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The Future Responsibilities of Accountants in the Context of Digital Transformations: A Theoretical Review

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Abstract. Today, many technological developments ensure that an organization and accountants are powered by the digital infrastructure. Imparting a process-oriented and controlling character to the accountants, on the one hand, technological transformations eliminate many routine activities such as recording, referring, controlling, and classifying on the other. Nevertheless, the technological advances achieved by accounting and business over the transitional period have some associated risks. Moreover, when accountants or both accountants and other employees working in accounting processes are no longer linked to the organization only by the production of financial information, it would be misleading to determine the job categories in a limited and narrow sense. In this way, they will generate added value to other people in all stages of the processes such as carrying out complex tasks, giving consulting services, and establishing practical and effective structures. With these responsibilities, accountants of the future will be responsible for the efficiency and legitimacy of the activities on an absolute basis.
Accounting has become a profession with wide-ranging importance in the development of the information society. In particular, technological innovations in the information age provide significant advantages to accounting applications and accountants in their professional practices. However, as a potential risk of these developments, digital transformations blur the professional responsibilities of people working in accounting processes. In this context, accountants will influence decisions and activities of people in order to create an administrative, process-oriented, and controlling infrastructure for an organization. The only way for accountants to add unique values to the organization lies in developing competencies of expertise in the area of administration and management.

Keywords: Accountant, Digital Transformation, Responsibilities.

1. INTRODUCTION

This paper examines some of the challenges that may be faced by the accounting profession due to the advent of Industry 4.0. Any time a new business or activity becomes a corporate event, accountants have to adapt, adjust, or sometimes invent a new rule. As Industry 4.0 is fiercely competitive, that could lead to some problematic issues for accountants. These include transforming accounting education to meet the needs of the new financial system, upgrading existing accounting software to digital, and incorporating new technologies into codes of ethics. It is a good help to make the decision of investment, the program of its education, its ethic standards and what accountant must perform in order to meet a new era. One of them are the transition of the education of accountants to the new accounting system, the digitalization of existing accounting systems, and the inclusion of current innovations in the ethical code (Weshah, 2021). The paper should be a touchstone for those considering investment, planning training, designing ethical frameworks or clarifying who is responsible for accounting in this time of change. The business world competes with each other about Industry 4.0 concept; these days may force accounting professionals to face the near challenge in the future that is quite different from today. This process in turn will be a challenge, as the educational period of the accounting professionals to adopt with the new accounting system, the process for the digital transformation of the currently operating accounting applications and the adaptation of ethical rules, incorporating current innovations in the business world (Supriadi et al. 2020).

This paper may be guiding sources for investment, training, ethical orientations, and shaping of accounting responsibilities in the process.

In the rapidly globalizing world, information technologies have transformed almost all political, social, and economic interactions of people, and several industrial transitions have arisen (Matyushok et al.2021). Certain professions have adapted to digital transformations more than others, but as observed in many fields, accounting has also been affected by the change related to the information technologies. It is accepted as "Industry 4.0," which brings physical production and digital systems together within the concept of the Industry 4.0, and also constitutes new responsibilities for accounting in this context. In this regard, in this study, first, the concepts of Industry 4.0 and its main components are explained and related definitions are presented. These concepts are followed by the effects on accounting and possible responsibilities of accounting related to digital transformations. Finally, the conclusions derived from the effects of ethical concepts, recommendations for accounting areas, and pathways that may be opened for future research are presented.

The accounting field, which was mostly based on paper economy in previous centuries, witnessed significant changes by entering the electronic economy. In today's world, while accounting and finance practices are carried on with internet fiscal administrations, exchanging unlimited information of accounting data, they are also being

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made on e-accounting applications with the help of software and technology. The capability of accountants has been progressing with the input of technology where their roles in traditional accounting activities have been changing. The next step of this process is expected to be digital transformation in business. This would change the inherited responsibilities of accountants in today's business and the presence of accountants, which has been expressed frequently in literature to be originated from traditional and regulatory activities, will require new skills and responsibilities. In this context, transformations in the future play an important role. Although academic literature contains studies on digital transformation only for information systems and information technology management, digital transformation impacts the accounting information systems as well, and the changes in these fields could lead the future roles and responsibilities of accountants to be analyzed from a different perspective. (Izzo et al., 2022) and (SABUNCU2022).

