

DOI: <https://doi.org/10.34069/AI/2024.83.11.7>

How to Cite:

Ievsieieva, O., Tsikalo, Y., Mulyk, T., Udodova, Y., & Nazarenko, O. (2024). Adapting accounting to the digital age: The urgent need for new regulatory standards. *Amazonia Investiga*, 13(83), 89-99. <https://doi.org/10.34069/AI/2024.83.11.7>

Adapting accounting to the digital age: The urgent need for new regulatory standards

Adaptar la contabilidad a la era digital: la urgente necesidad de nuevas normas reguladoras

Received: October 1, 2024

Accepted: November 29, 2024

Written by:


Olga Ievsieieva¹ <https://orcid.org/0000-0003-2042-8277>**Yevhen Tsikalo²** <https://orcid.org/0000-0001-8051-9299>**Tetiana Mulyk³** <https://orcid.org/0000-0003-1109-2265>**Yana Udodova⁴** <https://orcid.org/0009-0000-5922-8016>**Oleksandr Nazarenko⁵** <https://orcid.org/0000-0001-7546-174X>


Abstract


This paper discusses the regulatory challenges that account practices face in dealing with the rapid changing digital economy in the context of the need for new standards to reflect the complexity of modern financial transactions. This research reviews the recent academic and professional literature (2019–2023) to identify key challenges: the integration of emerging technologies such as AI and blockchain, data security and privacy, transparent AI generated financial data, adapting reporting for continuous accounting, and regulating big data analytics. The thesis of the study calls for policymakers to focus on the creation of new accounting standards and regulatory approaches to increase transparency, audit and efficiency in the digital economy. In addition, it implies that there needs to be transparency about data handling, auditing digital financial procedures and incorporating


Resumen


Este documento analiza los desafíos normativos a los que se enfrentan las prácticas contables para hacer frente a la rápida evolución de la economía digital en el contexto de la necesidad de nuevas normas que reflejen la complejidad de las transacciones financieras modernas. Esta investigación revisa la literatura académica y profesional reciente (2019-2023) para identificar los desafíos clave: la integración de tecnologías emergentes como la IA y blockchain, la seguridad y privacidad de los datos, los datos financieros transparentes generados por IA, la adaptación de la presentación de informes para la contabilidad continua y la regulación de la analítica de big data. La tesis del estudio pide a los responsables políticos que se centren en la creación de nuevas normas contables y enfoques reguladores para aumentar la transparencia, la auditoría y la eficiencia en la economía digital. Además, implica que debe haber

¹ Doctor of Economic Sciences, Professor, NGO «International Educators and Scientists Foundation», Ukraine.  WoS Researcher ID: ABE-2407-2022. Email: polkva@meta.ua

² Doctor of Economic Sciences, Associate Professor, Department of Accounting and Audit, Faculty of Economics, Ivan Franko National University of Lviv, Ukraine.  WoS Researcher ID: GSN-6036-2022. Email: tsikala@ukr.net

³ Ph.D. in Economics, Associate Professor, Head of the Department of Analysis and Audit, Faculty of Accounting, Finance, and Audit, Vinnytsia National Agrarian University, Ukraine.  WoS Researcher ID: L-5677-2018 - Email: mulyk_t_o@ukr.net

⁴ Ph.D. in Economics, Associate Professor, Department of Accounting and Taxation, Faculty of Economics, Zaporizhzhia National University, Ukraine.  WoS Researcher ID: KPY-0644-2024. Email: yana-vadimovna@ukr.net

⁵ Doctor of Economic Sciences, Professor, Department of Accounting and Taxation, Faculty of Economics and Management, Sumy National Agrarian University, Ukraine.  WoS Researcher ID: ACH-3350-2022. Email: alexnazarenko78@ukr.net



standardized reporting systems in the global accounting effectiveness in the digital age. Future research may investigate strategies to assist developing countries and reduce vulnerabilities in data manipulation of digital accounting.

Keywords: digital economy, regulatory requirements, standardization, technological innovations, data security, financial report, big data analytics.

transparencia sobre el manejo de datos, auditar los procedimientos financieros digitales e incorporar sistemas de información estandarizados en la eficacia contable global en la era digital. En futuras investigaciones se podrán estudiar estrategias para ayudar a los países en desarrollo y reducir las vulnerabilidades en la manipulación de datos de la contabilidad digital.

Palabras clave: economía digital, requisitos normativos, normalización, innovaciones tecnológicas, seguridad de los datos, informe financiero, análisis de big data.

