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ACCOUNTING OFFICES AND ACCOUNTING 4.0: A CASE STUDY IN THE MUNICIPALITY OF SANTO ANTÔNIO DE JESUS – BA

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ABSTRACT

The present work addresses the technological innovation of recent times brought by accounting 4.0. The main objective of the present study was to analyze whether accounting offices are prepared for the new era of computerization, identifying the challenges and opportunities in this process of data automation. The methodologies used were descriptive and qualitative research, of the case study type, in which a questionnaire was carried out and applied to collect objective and specific data from the research, which obtained 16 responses from accounting offices operating in the city of Santo Antônio de Jesus – Bahia. With this, the results of the diagnosis highlighted that the offices of Santo Antonio understand how digital accounting and the automation segment can bring progress in accounting activities, especially the optimization of time, better customer service, despite this, they complain about difficulties with the use of technological resources. Finally, it is necessary to prepare before training, so that offices can adapt to the demands of accounting 4.0.

Keywords: Process Automation. Accounting 4.0. Computerization.

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INTRODUCTION

The accounting area, like so many other sectors of the market, has been suffering great impacts as a result of technological and procedural advances in recent years. This new reality has become more dynamic and complex in commercial and social relations, generating a strong influence in the information age. In addition, it is essential that information is shared as a resource in organizational activities, including the operational and strategic areas. The fourth industrial revolution also brought the valorization of intellectual capital as a competitive market differential.

> Accounting 4.0 is a concept resulting from this new organizational context, which proposes a more strategic view of technological resources in the performance of accounting professionals, in which they assume a more proactive, consulting posture, focused on the management of intangible assets and the decision-making process. The use of technology plays a fundamental role in the accounting 4.0 environment, mainly because it contributes to the generation of increasingly accurate and timely information, which enables decision-making in a more assertive and faster way (ZWIRTES; ALVES, 2015).

It is understood that, in the current accounting structure, new legislation, tools and solutions continuously emerge to stimulate and give reliability to the economic and financial data generated by companies, thus simplifying the processes that involve the verification of information. Therefore, the main challenge for accounting professionals has been to keep up to date with the demands that these innovations establish for the exercise of their activities. Some of these professionals, because they have been in the market for many years, working with outdated tools, have difficulties adapting to the technological changes of the profession, and suffer from the weight of unpreparedness, losing clients and opportunities for growth in the job market.

Given the assumption, it is clear that accounting firms need to present an innovative behavior and look at the changes that information systems have been introducing, otherwise, they will be doomed to frustration in their careers and in the job market. In view of this understanding, this research seeks to answer the following problem: What are the challenges for accounting offices in the municipality of Santo de Antônio de Jesus – BA to adapt to the technological advances of accounting 4.0?

Thus, the general objective of this article is to identify the challenges for accounting offices in the municipality of Santo Antônio de Jesus – BA to adapt to the technological advances of Accounting 4.0, with the following specific objectives: To discuss accounting 4.0 and its importance, to describe the reflections evidenced with the use of technology to digital accounting and to highlight blockchain *technology* and its contribution to accounting 4.0;

The present work was formulated in order to show that current technologies can reshape the current labor market. However, the clarification and opportunity tools of accounting firms need to be kept up to date in the face of technological innovations, such as *blockchain.*

With regard to academia, this study aims to contribute to the future training of students in the areas of Accounting, Administration, Economics and related Sciences, offering new perspectives on the accountant of the future. In which he has enough time to improve his knowledge and availability to analyze data generated by computer systems, thus, the knowledge addressed can also be used as a basis for new research on the subject, stimulating more comprehensive and distinct discussions.

THEORETICAL FRAMEWORK

ACCOUNTING 4.0

The origin of accounting 4.0 is directly linked to industry 4.0 or also known as the fourth industrial revolution. It is worth considering that this current moment is being marked by mechanization and technological inventions adding to the change of this new generation of accounting professionals.

Simon (2016) reports that some experts see the term 4.0 as a disruptive technology and others as evolutionary, so that with the advent of the technological revolution, the connectivity and interaction of production systems is 30% faster and 25% more efficient.

Accounting offices are going through several changes in the technological scenario, such changes are currently called by the term of a new digital accounting. Advances from this updated accounting have brought significant improvements in the accounting field. Technological automations allow services to be done much faster, safer, easier, and more economically.

According to Costa (2017), argues that the impact of industry 4.0 goes beyond simple digitalization, passing through a much more complex form of innovation, based on the combination of multiple technologies, which will force companies to rethink the way they manage their business and processes.

Adding Xavier et al. (2019), accounting, as it is a means of providing internal and external data, is one of the areas that have suffered the most impacts with the development of technology, due to the fourth industrial revolution, responsible for the emergence of new demands.

In this way, it is clear to see the changes that technology has brought and has been bringing to accounting professionals, resulting in more practicality and security within

organizations. In addition, technology helps its managers with regard to the decision-making process and the preparation of strategic plans.

Oliveira and Malinowski (2016, p.2) argue that:

> [...] It can be said that technology, combined with accounting, plays an effective role in the implication of the information necessary to produce useful management information for the entire organization and its hierarchical levels.

Within this context, in addition to being part of decision-making, Current Accounting helps in the control and planning of activities, to monitor whether what is desired is being achieved, allowing managers to apply strategies in order to improve future performance.

According to Gularte (2021), the main objective of accounting 4.0 is to make accounting processes safer and more agile. With the use of the internet and technology, it is possible to have a faster and safer solution to the situation that the customer needs, whether to answer questions or even send some necessary information.