These changes are probably the most visible recent development in financial reporting, but they are part of a much larger phenomenon involving the responsibilities of all accountants (not only those who provide products for the external reporting arena) for distributing information about organizations that is relevant, timely, reliable, and also validly deserving of the attention of its targeted audience. Expressed differently, if financial reporting has any influence on an organization, its mode or manner of operations, or on the consequences that stem from this, then it will be through the usage of these sources of information by those who have reason to consult their contents. Even in the field of external reporting, why shareholders of an organization should be privy to regular, timely information about the activities and financial performance of an entity in which they own shares, while stakeholders in all other organizations that impact on an entity, but who do not have the opportunity to participate as shareholders, should not—this double standard fails rational reasoning (Weshah, 2024).

During the last 25 years, accounting has undergone unprecedented change, with information technology playing a pivotal role in this transformation. As a result of these changes, the type of individuals to whom the accounting descriptors are going to be anchored has similarly broadened. Today, the general purpose financial reports that are produced by large companies are mainly for the benefit of external stakeholders, especially their shareholders (Aldabbas et al, 2023). In developments that are bringing far-reaching changes to the reporting of individual organizations of all sizes, IT and the Internet are progressively allowing companies to communicate with all interested parties, and hence to inform them as to how well it is performing over and above the simple provision of a financial snapshot of its affairs of a particular moment in time or of recent announcements of dividend or profit profiles. It is removing the exclusiveness of company financial reports by offering up-to-date facts and figures to a wider landscape incorporating all who have reason to be interested (Han et al.2023).

2. LITERATURE REVIEW

Primavera registers a parchment from the Maltese Cathedral that mentions the purchase of goods to be used in the construction of the Cathedral using a cash-counting method. Towards the end of the works, a liquidation was required, which included sales of surplus goods and the renting of furniture. Sadly, nothing was stored, and a list of assets and liabilities only contained the property left by the mortgagee who committed himself to renting them for the church. Due to the strong validity of the internal control system for the needs of the economy, it is called commercial and documentary proof due to the link of today's science with classical antiquity. The term "calculator" appears in the description of the priorities of foreign business creditors in the USA and Canada in the 15th century. At the end of the same century, evangelical reformers took matters of the state budget to the heart of the parishes with the arrival of printing in England. Willcomb develops this theme and watches the implementation of a new accounting system in the double charge-book. The meaning of the word settling office assigned to their arrangement derives from the definition of Laurent and the purpose of Goody and Wilcomb. Three or more centuries passed, and not many steps were taken (Seccareccia and Matamoros, 2023).

Accounting, as any business database, is based on the classic accounting cycle, occurring for accounting information stations that follow: accepting and granting original documents, recording in or out of format or using the mechanism's categories to an account, performing source and method trial adjustments, adjusting and realizing errors accusations, accepting, interpreting, and examining convergence assumptions, producing test balances, generating the economic situation and financial performance reports, repeating errors in the records of permanent balance sheet accounts. These manual execution steps can often result in relevant mistakes, showing the importance of updating and improving the physical process. The automation incorporates technological tools which make it practical replacing repetitive stages with a single action, quickly handling a high quantity of informatics data (Zhang et al.2023). In this optic, fundamental work includes information processing, which is the primary business of accountants.