Introduction

Constant technological advancement has had serious influence on each economy (Buriak & Petchenko, 2021). Digital economy, based on information and communication technologies (ICTs), has brought profound changes in the companies and industries by eliminating geographical boundaries and by giving highest authority to data in a dynamic environment (Kipkemei & Mose 2024). From blockchain start-ups in their infancy to large e-commerce platforms, digital businesses earn revenue by introducing new ways of doing things, rather than saving money in conventional ways (Rajkumar, 2023). This environment has revolutionized the way news agencies, in the banking industry as well as in other business arena are operating and brought the development of newer company models and how their customers behave. On the other hand, physical stores are confronted with intense competition from online marketplaces, and traditional financial institutions struggle to compete with FinTech businesses that rapidly extend their business quickly (Mujiono, 2021). Today the customer anticipates information with the immediacy made possible by mobile devices and instant access. Customer expectations of accessibility, personalization and usability are higher.

These advancements aside, the accounting industry continues to face the challenges accompanying the ongoing digitized process. The complicated nature of the digital economy is not fully addressed by traditional accounting standards that emphatically rely on tangible assets and traditional ways (Çetin & Bozdoğan, 2023). The digital economy is characterized by immateriality of digital assets, by speed and ease of online transactions, and the creation of new organizational forms. These issues identify important deficiencies in current accounting procedures including provision of transparency, precision and reliability of financial reporting.

In this context, authentication and validation for fast digital transactions, as well as the valuation of intangible such as intellectual property and customer generated media, are critical (Damayanti, 2019). With increasing wealth of digital technologies, the systems need accounting processes to adapt (Odonkor et al., 2024). However, there is a challenge also in a lack of updates standards, which challenges to capture economic realities and provide solid financial reporting in a quickly digitalizing economy (Hacker, 2024). These concerns can be addressed only if we find out how the existing legal and economic systems operate in the regime of data processing. Digital financial systems are also prone to considerable user security threats, as well as environmental impact. Current obstacles to accounting rules are demanding immediate action to craft all-encompassing regulations that focus on profound audits, a straightforward paper system, and open transparency specifically when it comes to crypto businesses (Marshall et al., 2021). Therefore, with the correction of these deficiencies, the accounting system becomes more robust and live able so as to trust and transparency in the digital economy (Hu & Kee, 2022).

This study aims to determine the regulatory deficiencies constraining the accounting sector support to the digital economy growth. But this paper contends that the present account paradigm is too simplistic to tackle on the complex social relationships and contexts of present society. The paper attempts to highlight the significant drawbacks in the current accounting standards and introduces better alternatives to realize better financial transparency and financial accountability in the digital age. Better accounting standards enhance decision making, cut risks, and make resource allocation optimal, all of which help to maintain long term digital economy stability (Chen et al., 2021). Moreover, this study also emphasizes the need for accounting practice to follow the modern digital technology so that they are on par with their modernist.

While past work has focused on particular challenges, e.g. accounting for digital assets such as bitcoin, this work assumes a view from first principles in order to address the broader difficulties caused by the structural breakdown in the digital economy. The focus is on automated transaction implementation, intangible asset valuation and accountability for data manipulation in accounting. This research identifies legislative gaps to ensure a complete and transparent financial reporting in the digital times.

This study is underpinned by three unique variables. To start, it is fundamental to know the exact regulatory barriers for digital accounting (Albuquerque Filho et al., 2022). Second, to achieve this objective it is necessary to conduct a thorough assessment of authoritative releases, company data and academic research. Lastly, potential solution is discussed, including the adoption of revised or new developed accounting standards. The aim of this approach is to improve financial reporting dependability, efficiency, and openness in the digital economy. By doing so, the research emphasizes that more trust and confidence are required, to help develop a technologically advanced digital environment leading to prosperity (Dobrovolska et al., 2023). For the improvement of the organizational and methodological provisions of functioning of the accounting system it is necessary to estimate the essence and problems, related to the integration of digitalization mechanisms (Nazarova et al., 2022, p. 243). Generational outlooks, geopolitical situations and active military operations in Ukraine affecting the transformation of modern economic systems and transformation of accounting and financial mechanisms of business interaction (Calinescu et al., 2023, p. 39). Basically, the primary purpose of this research revolved around demonstrating the importance of strengthening accounting rules in light of the quick change in the digital economy. This study identifies current legislative limitations and proposes alternative approaches, to create a more resilient accounting system. The need is critical because it adapts the legal framework to the digital technology complexities in order to guarantee the sustainability and transparency of reporting in the financial world. While enhanced accounting standards will enable greater innovation—thereby stimulating economic growth—these measures will also be in step with increased stakeholder expectations such as from financial institutions, governments, investors, and customers.

Literature Review

Recently, the remaking of accounting in the digital age is a key area of interest. Existing literature on the role of digital technologies, including artificial intelligence (AI), blockchain, big data, to transform accounting practices, regulations and professional skill requirements are enlarging. This literature review synthesizes prior studies to advance our understanding on major themes, controversies, and knowledge gaps in this area.

