

## BENEFITS AND DIFFICULTIES OF THE DIGITAL AGE: A PERCEPTION OF ACCOUNTING PROFESSIONALS IN FORTALEZA / CE

## BENEFÍCIOS E DIFICULDADES DA ERA DIGITAL: UMA PERCEPÇÃO DOS PROFISSIONAIS DE CONTABILIDADE DE FORTALEZA/CE

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### ABSTRACT

The general objective of the study was to identify the benefits and difficulties of the digital age in the perception of accounting professionals in Fortaleza / CE. To this end, a quantitative survey was applied that used data collected through a survey applied to 124 accounting professionals. Thus, in the data analysis, descriptive statistics, exploratory factor analysis (EFA) and Kruskal-Wallis mean test were applied. The results signaled that, among the benefits provided by the digitalization of the accounting area, the most highlighted by the professionals was the promotion of greater consistency and reliability in the issuance of bookkeeping, while the most pointed difficulties were the lack of data or incomplete data. Thus, it stands out that, as accounting professionals recognize the advances brought by digitalization, there is still much to be done in terms of simplifying and improving systems, routines, including their own technical capacity.

**Keywords:** benefits and difficulty; accounting professionals; digital age.

### RESUMO

O estudo teve como objetivo geral identificar os benefícios e dificuldades da era digital na percepção dos profissionais de contabilidade de Fortaleza/CE. Para tal, aplicou-se uma pesquisa quantitativa que se utilizou de dados coletados por meio de um levantamento aplicado a 124 profissionais de contabilidade. Dessa forma, na análise dos dados aplicou-se estatísticas descritivas, análise fatorial exploratória (AFE) e teste de média de Kruskal-Wallis. Os resultados sinalizaram que, dentre os benefícios proporcionados pela digitalização da área contábil, o mais destacado pelos profissionais foi a promoção de maior consistência e confiabilidade na emissão de escrituração, ao passo que a dificuldades mais apontada foi a falta de dados ou dados incompletos. Assim, destaca-se que, à medida que os profissionais de contabilidade reconhecem os avanços trazidos pela digitalização, ainda há muito o que avançar em termos de simplificação e aperfeiçoamento dos sistemas, rotinas, inclusive na sua própria capacidade técnica.

**Palavras-chave:** benefícios e dificuldades; profissionais de contabilidade; era-digital.

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## 1 INTRODUCTION

In a highly competitive business environment, the use of technology in all segments of society, including the accounting field, is crucial. For the accounting professional, the digital age helps them safely and efficiently carry out their services, thus generating reliable information. Today, it is not possible to imagine an accounting professional without the digital resources available (Primak, 2009; Aparecido, 2020).

The digital age has provided a great revolution in the exercise of activities of accounting professionals, exchanging voluminous files in quick and direct access, classified in specific programs on the computer (Santos, 2015). The internet is part of the daily life of the accounting professional, since it is constantly evolving. This reality drives the accountant to seek qualification in the area of Information Technology and, at the same time, creates a careful, vigilant and aware posture that their career demands continuous training and technological improvement (Mahle & Santana, 2009; Albuquerque Filho & Lopes, 2021).

All accounting obligations revolve around the software. In this sense, Information Technology is an essential and indistinguishable part of accounting work. According to Ribeiro, (2009, p. 158), “the software provides information in the form of reports, demonstrations and explanatory notes, which may be accompanied by graphs, maps, charts or other documents”, which simplifies the understanding of different users. Through these applications, information is seen simultaneously and quickly, thus simplifying the work of the professional.

Thus, accounting seeks to keep up with technological changes through the reorganization of accounting processes and methods that directly affect the way work is performed and how information reaches the customer. We have, as an example, the use of the internet to carry out accounting services. According to Wernke and Bornia (2001), among the various alternatives for using the internet by accountants, the use of networks for downloads stands out. Through the internet, Income Tax returns are transmitted to the Federal Revenue Service of Brazil, data and surveys are downloaded from websites of public agencies and other affiliated agencies, including the regulation of the accounting profession, among others. The authors add that the internet provides contact with the accounting professional, enabling them to guide their clients on the best option to follow wherever they are.

In this way, it is noted that the modernization of the accounting professional is directly linked to the digital age. The software has an impact on the presentation of statements and organization of accessory obligations for taxpayers in a more accurate and transparent way, showing the improvement of control processes, and thus making information accessible, through data crossing and electronic auditing. (Oliveira, Feltrin & Benedeti, 2018; Astuti & Augustuti, 2022).

According to the above, this study seeks to answer the following question: What are the benefits and difficulties of the digital age in the perception of accounting professionals in Fortaleza/CE? In this perspective, therefore, the objective of this work is to identify the benefits and difficulties of the digital age in the perception of accounting professionals in Fortaleza/CE. Additionally, it sought to verify whether there are significant differences in the benefits and difficulties

formed by the scale based on their working time in the market.

