting demands for transparency and accountability in both corporate and governmental domains, integrating digital tools and technologies has emerged as a catalyst for enhancing the truthfulness and dependability of financial information ([Manita et al., 2020](#)). A growing body of research has explored the impact of digitalization on accounting and auditing practices, highlighting both the benefits and risks associated with the adoption of digital tools and technologies ([Lombardi et al., 2015](#); [Awang et al., 2022](#); [Gulin et al., 2019](#); [Melin & Toezay, 2022](#); [Johansson & Sjöberg, 2016](#)). However, the impact of digitalization on accounting and auditing from the accountability aspect remains to be explored.

The present research endeavors to investigate how digital technologies and tools have influenced accounting and auditing in emerging economies. It aims to assess the effects of these tools on traditional practices, workflows, and methodologies, as well as to identify the benefits and challenges associated with their implementation. Specifically, the study examines how digital tools have impacted financial reporting, auditing procedures, and the provision of assurance services. Additionally, it explores the skills and competencies required for professionals to effectively utilize digital tools. The research also investigates the potential risks and limitations of using digital tools in an emerging economy context. Employing a thematic analysis approach, this qualitative study specifically focuses on the in-

fluence of digitalization in accounting and auditing processes, with a particular emphasis on the impact of digital tools.

The remainder of the paper's reminder is organized as follows: A literature review in section 2 is followed by a theoretical framework in section 3. Sections 3 and 4 discuss this paper's methodology and findings, respectively. Finally, in sections 6 and 7, we draw a discussion and conclusion followed by policy recommendations.

2. Literature Review

The digitalization of accounting and auditing is a trending topic, and the profession of accounting and auditing is changing with the push toward digitalization (Kruskopf et al., 2020). Previous literature on digitalization implies that more responsibilities will be delegated to Internet-connected software applications to ensure integration (ICAEW, 2018), challenge of adoption (Elliot & Harackiewicz, 1994; AlNasrallah & Saleem, 2022), and transformation (Lombardi et al., 2014) and opportunity for growth and expansion (McGhee & Grant, 2019).

Integration of automation digital tools of emerging technologies such as AI (Artificial Intelligence), blockchain, big data, and analytics are turning points for the accounting field and the audit profession, as they change the responsibilities and functions of auditing professionals (ICAEW, 2018). Digitalization in accounting and auditing refers to integrating digital tools and technologies into the traditional processes and practices of accounting and auditing (Gartner, 2012). This integration has been driven by technological advances and changing business practices, creating new opportunities and challenges for accounting and auditing professions (Awang et al., 2022). Digital tools and technologies can automate many time-consuming and repetitive tasks associated with traditional accounting and auditing practices, such as data entry and record-keeping (Babayeva & Manousaridis, 2020; Melin & Toezay, 2022). This automation allows accountants and auditors to focus on higher-value activities such as strategic planning and risk management (Melin & Toezay, 2022). Digitalization can also support the use of big data analytics, which can provide greater insight into financial trends and performance and help identify potential risks and opportunities for improvement (Moffitt et al., 2018). Previous studies have addressed the diverse features of digitalisation in accounting and auditing as follows:

2.1. Adaption

Many industries adopt digitalization, which is a continuous evaluation process that has yet to be able to grow its roots in the system. This continuous transformation could reshape the auditing environment, meaning that the auditor profession could face shifts (Elliot & Harackiewicz, 1994). Auditors face technological adaptation, as improvement brings about a noticeable change in the accounting and auditing sectors. With the digitalization of the accounting industry, auditors are more likely to depend on modern technologies and development. Ow-

ing to technological advancements, globalization, and increased competition, careers are constantly changing. A report by *Forbes Insights* (2014) implies that an auditor's ultimate skill is adaptability. Although this skill is needed throughout the career, especially now when digitalization is reshaping our society and auditors' tools (*Forbes Insights*, 2014), it does not change the need for quality and accuracy in audits (*Forbes Insights*, 2014). Technological advances, including complex IT systems and business records in digital formats, have drastically changed audit evidence (*Knudsen*, 2020). In a study on accountants' adoption of digital tools in emerging economies, *AlNasrallah and Saleem* (2022) found that usefulness and ease of use affect accountants' intentions to adopt digital technologies. Similarly, *Nguyen and Gopaldaswamy* (2018) find that the adoption of digital technologies, e.g., System Application and Process (SAP), helps record accounting transactions efficiently and accurately. The application of a digital interface significantly improves the time efficiency. This study also anticipates that it can reduce costs related to the processing of financial transactions.