Feasibility and Challenges of Adopting Digital Accounting Standards

According to Ugochukwu et al. (2024), there is a need for digital technology to adopt accounting standards that resonate with distinctive characteristics of digital technologies. Among the solutions considered by the study are efficient digital transaction systems for accounts monitoring and resolution of fraud arising from cryptocurrencies. The results highlighted the need for broad uniformity in the regulations which are being established in the different sectors to fill the gaps that do exist in existing digital transformation scenarios. Also, like EU (European Commission, 2020) points on the requirement of ongoing legal frameworks to spur on digital adoption and suggest approaches, such as regulatory sandboxes and innovation centers. Their application could decrease the likelihood of fraud and supplement the added value of digital accounting processes. But in regions like Ireland, where there are no laws specifically aimed at this method, a joint effort from academia, business, and regulatory bodies is said to be needed, the report suggested.

Impact of Advanced Digitalization on Accounting Practices

Pargmann et al. (2023) showed how advanced digitalization transformed accounting, and found gaps in accounting training, including data analytics, cybersecurity and AI. It revealed inequalities in the access to digital tools and emphasizes policy intervention to offer an equal chance of development of skills. Fornio & Manera (2022) similarly focused on the extent of AI and its impact on financial statement valuations and strategic guidance, with the accountants' technological proficiency stressed as essential in ensuring professionalism is maintained. Digitalization led to the development of roles from manual tasks to analytical functions for accountants and Berikol & Killi (2021) suggested that accountants need enhanced logical and inferential skills training in the process.

Blockchain Technology and Accounting

Blockchain has become a game change in accounting. Because of its transparency and immutability, blockchain is believed to reduce fraud and ambiguity in finance (Hooper & Holtbrügge 2020). Nevertheless, the authors also stressed that widespread adoption would require major reform of legal and financial frameworks. The OECD (2019) discussed blockchain's implication on auditability, transparency and electronic security and also recommended stronger policies and collaboration between the public and private sector to handle the information security and privacy related challenges.

Regulatory and Educational Implications of Digital Accounting

Education is the recurring theme on how the digital divide is bridged in accounting in the literature. According to Pargmann et al. (2023), data analytics and AI are needed within accounting curricula. Mălăescu & Avram (2018) also provide further elaboration on the difficulties presented by growing complexity in financial data and the requirement for ongoing skill improvement. According to Al-Htaybat & von Alberti-Alhtaybat (2017), integrating accounting education with big data analytics would augment analytical capabilities and enrich understanding and approach to financial decision making. Dell et al. (2024) stated that in 2018, AICPA and CIMA were promoting the need to build a culture of innovation in the accounting profession. The study recommends that technologies, such as cloud computing and data analysis, be phased to improve efficiency and competitiveness. Furthermore, Chanyuan et al. (2020) pointed out that updated accounting standards and digital transformation are global and regulatory departments should encourage collaboration of firms to achieve equitable financial system.

Digital Transformation & Professional Development

Fornino & Manera (2022) emphasized the necessity of enhancing the upskilling of accountants in order to be able to cope with all the technological advances while staying relevant and offer strategic guidance as well as ethical responsibility. Accountants' roles have shifted, Berikol & Killi (2021) reasoned, and therefore training should emphasize analytical and inferential skills.

Knowledge Gaps and Future Directions

Existing studies offer useful insight but there are many gaps. As an example Ugochukwu et al. (2024) and EU (European Commission, 2020) framed the need for homogeneous regulations but failed to focus on the impediments of global implementation across varying legal and economic environments. Further, like Hooper & Holtbrügge (2020) and OECD (2019), they also knew that blockchain could potentially provide value; however, they did not discuss how blockchain could be integrated to the existing accounting systems. Furthermore, according to Pargmann et al. (2023) and Mălăescu & Avram (2018), the disparities in access to digital tools and training still need to be studied to develop inclusive policies.

It also shows how digital technology changes the rules for accounting practice and education and what the rules will be when they crystallize in the future. Some key themes are the requirement for uniform regulations, the contribution of advanced digital tools towards greater transparency and efficiency and education and training of people to close the digital divide. The identified knowledge gap is thus proposed to be addressed by future research in global regulatory frameworks, integration of emerging technologies, and equitable access to digital tools and training.

Research Methodology

In this study, organized and comprehensive method was applied in exploring the regulatory challenges of accounting in the digital economy.

Data Sources

Research was organized from searches of numerous key academic databases, namely ProQuest, Web of Science and EBSCO Host and other relevant sources. These were because of their broad and varied arrangement of high caliber scholarly assets including research articles, diaries, and gathering activities (Thomas & Thomas, 2021). The study also included data from reputable accounting and auditing firms and trade associations whose publications contain practical insights into the challenges that occur when

transitioning to digital accounting systems. Specifically, a complete review of online presence of these organizations was done to find recent advancements, present and passing trends and results of the conversion that they are amping towards (Chawla & Goyal, 2022).

