

Digital transformation of accounting as a result of the implementation of artificial intelligence in accounting

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Abstract: *Today's accounting is the consequence of a long historical process characterized by a series of transformations caused by technological progress. The accounting system has been marked by a series of changes over time, and the digital age has imposed the least possible use of the traditional accounting system, generating beneficial improvements in the field of accounting. The main objective of the paper is the analysis of the current debates on the digital transformation of accounting, by reviewing the recent literature. When processing the data we used the Web of Science (WoS) and Scopus platforms. The obtained results illustrate that the penetration of technologies based on artificial intelligence in accounting, such as expert systems, automation of processes through robotics or blockchain, can add value to accounting activities by reducing errors and increasing the efficiency of accounting and financial processes.*

Keywords: *digital accounting, process automation through robotics, artificial intelligence, blockchain*

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1. Introduction

AI is seen as an industrial revolution, with the aim not of replacing people, but of increasing their capabilities and productivity of work. Although AI is viewed as a technology capable of

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making computers the same or even smarter than humans, which provides accurate results, replacing and surpassing, in some cases human effort, AI systems do not have the ability to reproduce human intelligence. The reasoning of "artificial intelligence vs. human intelligence" is a topical issue, both among practitioners and academics, focused on various aspects related to the future perspectives of some professions, as well as how humans and machines/robots could function effectively, or not, together.

Supporters of the AI revolution see the automation of the accounting profession opening up a new page in the field of accounting and how AI will change roles in the organization. The new generation of machine learning systems will have a significant impact on the economy and business, but will lead to a new lifestyle and, why not recognize, even side effects. In the digital age, where every aspect of life is influenced by AI systems, we need to recognize the opportunities they offer and build the most appropriate ways to collaborate on the human-machine binomial. The accounting industry has been directly influenced by the evolution of information technology (IT). Traditional accounting has begun to transform by introducing software used in core business, such as inventory tracking, payroll, and continuing to develop and introduce Company Resource Planning (ERP) systems. Today, accounting uses cognitive technologies, such as machine learning, robotic process automation (RPA), and the storage of information in the cloud associated with artificial intelligence (AI) (Lacurezeanu et al., 2020).

The accelerated development of technology, supported by the development of the economy, facilitated the emergence of the era of artificial intelligence, which exerted a significant influence on all aspects of life. Lately, many researchers have focused on the impact of AI's penetration into the economic field. In this context, the paper *Digital transformation of accounting as a result of the implementation of artificial intelligence in accounting* is based on technological progress in general and the accelerated introduction of AI in accounting, in particular. The purpose of this paper is to analyze the technological progress in the field of accounting and the impact of the accelerated penetration of AI. Thus, the main objective of the paper is to highlight the opportunities offered by the digitalization of the accounting profession, by implementing the concepts of RPA, AI and blockchain.

The methodology of the research involves collecting data from the literature on the challenges that accounting is currently facing and the path taken by accounting, from the traditional method based on double registration, to the triangular method called the Triple-Entry method. Also, papers on the digitization of accounting were analyzed, especially on the key concepts Robotic Process Automation, Artificial Intelligence, Blockchain and their impact on the future of accounting, using data platforms Web of Science and Scopus.

The results obtained from the analysis and interpretation of data show the predisposition of accounting activities towards automation through robotics and how AI applications have the ability to analyze data and establish connections between them. It also highlights the benefits of blockchain technology and whether they are fully available, providing security for

accounting activity by applying the triple entry method. The study helps to improve knowledge about the potential of emerging technologies for accounting services.

2. Literature review

Technological evolution is the trend that imperiously influences the business world and facilitates familiarity to a constantly changing work environment, determined by digitalization. With "the use of the internet, mobile applications and social networks increasing, more users are coming online, and service providers are developing their services and resources and infrastructure to support them" (Krájnik & Demeter, 2021). The solutions offered by the digital applications will generate significant improvements, more efficient services and will produce added value to economic agents, both in the field of services provided and in the use of resources and infrastructure that supports them.

Everyday life is increasingly influenced by AI-based applications, for example mobile phones have introduced applications that can understand speech, fill in words while writing text and offer advice in the spoken language (Makridakis, 2017). Technological progress has led from the transition of the Watson computer to AlphaGo and DeepMind, and AI is improving thanks to deep learning algorithms and big data science. These state-of-the-art computers have the ability to learn on their own using the "software writing software" (Parloff, 2016) principle. The path taken by the implementation of AI applications in the field of accounting can be traced back to the 1980s, when a number of academics and practitioners conducted research on the application of AI in auditing, taxation, financial accounting, management accounting and personal financial planning (Stancheva, 2018).