2.2. Opportunity

Digitalization can be viewed as an opportunity or threat within the accounting profession. The digitalization of accounting and auditing accelerated during the pandemic (*Coman et al.*, 2022). There is a vast opportunity for diversity in digitalization. Some of these include blockchain technology, AI, archival data management, and cloud accounting (*Mohan et al.*, 2023). Accountants can acquire new skills, particularly engineering, to aid the emergence of new accounting professionals (*Gulin et al.*, 2019). Simultaneously, accountants need to comprehend how technology and digital transformation transform the workplace. *Lombardi et al.*, 2015 have argued that an overall change in accounting was observed due to digitalisation. A blockchain is a decentralized digital ledger that records transactions between two sides in a peer-to-peer (P2P) network and encrypts them (*Jans et al.*, 2022; *Mohan et al.*, 2023). A critical feature of Distributed Ledger Technology (DLT) is that its data are immutable, ensuring that records cannot be deleted or modified except when corrected with a balancing entry (*McGhee & Grant*, 2019). These benefits and challenges are related to audit quality, skills, efficiency, and profile, and most of these impacts likely demand a specific application and understanding of complex technologies (*Lombardi et al.*, 2015). These innovative signs of progress can pressure the auditing environment, so they are significantly associated with auditors and stakeholders (*Knudsen*, 2020). The audit profession, which executes operations to offer assurance that financial statements accurately match present accounting standards and precisely reveal a firm's financial statements, is also facing technological transformation (*Lombardi et al.*, 2014). The auditing profession, like any profession, cannot resist advances that may increase the efficiency or effectiveness of the process, or it will find itself no longer compatible with the modern age (*ibid.*). An alternative approach is to investigate the challenges and benefits digitalization can bring to the current state of auditing

(Tiberius & Hirth, 2019).

Ratzinger-Sakel and Gray (2015) refer to an over thirty-year gap between practice and academic communities in their study. They consider this a significant obstacle that must be tackled for the audit profession to become a learned one (Ratzinger-Sakel & Gray, 2015). Lombardi et al. (2015) seem to share the same thought, explaining that "...the auditing profession, as any profession, cannot resist advances that may further the efficiency or effectiveness of the process, or it will find itself no longer viable." (p. 15). Some of the critical benefits of digitalization in accounting and auditing include increased efficiency, improved accuracy and reliability of financial information, enhanced data management and analysis, and greater accessibility and transparency (Manita et al., 2020).

Knudsen (2020) claims that the auditor's requirement to possess IT skills and abilities is growing, a present-day competence demanded. The study conducted by Manita et al. (2020) also agrees with the importance of technical skills derived from digital transformation, meaning that auditors must feel confident while using digital tools. Similarly, Tiberius and Hirth (2019) believe that annual auditing will replace continuous or even real-time auditing. Hunton and Rose (2010) argued that auditors will begin to transition from manually collecting data to managing complex decision support systems and thus have to become comfortable with trusting these systems. Collin (2015) describes the idea of digitalisation and its associated impacts as a "global megatrend that is fundamentally changing existing value chains across industries and public sectors". Therefore, digitalization is inevitable for firms in many contemporary industries.

According to Lombardi et al. (2014), auditing is one of the fields most affected by such technological advancements. However, a study later published by the same three researchers claimed that auditing has yet to entirely rip the benefits of digitalization because there has not been enough incorporation (Lombardi et al. (2014)). On the other hand, a report ICAEW (Institute of Chartered Accountants in England and Wales) states in her report that "Disruptive technologies also have a profound impact on the skills required of auditors..." (ICAEW, 2018: p. 5). Lombardi et al. (2014) add that auditors must become prepared and trained to handle the new challenges of collecting and processing big data. Conversely, Raphael, 2017 suggests that auditors do not necessarily need to be computer programmers or experts in technological development. Nonetheless, they need practical experience and are able to handle new tools to handle and analyze data (Raphael, 2017). Alles (2015) challenges the audit field to embrace the opportunities that arise from digitalization, mainly Big Data, and hopes that the audit field will have learned its lessons from the past and towards a positive, proactive response instead of a defensive reaction to market pressure. The one study conducted by Johansson and Sjöberg (2016) concluded that while digitalisation played some role in auditing, especially for young auditors working in the Big Four accounting firms (Deloitte, EY, KPMG, and PwC) auditors expected digitalisation to play a far more significant role in the future.

2.3. Risk and Concern

Despite the numerous challenges, the trend towards digitalization in accounting and auditing will likely continue as the profession responds to the changing needs and expectations of businesses and society (Lombardi et al., 2015). In the coming years, many accounting transactions will be handled by AI and automation systems (Profession of the Digital Age: Accounting Engineering, 2020). Numerous job titles are at risk of automation, with accounting having the highest probability of being automated and digitized shortly.