These data sources were justified through their reputation, reliability, and relevance to these assess information. These databases enabled up to date scholarly work to be accessible, while the inclusion of trade and industry publications ensured research was not limited to only the theoretical aspects of the regulatory challenges in accounting.

Search Strategy

The search strategy concentrated on key terms and phrases related to digital accounting in order to adequately search for relevant information. This included:

Accounting digitization terms: Digital accounting, FinTech, accounting automation, cloud accounting (Attard, 2023).

Emerging technology terminology: "big data", "cloud computing," "chain reaction," and "artificial intelligence (AI)," (Roy, 2019).

Regulatory environment terms: The titles of this thesis are: "accounting standards," "regulatory challenges" and "financial reporting in the digital age" (Ugochukwu et al., 2024).

Due to targeted approach, the search results reflected on the interdisciplinary nature of digital transformation in accounting, focused on the technological, as well as regulatory aspects of digital transformation.

Eligibility Criteria

The study materials were required to meet the following criteria to ensure quality and consistency:

Language: To maintain uniformity and make the analysis easier, all materials should be published in English (Lindsay, 2020).

Source credibility: In addition, peer reviewed academic publications and professional materials from nationally recognized universities and respected accounting organizations were given priority. The selection of these sources was done to respect academic and industrial standard of rigor and trustworthiness (Yigitbasioğlu et al., 2023).

Relevance: Only studies targeted to the regulatory challenges of digital accounting or related technological transitions were included.

Publication date: For the most recent trends and findings, recent studies were selected.

But studies in languages other than English or that did not focus on digital accounting specifically were excluded. At the same time, this systemic approach made sure that high-quality, relevant and reliable data were included.

Data Analysis Techniques

To analyze the collected data, the study employed a combination of qualitative and theoretical research methods, as detailed below:

Thematic Analysis: They conducted a thematic analysis to identify how the themes are recurring and trends across the selected studies. To do this, findings connected to key regulatory challenges in digital accounting as data security, transparency, and compliance with the accounting standards were categorized. To evaluate these patterns, theoretical frameworks from information systems and accounting research were used (Kroon et al., 2021). For example, blockchain applications in accounting was studied to understand how they solve transparency issues and create new compliance issues.

Generalization: Data analysis led to broaching broad conclusions to deepen insights on the possible impacts of digital transformation on the frameworks of accounting regulations. For instance, findings related to the role of AI in automating the financial reporting processes were generalized to propose new ways to update regulations (Li et al., 2020).

Abstraction: By abstraction, the study identified fundamental concepts and principles embodied in regulatory challenges. Using this method led to formulation of research questions and potential solution. For example, analysis of studies on ‘cloud accounting’ revealed the emergence of a need for regulatory frameworks regulating data ownership and cross border data sharing (Rashidov et al. 2023).

Comparative Analysis: The study synthesized results from different sources to look at the interplay between the regulatory framework of the accounting industry and digitization. It also compared different regulatory environments, analyzing how different countries establish real case studies on developing regulatory models related to blockchain accounting (e.g., European Union versus United States)—and how these can be contrasted and compared to determine global challenges and best practices (Rashidov et al., 2023).

These methods were systematically combined and used in a robust and comprehensive synthesis of the findings. In addition to illustrating the importance of the regulatory challenges of digital accounting, the results provide insights into potential approaches for dealing with them.

Results and Discussion

Accounting practices and Its Impact on accounting practices due to digitalization

Since the very day that digital technology has been brought to the accounting industry, it has changed dramatically. These modifications have two types of outcomes, positive and negative, which are very important for understanding the way accounting is transforming itself in the digitized world. In this work, we apply the research methods and insights developed from and learned in previous studies on these changes in the regulatory landscape.

Regulating Accounting as a Challenge of Digitization

The paper’s findings show many consequential and ethical/legal problems due to the rise of digital accounting. Some of the literature points out what may significantly influence future regulatory regimes.

A whole new set of regulations and laws are necessary. New technologies such as blockchain, artificial intelligence (AI) and big data have made financial laws much complex. According to Hassani et al. (2018) however, these challenges posed by these advancements could only be addressed through devising new methodologies. As far as governments are concerned, it is essential they keep up to date financial and accounting record but they likewise need to investigate ingenious ideas. The International Federation of Accountants speaks about the need for a consortium between international governing organizations to revise accounting rules, which have to be in line with the interests of every country. They ensure multinational companies work in a fair setting, thereby fostering trust by investors on global financial markets.

This requires the pace of the adaptation of the existing regulatory frameworks with the rapid technological progress. Regulatory sandboxes and innovation centres can be useful, the European Commission says, as they allow evaluation of new technologies in risk free pilot projects.