Observing this scenario, it can be understood that digital accounting, in addition to facilitating and optimizing time in offices, is also capable of acting in a consultative way, that is, promoting positive efficiency in financial management and thus pointing out a better way to reduce costs, using tools that help tax planning for each company.

TECHNOLOGICAL ADVANCEMENT AND ITS CHALLENGES

The internet is a device that companies usually commit to using constantly, it is even widely used in the process of receiving and sending documentation, in which the use of technological means has been replacing paper and in its counterpart, greater data security is obtained in addition to contributing to the environment. Given this, many accounting firms use cloud-based systems to optimize all their information anytime and anywhere in the world, just connect by logging in and immediately access the data they want.

Oliveira and Malinowski (2016) report that in recent decades there have been significant changes in the area of accounting, as computerization and the evolution of technological areas have become essential, due to the support of the manager's decision-making. Information Technology as well as Information Systems are tools present in the accountant's daily life.

With the optimization of accounting processes, the working conditions of professionals in the area improved significantly, as the new bookkeeping methods allowed time savings with automation, in this way, accountants could, from then on, analyze more comprehensive and accurate reports that supported the advisory function of accounting.

Digital transformation has reached several areas of the business market, forcing entrepreneurs to quickly adhere to new insights for capturing and sharing information. This transformation made it possible to improve the company's performance, expand objectives and enhance results. And it does not only affect the company that decides to change, but also the end customer who sometimes did not identify the need for change, and ends up seeing results in the service received (GATTI, 2020).

For accountants who are more flexible and open to change, technology has come as a great ally, however, in productivity, proximity to customers, optimization of time in relation to internal processes and even in the promotion of the company. In addition, some digital tools such as automation systems and cloud storage have significantly helped accounting firms in recent years. Rework rates due to errors tend to decrease considerably, because, in addition to process support, tools and information can be accessed from anywhere.

Pinto et al. (2020) report that the impacts of technology in the accounting sector have been instigating interest in how Higher Education Institutions (HEIs), which offer the accounting course, are dealing with this technological focus in the area. The authors noted that many studies prove the importance of HEIs adapting to the new scenario brought about by industry 4.0 and its requirements. In this sense, they should prepare professionals to work in accounting 4.0, making better use of technological resources in their training.

In view of the above, it is clear that one of the main technological impacts on the accounting profession is the lack of preparation of accounting students for the new digital era, it is noticeable that some newly graduated professionals encounter several barriers to enter the market.

BENEFITS AND CONTRIBUTIONS OF DIGITAL ACCOUNTING

The rapid advancement of technologies and means of communication has been leading part of accounting professionals to a race against obsolescence, that is, they are constantly seeking training in the technological industry. Several companies have introduced innovative and scalable solutions and business models to the market, allowing them to reduce costs and compete with long-established companies and services.

The traditional model of carrying out accounting processes that will possibly soon cease to exist is the one that is somehow updating, no longer using piles and piles of documentation scattered on the office table, and accounting systems overloaded with entries made in a totally manual way. Currently, the accounting professional does not only need to deal with complex calculations and legislation, but also improve their knowledge of technology and in relation to their business and their clients.

According to Coelho (2016), the pillars that support digital accounting are constituted by means of technologies: Internet of Things (IoT), cyber-physical systems and big data. Therefore, the accounting area was one of the most affected by technology and kept up with technological advances, which are currently able to facilitate the profession, bringing agility, inspection and transparency to the public sectors. In agreement, Borges and Miranda (2011) report that technological resources are responsible for revolutionizing and modifying the routine of the accounting area, providing improvements in the operationalization of services and customer service.

Therefore, the use of digital technologies in accounting, in addition to qualifying professionals in the labor market, will allow the increase in the productive capacity of entities from all segments. In order to develop socio-emotional skills, in order to stimulate creativity, entrepreneurship, leadership and communication.

According to Oliveira (2014), accounting evolution is directly linked to innovations involving the economic system and requires incessant changes from the accounting area, with the intention of satisfying the needs of each era. The author points out that keeping up with the continuous changes in the market brings accounting professionals progress and constant updating.

The process of technological innovation presents an evolutionary and systemic perspective capable of self-organizing, enabling the economic sustainability of the entities, being able to deal with changes that are part of its analytical framework.

ACCOUNTING SYSTEM AND BLOCKCHAIN TECHNOLOGY

It is known that in the current market there are several accounting systems and software options for process optimization, that is, its function will facilitate the use of time, making offices more productive and competitive. The accounting automation process can modify the routines, habits of the organization and the behavior of the professionals involved. The idea of optimizing makes tasks more precise and reduces margins of error.

Likewise, the structuring of a more automated and methodical environment in digital tools allows the inclusion of more effective systematization, based on software, digital documents and the like.

For Xavier and Rodrigues (2019), for information processing to occur, it is necessary to use systems (software) capable of performing the tasks determined by users. For Padoveze (2015) these systems can be identified as a set of interdependent, organized, unitary and complex elements.

It is understood that within an accounting office it is necessary to have processes, due to responsibility and attention to values and deadlines, so the accounting system becomes very relevant, especially if it is compatible with the client's system.

According to Duarte (2018):

> The next few decades will be marked by artificial intelligences acting in accounting to exponentially change the way we gather information, make decisions, and connect with stakeholders. This is because the definition of artificial intelligence is related to the ability of machines to think like humans – to have the power to learn, reason, perceive, deliberate, and decide rationally and intelligently. The benefits of artificial intelligence in Accounting can support more complex decisions in areas such as human resources, budgeting, marketing, and even corporate strategies.

In this way, offering offices security and practicality, as the vast majority of systems have cloud storage, making them accessible anywhere and security so as not to lose information.

