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# Guest editorial: The COVID-19 pandemic: a catalyst for digital transformation

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## 1. Introduction

In a matter of weeks, in early 2020, the outbreak of the COVID-19 pandemic changed the world as we knew it. Businesses were shut, pausing human lives and placing economies at risk. According to [Soto-Acosta \(2020\)](#) the “pandemic” crisis had reached a scale which had not been witnessed since the Great Depression. There was a sudden and visible acceleration in the development of a large group of ICT and online services. Global lockdowns and mandatory social distancing measures led to a huge growth of digital media usage, online services, distance education and remote employment in many aspects of accounting, auditing and assurance, and business management at large. The digital infrastructure witnessed a “positive demand shock” due to the shift to online realities ([Banga and Te Velde, 2020](#)).

Nonetheless, these measures created favorable conditions for a novel phenomenon defined as a disrupt, which is a revolutionary transformation of humanity to a new digital society ([Ganichev and Koshovets, 2021](#)). The definition of the digital society or economy by scholars includes two key aspects:

- the digital economy is an economic form that guides and realizes the rapid optimization and regeneration of resources and achieves high-quality economic development; and
- at the technical level, the digital economy includes big data ([Xu et al., 2021](#); [Gogia and Chakraborty, 2022](#)).

Advanced technologies fueled the emergence and application of the digital societies in the various fields of accountancy, auditing and business management. These technologies included Artificial Intelligence (AI), Internet of things (IoT), blockchain, cryptocurrencies, cloud computing and 5 G communication. In this context, digitalization refers to using these technologies to transforming communications, interactions, business operations and business models into more digital ones ([Agarwal, 2021](#); [Musleh Al-Sartawi, 2022](#)).

Digital transformation, although affecting all industries, is impacting organizations with a high degree of technological orientation such as finance, accounting and auditing firms, and the media differently in both developed and developing economies ([Hegazy and Hegazy, 2018](#)). The digitalization of accounting and auditing practices represents one of the major paradigm-shifts that have distinguished the past years ([Lombardi and Secundo, 2020](#); [Bhambra, 2022](#)). The IFAC report ([Gould, 2019](#)) calls for auditors to revise their paradigms to adequate their know-how toward the new challenges brought up by digitalization. Another report by [KPMG \(2017\)](#) states that digital transformation is not a voluntary choice for auditors anymore due to its disruptive impact on organizations. Although these statements were made prior to the COVID-19 outbreak, they still ring true today. According to this evidence, this Special Issue’s contributions are manifold, as it discusses changes in accounting practices catalyzed by the pandemic.

Despite descriptive and preliminary research being done in relation to COVID-19 and the digital economy, important gaps in our knowledge remain and comprehensive insights are



still needed to fully understand its impact on specific topics, varying from auditing, earnings management, financial reporting, to sustainable development in the digital era (Hegazy and KamarEldawal, 2021). Therefore, the reason for selecting the theme for the Special Issue has been crucial to move beyond preliminary research and to provide more empirical driven studies which help in answering significant questions related to digital transformation during COVID-19, and whether the disruptions caused by the pandemic have impacted accounting and auditing practices. It is our experience as researchers and academics which urged us to choose the current topic. Therefore, the main aim of this Special Issue is to offer a platform for researchers to debate and provide solutions that will serve the accounting and auditing profession. This Special Issue lends itself as a thorough reference covering theoretical and practical aspects across multiple domains pertaining to the disrupts and the revolutionary transformation in the digital economy. It further provides an original contribution by focusing on digital transformations of auditing and accounting practices under the lens of the COVID-19 pandemic. We are confident that this Special Issue will promote further research into the relationship between COVID-19, digital transformation, sustainable technologies and the digital economy. Furthermore, future research could examine the need for governance systems and mechanisms for digital media, continuous auditing and big data applications in business operations and sustainable technologies used by corporations.

The rest of the Editorial is structured as follows. Section 2 reviews the importance of sustainable technologies. Finally, section 3 presents the main papers in this Special Issue and their contributions. Although the papers present different aspects of the challenges and opportunities of digital transformation, they focus on issues related to earnings management, key audit risks, investor protection during COVID-19 and the impact of auditor's characteristics and the Covid-19 pandemic on Key Audit Matters (KAM) reporting.

## 2. Sustainable technologies during COVID-19

A thorough review of relevant literature indicates a rise in awareness about the impact of digital transformation on the economy. Previous studies agree that digitization and digitalization are part of digital transformation (Verhoef *et al.*, 2021; Prakash *et al.*, 2022). Investments in and expectations from technologies have placed pressure on researchers and professionals to find solutions for optimal integration of these technologies into many facets of our lives (Musleh Al-Sartawi *et al.*, 2022; Hegazy *et al.*, 2022). Hence, this Special Issue seeks to open a room for researchers to examine such issues and list propositions for research and practice.

Advanced technologies, from Internet of Things to 5G communications, are currently playing a key role in crisis recovery which have helped people in maintaining remote education, employment, banking and other online services by reducing exposure to the virus (Al-Sartawi *et al.*, 2021). A study by the World Bank (2020) collected data from 1,182 firms in developing countries in Africa and showed that 266 firms (22.50%) of the sample report adopting a digital response to the pandemic. It is worthy to note that 6.77% of firms in the retail sector and 4% of firms in other services sectors reported an increase in monthly sales compared to previous years. These findings support the notion of favorable conditions caused by the COVID-19 disrupt.