Baldwin et al. (2006) stated that the development and use of expert systems (ES) in the field of accounting is one of the most studied areas. ES are software programs that explore people's behavior and expertise, archive human knowledge and experience in order to turn them into rules, in an attempt to perform accounting tasks (Suton et al., 2016). Thus, an attempt was made to develop adapted ESs for the analysis of decision-making processes used in accounting (O'Leary, 1987). However, over time it has been shown that SEs do not have the necessary potential to make accounting decisions (O'Leary, 2003), being able to repeat the same mistake (Makridakis, 2017), without the ability to learn. "In addition to these early, even quite primitive attempts at automation, there is the eternal desire of accountants to improve the efficiency and effectiveness of their work and to add more value to business" (Stancheva, 2018).

Technological advances in AI have led to machine learning systems, which will contribute to a change in the roles of the professional accountant for the organization (ICAEW, 2017). This will have a significant impact on the economy and the business environment, also imposing a new lifestyle, with sociological side effects (Dirican, 2015). By digitizing accounting, in addition to the implementation of AI-based technologies, the activities of professional

accountants are adapted to maximize the capabilities of digital technologies. In this context, organizations are re-evaluating their potential in relation to the digital knowledge society, with knowledge management (Bencsik & Horváth-Csikos, 2018), giving high priority to the development of new products and services (Bathla, 2018). Part of this transformation, known as the Industrial Revolution 4.0 or Digital Transformation (Racsco, 2017), focuses on advanced digital solutions and technologies, including big data (Vukmirović et al., 2018) computing, AI, blockchain, robots, cloud computing, and the use of virtual reality.

Over time, blockchain technology has received several definitions, of which the most often accepted are:

- blockchain is a publicly distributed registry (Zhao et al., 2016);
- blockchain is a meta-technology, it combines several technologies (Mougayar, 2016).

Thus, we can say that blockchain is defined as a public register of transactions, or a series of encrypted and anonymized blocks. The introduction of blockchain technology in accounting indicates a migration to storing transactions in a decentralized public registry and reliable accounting (Ali, 2017). Nowadays, blockchain technology is used to simplify digital money transactions. Blockchain technology was originally created to support transactions with bitcoin cryptocurrency, based on a network of nodes or computers, without being controlled by a central unit. Therefore, this technology can be considered secure, thanks to the new cryptographic system used (Yu et al, 2018). However, Pedreño et al. (2021) say that "whoever controls the maximum number of validation nodes can control the direction in which Blockchain evolves".

In order to highlight the evolution over time, the interest of accounting practitioners and researchers in the implementation of technological progress in accounting, we have carried out a meta-analysis visualized in **Table 1**, correlation query: *process automation by robotics (RPA) - artificial intelligence (AI) - blockchain*.

Table 1 – Meta-analysis of the literature on emerging applications: process automation by robotics, artificial intelligence and blockchain

Year	Author	Publication title	Research results		
			Process automation by robotics (RPA)	Artificial intelligence (AI)	Blockchain
2016	Sutton, S, Holt M., Arnold, V.	<i>The reports of my death are greatly exaggerated — Artificial intelligence research in accounting</i>		The benefits of implementing AI in accounting and financial reporting processes have shown that cognitive technologies significantly reduce the time required to perform certain accounting activities,	

Year	Author	Publication title	Research results		
			Process automation by robotics (RPA)	Artificial intelligence (AI)	Blockchain
				decrease the number of errors, improve the real-time reporting process, help real-time monitoring of assets and stocks, facilitate audit missions and contribute to more accurate financial forecasts.	
	Yli-Huuno, J., Ko, D., Choi, S., Park, S., Smolander, K.	<i>Where Is Current Research on Blockchain Technology? – A Systematic Review</i>			Blockchain is a decentralized system used in recording transactions in a public ledger visible to all users. The application ensures anonymity, security, privacy and transparency of users. Researchers' interest in blockchain has increased since 2013 and has shown that it is used not only for bitcoin trading, but also for the conclusion of smart contracts, property licenses, voting, etc.
2017	Kokina, J., Davenport, T.	<i>The Emergence of Artificial Intelligence: How Automation is Changing Auditing</i>		AI's analysis of the benefits of accounting and financial reporting processes reveals that cognitive technologies significantly reduce the time of performing accounting activities, reduce the number of errors, and improve the real-time reporting and monitoring process.	
	Vasarhelyi, M.A.	<i>Toward Blockchain-Based Accounting and Assurance</i>			Blockchain technology is under development and is expected to be as revolutionary as the internet. The concept of triple