Martins et al. (2012) report that accounting makes use of GIS as a tool for integration, processing and management of information, due to the advancement of technological development. Within an ERP, the SIC enables the optimization and use of information to support the company's economic management process, addressing the tax, analysis and managerial areas. (PADOVEZE, 2010).

The main function of the Management Information System is to plan and control production effectively, it also establishes tools that develop the company's billing, the verification of accounts payable and receivable, inventory calculation on the day, payroll and tax accounting as the calculation for tax collection, in addition to contributing to decision-making in the face of the monitoring and planning of the processes of each entity.

mastermaq

According to Beto Tamm, the company's commercial director, Mastermaq is a software that has been on the market for more than 27 years. In addition to being in accordance with SPED, it has been offering innovation and competitiveness in the market, providing benefits such as: Contribute to the conduction of payroll activities, tax management and asset control. The service is 100% online, managing to manage contracts, compliance with other accessory obligations, facilitating the sending and receiving of documents to customers.

dominios

According to Thomson Reuters, a multinational media and information company founded in Canada, domains is an operating system that facilitates the service of

accounting offices, offering assistance in research related to legislation. Its online integration facilitates the entry of invoices, accounts payable and accounts receivable, managing taxes withheld ISS, PIS, COFINS, INSS, Social Contribution and others, in addition to offering 24-hour technical support.

Prosoft

Wolters Kluwer, a global publishing and information services company, says that the system is constantly updated along with the legislation, thus facilitating bookkeeping according to the guidelines, while generating documents such as balance sheets, trial balances, taxes to be collected and statements. It operates storage through the cloud, offering security so as not to lose information and data. In addition, it meets the requirements of the LCDPR (digital cash book of the rural producer), thus facilitating the calculation of data and results.

Blockchain technology

The new digital era and artificial intelligence called *blockchain* is a distributed ledger protocol, that is, a type of decentralized software that stores any and all information that can be seen and analyzed in real time from anywhere in the world, the tool has been interconnected to cryptocurrencies and bitcoin, however, it consists of data sets composed of chains or blocks, And this block incorporates multiple transactions, however, the *blockchain* represents a complete ledger of transactions, each block is validated by the network through cryptographic means containing a timestamp and in this way numerous frauds can be effectively and completely secure.

According to Salah et al. (2019), *blockchain* can be highly cost-effective in eliminating the need for a centralized authority to govern and verify interactions and transactions between all participants. The technology was built with four key architectural characteristics in mind: security of operations, storage/compute decentralization, data integrity, and transaction immutability.

In addition, the tool can also be used for document validation, financial transactions, crypto art sales, streaming services, etc... Furthermore, although there are still several challenges related to blockchain, with regard to data privacy, agility and security, the technology is unquestionable and in this concept it is very successful, even though its reputation is associated with cryptocurrencies, there is a very wide universe that can and should be explored in terms of disrespect for this technology.

METHODOLOGY

The methodology of scientific research uses paths and artifices to achieve a defined study objective. Based on an inquiry as a presupposition to insert the researcher in the study context, directing him to the development of the elaboration of the scientific essay.

> Methodology is the study of the method and its techniques. It is the path that all scientific investigation must follow so that knowledge of the scientific type is generated. [...] The methodology studies the best way to approach certain problems for the production of knowledge that can be called scientific. She is interested in the study, description and analysis of methods, their objectives, utilities and consequences. (OLIVEIRA, 2011, p. 19).

This research aimed to portray how technological innovations have impacted the accounting sectors. The assumption of this project arose through observations regarding the challenges for accounting offices in the municipality of Santo de Antônio de Jesus – BA, regarding the adaptation to the technological advances of accounting 4.0.

As for the objectives in the research, these are of a descriptive nature. According to Gil (2002, p.28) descriptive research has the purpose of:

> Description of the characteristics of a given population or phenomenon or the establishment of relationships between variables. There are numerous studies that can be classified under this title and one of its most significant characteristics is the use of standardized data collection techniques. (GIL, 2002, p.28)

As for its nature, the research is classified as qualitative. Raupp and Beuren (2006, p.92) point out that "in qualitative research, deeper analyses are conceived in relation to the phenomenon being studied. Its qualitative approach aims to highlight characteristics not observed through a quantitative study, given the superficiality of the latter".

As for its typology, the research is adjusted as a case study that has as its object the accounting offices of the city of Santo Antônio de Jesus – BA. Raupp and Beuren, (2006, p.92) complement by exposing that "this type of research is carried out more intensively, as a result of the researchers' efforts being concentrated on a certain object of study. However, the fact that it is related to a single object or phenomenon constitutes a limitation, since its results cannot be generalized to other objects or phenomena".

In order to analyze the understanding of accounting offices in relation to the adequacy to technological advances, two electronic forms were prepared Google Forms and provided via the internet. The first questionnaire addresses the questions in a general way and the second dealt with the questions in a more specific way. This tool was chosen because of the practicality in the process of collecting information, so that it could reach the

largest possible number of answers. The forms were spread and analyzed in November 2021.