Critical Analysis and Examples: With the advent of tech such as blockchain and AI financial laws become complicated, for example blockchain consists of decentralised transactions which are usually very complex and difficult to control. For example, transactions recorded on the blockchain are not reconciled using uniform standards, therefore creating inconsistencies in financial reporting. Regions like the European Union have successfully used regulatory sandboxes to test blockchain solutions with minimal risk and can, thus, serve as a concrete roadmap for others worldwide in implementing similar methodologies.

Data Security and Privacy Concern

The years have seen an increased emphasis on privacy and data security issues arising from the transmission and storage of ever-increasing volumes of data in a digital form. In order to guarantee an adequate protection and security of sensitive financial documents there is an urgent need for robust legal systems. Among many things, executing data governance solutions is a complex process that requires thorough planning and, sometimes, intricate handling of information. Data governance systems are developed to ensure data accuracy and reliability are established, and data errors are reduced in their maintenance to facilitate better decision making.

Critical Analysis and Examples: The 2020 SolarWinds hack is just the latest of a string of data breaches, all of which highlighted the critical need for robust cyber security within accounting. Jauhiainen & Lehner (2022), however, regulations that force data encryption and periodic security audits can be a defense against these vulnerabilities. For instance, data protection capabilities of accounting firms became significantly higher since the European countries became compliant with GDPR, this is a benchmark for other countries.

Transparency and Auditability of algorithms for AI-generated Data.

When it comes to accounting, the introduction of AI concerns how traceable or reliable the financial data is. AI driven financial activity has to be auditable which regulatory authorities could establish standards for. Though the legal/ethical requirements of ensuring proper compliance are common, AI development and use must adhere to standard protocols for failing to comply itself. Eziefule et al. (2022) argue for the need of "explainable AI", a term used for techniques that enable human auditors to understand AI based financial decisions.

Critical Analysis and Examples: One example is how firms, like Deloitte, have developed frameworks to help develop AI audited frameworks to assure transparency in the financial data analysis. These approaches are in line with the call for explainable AI models made by Bose et al. (2023), as they help auditors detect errors and follow regulatory compliance.

The project works to integrate Blockchain technology.

The blockchain technology is secure to data and fast to perform business transactions. However, the challenge with its decentralization is that transaction verification and compliance isn't as dependent, and fraud is more of a possibility. The European Commission (2020) calls to put in place regulatory guidelines for the handling of blockchain transactions.

Critical Analysis and Examples: For example, blockchain can be used for real-time tax reporting in Estonia. However, the use of this approach has increased transparency and decreased errors but has also required the government to create comprehensive guidelines for using blockchain in accounting.

Continuous Accounting and Reporting

With the move to continuous accounting, fueled by real time data collection technologies, existing reporting legislation will need to be updated. According to Al-Htaybat & von Alberti-Alhtaybat (2017) and Chanyuan et al. (2020), the concerns about accuracy and timeliness of financial information have emerged. Automated reporting tools may be employed as strategies by the authorities to effectively ease reporting obligations without the cost of inaccuracy.

Critical Analysis and Examples: Take for instance, it has allowed companies working with the SAP's real time accounting software to keep up with changing reporting standards with efficiency. But for smaller firms, adopting such technologies causes high costs, thus, they require financial assistance programs to help them fill the gap.

Big Data Analytics and its Regulation

Increased reliance on big data has highlighted the need for legal frameworks relating to the ethical use of this kind of data in accounting. The data privacy regulations such as GDPR limit independent accountant

key performance indicators (KPIs), which need to be aligned to retain the integrity of the financial reports. According to OECD (2019), quality data management improves representativeness of financial analysis.

Critical Analysis and Examples: By firms like PwC, the use of big data analytics in auditing proves the possibility of identifying financial discrepancies quickly. But there needs to be oversight through regulation to prevent misuse and to make sure it does not and in fact comply with the ethical standards.

Enhanced Enforcement Power

Big data analytics technologies, like those used by regulatory agencies to examine financial fraud, will help organizations identify potential illegal activities, then detect and investigate them. This capability helps improve regulatory framework and gains market trust.

Critical Analysis and Examples: As an example, big data for uncovering the Wire card scandal in Germany shows how analytics may transform the enforcement power. Putting these tools in the hands of regulatory bodies strengthens them, and helps detect financial insanities sooner.

Regulatory Reporting Standardization

In that case, digital technology can help develop global standards for regulatory reporting. Accountability and simplification in compliance for multinational corporations arise from harmonizing standards across jurisdictions.

Critical Analysis and Examples: An example of the benefits of standardised reporting formats is the adoption of Extensible Business Reporting Language (XBRL) by the Securities and Exchange Commission (SEC) in the United States. It has slashed regulatory compliance and increased transparency of financial disclosures.