This study is justified by the relevance of digital accounting that makes processes more agile and effective in an accounting firm. Due to the use of digital technologies in accounting, the need for qualification to better use these technologies has been expanding between the market and accounting professionals (Pan, & Seow, 2016). In this way, Guthrie and Parker (2016) emphasize that giving importance to this emerging accounting context is fundamental due to the changes in accounting businesses with the arrival of new technologies and digital novelties that appear on the market (Sarigul & Oralhan, 2022).

These observations allow us to bring to the domain of the accounting area, but also to the administrators, the real situation of this accounting scenario, since they outline notions of management and business renewal that serve as a model for the current accounting market (Schiavi et. al, 2020). Thus, this study is important, as it will seek to highlight the intellectual knowledge of accounting professionals through the identification of the benefits and difficulties that are identified with this accounting modernization (Andrade & Mehlecke, 2020).

From this point of view, understanding the changes in the accounting market and their interference on business is essential for the conservation of companies operating in this area (Frey & Osborne, 2017). This reality requires accounting businesses to take a position not only related to the arrival of new technologies, but also with regard to transformations in the services and products offered and in the data and business methods (Bygren, 2016).

## **2 THEORETICAL REFERENCE**

This section brings the theoretical positions, which will serve as a basis for the development of the research line of reasoning. Initially, considerations are presented on the evolution of accounting to the present day. Next, information about digital accounting is provided. Finally, the benefits and difficulties of digital accounting are highlighted.

### **2.1 EVOLUTION OF ACCOUNTING**

It was in the first civilizations that the history of accounting began, in a very fundamental way and is related to the first demonstrations of men to identify their riches, and the beginning of understanding the inheritance left from father to son, thus denominating patrimony, a term that configures as a set of assets, rights and obligations of a company or individual. Historical data show that ancient civilizations already had an outline of accounting methods (Santos, 2014).

According to Iudícibus and Marion (2007, p. 32), “accounting has existed since the most primitive peoples, due to the need to control, measure and preserve family patrimony and even in terms of exchanging goods for greater satisfaction of people.” In this perspective, it is noted that the origin of the emergence of accounting records is directly linked to the need to manage assets, that is, they measure how, when and where they can be used and whether there is a need for greater or lesser productivity within a certain productive field (Iudícibus, 2010).

In this context, the way to individually measure the increase or decrease in the wealth of each person is indispensable through accounting, which offers the principles and adequate methods to measure the magnitude of the wealth of individuals and legal entities (Pereira et al., 2005). In this way, over time, the records, which were previously made in the form of drawings, risks, signs and symbols that expressed the meaning of quantity and quality, in order to measure their heritage, were modernized (Iudícibus, 2010; Iudícibus et al., 2022).

According to Santos (2014, p.22), in the Middle Ages, with the beginning of some discoveries and developments, such as the exchange of parchment for paper, the development of business control began. Also evident is the emergence of the double-entry method, created by a Franciscan Friar (Brother Luca Pacioli), a method that was extremely important for the advancement of accounting as a science.

In the mid-fifteenth century, accounting began to have an evident advance, known as the pre-scientific phase. At this stage, there was a great increase in commerce and the appearance of the first business organizations, requiring the improvement of the accounting system. It was from the publication of the first printed book that modern accounting began (Carvalho, 2018). At this time, accounting professionals were known as bookkeepers, and had the responsibility of keeping and guaranteeing in good order the books of commercial companies. The professional's work was mainly mechanized, which required little depth and minimal scientific knowledge (Oliveira, 2013).

In the period of the Industrial Revolution, due to the voluminous production processes, there was a demand for greater control of the transactions that provided components to permanently transform the Accounting Science as a Science of Control of the patrimony, definitively adding the definition of the use of the cost accounting that, then, at the end of the 19th century and beginning of the 20th century, changed to managerial accounting principles (Padovezze, 2004; Nossa, 2022).

According to Oliveira (2003), with the emergence of mechanical machines, produced in the United States (typewriters and automatic processors, used to fill in forms), bookkeeping, which was performed manually, began to decrease due to problems that professionals found to register and, consequently, keep themselves informed, given the expressive amount of information admittedly indispensable. These machines, over time, were replaced by computers and programs, considering the lower cost of these new equipment.

Thus, due to the large volume of information that was known to be extremely important for the perfect progress of the activities, it became impossible for professionals to continue to carry out the records manually, as this practice brought great difficulties in updating the records. However, with the emergence of new technologies, accounting naturally started to have more complete records and with greater practicality and agility in the information (Nambisan, 2013).