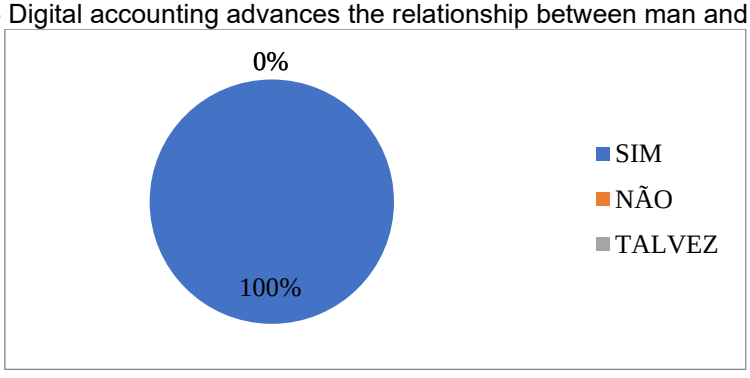
For the dimension of the number of existing offices, the scientific article by Silva (2018), published at the Faculty of Sciences and Entrepreneurship, was considered, which was possible to obtain the information that the municipality under study had 40 (forty) accounting offices As a result, the questionnaire was sent to the accounting offices through the sub-delegate of the Regional Accounting Council of Bahia, subsection of the city of Santo Antônio de Jesus, which mediated this process so that the questionnaires were forwarded to the accounting offices.

RESULTS AND DISCUSSIONS

The analysis and discussion of data are considered the central core of the research, as the common fact is that it will be interpreted as a textual analysis, that is, the central focus is a conversational analysis (GIBBS, 2009). In this way, it is possible to interpret and parameterize the data obtained during the research.

The first stage of the questions addresses the topic in general, definition, routines and automation in offices, was composed of 8 questions. The second stage presents the questions in a more specific way, evaluating the perception of the firms regarding the use of technology and the benefits for accounting activities, integrating 12 questions. It is worth mentioning that the analysis obtained 16 respondents, the others preferred not to participate.

Graph 1 - Digital accounting advances the relationship between man and machine.

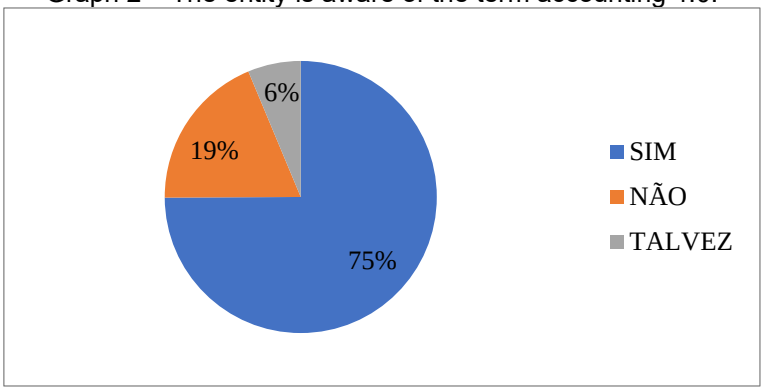


Source: Prepared by the authors (2021).

The information age has been reflected a lot both in organizations and in accounting offices, also called the post-industrial era, this scenario shows the evolution of computerization as a new language, that is, technology is able to guide man to a new way of communicating, managing and extending knowledge. Enabling a more intelligent and modern aspect of carrying out activities, making new processes more flexible in the

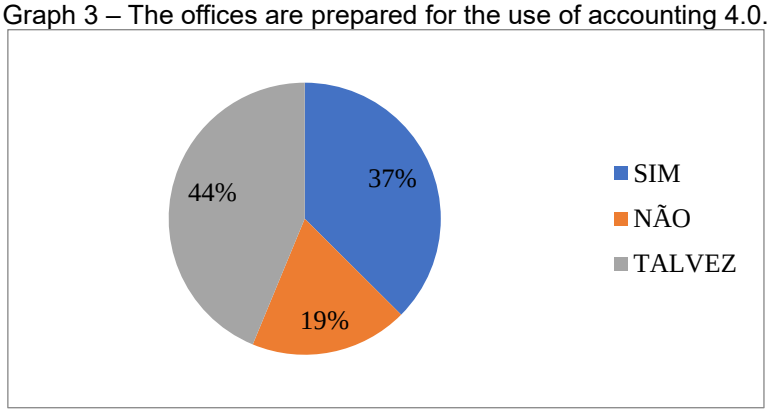
organizational sphere. With the results, it is observed that 100% of the respondents say that digital accounting would advance the relationship between man and machine.

Graph 2 – The entity is aware of the term accounting 4.0.



Source: Prepared by the authors (2021)

Graph 3 – The offices are prepared for the use of accounting 4.0.



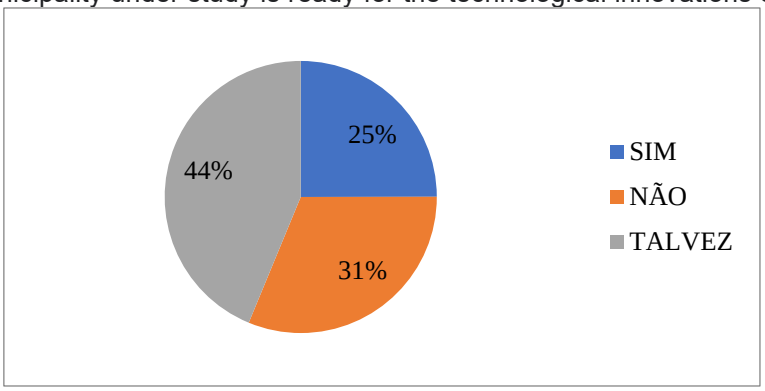
Source: Prepared by the authors (2021)

Accounting 4.0 has enabled the use of technological resources that provide the versatility to perform activities within an accounting office efficiently and effectively, demanding a more modern pace of work, enabling greater personal and professional satisfaction. In graph 2, the participants were asked if they were aware of the term "accounting 4.0", 75% said yes, 19% said no, and only 6% said maybe. In graph 3, respondents were asked if they were prepared for digital accounting, 44% said maybe, 37% said yes and 19% said no.