Technology can be described as a group of scientific knowledge which modernizes the course of doing things. This inclination has presented a new environment across the accounting profession, producing sophisticated functions, services, and accounting software available for professional accountants. Technology advances have modified fundamental accounting activities designed to offer decision-making information. These transformations happened since the accountancy profession initiated, continuing for a specific period. The initial improvements were higher than the latest ones, but the diversity of all changes makes the existing category as remarkable as the previous ones (Park et al., 2023). This first transformational phase had the core characteristics of sudden growth

and a swarm of progress that revolutionized execution patterns shell. Such rapid advancement resulted because the primary characteristics of technological transformations, creation, inversion, and indirect effects, were co-led.

The role of digital transformations proceeding at an incredible pace in our rapidly developing world is becoming more important for each sector. These changes are becoming extremely important for the accounting sector, as in other domains. The need for adaptability that was experienced as a result of the Covid-19 crisis first made digital transformation compulsory for enterprises that had long resisted making this transformation, highlighted the damage entailed in not making such a transformation, and then spread digital transformation to all sectors (Elgazzar et al.2022)(Li et al.2022). The situation that undoubtedly most stands out in accounting is the expanse of capabilities offered by the cloud. This capability of the cloud is manifest in transforming transactions into data inside businesses, making financial applications available on all devices, offering access to analysis and reporting independent of location, and above all, ensuring data to work in tandem with each other, possess such capacity, and provide synchronization with all devices while being easy to use.

Contentious Issues of Automation and AI in Accounting The most concerning aspect of the consequences of automation, particularly among the workforce, is the fear of losing a job. Workers are very worried that there could be a day when their income from work could be nil. (Parker & Grote, 2022) This is because the machines can do the job faster and sometimes cheaper. The three technologies that are the most concerning in this regard are robotics, algorithms, and AI. Such technologies affect both the tasks performed on a daily basis and sometimes the jobs that are carried out in particular industries. On top of this, automation can also give birth to new business models. But from the workers' perspective, the new models will eliminate jobs as the technologies can perform cheaper and faster. Again, these have the potential to reduce the companies' profit margins significantly, but the advantage of using technology will impact the shareholders positively. This is why market forces are the ones that are pushing firms to adopt automation and participate in job-shedding practices.

Artificial intelligence has been defined by many researchers as the capability that is possessed by a machine and enables it to perform activities that we associate with human intelligence, such as being able to carry out various forms of intelligent behavior and learn from experience. Various authors add that AI concerns how to make computers do things that people can do better. There is also consensus among researchers that any device that begins to imitate the human mind will fall within the category of AI (Hagendorff & Wezel, 2020). Automation implies that the tasks performed during the accounting process can be automated through digitalization. Automation includes traditional accounting activities like bookkeeping and more advanced activities like journal entry processing, classification of accounts, and transaction evaluation. Moreover, interfacing with other systems or repeated access to specific tools like ERP software (enterprise resource planning) can also be considered as part of the accounting function.

It has been generally acknowledged that blockchain technology has the potential to be a disruptive influence in the accounting profession. The increasing automation of accounting procedures, due in part to digital transformations, also poses a risk for the profession as this technology becomes more complex. The consequences of this advancement are still unclear, whether to transform the accounting profession, in the form we know it today, into a digital unit able to continuously adapt to the rapid digital change or to prompt auditing firms' specialization only in advisory's high-added functions and in audit technology and algorithms adapted to change. This study aims to provide a comprehensive review of the theoretical implications of moving from an audit approach based on trust in client-prepared information in a manual examination process to a technological audit approach based on smart contracts (Garanina et al.2022) and (Maffei et al.2021).

The characteristics of blockchain technology could offer a number of opportunities and changes in various important and fundamental parts of the existing accounting framework. The opportunities presented have been signaled mainly by policymakers and bodies capable of standardization and are leading to various research projects in the field of accounting operations carried out by accountants. The adoption of blockchain in accounting implies an adaptive state of accountants to handle information that has been applied in another logic - cryptographic proof of establishing trust - without the requirement for examination and opinions and manuals. With digital transformation, information comes from categorized technology and is continuously and currently transferred through the organization's external and internal systems (Weshah et al, 2022). This information migrated using the blockchain is the critical, simultaneous evidence of recent logistics that have transformed the facade of the accountants' responsibility and duty assurance in the digital economy of the era so far.