ICAEW (Institute of Chartered Accountants in England and Wales) states in their report, “Disruptive technologies are also having a profound impact on the skills required of auditors.” Johansson and Sjöberg (2016) concluded that while digitalization played a role in auditing, especially for young auditors working in the Big Four accounting firms, auditors expected digitalization to play a far more significant role. Significant concerns have also been raised about the risk exposure associated with applying digital interfaces in the accounting of financial transactions (Awang et al., 2022). However, as is the case with other emerging economies, the extent to which digitalization affects in an emerging country like Bangladesh’s accounting and auditing is still being determined. This research offers a comprehensive study to explore the status of digitalization in accounting and auditing practices within the theoretical framework of accountability.

3. Theoretical Framework

Accounting promotes increased democratic participation of stakeholders in accounting and accountability practices. This study draws on the concept of dialogic accounting. The reason for this approach is to consider and recognize contested issues regarding the design and implementation of digitalization and multiple ideological differences. Critical dialogic accounting theory takes divergent perspectives seriously and advocates inclusive, participatory, and pluralistic approaches to accounting and accountability practices (Brown, 2009). Accounting and accountability practices are unavoidably value-laden and political and cannot be treated in a technical and apolitical way. Political contestation and debate should be accepted and viewed as problematic. Dialogic accounting facilitates and creates space for stakeholders with diverse ideological orientations to discuss and debate contested issues and (re)construct their views, perspectives, and ideologies (Brown, 2009). Some fundamental critical dialogic accounting principles recognize multiple ideological orientations, ensure an effective participatory process, and are attentive to power relations (Brown, 2009; Dillard & Brown, 2012).

3.1. Recognizing Multiple Ideological Orientations

Dialogic accounting considers that individuals may have different views and perspectives (Brown, 2009: p. 324). It aims to facilitate the “expression of different perspectives and to encourage individuals and groups to engage in democratic interactions across perspectival borders” and develop accounting and accounta-

bility practices that reflect these diverse views (ibid.). It requires establishing a broad stakeholder base and recognizing insufficiently influential groups to have a voice in decision-making (ibid.).

3.2. Ensuring an Effective Participatory Process

Dialogic accounting aims to create effective participatory processes that enable individuals and groups to construct their views and values and to identify critical issues according to their preferences. Engagement is deemed effective only when participants can engage in this manner, and they can “speak and press their claims in their voices” (Dillard & Brown, 2012: p. 10). However, there are challenges in achieving this in practice (Brown, 2009). Lessons learned in participatory contexts inside and outside accounting reveal the need to involve stakeholders early in the engagement processes and to develop procedural rules to create “a more even playing field ‘for all participants’” (Brown, 2009: p. 326). Dialogic accounting calls for participatory forms of accounting that take pluralism more seriously. A participatory approach should allow actors with diverse perspectives to resolve issues related to their interests. A pluralistic environment should create space for various stakeholders to participate in contested issues (Brown, 2009).

Dialogic accounting promotes dialogue and participation among stakeholders with multiple ideological perspectives. Through dialogue, it seeks to create space for alternate views and provide a “platform for normally unheard voices to be heard” (Bebbington et al., 2007: p. 366).

3.3. Attentive to Power Relations

Dialogic accounting claims that pluralistic accounting and accountability must explicitly recognize and challenge power relationships, for example, by “exposing the frames dominating specific decision outcomes and the resulting distribution of economic, social, environmental, political, and cultural impacts” (Dillard & Brown, 2012: p. 10). Dialogic accounting recognizes how power asymmetries can influence decisions and restrict the participation of individuals and groups. According to Brown (2009: p. 326), “attention to the power dynamics inherent in any accounting situation is vital to ensure that currently marginalized groups are included in participatory processes... and that their concerns and priorities are not defined out of technical models”. Dialogic accounting recognizes “the power dimensions of social relations” and how power asymmetries among stakeholders affect or prevent some from participating in or influencing decisions (Brown, 2009: p. 219).

Within the following multiple Critical Dialogic Accounting themes, we have examined digitalization in the accounting and auditing field in Bangladesh and whether our accounting and auditing practitioners are ready yet to adopt automation and digitalization. Further, we have extended the discussion to the overall impact of digitalization to ensure accountability in tackling the challenges in an emerging economy context.

4. Methodology

4.1. Research Design

4.1.1. Research Question

What is the impact of digitalisation on accounting and auditing processes in Bangladesh?

4.1.2. Research Objective

The objective of this research is to investigate and analyze the impact of digitalization on the accounting and auditing field, with a specific focus on the impact of digital tools in the accounting and auditing process. The research aims to explore how the adoption and integration of digital tools and technologies have influenced various aspects of accounting and auditing. It aims to assess how these tools have transformed traditional practices, workflows, and methodologies, and to identify the benefits and challenges associated with their implementation. The research will examine how digital tools have affected the quality and reliability of financial reporting, auditing procedures, and the provision of assurance services. It will investigate the necessary skills and competencies required for professionals to effectively utilize digital tools and technologies in their work. It will examine the potential risks and limitations associated with the use of digital tools.