Year	Author	Publication title	Research results		
			Process automation by robotics (RPA)	Artificial intelligence (AI)	Blockchain
					entry accounting can only be an adaptation to the existing world, but insufficiently advanced to be used in the future in an ever-changing world.
2018	Moffitt K., Rozario A. M., Vasarhelyi M. A.	<i>Robotic Process Automation for Auditing</i>	The specific features of RPA in accounting are: the involvement of a significant amount of human effort in the execution of processes, actions to be repeatable at a clear interval of time, and the resolution of tasks to be based on a well-established set of rules. For the monitoring of the RPA introduction process, a "roadmap" can be used, which takes into account the stage of understanding the processes to be automated, the stage of standardization of the information and the stage of testing the operation based on real data.		
	Stancheva, E.	<i>How artificial intelligence is challenging accounting profession</i>		With its ability to reshape the future of the accounting profession, AI can be significantly improved if it is considered as a complement to human intelligence, thus directing the role of the accountant to management functions. In this context, professional accountants are forced to collaborate with specialists in AI-based applications, for	

Year	Author	Publication title	Research results		
			Process automation by robotics (RPA)	Artificial intelligence (AI)	Blockchain
				the development of applications that can solve the accounting problems in the most efficient ways.	
	McComb, J.M., Smalt, S.M	<i>The rise of blockchain technology and its potential for improving the quality of accounting information</i>			Blockchain innovation has the ability to disrupt the path taken by accounting information in recording, organizing, verifying and disseminating it. The accounting system based on blockchain technology is being developed, however its widespread adoption and implementation is still in its infancy.
2019	Cooper, L.A., Holderness, D.K., Sorensen, T.L., Wood, D.A.	<i>Robotic Process Automation in Public Accounting</i>	Although robots are a technological innovation under development and implementation in accounting, accounting firms use RPA in the work of recording inputs, processing and data provisioning. Although robots provide efficiency to the work of professional accountants, they will not reduce the number of employees.		
	Peng, Y., Chang, J.S.	<i>An Exploration on the Problems of Replacing Accounting Professions by AI in the Future</i>		Professional accountants believe that AI will only replace manual accounting work, especially the usual and repetitive tasks. For example, the journal ledger and financial statements are already	

Year	Author	Publication title	Research results		
			Process automation by robotics (RPA)	Artificial intelligence (AI)	Blockchain
				automatically generated using accounting software. Practitioners' opinion is also divided, i.e. some believe they are ready for the implementation of AI in accounting, but others consider themselves threatened by its penetration.	
	Demirkan, S., Demirkan, I., & McKee, A.	<i>Blockchain technology in the future of business cyber security and accounting</i>			Researchers believe that blockchain could be effectively introduced into the realm of accounting and provide cyber security. The applications used by blockchain technology have applicability not only as an integral part of a cybersecurity system, but also as part of an accounting system based on accuracy, transparency, decentralization and financial trust.
2020	Lacurezeanu, R., Tiron-Tudor, A., Bresfelean, V.P.	<i>Process automation through robotics in auditing and accounting</i>	RPA is considered efficient in managing claims and debts regarding the database of customers, suppliers, debtors, creditors, issuing / receiving and processing invoices, making payments on the due date.		
	Kovalenko, S.N., Kalutskaya, N.A., Bolvachev, A.I., Prodanova, N.A., Sotnikova, L.V., Shevchenko,	<i>Artificial intelligence in the accounting profession</i>		Accounting, supported by AI-powered digital technology, enjoys popularity at the expense of traditional accounting. This is supported by the advantages offered,	