With regard to the accounting and auditing profession, the widespread implementation of technologies for data extraction and analysis, fraud detection and continuous monitoring has managerial implications related to the disruptive impacts that digitalization has caused to the auditing practices (Pizzi *et al.*, 2021). Thus, with the impending emergence of Industry 5.0 and the aftermath of the pandemic, auditors are put in a tight spot. The work of

accountants has historically evolved in line with developments in ICT. [Granlund and Mouritsen \(2003\)](#) even state that from the beginning of the above developments in ICT accounting information and technology go hand in hand. IT/data governance is one of the main keys to ensure the sustainability of the accounting profession in the digital economy because if utilized effectively, governance can simplify data management complexities ([Al-Sartawi, 2020](#)). The Special Issue recognizes an area for future research which could be examined further in terms of the role of IT governance in the digital economy, and its impact on organizations contributing toward sustainable development.

### 3. Contents of the special issue

This Special Issue presents a variety of papers that aim to examine some of the issues highlighted in the Editorial. The papers published in the Special Issue use various methods, including literature reviews, quantitative approaches, field and case studies, latent semantic analysis methods indices and checklists. Moreover, the articles cover a vast array of special topics and applications illustrating the unprecedented challenges businesses and organizations faced with a focus on accounting and auditing practices. Additionally, the papers provide policy recommendations for promoting the adoption of sustainable technologies to overcome some of the issues resulting from the COVID-19 pandemic. Nevertheless, it should be noted that the Special Issue papers complement each other as they share common themes and topics.

The paper *“Earnings management and investor protection during the COVID-19 pandemic: evidence from G-12 countries”* by [Ali et al. \(2022\)](#) aimed to determine the interrelations among the strength of investor protection institutions and earnings management (EM) during the COVID-19 pandemic. Their sample included 5,519 firms listed in the G-12 countries during 2015–2020. The researchers used the modified Jones Model as a proxy to measure Earnings Management (EM) and the Investor Protection Index as a proxy to measure investor protection. The study found a significant and negative relationship between the level of investor protection and EM practices and concluded that this negative relationship was more evident during the pandemic. As a result, this paper has various implications to practitioners, investors and policymakers.

Another paper titled *“Key audit risks and audit procedures during the initial year of the COVID-19 pandemic: an analysis of audit reports 2019–2020”* by [Kend and Nguyen \(2022\)](#) attempts to examine audit procedure disclosures on key audit risks, prior to and during the initial year of the outbreak. The researchers examined the matters published in over 3,000 Australian statutory audit reports during 2019 and 2020 using latent semantic analysis methods. Interestingly, the study found differences in the sentiment or tone of words used by different auditors in 2020, but differences in sentiment or tone were not found prior to that in 2019.

A third paper, *“Relevance of supplementary fair value disclosures under market uncertainty: effects on audit fees and investors’ pricing”* by [Mehnaz et al. \(2022\)](#) studied the relevance of supplementary disclosures intended to improve the representational faithfulness of Fair Value (FV) estimates by assessing their impacts on audit fees and investors’ valuation of FV adjustments in uncertain market conditions during COVID-19. The findings indicate that investors’ pricing of FV adjustments increased with the increase in disclosures during the market uncertainty of 2020 which, however, was not the case before the pandemic.

The paper *“The impact of COVID-19 pandemic on earnings management and the value relevance of earnings: US evidence”* by [Liu and Sun \(2022\)](#) examined whether the COVID-19 pandemic has influenced Earnings Management and the value relevance of earnings in the

United States. The researchers compared discretionary accruals, the explanatory power and slope coefficient of earnings between the prepandemic year and the pandemic year. The results show that there was a significant decrease in discretionary accruals from 2019 to 2020. This indicates that firms engaged in more income-decreasing earnings management to take a big bath in reporting earnings during the pandemic year.

The paper “*Lessons from leveraging technology in auditing during Covid-19: an emerging economy perspective*” by Sharma *et al.* (2022) examines the challenges posed by Covid-19 restrictions for audit processes in India. Emerging Technologies were used by the auditing profession to respond to imposed disruption of established audit process and practices to ensure data accuracy and transparency and enhanced audit quality.

The paper “*Impact of Covid-19 pandemic on auditors’ responsibility: evidence from European listed companies on Key audit matters*” assesses the impact of the pandemic on the quality of financial reporting and the auditor’s responsibility and as key audit matters (KAM) in audit reports. The findings suggest a direct positive correlation between the number of KAMs and the auditor’s size, frequency of the event and going concern uncertainty.

The paper “*The impact of auditor characteristics and Covid-19 pandemic on KAMs reporting*” by Hegazy *et al.* (2022) investigates how auditors’ characteristics affect Key Audit Matters (KAMs) and audit quality decisions in specific industries before and after the Covid-19 pandemic. The paper uses a survey based on actual audit case studies extracted from the management letters of clients in an audit firm with international affiliation to test the proposed hypotheses. Industry specialization, professional qualifications of the auditors and the effects of Covid-19 had some effects on the ability of auditors to recognize and disclose KAMs. Auditor position is the most factor that significantly influenced the recognition of KAMs compared to other audit matters in the new audit report resulting in higher audit quality and enhancing users’ confidence in both the audit and the financial reporting processes. This was specially the case with auditors specializing in manufacturing and financial institutions.

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**Further reading**

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