We have conducted a qualitative study using a thematic analysis approach to explore the impact of digitalization in accounting and auditing, specifically focusing on the impact of digital tools in the accounting and auditing process. We utilized semi-structured interviews to gather rich and detailed insights from professionals working in the accounting and auditing field who have experience working with digital tools.

4.2. Participant Selection

We have selected participants (see Appendix 1) from diverse backgrounds, including accountants, auditors, and other relevant stakeholders, who have practical experience in utilizing digital tools in accounting and auditing. This method aims for a diverse sample in terms of organization size, industry, and geographical location to capture a wide range of perspectives and experiences.

4.3. Data Collection

We have conducted a total of 15 in depth semi-structured interviews, allowing participants to share their experiences, opinions, and observations related to the impact of digitalization and digital tools in the accounting and auditing process. Each interview lasted one hour. We used open-ended questions to explore various aspects, such as benefits, challenges, changes in practices, decision-making processes, and job roles. Audio-recorded and/or transcribed the interviews to ensure accurate data capture.

4.4. Data Analysis

We have performed thematic analysis to identify recurring patterns, themes, and

insights from the interview transcripts. We begin by familiarizing with the data through reading and re-reading the transcripts, noting initial ideas and impressions. The initial codes were generated by identifying meaningful units of information related to the impact of digitalization and digital tools. The codes were organized into potential themes, grouping related codes together to create a coding framework. We reviewed and refined the coding framework by iteratively applying it to the data, ensuring consistency and capturing all relevant themes and analyzed the relationships between themes, looking for connections, contradictions, and overarching narratives. We interpreted and summarized the findings, drawing upon direct quotes and providing a rich description of the impact of digitalization and digital tools in accounting and auditing.

4.5. Trustworthiness and Rigor

Ensure credibility by maintaining an audit trail of decisions made throughout the research process, documenting methodological choices, and keeping detailed research records. We also seek peer debriefing and input from colleagues or experts in the field to validate interpretations and enhance the rigor of the analysis.

4.6. Ethical Considerations

We obtained informed consent from participants, ensuring they understand the purpose of the research, their rights, and how their data will be used. We Anonymized participants' data by assigning pseudonyms or codes to maintain confidentiality.

4.7. Reporting

We present the findings in a clear and organized manner, using quotes and excerpts from the interviews to support the identified themes. A comprehensive and nuanced description of the impact of digitalization and digital tools in accounting and auditing were provided, highlighting the key themes, patterns, and insights derived from the thematic analysis.

5. Results and Discussions

The study's findings highlight the benefits of adopting digitalisation in accounting and auditing, including greater efficiency, automated processes, reduced human error, and improved transparency in the Bangladesh context. However, this investigation explored some limitations and difficulties, including knowledge gaps and financial limitations in the widespread digitalisation process in accounting and auditing areas at the same time, major cybersecurity concerns arise. The overall impact of digitalisation is acknowledged through the themes that were found. The most crucial factors mentioned as themes helped us understand digitalisation's impact completely. The factors are benefits, limitations, cost, challenges, and age factor. The key to successful digitisation is closing the knowledge gap through education and training, obtaining financial assistance from the govern-

ment, and putting in place adequate safety measures to reduce the threats associated with cybersecurity.

5.1. Technological Change

Overall, the data set shows that digitalisation in accounting and auditing indicates a technical change in accounting and auditing. A change is observed in accounting and auditing processes due to digitalisation. The professionals perceive the change as a technical change. These changes have caused a transformation of many accounting procedures, especially from manual to automated procedures. This change includes the implementation of various accounting software and digital tools that have been adopted in the profession, such as ERP (Enterprise Resource Planning) systems, CAAT (Computer-Assisted Audit Techniques) software, and SAP software. Data analytics and artificial intelligence are also used to ensure professional competency. The accountants have mentioned that Enterprise Resource Planning is used in accounting to automate recording procedures. Some of the interviewees (i.e., P8, 9, & 13) mentioned that besides accounting data processing, ERP provides a wide range of support to business operations. e.g., financial management, supply chain and distribution management, human resource management and so on. ERP improves the operational efficiency of the business. It helps business to automate routine tasks, freeing up employees to focus more on other strategic business activities. ERP also helps business to access real-time data and analytics. Through ERP business can gather information on key performance indicators, consumer's attitude and behavior and market trends. As a result, business can anticipate and predict changes. This results in improved decision-making process of the business. Hence, business can formulate better strategy to run efficiently (P8, 9 & 13).

The introduction of digitalisation and the availability of digital tools in accounting, manual steps are reduced, reducing complications. The number of paper-related functions in the accounting process has also reduced. Data suggests the accounting process can now be fully practiced within their businesses' accounting practice framework. An audit officer has claimed:

Digitalisation increases the speed of the auditing and accounting processes and our efficiency (P3).

AI and Data Analytics create summaries and generate information that automates various financial operations, such as setting the credit limit for the buyers of a company automatically by the system.