Today's technologies that have removed the concept of location and time have dragged the accounting process into digital formats. This facility in accounting is not always positive. The transformations brought about by the change of the accounting system and the accounting language to the digital world are faced with some drawbacks. The necessity of making the accounting process and the preparation of the financial tables much faster, the interpretation of various financial tables, and the provision of services in various fields, which are the result of the ease of flow of data, may have led to diversions. This case may have caused researchers, who have been dealing with this field from different angles and who have to be aware of some theoretical shortcomings originating from these problems, to look to the accounting language and to reject it (Moore, 2023). This study draws attention to some of the deficiencies derived from theoretical and application considerations within the accounting system, which is open to digital transformation from various angles, by scanning the relevant

literature.

Digital transformations, which started as an information revolution, have spread quickly to finance systems and they encompass everything in today's world. Accountants, who carry out the preparation of these systems according to the Generally Accepted Accounting Standards, are among the stakeholders directly affected by this change (Yigitbasioglu et al.2023). The aim of this study is to address the critical points that accountants need to pay particular attention to during digital transformations. The study first argues that information quality is a fundamental requirement for a finance system to be successful in this changing process. Accountants are responsible for providing reliable and high-quality information in this transition process. It can be argued that due to the decisions and applications that will be made with the financial information, the quality of the information is crucial.

Given that technological devices are commonly used as a primary source of information and that the augmented information components of virtual reality appear to be highly valuable for accountants, the accountant can then concentrate more distinctly on managerial accounting activities and the presentation and preparation of capital statements, as well as taking on a multi-faceted consulting role in business operations, creating a competitive advantage by acquiring relevant knowledge and skills that can be universally applied by other competing businesses. However, the analysis of the disadvantage and complexity of sophisticated activities related to the company data processing system, such as pinpointing faults and distinctions, generating predictions, and guiding the norms that facilitate the business's strategic planning and decision-making, are important besides just finding technological improvements in accounting firms.

In accounting firms, the transition to digital accounting or the process of replacing redundant IT operations through automation or artificial intelligence tools can improve conventional accountant job descriptions by lowering the prerequisites of the job, which often include low-level technical responsibilities and maximizing the higher levels of analysis and management necessary for task construction, delivery, evaluation, and management. In fact, in the context of extensive digital processes, accountants at an operational level often have the tasks of primarily transposing the data from one format to another, checking the data and signposting exceptions. However, AI systems' skills have the potential to take on such roles, particularly when coupled with technological developments related to the application of AI in products and ERP systems. Additionally, researchers believe that automated methods constitute systems that are capable of executing instructions without human effort.

The recent international developments have led to a much broader accounting skillset. According to the IESBA, the new skillset of professional accountants should consist of expertise in IT for accountants, data collection and analysis, data security, privacy and protection, data governance, critical thinking, risk assessment, professional skepticism, and accounting regulation. Later, Enterprise Risk Management, Corporate (Social) Governance, and Anti-Money Laundering come into play. Even more surprisingly, the audit and accounting profession websites use different sets of new accounting expertise. It is noteworthy that the 'ecosystem' encompasses nearly 20 areas. Cybersecurity, People Leadership, Data Analysis, and Corporate (Social) Governance, a set of skills which was recommended as pre-eminent, already entered the accounting curriculum more than a decade ago. True, Technology, Automation, and SaaS Expertise are more recent skills. Nevertheless, this distinctive transformation in the competitive landscape of auditing by means of the introduction of new combinations of artificial and human intelligence indicates that audit and accounting professionals must be able to use artificial intelligence in complement to add value and to leverage the best of both for superior engagement quality.