Year	Author	Publication title	Research results		
			Process automation by robotics (RPA)	Artificial intelligence (AI)	Blockchain
	O.P.			including cost reduction, anonymity, decentralization, courtesy. Organizations are also pleased with the variety of services offered and areas of applicability.	
	Cristea, L.M.	<i>Emerging information technologies for the practice of the accounting and auditing profession</i>			The penetration of blockchain technology in the financial sector provides security for recorded transactions, due to the use of smart contracts, which confirm the transfer of data / information between participants.
2021	Mookerjee, J., Rao, O.R.S.	<i>A Review of the Robotic Process Automation's Impact as a Disruptive Innovation in Accounting and Audit</i>	Automating accounting through robotics has the power to replace a significant part of the work of accountants, which will diminish the basic roles of accountants. RPA has completely changed the accounting system. Among the tasks of future accountants there is financial reporting for the company's consulting, which has evolved in response to technological innovation, being simpler, faster, more efficient and more reliable than ever.		
	Krájník, I., Demeter, R.	<i>Artificial Intelligence Approaches In Finance And Accounting</i>		The implementation of AI-based technologies is the key to the competitiveness of economic agents in the future. AI, along with machine learning,	

Year	Author	Publication title	Research results		
			Process automation by robotics (RPA)	Artificial intelligence (AI)	Blockchain
				cannot replace human intelligence, but it can support it. The main benefit of these technologies is faster access to real-time information from multiple sources for professional accountants, later used to provide timely advice.	
	Pedreño, E.P., Gelashvili, V., Nebreda, L.P.	<i>Blockchain and its application to accounting</i>			Blockchain is a distributed ledger technology with special attributes. Distributed ledger technology can be defined as a decentralized database, managed by various participants, that could be adapted to accounting much better than blockchain. Of note, it is that not all distributed ledger technologies are blockchain technologies.

Source: Author's own processing

3. Emerging AI-powered applications implemented in accounting

"The history of Artificial Intelligence is a history of fantasies, possibilities, demonstrations and promises. Ever since Homer wrote about the mechanical "tripods" that were waiting for the gods for dinner, imaginary mechanical assistants have been part of our culture. However, it is only in the last half-century that we, the AI community, have been able to build experimental machines that test hypotheses about the mechanisms of intelligent thinking and behavior, and thus demonstrate mechanisms that previously existed only as theoretical possibilities." (Buchanan, 2005). In other words, people have the tools to both analyze the predictions regarding the nature of the thinking itself and solve practical tasks.

Many of the scientific or engineering problems have already been solved, but, at the same time, there are others waiting to be solved. A number of practical applications in the field of

digitalization are currently used and, let's not forget that the future is unlimited. Artificial intelligence (AI) is one of the emerging applications facing the digital sphere. However, the concept of "artificial intelligence" is a source of confusion, since it can be interpreted as the opposite of real intelligence (Poole, Mackworth, 2017). In any situation, we can distinguish the real from the false, the natural from the artificial, means offered by nature and means created by man – artificial. It can be argued that intelligence is different: there can be no false intelligence (Poole, Mackworth, 2017). Intelligence is defined by external behavior, which denotes that any intelligent action assumes that you are intelligent. Thus, artificial intelligence can be considered a real intelligence, created artificially.

Thus, AI is considered a "determining technology of the future" that has the ability to stimulate intelligent behavior in machines and perform cognitive functions that, until recently, were considered specific only to the human mind: perception, learning, creativity, interactivity, reasoning, problem solving. In other words, AI includes systems or machines that mimic human intelligence, to carry out various activities of everyday life and that can be improved based on the information collected. The most commonly accepted definition of AI belongs to the scientist John McCarthy, given in 1955. He stated that "it is about Artificial Intelligence when a machine behaves in a way that can be considered intelligent, if it were about man".

3.1. Impact of artificial intelligence (AI) on the Accounting System

A form of AI is also considered machine learning, built to recognize certain patterns, and accurately predict an outcome. Nowadays, very little machine learning is introduced to accounting software, but this will undergo changes in the near future. As AI develops, large software companies will integrate it into the applications used in accounting evidence, which will allow accountants to provide more information to their customers in the shortest possible time. We consider that machine learning is applied to general accounting applications to analyze historical and pending transactions, predict future cash flow without spreadsheets, analyze sales trends, and suggest purchases that maintain ideal inventory levels.

A relatively new phenomenon in economic activity, AI gives the possibility of making different applications in various fields, making its presence felt in accounting as well. The application of AI in economics is argued by the development of online commerce, virtual reality, industrial robots (Harari, 2018), having the ability to collect information and examine data for the preparation of decision alternatives and decision-making.