5.2. Automation

The interview data also indicates software used to automate the auditing process. The practitioners and academicians observe a difference in the definition of digitalisation. The accountants and auditors have defined digitalisation from a technical perspective. Accountants have defined digitalisation as the automation of accounting and audit practices. The only theoretical definition observed among

the accountants and auditors is considering the overall digitalisation process as part of the fourth industrial revolution.

To the practitioners, the transformation from manual, automated accounting and audit practice is digitalisation. It indicates perceiving digitalisation from a more technical than theoretical perspective. Practitioners have mentioned using various advanced technologies as tools of digitalisation and using these tools in the process of accounting and auditing as part of the sector's digitalisation. The impact of digitalisation is observed in various definitions, indicating the shift from the manual procedure to automation of accounting and auditing; this is considered the main impact of digitalisation in accounting and auditing in the Bangladesh context. Due to increased complications and the involvement of too many steps and procedures, keeping a small business updated involves much work pressure.

5.3. Enhancing Professional Competence

Compliance with accounting standards is always ensured with the application of digital tools. It was understood from the analysis that digitalisation tools are created adhering to the standards. According to an audit supervisor: Due to digitalization, we can now easily use the standards, for example, IFRS16-Lease, IFRS17, and IAS21. How we should treat leases can now be locally and easily adapted based on our present circumstances (P14).

This act ensures that all the records and financial information are made available in compliance with the accounting standards. The digital tools also enhance audit traceability. It indicates that in case of any fraudulent activity, it becomes easier to identify. Transparency, accuracy, enhanced traceability, and assurance ensure the trust of the stakeholders in the financial reports and audit reports. The transition to digital technology has been beneficial to the auditors. The auditors' repetitive tasks have been simplified due to the growing use of digital tools. The new tools' opportunities enable the auditor to obtain information from clients with greater efficiency (Karlsen & Wällberg, 2017).

5.4. Ensuring Transparency and Prevent Fraudulent Activity

The most noticeable improvement in the accounting and auditing sector due to digitalisation is the increased transparency in the accounting and auditing processes. According to the dataset, more transparency is obtained through applying digital tools. Although from the perspective of current auditors, all digitalisation tools still need to be applied entirely in auditing, auditors still anticipate that it could make the data access and review process more accessible.

According to the auditors, digitalisation also removes the possibility of fraudulent activities and facilitates transparency. The possibility and scope of making fictitious transactions and receipts are less due to the application of digital tools. Now, the transactions and their records are more transparent due to the application of digital tools. Before digitalisation, excessive paperwork made it difficult for

auditors to identify fictitious transactions. There is assurance due to digital tools auditing, which eventually leads to securing public trust and confidence. Digitalisation also considerably lowers the possibility of fraud and financial manipulation. However, there is a hidden risk and power struggle that cannot even be tackled through digitalisation in Bangladesh. As such one participant's has claimed:

Digitalisation creates huge transparency and accountability in public financial management, but there are some other things that the company always try to hide; sometimes they manipulate the financial statement, so digitalisation just cannot avoid the control under this one some actually gives you the picture, but behind the picture, you do not know, and throughout the digitalisation, you cannot actually control that one so this is a problem for us (P7).

5.5. Challenges of Digitalisation

In a middle-income country like Bangladesh, significant costs are involved in achieving digitalisation. We have also discovered in the analysis that the achievement of digitalisation is the application of digital tools in accounting and auditing processes. Sometimes, the costs even work as a barrier to achieving digitalisation efficiently. It also needs to be more focused on the original purpose of the application of digitalisation. The economic cost is a considerable obstacle to obtaining the benefits of digitalisation. From a senior accountant's perspectives:

Unfortunately, the main limitation is the financial and technical capacity required to build this software, which is insufficient within the existing CA firms of Bangladesh. As a result, institutes like ICAB do not even pressure our local CA firm to implement these tools or fully adapt to digitalization as they already know about the limitations (P13).

The cost is more compared to the benefit gained from the context of Bangladesh. Despite the costs and financial obstacles and software not being cost-effective, the auditors still find the ultimate results of digitalisation beneficial to the profession. However, the dataset also identifies a knowledge gap between the accountants and the IT professionals. Due to the increased complexity of the system and software, the accountants need help to see the tool's functionality from the inside. The mechanism of the systems is incomprehensible for the accountants. On this aspect opinion from an audit officer.

Currently, our manpower in auditing and accounting is not that adapted to the technology and lacks technical knowledge, so we need to grow the technical knowledge of our manpower, and then it will be easier for us. Authority of the Professional Body and provide development programs to the auditors (P3).