What are the skills and competences that accounting professionals must have, facing a work environment that is influenced by rapidly changing developments in IT and has increasingly become hyper-competitive? The traditional skillset comprising analytical, technical, and mandatory skills required from accountants in the past century no longer suffices today. Considering the global landscape, the Big Four consulting firms have already more than 20 distinct areas. AKT Firm, the UK's No. 1 Best Place to Work, has rewarded its staff by giving them analytics tools and qualitative training in addition to the traditional technical skills. A number of new cognitive tasks, such as judgment, teaming, creativity, and emotional intelligence are added to the analysis, maths, and economic and business knowledge of the traditional accounting curriculum.

3. RESULTS AND DISCUSSION

3.1. Theoretical Frameworks for Understanding Accountants' Future Responsibilities

The present digital transformations, which include artificial intelligence (AI), big data, and connected devices, have drawn attention as a force to shape world society and global business. The "fourth industrial revolution" and its influence on the transformation of the accounting profession are natural. This article focuses on the role of accountants in this digitalized economy. Based on a theoretical discussion, this paper presents accountants' future responsibilities in the context of ongoing digital transformations, which will add value to the accounting profession.

The concept of digital transformation is full of controversies and the future responsibilities of accountants have not been clearly identified. In this theoretical research, the authors aim to evaluate the concept of digital transformations, the dominant theoretical framework on society and organizations, and then the specific role of

the accounting profession in this digitalized world. The study will first review related frameworks for understanding contemporary society and introduce the fourth industrial revolution and its impact. Final contents will clearly present the impact of digital technology, in general, with specific focus on both the accounting environment and the accounting professionals.

One way to establish the responsibilities and purposes of accounting is to use accounting theories, since accounting has been a way of representing economic, political, or social phenomena. One of these theories studied by accounting researchers is that of the agency, where managers are the agents, the owners are the principals, and it is necessary to curtail an agency's abuse of trust and ethical failure. The German philosopher Kant (1903: 47) wrote the following about ethics: "Some persons are nobly inspired who can find no other basis of the lawful order except the esteem and the right of man as a rational being based on respect for humanity, this basis has in it independence, dignity, and absolute worth of humanity." (Reath, 2020)

This paper aims to carry out an in-depth theoretical review to support the conceptual bases of the contemporary discussion about dystopia or utopia regarding accounting in the wake of the digital era. The future responsibilities of accountants in a world in the age of algorithms are discussed using the theoretical references of Paton and Littleton (1940) and accounting theory. Section 5 presents agency, stewardship, and stakeholder theories. It was concluded that the main challenges and future responsibilities of accountants in relation to technology trends are related to the following: to curb IT abuses and ethical failures in the digital realm, to design methods for ethical ICT development, use and governance, and to accept a set of fundamental values and make them operational. Furthermore, traditional safeguards (regulatory and informational) are not enough; it is necessary to develop soft solutions.

However, the resource-based view theory of strategy has weaknesses. It was first developed in the 1980s, a time of industrial innovations. Therefore, it may not have relevance to the current digital environment or digital age. However, in recent years, several studies have extended the scope of the resource-based view theory to the digital age (Cooper et al., 2023)(Chaudhuri et al., 2022)(Cuthbertson & Furseth, 2022). These studies indicate that the resource-based view theory is still relevant and useful in explaining the success of firms today. However, some have their disagreements regarding its relevance in the digital world. But understanding the resource-based view theory can be helpful for accountants. This is because, as suggested by other researchers, however operated, resources and capabilities must also be controlled and accounted for. Resources - tangible, intangible, and human - have to be managed. Their use involves business operations and finance, which require controls of operations and reporting on the use of resources.

Resource-based view theory postulates that a firm's resources and capabilities are important in shaping its competitive advantages. The resource-based view theory posits that companies have unique resources and capabilities. These unique resources and capabilities may be the source of sustained competitive advantage for companies (Kruesi & Bazelmans, 2023). This could result in superior company performance. This view has been adopted in various studies, such as the study by Wenowski and Coslor, which suggests that competitive advantages gained in business operations are pivotal for firms competing effectively in digital ecosystems.