In Graph 4 that follows questions whether the municipality under study is prepared for this digital accounting era, 44% of the participants reported that maybe, 31% said no and 25% declared that it is. And as for the offices in graph 5, 38% of respondents said maybe, 31% said yes and no. If the answer was "maybe" and "no" they were asked to justify the reason, the main answers were, difficulties in dealing with the new, assimilating information, lack of access to technology, in addition to the need for a previous training preparation. In other words, through the answers, it is a worrying scenario, because even

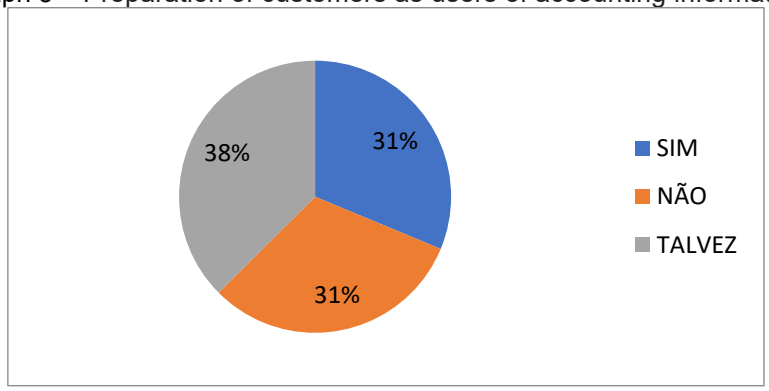
though accounting 4.0 is such a pertinent subject, there is a lack of preparation among offices, municipalities and clients.

Graph 4 - The municipality under study is ready for the technological innovations of accounting 4.0.



Source: Prepared by the authors (2021)

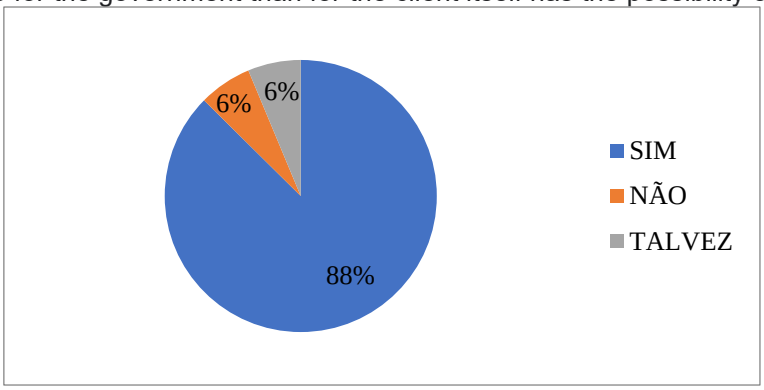
Graph 5 – Preparation of customers as users of accounting information.



Source: Prepared by the authors (2021)

It is common knowledge that every enterprise needs an accountant to leverage the profitability and success of the organization. The accountant is much more than just a "guide issuer", he is the one who will parameterize the course of companies. But this does not prevent offices from becoming obsolete due to lack of automation, that is, they will have difficulties in staying in the current market, in addition to losing space to online accounting and/or to offices that invest in technology. In the following graph, the survey members were asked if the accountant who only scans documents and issues guides has the possibility of becoming obsolete, from the perspective of the answers 88% said yes, and 6% declared no and maybe.

Graph 6 - The profile of the accountant who only works by scanning documents and issuing guides for the taxpayer working more for the government than for the client itself has the possibility of becoming obsolete.

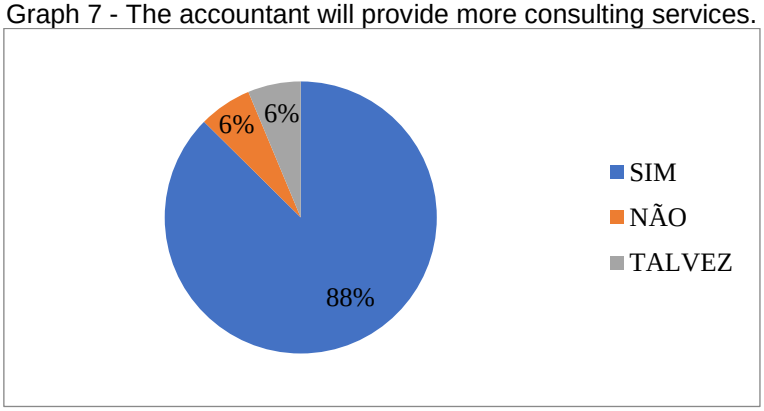


Source: Prepared by the authors (2021)

Consultative accounting has been cited in recent times, as it is a way for the accountant to be closer to companies, in addition to providing information for decision-making. It contributes to economic development, providing opportunities for the advancement of strategies in the current market, ensuring business extension.

Regarding the accountant in the future to provide consulting services, graph 7 brought the following results, 88% of the participants stated that the offices will provide a more consultative accounting, 6% said that they will not and maybe.

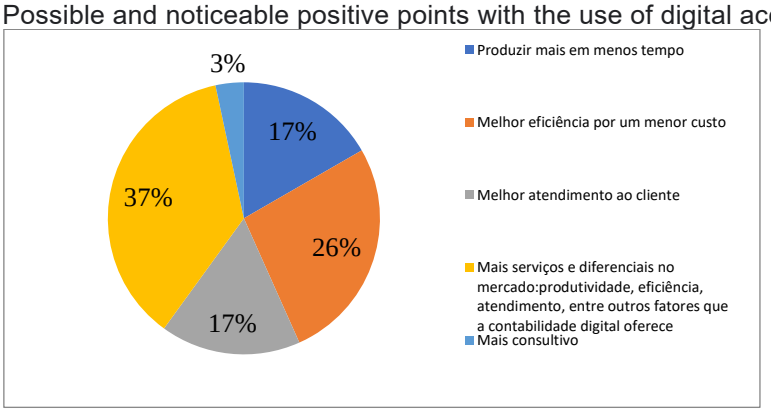
Graph 7 - The accountant will provide more consulting services.