While, using digital tools and technology, accountants and auditors can understand fraud, misstatements, or unusual transactions. However, correcting the issue could sometimes be challenging due to the lack of IT knowledge required to operate and modify the software. Relying on technology can raise problems like dependency on an IT expert, so the work process becomes slow, which will ultimately lack efficiency in accounting and auditing tasks. Accountants need help

understanding the mechanism of the systems as IT professionals. This results in decreased efficiency and incapability to use the system to its full potential. As a result, technical problems become unsolvable for the accountants. Participants also claim that IT experts must acquire accounting and auditing knowledge to configure an appropriate software tool simultaneously.

Due to this extensive knowledge gap, it is difficult for accounting. Knowledge Gap, the transition to digital tools may present a knowledge gap between IT professionals and accountants. Decision-making can become challenging without adequate understanding and training in utilizing digital technologies.

For an emerging economy in the Southeast Asian region such as Bangladesh, digitalisation poses cybersecurity risks. Also, there is a lack of knowledge regarding the application of tools, a knowledge gap between professionals, decision-making constraints, and the incapability to fulfil objectives efficiently in an emerging economy. Accountants have perceived the support of the regulatory bodies as a crucial factor for properly implementing digital tools in accounting and auditing. However, due to corruption and many political barriers in an emerging economy such as Bangladesh, there exists a need for more support from the regulatory authorities. Even in the functioning of the regulatory authorities, a need exists for more implementation of digital tools. The regulatory authorities refrain from pressuring existing firms and businesses to use digital tools in accounting and auditing functions. The analysis also suggests a need for more government support for adapting digital tools in auditing.

5.6. Financial and Technical Constraints

Implementing digitalisation in accounting and auditing may be financially and technically demanding, especially for smaller businesses or middle-income countries with limited cost-effective audit software. According to a deputy general manager:

In developing countries, small and medium-sized enterprises are less likely to introduce digital technology because of the initial cost (P1).

Through various mentionable events, the data set indicates that applying digital tools exposes accounting information to vulnerabilities. It exposes accounting information specifically to cybersecurity risks at Financial Institutions, such as the recent incident at Bangladesh Central Bank. Evidence has suggested that introducing digitalisation could expose confidential accounting data to risks—cybersecurity threats from internal and external sources. Internally, employees with malicious intent can cause harm to confidential data generated from digital tools. For security, access is given to employees based on their authority and requirement of data and information. However, with that limited access, the employee can cause harm or manipulate accounting information. External threats come from hackers who intend to damage transaction information and their analysis stored on the server. Hackers can steal or damage information and sometimes tamper with the accuracy of accounting data. The professionals highlight Certain

limitations for a middle-income country's economy. Such limitations are unexpected from digitalisation by accountants and auditors. It has been observed that in the case of middle-income countries, audit software could not be more cost-effective. As concerned,

Many organisations lack the necessary infrastructure and resources to fully embrace digitalisation. This can create a divide between those with access to digital tools and those without access (P15).

Digital tools such as ERP systems and SAP audit software are expensive for firms and businesses.

Government support and incentives can ease financial hardships, especially for smaller firms and developing countries. Strong security measures, such as barriers and constrained employee access, can reduce cybersecurity threats and protect against data tampering.

Evidence shows there are solid counter arguments that acknowledge the limitations of digitalisation in Bangladesh context. Although it can somewhat reduce fraud and human error, some businesses may find it financially challenging to employ digital tools. The refutation offers ways around these restrictions in any case. The prevalence of fraudulent actions and financial misrepresentations is significantly decreased when digital tools are combined with appropriate training and security measures. Some participants argue that while digitalisation reduces the risk of fraudulent activities, it cannot eliminate them. As argued by an Internal Control Manager:

The risk could be unauthorized access of any random people which would be a problem for the organization and as the data can be backed up so, it is kept in a cloud so, if the password of the cloud is leaked then the hacker may get access to the information which would be a great risk for the organization (P2).

Also, human error through incorrect input or manipulation of data is still possible. Ultimately, the result of the output obtained is not worth the cost incurred per the data obtained. One of the objectives of digitalisation is to obtain the reliability of accounting data. However, according to the data set referrers, middle-income countries cannot achieve reliability by applying digital tools in accounting and auditing unless they solve the skill shortage and deficiency in investment issues. Ultimately, the application of digitalisation in accounting and auditing comes with concerns.

6. Discussion

Despite several challenges, digitalisation in accounting and auditing has clear advantages. Efficiency and automation enhance operating procedures, lessen human error, and conserve time and resources. Using cutting-edge software solutions and complying with legal standards improves transparency, control, and assurance. Stakeholders develop greater trust in the veracity and openness of financial data, which improves financial management and decision-making. Our study has confirmed the diverse aspects of digitalisation as discussed in the literature review

section. In addition, also explores several critical issues in an emerging economic context, as such knowledge gap, lack of investment, and infrastructural issues.