Implication for accounting practice and policy formulation

Accounting itself has been radically revolutionized by digitalization, but for this revolution to be a success, there now needs to be proactive cooperation from policymakers and regulators together with accounting professionals. The accounting profession can, by addressing data security, AI transparency and blockchain regulation, pave a way to more transparency and trustworthy finance system. Institutions of education have to redesign the curricula in accounting to provide professionals with the skills for the digital era. To ensure inclusivity, policymakers should hence support adoption of digital technologies by smaller enterprises and emerging economies. Digitalization can make our financial system much better in the future. But this will need to overcome existing challenges and leverage new opportunities over the longer term.

Digital accounting is a fundamental shift for society and for business. It is something that presents regulatory complexity and data security challenges, but also can be leveraged to create greater transparency, efficiency, and trust. Through collaboration and innovation, the accounting profession is able to handle the obstacles it confronts and keep thriving in this quickly changing landscape.

Conclusions

This research essentially investigated the laws and regulations that are appropriate for application to the online marketplace in regard to accounting. The emergence of artificial intelligence (AI), blockchain and big data are revolutionizing large corporations' operational practices. A novel digital ecosystem was developed with recent technical advancements. Reporting of financial information in this ecosystem has been standardized according to its own standards. But the ancient accounting rules were designed for a paper economy and are ill suited to today's digital assets or the speed with which those things go around in today's online world. The framework currently lacks consideration of existing frameworks thus creating discrepancy between the current economic situation and the set targets.

This paper is important in the sense that it can deal with this divide. The study identifies deficiencies in the existing legislation and proposes enhancements fit for digital integration, thus the main contribution of the study. This research bridges the gap between outdated regulations and needs of a modern economy by presenting practical alternatives which entail adopting digital accounting tools and digital technologies.

This will make the system more efficient and adaptive, leading into a more intelligible, highly efficient and resistor digital economy towards changing threats.

This research focused primarily on identifying and understanding the barriers that result from the move to a digital accounting system. The study evaluates literature, professional articles and regulatory alerts for both opportunities and challenges therein. Its emphasis on updating legal frameworks to effectively manage the increasing complexity supplied by technological advancements is a huge original contribution. The study highlights the importance of having regulatory systems that go hand in hand with real time data processing, analytics, while being transparent, verifiable by using technologies such as blockchain.

Since the number of individuals accessing data has expanded, there are important issues concerning security and privacy. Safeguarding data integrity while being transparent with data at the same time is still an ongoing challenge. However, the proposed research aims to make use of blockchain technology for bookkeeping and auditing; also capable of real time, data supported, continuous accounting. In addition, the study supports the optimal use of big data analytics to transform the accounting discipline into a more dynamic and predictive field. This is quite a shift from the more reactive perspective when tackling risks and inefficiencies in the digital accounting framework.

Policy Implications

This study's findings provide some actionable solutions to the question of accounting in today's digital economy. New accounting guidelines are desperately needed to wrap our heads around the complexities of digital assets and economic operations. These reforms must be accorded the highest priority by policymakers since there are gaps in the existing frameworks. Implement robust data governance systems and cybersecurity measures to safeguard data and ensure accurate financial reporting. As is mentioned, women's participation in data governance initiatives should be considered as it influences economic development and empowerment because they participate in international practices and transparency efforts (Rezvorovich, 2023). Governance frameworks must be strengthened, and cybersecurity laws have to be brought out to manage the risks of the digital economy.

Public trust and engagement can only be enhanced through open and transparent financial and operations reporting. It guarantees the participation of the public and facilitates auditors to bank on the perks of a uniformed digitalized economy. Besides, there should be consistent effort to bridge the skill gap between the accounting professionals with the fast-growing field of accounting. Achieving this objective, however, will require the establishment of collaborative programs between private sectors and regulatory bodies.

Setting globalization on its back, global collaboration and development of the norm to practice money in the same way is needed. However, adhering international monetary standards and mutual legislative support between and among nations can improve the competitiveness of corporations at international levels. And that will also put more confidence in investors, which is necessary for the stability and growth of the market.

Future Research and Limitations

There are several limitations in this study. Initially the conversation centered on legislation in more developed countries, therefore leaving it to be utilized to its best potential in developing economies with limited access to digital technologies. This should be extended further by looking into the general implications for developing countries (with an emphasis on context specific digital offerings for accounting). Second, the technical constraints associated with implementing new accounting standards were incompletely addressed in the study. Future research could include mitigation strategies to risks with data changes with digital accounting systems. Additionally, there is great promise in developing methods for evaluating digital assets and incorporating real time analytics into accounting practice in a standardized way.

With such an attempt to fill these gaps, this research will not only contribute to the ongoing discussion on digital accounting but also lay the foundation for a more inclusive and adaptive global accounting ecosystem. However, a broader perspective frames a well-regulated accounting framework that is innovative for the digital economy as potentially transformative.