Source: Prepared by the authors (2021)

It is noticeable that digital accounting has brought benefits and innovations in the accounting area, offering more agile services, with security and practicality. In addition to contributing to the environment, reducing the volume of prints and accumulation of paper. In other words, technological development increases professional optimism and admiration for the renewal of technology applied in the accounting area.

Graph 8 - Possible and noticeable positive points with the use of digital accounting.



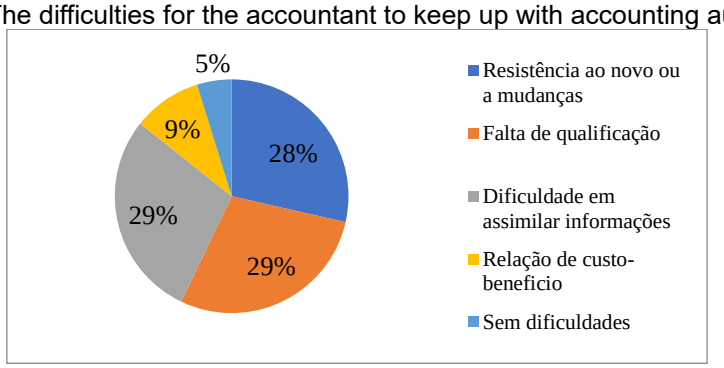
Source: Prepared by the authors (2021)

Graph 8 above shows the positive points with the use of digital accounting, 37% of the participants said that the benefits of using digital accounting are more services and differentials in the market such as: productivity, efficiency, service and other factors, 26% better efficiency for a lower cost, 17% said they produce more in less time and better customer service and 3% a more consultative accounting.

Although it has numerous benefits, it cannot be isolated that there is a certain difficulty for offices to adapt to this digital age. Referencing this, graph 9 brings references to some difficulties highlighted by the offices, 29% of the answers emphasize that they would have difficulties in assimilating information and lack of qualification, 28% resistance to the new or changes, 9% cost-benefit ratio and 5% say they have no difficulties.

Analyzing the answers, it is notorious to realize that there are still offices that prefer to work in a more "traditional" way, making it impossible to use technology in daily activities, but this type of posture cannot last for long, about the difficulties in assimilating information, when it is not understood how to apply systematic automation, it is complicated to handle the data, Regarding the cost-benefit, it is likely that the offices may not be making profits as a service provider, generating difficulty in qualifying and adapting to innovations. These 5% who said they have no difficulties demonstrate that they have the technological structure to serve their customers.

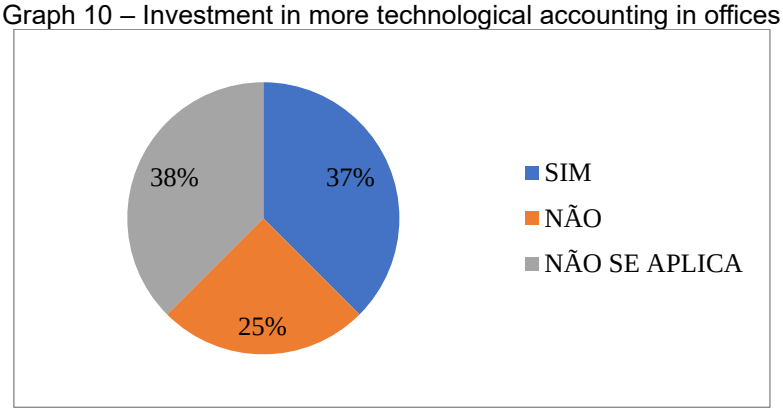
Graph 9 - The difficulties for the accountant to keep up with accounting automation.



Source: Prepared by the authors (2021)

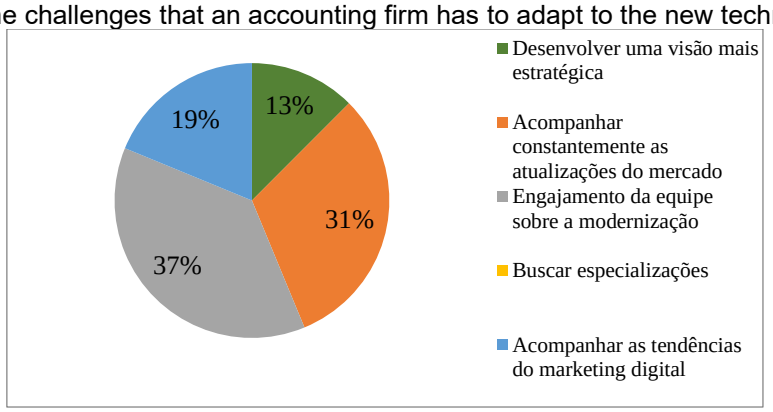
There are several ways to invest in technology in accounting offices, as shown in chart 10 below. He shows that 38% said they do not apply, 37% said they do, and 28% said they do not. The following aspects for investment in technology were mentioned by the participants, among these are continuing education, use of systems that integrate the team with customers, technologies that facilitate self-service and service, preparatory courses. But it cannot be isolated that 25% still do not invest, one of the justifications signaled was that because they are starting their careers they still do not have the resources to invest in technology.

Graph 10 – Investment in more technological accounting in offices



Source: Prepared by the authors (2021)

Graph 11 - The challenges that an accounting firm has to adapt to the new technological era.