Digitalisation profoundly impacts accounting and auditing practices, creating new opportunities and challenges for the profession (Awang et al., 2022). Integrating digital tools and technologies drives increased efficiency, improved accuracy and reliability of financial information, and greater transparency and accessibility. The increasing demand for transparency and accountability in business and government puts pressure on the accounting and auditing professions to improve the quality and reliability of financial information. There is also a growing recognition of the role of digital tools and technologies in improving the efficiency and effectiveness of accounting and auditing processes (Manita et al., 2020).

According to a recent research (Melin & Toezay, 2022), the primary purpose of auditing is to provide confidence in the quality of the financial reports, ensuring that they are valid and without material misstatements (Porter et al., 2014). Knechel and Salterio (2016) have argued that the audit process has seven main steps: preplanning (Pre-engagement), planning, understanding the entity, risk assessment, documentation, completion, and reporting. In a similar tone the exposure of findings from this study underscores the manifold advantages associated with integrating digitalisation within accounting and auditing. Noteworthy benefits encompass heightened operational efficiency, streamlined processes via automation, mitigated human errors, and an augmented level of transparency, ultimately ensuring fair participation and accountability.

Digitalisation recognise multiple ideological orientation and ensure effective participation of accountant and IT expert to make automating accounting and auditing procedures possible, eliminating the need for paper and pencils and lowering the likelihood of human error. Transactions can be recorded, processed, and saved electronically using software tools, which saves time and resources. The emergence of tools like CAAT, which enable auditors to carry out thorough data analysis, anomaly identification, and risk assessment, also presents potential for innovation and development due to digitalisation. Better decisions are made due to enhanced efficiency and accuracy, leading to better financial management. Digitalisation encourages transparency and traceability in financial management. Firms can assure adherence to accounting standards and reduce the possibility of fines and license revocation by regulatory authorities like the Securities and Exchange Commission (SEC) by aligning software with regulatory requirements. Ultimate digitalisation facilitates multiple ideological orientations. Stakeholder confidence in the data and records improves control and supervision, reflecting collaborative dialogue. The public and stakeholders can have confidence in digitalisation, knowing they can rely on accurate and transparent information to make wise decisions.

Our study suggests, in an ethical stance, digitalisation considerably lowers the danger of fraudulent operations; however, it cannot eradicate fraud. The risk of cybersecurity breaches and insider threats is reduced by instituting strict internal

controls, implementing cutting-edge security solutions like firewalls, and limiting employee access. Additionally, because data anomalies and inconsistencies may be found using advanced software tools, digitalisation makes detecting and preventing financial deception easier. Financial risks are generally decreased, and the dependability of financial statements is increased, balancing the power relation.

However, issues, including knowledge gaps, inadequate resources, and cyber-security threats, must be resolved to achieve successful adoption. In addition to addressing the drawbacks and hazards of the transition, this talk makes a strong case for the benefits of digitising accounting and auditing.

Business entities ought to accept technological changes and take advantage of the benefits they provide by using digitalisation in accounting and auditing, which makes a strong case for doing so. The study concludes by stressing the benefits, constraints, hazards, and suggested solutions in the context of digitalisation, providing dimensions to this matter.

The advantages of greater effectiveness, openness, control, and risk mitigation exceed the drawbacks and difficulties. Organizations may successfully implement digitalisation and prosper in the constantly changing digital landscape by tackling knowledge gaps, financial limits, and cybersecurity concerns. Investing in knowledge, training, and robust security measures is the key to ensuring a successful transition towards digitalisation in accounting and auditing operations. At the same time, there are other factors as well that require immediate attention. There are emerging practical problems that need attention. In this crowd of digital tools, their applications and benefits, digital tools still cannot replace accountants and auditors. The data indicates that some parts of accounting require observation, monitoring, and expertise that a professional can only provide.

As such, an audit officer has stressed: “No, digitalisation will not be replaced entirely because human expertise is still required to interpret and analyse financial data. To do analysis in digital format, we need human expertise. So because of this, traditional practices won’t be replaced entirely.” (P3)

Digital tools can identify technical problems and violations of accounting standards or regulations which have been integrated into the system. However, it is incapable of identifying any ethical violation. It is incapable of inheriting the humane side. In the case of auditing, it has been mentioned that assurance can only be obtained with the supervision of an auditor. The efficiency of digitalisation is only achievable with the expertise of an auditor. Moreover, an audit is described as a humane activity; some functions can only be carried out by an auditor. The increasing reliance on technology may lead to greater exposure to cyber-security threats and data breaches, which can compromise the confidentiality and security of financial information (Awang et al., 2022). There is also a risk that the increased automation of accounting and auditing processes may lead to a loss of professional judgment and expertise and a reduction in the human touch which is an integral part of the process. Nguyen and Gopalswamy (2018) are document loss, slow processing, high error possibility, and expensive bank charges. In addition, there are also risks associated with adopting digitalisation, including increased exposure

to security threats and a loss of professional judgment and expertise (Melin & Toezay, 2022).