In this context of changes, it was foreseeable that digital technologies would be inserted in a variety of products and services, being present in the social, personal and work relationships of individuals (Nambisan, 2013). The way in which all this modernization is being used in a wide range of different products and services ends up affecting and promoting business transformations, considering its important use (Demirkan, Spohrer & Welser, 2016). This is due to the fact that the technological age is increasingly present and explored in business. And, in this market, they have a relevant role as a driving tool for the satisfaction of goals and objectives of organizations and, consequently, promoters of profound changes in the various sectors of the economy (Nulén & Holmstrom, 2015).

According to Carvalho, (2018), the digital age corresponds to a construct that compiles definitions constantly used to name the technological progress arising from the Third Industrial Revolution and that mirror, in the propagation of a cyberspace, a form of instrumental communication through informatics, internet and use of *softwares*.

From this, companies have been facing great challenges to be always walking together with the modernization and transition to the digital age, since they are looking, daily, for ways to invest in updates and improvements of their systems. On the one hand, technological transformation is

characterized by the creation of new products and new ways of presenting a company to its customers. It is known, therefore, that some processes are replaced due to accounting integration and its records with other sectors, bringing new structures, practices, values and beliefs that can be threatening within a corporation, where certain rules already exist within the organizations and sectors (Hinings, Gegenhuber & Greenwood, 2018).

Therefore, according to Carvalho (2018), through the various advances obtained by the digital age, it is possible to evidence the increase in the power to store and remember information, data and forms of information; and global aggregation through the relationship of people from all over the world, sharing information, propagating information, propagating impressions and disseminating forms of culture and wisdom.

## 2.2 DIGITAL ACCOUNTING

The arrival of the digital age is one of the innovations that happened in the areas of professional activity, including the accounting area. And, surely, it is the most important milestone of the current times. Thus, like any transformation, the change happened gradually with the evolution of complex and evolved systems that simultaneously opened windows for the modernization of accounting activities (Pasa, 2001; Andrade & Mehlecke, 2020)

The digital world is constantly evolving and has impacted companies and professions. Digital accounting is the result of this technological evolution that has been rapidly growing and modernizing the conventional way of performing the services of individuals and companies in the various areas of activities (Hodge & Maines, 2004). This tool represents a new era for accounting services and has arrived to replace the traditional model of doing accounting. Using the internet and online software, digital accounting promotes greater integration of the accounting professional with their clientele and, as well, their suppliers (Stainer, 1997; Albuquerque Filho & Lopes, 2021).

In this renovation scenario, everyone profits. Accounting activity becomes more productive, faster and presents less possibility of errors. While the other manual activities, and specifically those using paper, are considerably reduced. It is important to highlight that, in this context, the accounting professional is not losing ground in their job market. On the contrary, the profession is gaining expression and becoming promising in view of the current demands and needs of the market. From this perspective, the accountant needs to be aware that they cannot neglect continuing education (Cavalcante & Schneiders, 2008). They must remain focused on the search for knowledge, following technological transformations and innovations, in order to always be qualified and competitive for the challenges of the profession and not fall behind (Lizote & Mariot, 2012).

The changes arising from digital accounting caused great repercussions in the Brazilian business environment and, of course, among accounting professionals. And, as it is still a new tool, there are also many doubts and questions about the transition process. Allied to this, there is the need for training in digital technology – a relevant fact in this process. However, the gains obtained with this transformation are noticeable to everyone. It is enough to see that the implementation of the Public Digital Bookkeeping System - SPED made accounting modern, moving from a computerized system in which filings are made on paper, to a modern digital system and in the cloud, if the user of the services prefers (Ruschel & Utzig, 2011).

In SPED, the following benefits of Digital Accounting Bookkeeping stand out: The significant reduction of paper – paperless, which, consequently, contributes to the preservation of the environment; reduction of the time spent executing the records; strengthening of control; information security and quality; reduction of bureaucracy, among other advantages (Geron et al., 2011;

Aparecido, 2021).

For professionals and accounting firms, the benefits are also relevant when adding technology to the profession. It makes tasks more efficient and promotes the appreciation of the accounting professional, who also becomes a consultant for their client. In this way, the accounting professional must be aware of developments in the area so as not to become outdated and lose their ability to act. In this scenario, the accounting professional will have a fundamental role in the management of market demands, being impossible to exclude them from this scenario of modernity, taking into account that the objective of digital accounting is to bring accountants and clients closer, adding value to the service provided (Cavalcante & Schneiders, 2008).

Therefore, with technology at their disposal, the professional does not need to use old methods to attract customers. It allows the accountant to be present in companies online, through videoconference meetings, or even sharing the client's screen and chatting in real time. In addition, in this digital version, the accountant can count on safe and quality information that speeds up the provision of service, generating gains in the satisfaction of their customers. Furthermore, it is clearly noticeable the great window of opportunity that opens up for accounting professionals who use digital technology as an ally (De Oliveira & Malinowski, 2016).