Bibliographic references

- Albuquerque Filho, A. R., de Sá Borges, F. R., da Silva, M. F., & Araújo, D. L. (2022). Benefits and difficulties of the digital age: a perception of accounting. *Brazilian Journal of Accounting and Management–BJA&M*, 11(20), 030-046. <https://doi.org/10.5965/2316419011202022030>
- Al-Htaybat, K., & von Alberti-Alhtaybat, L. (2017). Big Data and corporate reporting: impacts and paradoxes. *Accounting, auditing & Accountability Journal*, 30(4), 850-873. <https://doi.org/10.1108/AAAJ-07-2015-2139>
- Attard, K. (2023). *The impact of automation on the accounting profession*. University of Malta.
- Berikol, B. Z., & Killi, M. (2021). The effects of digital transformation process on accounting profession and accounting education. *Ethics and Sustainability in Accounting and Finance, II*, 219-231. https://doi.org/10.1007/978-981-15-1928-4_13
- Bose, S., Dey, S. K., & Bhattacharjee, S. (2023). Big data, data analytics and artificial intelligence in accounting: An overview. *Handbook of big data research methods*. Elgaronline, 32-51. <https://doi.org/10.4337/9781800888555.00007>
- Buriak, I., & Petchenko, M. (2021). Analysis of the dilemmas of building an accounting system for the needs of future economic management. *Futurity Economics & Law*, 1(1), 17-23. <https://doi.org/10.57125/FEL.2021.03.25.3>
- Calinescu, T., Likhonosova, G., & Zelenko, O. (2023). Accounting and financial mechanism of business interaction: directions for the recovery of the tourism industry. *Amazonia Investiga*, 12(67), 38-53. <https://doi.org/10.34069/AI/2023.67.07.4>
- Çetin, Ö. O., & Bozdoğan, T. (2023). Digital transformation of accounting in industry 4.0 perspective and an empirical study on Turkish accounting education. *Journal of Accounting and Taxation Studies*, 16, 31-52. <https://doi.org/10.29067/muvu.1261040>
- Chanyuan, A., Zhang, J. D., & Vasarhelyi, M.A. (2020). *The Impact of Disruptive Technologies on Accounting and Auditing Education*. Cpajournal. <https://acortar.link/S1gzbe>
- Chawla, R. N., & Goyal, P. (2022). Emerging trends in digital transformation: a bibliometric analysis. *Benchmarking: An International Journal*, 29(4), 1069-1112. <https://doi.org/10.1108/BIJ-01-2021-0009>
- Chen, Y., Kumara, E. K., & Sivakumar, V. (2021). Investigation of finance industry on risk awareness model and digital economic growth. *Annals of Operations Research*, 1-22. <https://acortar.link/nyrTk8>
- Damayanti, C. R. (2019). Accounting and its challenges in the new era. *Annual International Conference of Business and Public Administration (AICoBPA 2018)* (pp. 81-83). Atlantis Press.
- Dell, S., Akpan, M., & Carr, A. (2024). Aligning artificial intelligence with ethical accountancy: A global perspective on emerging frameworks. *Corporate Ownership & Control*, 21(1), 47-54. <https://doi.org/10.22495/cocv21i1art5>
- Dobrovol'ska, O., Sonntag, R., Ortmanns, W., Kadyrus, I., & Rudyanova, T. (2023). Structural and comparative analysis of R&D funding impact on the level of innovation development: The empirical evidence of GII's leaders and Ukraine. *Business Perspectives*, 19(4), 310-322. [http://dx.doi.org/10.21511/im.19\(4\).2023.25](http://dx.doi.org/10.21511/im.19(4).2023.25)
- European Commission. (2020). *Communication from the commission on a Digital Strategy for Europe*. European Union Commission. <https://digital-strategy.ec.europa.eu/en>
- Eziefulé, A. O., Adelakun, B. O., Okoye, I. N., & Attieku, J. S. (2022). The Role of AI in Automating Routine Accounting Tasks: Efficiency Gains and Workforce Implications. *European Journal of Accounting, Auditing and Finance Research*, 10(12), 109-134. <https://tudr.org/id/eprint/3073>
- Fornino, M., & Manera, A. (2022). Automation and the future of work: Assessing the role of labor flexibility. *Review of Economic Dynamics*, 45, 282-321. <https://doi.org/10.1016/j.red.2021.07.002>
- Hacker, P. (2024). Sustainable AI regulation. *Common Market Law Review*, 61(2), 345-386. <https://doi.org/10.54648/cola2024025>
- Hassani, H., Huang, X., & Silva, E. (2018). Big-crypto: Big data, blockchain and cryptocurrency. *Big Data and Cognitive Computing*, 2(4), 34. <https://doi.org/10.3390/bdcc2040034>
- Hooper, A., & Holtbrügge, D. (2020). Blockchain technology in international business: changing the agenda for global governance. *Review of International Business and Strategy*, 30(2), 183-200. <https://doi.org/10.1108/RIBS-06-2019-0078>
- Hu, M. K., & Kee, D. M. H. (2022). Fostering sustainability: reinventing SME strategy in the new normal. *Foresight*, 24(3/4), 301-318. <https://doi.org/10.1108/FS-03-2021-0080>
- Jauhainen, T., & Lehner, O. M. (2022). Good governance of AI and big data processes in accounting and auditing. *In Artificial Intelligence in Accounting* (pp. 119-181). Routledge.