Despite these promising outcomes, the study steadily acknowledges the presence of certain constraints and challenges. Notable among these are information gaps, financial constraints, and apprehensions concerning cybersecurity. In this conflict of understanding of the digitalisation process, the objective is to enhance the knowledge to understand digitalisation in accounting and auditing. The study has taken an approach to fill this objective and the gap in understanding digitalisation within accounting and auditing for accountability domains by building a specific research question. Ultimately, Bangladesh's accounting and auditing professions have undergone a digital revolution, providing several advantages in efficiency, transparency, and risk mitigation. The essential initiatives the Bangladesh Government and Central Bank authority require are to invest significantly in government official bodies and offer special package loans and financing opportunities to the private sector to upgrade digital infrastructure to cope with the digitalisation trend. Also, free and regular mandatory training and workshop sessions on implementing advanced technologies such as blockchain, artificial intelligence, and cloud computing must be arranged. By adopting digital tools and processes, firms can take effective measures to mitigate the following challenges: improve decision-making, streamline operations, and improve financial management.

7. Conclusion

This study recognises the critical struggle, constraints, and difficulties of digitalisation in accounting and auditing in the Bangladesh context, particularly in terms of power relations to ensure accountability. These include the knowledge gap between accountants and IT specialists, the financial limitations for smaller enterprises or middle-income countries, and digitalisation's incapacity to eradicate fraud or human mistakes. Additionally, some firms may need help with the upfront costs of deploying digital tools and assuring cybersecurity measures. Organizations must make knowledge and training program investments to close the knowledge gap between IT experts and accountants to overcome these constraints and difficulties. Governments can aid and incentives to encourage digitalisation audit technologies, especially in emerging countries where corruption and political obstacles may impede development. Implementing robust security measures, like firewalls, restricting employee access, and centralized storage through blockchain technology, can effectively address cybersecurity risks and reduce data manipulation.

The advantages of digitalisation accounting and auditing exceed the drawbacks and difficulties. Modern organizations must improve their efficiency, accuracy, transparency, control, and risk management to succeed. Businesses may streamline processes, enhance decision-making, and win over stakeholders by embracing digital tools. However, several issues can be addressed while realizing the constraints and difficulties, such as knowledge gaps, funding limitations, and cyber-

security concerns. The key to successful digitalisation is bridging the knowledge gap between accountants and IT workers through training and development programs. Organizations must spend money on security measures, information, and training for a smooth transition. The emergence of the Fourth Industrial Revolution requires that accounting and auditing be rendered in digital form. Nonetheless, it also presents opportunities for businesses to prosper in the fast-changing digital environment. This research urged for a holistic approach to accelerating the benefits of digitalisation in an emerging country context.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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Appendix 1

	Qualification and Job position
P:1	Deputy General Manager, Accounts and Finance
P:2	General Manager, Internal Audit
P:3	Audit Officer in Charge
P:4	Article ship student from Deloitte Bangladesh
P:5	Article ship student from Deloitte Bangladesh
P:6	A senior lecturer in the Department of Finance
P:7	Member of Dhaka Taxes Bar Association, EC member of BD Tax Lawyer Association
P:8	Accounts and Admin Manager
P:9	Senior Executive, Accounts
P:10	Audit Supervisor
P:11	Manager Audit and Assurance
P:12	Manager Operation
P:13	Senior Executive, Accounts, Qasem Industries Limited
P:14	Audit Supervisor, Hoda Vasi Chowdhury and Co
P:15	Institute of Chartered Accountants of Bangladesh ,ACNABIN, Chartered Accountants

Appendix 2

Questionnaire

(1) How has digitalization impacted traditional accounting practices, and what are the key changes brought by the adoption of digital tools?

(2) What are the benefits and drawbacks of digitalization in accounting and auditing, and how do they impact the efficiency and effectiveness of financial processes?

(3) How does the integration of digital tools, such as accounting software and data analytics platforms, affect financial reporting and decision-making in organizations?

(4) What are the factors that influence the adoption and implementation of digital tools in accounting and auditing practices?

(5) How does digitalization contribute to the accuracy and reliability of financial information, and what are the challenges associated with ensuring data integrity in a digitalized environment?

(6) What are the emerging trends and innovations in digitalization within the accounting and auditing fields, and how do they shape the future of financial management and assurance?

(7) How does digitalization impact the role and skill set of accountants and auditors, and what are the implications for professional development and education in the industry?

(8) How does digitalization and the use of digital tools affect the audit process, including risk assessment, fraud detection, and compliance monitoring?

(9) What are the ethical and legal considerations surrounding data privacy, security, and confidentiality in the digitalization of accounting and auditing practices?

(10) How does the digital divide, in terms of access to technology and digital skills, impact the adoption and effectiveness of digital tools in accounting and auditing, and what strategies can be implemented to address this divide?