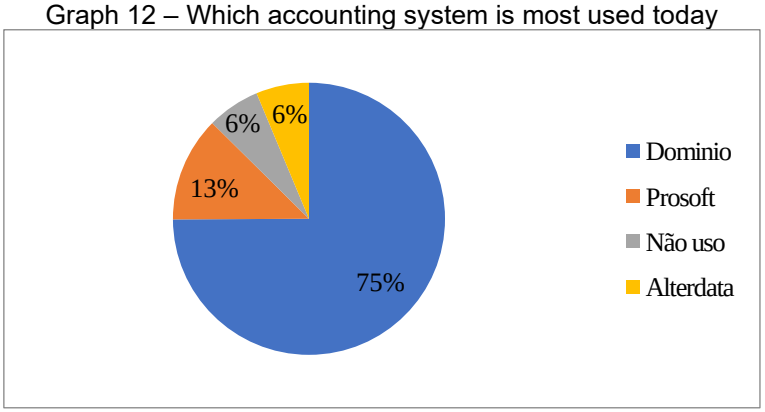


Source: Prepared by the authors (2021)

Responding to the challenges for adapting to the new technological era referring to graph 11 above, 37% of the participants stated that it would be the engagement of the team, 31% assume about the difficulties in keeping up with market updates, 19% guarantee the possibility of following accounting marketing trends and 13% that it would be developing a more strategic vision. It is common that with so many modifications there is part of the team's resistance, it is common for a manager to implement software without prior adjustment, there will certainly be disharmony with the team, but continuous training is

necessary among the team so that both feel safe and welcomed, enabling them to see the advantages of this change.

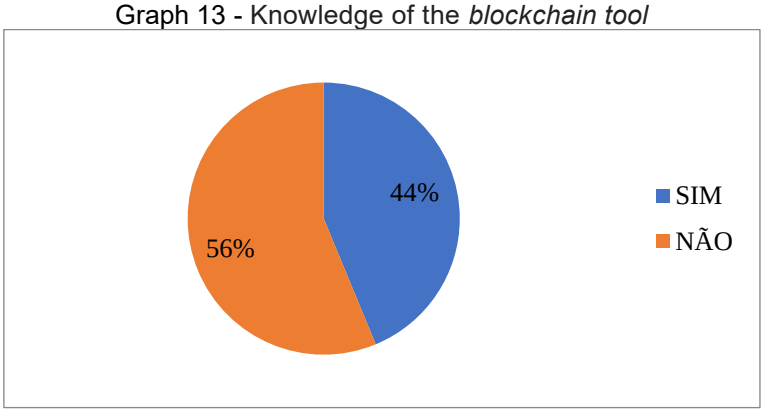
Graph 12 – Which accounting system is most used today



Source: Prepared by the authors (2021)

In view of the exposed in graph 12, of the participants 75% use the domain system, 13% Prosoft, 6% use alterdata or do not handle accounting software. The automation of processes through software promotes greater autonomy, so tasks will be performed faster. In addition, the use of accounting systems preserves communication gaps between sectors.

Graph 13 - Knowledge of the *blockchain tool*

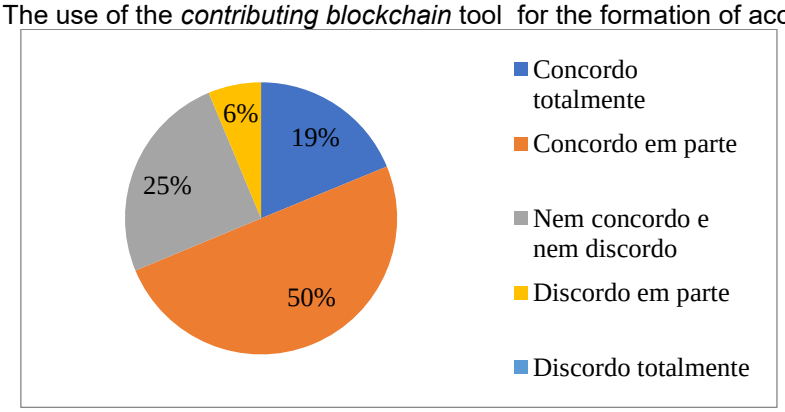


Source: Prepared by the authors (2021)

According to Rodrigues (2017), *cryptocurrencies* can be defined as digital currencies and *blockchain* refers to a technology for the storage and security of electronic information. Thus, transactions are stored through blocks of digital data that are interconnected with each other, and are validated by computational mathematical processes, known as mining, before being inserted into the data chains.

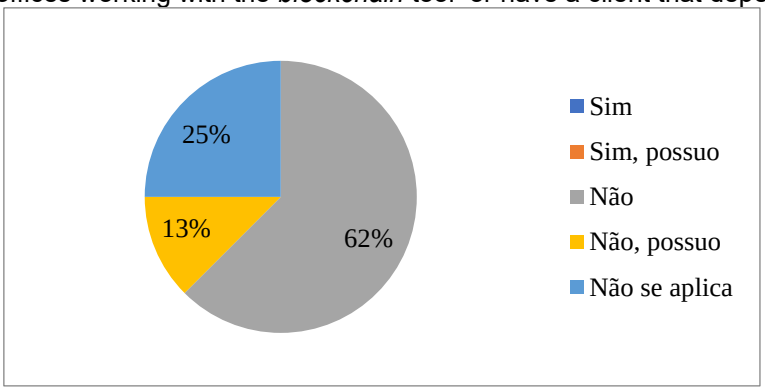
Unfortunately, bank statements take a few days to generate these reports, but with blockchain all these transactions are stored in real time, thus making it easier to import into software, eliminating any fraud in the financial system.