3.2. Challenges and Opportunities for Accountants in Digital Transformations

In truth, virtually most, if not all, of the tasks currently performed by accountants can be automated by machine learning algorithms. Even though the creativity element embedded in accounting is particularly complex to emulate by these algorithms, the current possibilities for a virtually full automation of accounting tasks, as well as the rapid progress of machine learning technology, result in a permanent need for accountants to upgrade their competences and to refine their skills and creativity. This progressive need for accountants to upgrade their competences and creativity translates into an important change in their role, with some experts calling for a new paradigm of accounting. Fears of artificial intelligence and serious practitioners of accounting suggest that with the continuous development of technology, those tasks that do not use critical thinking associated with judgment, values, and empathy will be much more likely to be automated.

The constant changes in our day of age are also challenging the accounting profession and accountants. Information technology, data analysis tools, advanced data analytics, robotics, artificial intelligence, and other digital tools allow accountants to perform various tasks of different levels of complexity very quickly and easily (Gonçalves et al., 2022). Accountants can, for instance, quickly carry out a remedial action of the risks identified by data analysis tools and assess the relevancy of the financial statements very effectively, on a permanent basis, throughout the various stages of the financial transactions. Notwithstanding these unquestionable opportunities, several questions arise in this context. What are the impacts of digital transformations on the role of accountants and, consequently, on accounting responsibilities? What are the current and future competences of accountants in the context of these digital transformations?

Digital ethics should also include the norms and values shared by the relevant groups within and outside the accounting community, including the accounting information of the enterprise with which the accountants maintain financial relations in every phase. The issue of digital ethics is as important as the ethical responsibilities of the accounting profession. When looking at the existence of digital ethics in different sciences on a theoretical basis, the subjects of digital transformation in law are the need for digital ethics, the principles of digital ethics,

and challenges to legal education and research (Zhanbayev et al.2023)(Vial, 2021). To answer the questions raised in these subjects, the necessity of the existence of digital ethics will be shown and the reasons and circumstances that necessitate the existence of digital ethics will be discussed together within the framework of the basic concepts of digital ethics.

Ethical considerations are the most important topic when it comes to the accounting profession. Accountants perform their duties in accordance with their professional ethics. The new and rapidly developing digital transformation process, which we can call the 4th industrial revolution, has been affecting not only business life but also all living spaces. In today's digital transformation where internet use has increased, the importance of digital ethics increases in areas such as accounting and management, which are based on the use of the internet and where information is the main process. Digital ethics covers the attitudes of researchers, accountants, and accountants about technology, as well as policy issues related to the present and future use of digital tools and activities, the problems arising from the information obtained, and how these problems are managed.

Accurately predicting the frequency of cybersecurity attacks is somewhat problematic, as the frequency of threats not only depends on the nature of the organization's business, but also the nature and security standard of defenses in place. Holistically, a cybersecurity attack can take on many forms: a person can deliberately or accidentally misuse the organization's computer system; electronic files can be corrupted by viruses or malware; externally, a person can commit theft or fraud by hacking into the organization's network, using against misconfiguration, software bug, or unauthorized access; and/or a person can prank or temporarily shut down the organization's business processing functions, customer service capabilities, and financial reporting (De et al.2023) and (Nifakos et al.2021).

Cyber risks (or cybersecurity risks) refer to the potential of computer or network technology failures to cause an organization's software, hardware, and other important assets to be threatened, damaged, lost, or stolen.