- Kipkemei, C. K., & Mose, T. (2024). Drivers of ict systems performance in selected state corporations under the ministry of information communication technology and digital economy, Kenya. *International Journal of Social Sciences Management and Entrepreneurship (IJSSME)*, 8(2). <https://sagepublishers.com/index.php/ijssme/article/view/491/523>
- Kroon, N., do Céu Alves, M., & Martins, I. (2021). The impacts of emerging technologies on accountants' role and skills: Connecting to open innovation—a systematic literature review. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3), 163. <https://doi.org/10.3390/joitmc7030163>
- Li, K., Kim, D. J., Lang, K. R., Kauffman, R. J., & Naldi, M. (2020). How should we understand the digital economy in Asia? Critical assessment and research agenda. *Electronic Commerce Research and Applications*, 44, 101004. <https://doi.org/10.1016/j.elerap.2020.101004>
- Lindsay, D. (2020). *Scientific writing= thinking in words*. Csiro Publishing.
- Mălăeșcu, A. M., & Avram, M. (2018). The accounting profession in the digital age. *Annals of the University of Craiova, Economic Sciences Series*, 2(46), 5-12.
- Marshallok, M., Melnyk, A., Vasiuta, V., Yatsenko, V., & Saienko, V. (2021). Competitive advantages of small business. *AD ALTA: Journal of Interdisciplinary Research*, 11(2), 60- 65.
- Mujiono, M. N. (2021). The shifting role of accountants in the era of digital disruption. *International Journal of Multidisciplinary: Applied Business and Education Research*, 2(11), 1259-1274. <https://doi.org/10.11594/10.11594/ijmaber.02.11.18>
- Nazarova, H., Kashchena, N., Nesterenko, I., Kovalevska, N., & Kashperska, A. (2022). Theoretical and methodological aspects of improving the functioning of the accounting system. *Amazonia Investiga*, 11(54), 243-255. <https://doi.org/10.34069/AI/2022.54.06.23>
- Odonkor, B., Kaggwa, S., Uwaoma, P. U., Hassan, A. O., & Farayola, O. A. (2024). The impact of AI on accounting practices: A review: Exploring how artificial intelligence is transforming traditional accounting methods and financial reporting. *World Journal of Advanced Research and Reviews*, 21(1), 172-188.
- OECD. (2019). *Blockchain and the accounting profession*. Organisation for Economic Co-operation and Development. <https://www.oecd.org/daf/blockchain/>
- Pargmann, J., Riebenbauer, E., Flick-Holtsch, D., & Berding, F. (2023). Digitalisation in accounting: a systematic literature review of activities and implications for competences. *Empirical Research in Vocational Education and Training*, 15(1), 1. <https://doi.org/https://doi.org/10.1186/s40461-023-00141-1>
- Rajkumar, S. (2023). *Financing The Blockchain Revolution*. (Thesis) The Ohio State University. <https://kb.osu.edu/server/api/core/bitstreams/b8104ddd-a4c5-4619-89d1-847549a7082c/content>
- Rashidov, A., Leonodovna, M. N., & Azlarkhan, A. (2023). The importance of financial accounting in business decision-making. *Texas Journal of Multidisciplinary Studies*, 21, 1-4.
- Rezvorovych, K. (2023). International norms and their role in the gender vector of Ukraine in the post-war period: analysis of social, economic and political aspects. *Philosophy, Economics and Law Review*, 3(2), 137-146.
- Roy, K. (2019). *Advances in ICT and the Likely Nature of Warfare*. Routledge. <https://doi.org/10.4324/9781003004707>
- Thomas, C. G., & Thomas, C. G. (2021). *Academic databases*. Springer.
- Ugochukwu, E. C., Falaiye, T., Mhlongo, N. Z., & Nwankwo, E. E. (2024). Accounting for digital currencies: A review of challenges and standardization efforts. *International Journal of Science and Research Archive*, 11(1), 2438-2453. <https://doi.org/10.30574/ijrsra.2024.11.1.0317>
- Yigitbasioglu, O., Green, P., & Cheung, M.-Y. D. (2023). Digital transformation and accountants as advisors. *Accounting, Auditing & Accountability Journal*, 36(1), 209-237. <https://doi.org/10.1108/AAAJ-02-2019-3894>