Graph 14 - The use of the *contributing blockchain* tool for the formation of accounting 4.0.



Source: Prepared by the authors (2021)

Graph 15 - The offices working with the *blockchain* tool or have a client that depends on this tool.



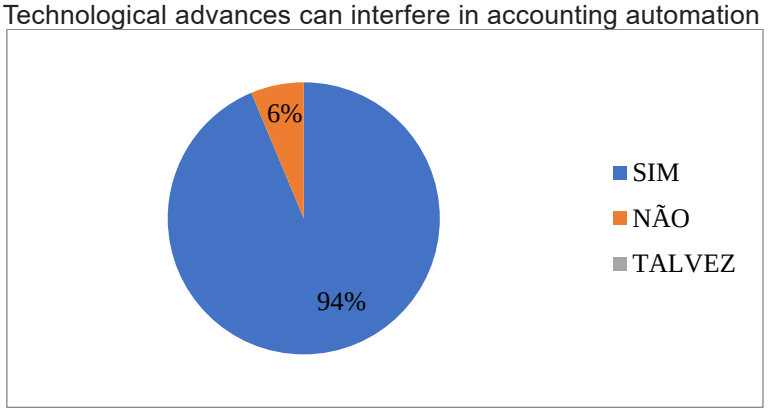
Source: Prepared by the authors (2021)

In graph 13, when asked about the respondents' knowledge about the *blockchain* tool, 56% do not know it and 44% stated that they do. In chart 14, when asked about blockchain's contribution to accounting, 81% strongly agreed, 19% partially agreed and 6% partially disagreed. Graph 15 asks if the firm uses this tool and if any client is dependent, 62% said no, 25% said it does not apply, 13% do not use it, but have clients who depend.

Analyzing graphs 13 and 14, the participants do not know the tool, but agree that it can contribute to accounting. Thus, it can be seen that the offices investigated have a low level of knowledge about blockchain .

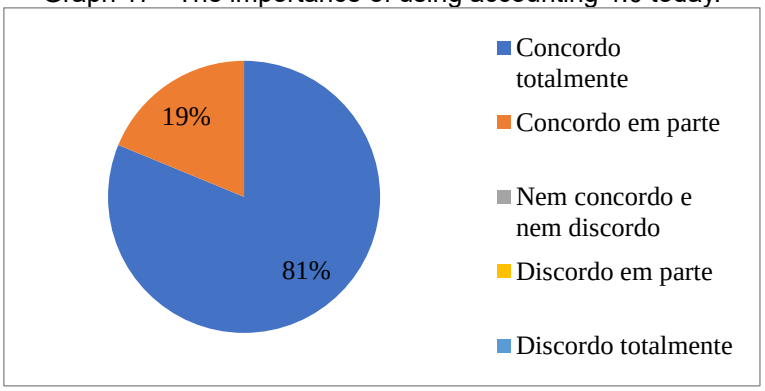
From the perspective of graph 16, 94% of the respondents stated that technological advances interfere with accounting automation and 6% said they do not. In the last graph, 81% agreed on the importance of using accounting 4.0 today and 19% partially agreed.

Graph 16 - Technological advances can interfere in accounting automation processes.



Source: Prepared by the authors (2021)

Graph 17 - The importance of using accounting 4.0 today.



Source: Prepared by the authors (2021)

The automation process favors work in general, resulting in performance to obtain a competitive advantage in the market, offering personalized services to clients, as mentioned above, offices will have more time to manage consulting for organizations. Because automating offices maps and understands the steps in decision-making, standardizing processes continuously.

FINAL CONSIDERATIONS

This article aimed to analyze the challenges for accounting offices in the municipality to adapt to the technological advances of accounting 4.0. For this purpose, a descriptive and qualitative case study study was used.

The first specific objective discussed accounting 4.0 and its importance, which was feasible through the analysis of the theoretical theme. Which originated from the fourth industrial revolution in which the process of technological mechanization emerged, automating accounting routines, promoting major changes in the current market impacting work methods. In offices, it has been no different, in addition to providing time optimization, the accountant now has more availability to meet customer demands.

In the second specific objective, he described the reflections evidenced with the use of technology to digital accounting, in this aspect it was found that accounting systems, in addition to optimizing time, store data in the cloud and can be accessed anywhere in the world, eliminating misplacements from the use of documents and reducing the use of paper, thus collaborating with environmental development. However, innovations have established that firms are often adapting and improving in terms of strategies and personnel.

In the third specific objective was to highlight blockchain *technology* and its contribution to accounting 4.0, it is a tool that prevents fraud in all its transactions, hardly a *hacker* can have access, that is, it is much more than cryptocurrencies, it is technological management, but when it comes to its functionalities, little is known.

Regarding the issue of challenges to adapt to digital accounting, it was found that most respondents believe that the biggest factor would be the team's engagement on modernization, the most important benefits would be more services and differentials in the market: productivity, efficiency, service, among other factors that digital accounting offers.

In general, they also seek to invest in continuing education among the team and invest in technologies that facilitate customer service, little is known about blockchain technology and its importance for accounting, the municipality under study is not yet prepared for this also called industry 4.0 together with customers. It is important to emphasize that the need for preparation preceded by training so that both can adjust to the new technologies that are to come.

In consideration of the results achieved, it is believed that all the objectives of the research were achieved, even registering difficulties in obtaining information about the scenario of the offices, which lived under the pandemic period. Finally, the knowledge covered can also be used as a basis for new research on the subject, stimulating more comprehensive and distinct discussions.

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