4. CONCLUSION

Accountants need to acquire new technical competencies in order to respond to expectations of digital transformation. In this context, technological competence is thought to be the most important to change the profession. In addition to technological progress, ethical knowledge-based innovation is another important aspect of change. The key feature of accountancy is the establishment of trust, which means that the trust is between an employer and an auditor. The 21st century technological revolution facilitated the change in accountancy at the same time. However, the expectation of trust is still a significant driver of the audit profession, and the demand for auditors' value add has increased, thus accelerating the transformation process for accountants. With artificial intelligence, accountants undertake more analytical roles, which force auditors to plan more effectively while providing and associating more reliable results. There is a need in the area of developing innovative and ethical technologies that can improve the audit's testing procedures while reducing costs. The results from recent research should definitely underline that in more recent studies on the interaction between auditors' moral compassion and trust, greater consideration should be given to the selection of task experience and designated responsibilities when both the company and the auditor participate. The effective integration of tasks with innovative artificial intelligence systems can only lead to unanticipated ethical decision-making to obtain significant value-added audit operations. These results could make auditor experts feel more confident using machine learning techniques given the current low level of trust.

As a result, it is seen that the age brought by digital transformation has led to the emergence of new roles and professions. This brings along the debate of the existence of tasks that digital transformation will take on the auditor and accountant or their contents will change. It is also thought that accountants are more responsible in terms of ethical concerns and need to question the reliability of the information obtained from the data generated by machines. Some researchers emphasize that the responsibility for detecting fraud, misstatements, and irregularities will no longer lie with accountants but lie with robots and artificial intelligence (i.e., machine) in the digital age (Weshah et al, 2021). Furthermore, it is stated that people tend to trust technology as a result of overestimating capabilities of the digital age and increasing reliance on robots and artificial intelligence. However, it is stated that these perceptions and attitudes both limit the development of critical thinking skills and reduce the auditors' skepticism in the relevant area. Therefore, it may lead to loss of common sense in some sense.

When the Fourth Industrial Revolution has changed the behaviors of companies (shifting organizational form, decentralization, control, overlapping ecosystem, responding dynamically and proactively, overcoming users' information asymmetry, better optimizing resource allocation, reducing the economic cost of business, and adapting accounting information for digital businesses), it has also redirected the new role and attitude of the accountant as a transformation partner (to build the company's reputation in the long term, to become an essential strategic partner, to increase the management accounting role, to act as a critical and supportive advisor in the face of high uncertainty and fraud, to be proactive in addition to providing basic accounting services, to be in the driver's seat of technological revolutions, and to be ready to face changes generated by technology such as risks, challenges, and beneficial models). The other related issues about the Fourth Industrial Revolution are the tax challenges of the digitalized economy, which are unrelated to the technological revolution.

Therefore, not only will market players need to question the nature, design, and functioning of corporate technologies, but they are also urged to recognize and contribute towards the societal need for requiring accountants to engage in professional formation transformations that anticipate rising environmental challenges. They should also consider the continuing and ever-closer relationship between human beings and these technologies, inter-ones, social systems, and natural ecosystems.

The existing regulatory accounting, management control, and assurance literature do not consider the abilities and implications of these technologies altogether. This indicates the existence of a knowledge mobilizing gap that might be reflected in the determination of the concrete rules, professional competencies, and development strategies necessary to produce valued transaction costs reduction and ad-hoc information delivery to intelligent users.

Further, by blurring the perceived distinction between human and non-human, such technologies might redefine present-day understandings of the key thresholds, stakeholders, reports, roles, and policies embedded in the modern corporation.

Some of these changing corporate technologies feature transformative capabilities, namely increased speed, accuracy, and volume, that might revolutionize the organization of shapes of human productive activities. They can create new organization management and control opportunities and challenges and redefine the connections between accounting, corporate governance, and decision-usefulness. This is illustrated in present-day debates surrounding corporate reliance on artificial intelligence and robotization.

The results of the present study suggest a need for understanding the financial accounting and reporting implications of the growing use of technology in businesses. This stems not just from the increasing adoption, volumes, or sophistication of these technologies, but also, more importantly, from the changes in their nature, design, and functioning.

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