3.2. The impact of robotic process automation (RPA) on accounting

Process automation is dependent on robots and RPA, respectively, and the working obligations of employees depend on their ability to perceive and analyze. Cohen et al. (2019) reported that RPA can be successfully introduced and used by any company or department, being considered a software that imitates the activity of people in performing repetitive,

structured, rules-based tasks. RPA is a software embedded in the existing IT infrastructure at the company level, able to perform various operations, such as entering - processing invoices and transactions, filling in documents, online/offline forms, drawing up reports, drawing up - updating databases, checking - validating data, thus freeing employees from certain monotonous tasks. Due to the fact that many accounting-specific activities are repetitive and involve interacting with multiple systems, encompass high levels of transaction processing and require timely decision-making, the potential for using RPA in this area is high (Zhang, 2019). In other words, RPA facilitates the efficiency of the business process and contributes to the reduction of human error and costs. However, it *is not an intelligent software*, since it cannot familiarize itself with the changes and cannot make complicated decisions.

The use of RPA in accounting provides the opportunity to improve the quality of the services offered, although there are a number of reservations about the conclusion that the use of RPA will lead to the substitution of people with robots. In reality, this automation through robotization will generate an adaptation of the role of the professional accountant towards the allocation of more time to the analysis and forecasting activities, to the detriment of the routine ones (Cooper et al., 2019). Historically, the accounting process has implemented throughout its development a series of tools and processes made with the help of computers, which have replaced several manual steps, without replacing the professional accountant.

3.3. Blockchain – switching from double entry to triple entry

The development of organizations requires the sharing of accounting information with external users, such as potential suppliers, investors, creditors or even state institutions. However, external users avoid accounting due to the lack of guarantee of the reality of the data provided by the organizations, which implies requesting the services of auditors. It is no wonder that the next leap in the evolution of accounting is precisely the elimination of their services, considered to be a third party. This does not mean that the double-entry accounting system is outdated, but a new registration method is needed to remove the lack of direct trust between the organization and external users.

Until 2009, such an accounting method was considered impossible, but with the advent of Bitcoin and blockchain technology, accounting also evolved. Bitcoin is the revolutionary innovation that allows for remote transfer of value without involving a third party to prove the transaction made. This method uses a decentralized form of transfer/payment based on blockchain technology and a shared accounting ledger. Due to the fact that all parties to the transaction hold a full copy of the updated trading ledger, the parties reach a consensus on the transfer without further evidence. As a result, the new registration concept called triple-entry accounting was born.

The concept of "three-part evidence" appeared in 1986, at the initiative of Professor Yuji Ijiri, according to which the current accounting system is not an absolute system, but has the opportunity to evolve to a triple entry accounting focused on how accounting information facilitates the decision-making of internal management. The main difference between double-entry accounting and triple entry accounting is that the latter has three proposed basic financial statements: the declaration of assets, the statement of impulse and the declaration of force. Although intellectually interesting, his invention has long been ignored and heavily criticized as lacking a use case.

However, the research continues and, in 2005, Ian Grigg brings back to the fore the term "triple accounting", but with a completely different meaning than that of his predecessor. He, with his experience in financial cryptography, proposes a solution to eliminate errors and fraud in accounting by securing cryptographic transactions. Thus, the third registration is introduced by the appearance of the digitally signed receipt, which authorizes the transaction, which is a challenge to the double-entry accounting. In addition, the digital signature provides a decisive capacity to the receipt, since it is more relevant than double entry records. The possible problem of the lack of a receipt is clarified by sharing the records, which will allow each of the parties involved to have a copy. "*Our term triple-entry accounting recommends an advance in accounting rather than a revolution*" (Grigg, 2005). In other words, he studied the potential of recording secure transactions with cryptographically protected digital receipts, which leads us to the hypothesis that triple-entry accounting operates with two rather unclear and difficult to explain areas, namely cryptography and accounting. However, at the time of the conception of the three-entry accounting, it was not entirely clear who would act as a neutral and reliable third party to control the third shared ledger. In this context, his study had an influence on subsequent researchers who led to the emergence of bitcoin and *Blockchain*.

The research does not stop there, and, in 2014, Jason Tyra published an article in *Bitcoin Magazine* suggesting that using bitcoin infrastructure, the triple entry accounting concept recommended by Grigg is achievable and can be applied to both organizations and external users. Since that time, triple-entry accounting associated with *blockchain* technology, has become the most accepted definition. Bitcoin is the first functional model of triple-game accounting. The industry has already witnessed the massive potential of accounting with *triple inputs with blockchain*.

In 2016, Deloitte stated that blockchain technology, along with triple-entry accounting, is the next step in accounting and offers companies the opportunity "to keep separate records based on transaction receipts, companies can write shares directly to a common ledger, creating an interconnected system of sustainable accounting records" (Deloitte, 2016). It is also mentioned that, although the information will be accessible through the third public register in a much faster and efficient way, the need for requests and confirmations can be

canceled and will no longer require substantive testing in the audit process. However, the audit process will take place, but will focus more on comprehensive control of all transactions, representing a major breakthrough.

Some researchers believe that triple entry accounting is a simple idea. When making transactions, a receipt is signed using digital signatures of users. Thus, we can argue that it is an improvement of the current accounting system, due to the fact that the accounting records made are visible to all parties involved in transactions and are cryptographically sealed with the help of the "third record", made by the network itself (Pedreño et al., 2021). The final receipt is digitally signed by all parties involved, and thus becomes a proof of the transaction, respectively the "third entry". According to Ibáñez (2018), the triple record implies the direct connection between two operators and the registration approved by the network of nodes. Operations are recorded automatically, without the involvement of third parties, so in decentralized registers everyone simultaneously becomes responsible for the operations carried out. The consequence is that professional accountants are not obliged to issue paper documents (delivery note, invoices) and verify the concordance between the accounting records made.

González (2018) also argues that, given that transactions are recorded in the register of both parties, in the future the need for a third party, that is, the block chain, will be imposed, thus generating a Triple-Entry system that will simplify and significantly automate the accounting system. Triangular accounting, cryptography and blockchain technology are a form of objective reality, namely: they are two parts that shape a variant of past events with the help of an exportable system, individually verifiable and easier to manage by computers. The simple adoption by organizations of accounting by the triple method, can provide two significant benefits:

- facilitates the work of auditors, as they will be able to verify much easier and faster the data contained in the financial statements;
- the annual financial statements and the information presented by them will be much more secure and reliable.

In this way, "blockchain technology will continue to advance, going through a process of improvement and technical change until it reaches maturity" (Fullana & Ruiz, 2021). Surely it will continue to connect with other technologies, such as AI or *cloud* services, as well as promote research in those areas where it can generate greater benefits, among which, accounting.

Conclusions

When we talk about a modern world we tend to imagine a world in which technology is as essential as air, being present everywhere, helping and guiding people whenever this need arises. This is very close to materializing, and the key driver of it is the process that we call

digital transformation. This process will involve a fundamental change in the way economic entities will operate on a daily basis. Moreover, it will also involve a cultural change that will force economic entities to challenge the traditional way of doing business. In this regard, this paper supports researchers, but also stakeholders in the future of accounting, sketching the general direction of research topics, thus disclosing the new trends and applications in this field, most of them focused on blockchain technology.

Following the review of the literature, we have seen that emerging applications such as RPA, AI and blockchain are enjoying a great deal of interest from researchers, who are focused on its challenges and applicability in the accounting field. Many of them see blockchain technology as the future of accounting. We believe that in the near future these research topics, in terms of emerging technologies, will become extremely important, both for researchers who will focus on the different ways in which these technologies will be able to bring added value, but also for practitioners who will have to adapt and learn how they can be used. Knowing these research directions is extremely important, helping professionals to be prepared for the changes that will occur in the field of accounting in the near future, these research topics actually shaping the future of the accounting field. Blockchain is considered a new technology, but built on the basis of already existing technologies such as the internet, private key cryptography and the protocol that governs stimulation. Together, they lead to a secure process that ensures the facilitation of digital transactions without the involvement of a third party. In other words, blockchain is an alternative accounting model.

Existing studies of emerging AI-powered applications and their use in accounting, although limited for now, still offer prospects for the future. In the near future, blockchain technology will have the ability to integrate the Internet of Things (IoT), artificial intelligence (AI), and other emerging technologies to deliver higher-quality services to organizations. However, blockchain still remains at the experimental technology stage, being applied in some areas on a small scale.

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