## 2.3 BENEFITS AND DIFFICULTIES OF DIGITAL ACCOUNTING

The implementation of digital technology in accounting provided the improvement of accounting activities in two fundamental and immensely important resources, which are productivity and management efficiency (Doost, 1999). Through technological development the methods are increasingly simpler to be executed. Currently, information can be placed in information systems by people who do not necessarily need to have some understanding of accounting (Kelton, Pennington & Tuttle, 2010; Andrade & Mehlecke, 2020).

According to Baines, Langfield and Smith, (2003) and Sarigul and Oralhan (2022), management reports and financial statements are easily accessible and are prepared in less time, favoring company administration and helping in decision making. Information technology has arrived to help the daily lives of people in different areas. And in accounting this help is increasingly evident, and becomes more visible with each new mechanism that is created. Consequently, the accountant needs to be committed to these advances, so that they do not become archaic and outdated.

Digital technology has its advantages and disadvantages, which has generated some resistance in some accounting professionals to favor this new model of doing accounting. Whether due to the absence of qualified personnel or the lack of resources to fund the high investment in the purchase of software and equipment, digital accounting has become an adversity for accountants. This is the current reality: adapting to changes or being excluded from the job market by becoming an outdated professional (Ruschel et al., 2011).

Accounting progress closely follows economic progress. This shows that, as the economy grows, so does the need for economic agents to impose control over their activities and measure the results of their businesses. This is when they need something that has the ability to record and track changes in their assets. From this need, norms and theories arise, well defined by the Federal Accounting Council, which regulate and discipline Accounting Science (Iudícibus & Marion, 2007; Astuti & Augustine, 2022).

Analyzing this progress that expands to digital accounting, and that unites information and the way it is carried out, (Sá, 2002), highlights the current growing pace of changes, stating that the transformations actually started from the 30's. But, in fact, the big change in accounting took

place from the 60's, in the 20th century, when there was a standardization of the way of bookkeeping and registering the accounts in statements. Since then, accounting has been frequently impelled to advance and improve its techniques and ways of entering, keeping records and providing information.

Emphasizing that the evolution of digital technology came to meet the needs of society, Pires, Ott and Damacena, (2009), clarify that the difficulty is not only associated with the preparation and publication of economic information, since society's concern is directed towards the way the organization behaves in the environment in which it is established.

Faced with technological progress, in a market that requires fast information, the Brazilian government, in the same way, seeks to improve its processes. Attesting data more quickly, with the intention of reducing the number of scams and tax evasion made by taxpayers. The sending of this information is done through the internet, which is a tool that helps the tax authorities to inspect the taxpayer. For this, Digital Accounting emerged, where its objective is to generate and send this information in electronic records.

The accountant we need in the future, in addition to having accounting skills and understanding, must be an achiever, financial analyst, global competitive, market analyst, efficient salesperson, good speaker, capable agent and public relations expert, as well as a general manager. This is an expression of our valuable currency, at the same time the other expression is the one that they have to excel in technical capacity, with immense attention to communication, connections between people and behavioral competencies (Cardoso; De Sousa & Almeida, 2006).

Cleto, (2006), states that today's professionals in the digital age need to reflect on changing their focus. Stop being a simple maker of guides and launches, to be an advisor in the management of their clients' business. Their understanding, experience and wisdom are resources to be used to generate revenue for companies, reasoning for organizations and prosperity for our country.

The accounting activity does not stop growing, it is in successive development, in which new changes appear all the time. In progression, it also increases the worthiness of the accountant. Therefore, new accountants need to have an appropriate domain of information systems, aiming to handle state-of-the-art technology, especially systems offered through the internet that have the purpose of facilitating adaptation to the digital age (THOMAZ; GOMES; TESSMANN, 2011).

Thus, some previous empirical studies were carried out with the objective of identifying the contribution of *softwares* (SPED, for example) to the development of accounting. Ruschel, Frezza and Utzig (2011) sought to assess the impact of SPED on accounting, seeking to identify the challenges and perspectives of accounting professionals facing SPED. For this purpose, a total of 41 accounting professionals in the SINDICONT sub-region – Chapecó were interviewed. The findings indicated a positive effect of SPED in the accounting area due to the reliability and quality of the data, insofar as it is expected that it will allow greater agility and speed in the consolidation of the data to be obtained. Despite this, the authors highlighted limitations such as trained professionals, increased work (considered a positive point), in addition to the need to master the subject.

Aparecido (2021) analyzed the influences of the impact of the implementation of SPED and highlights the evolution of accounting in the Digital Age in an attempt to demonstrate the challenges and perspectives of accounting professionals in the face of this government project, thus in fact bringing several changes to the accounting office. The results signaled that accounting professionals have been, over the years, ceasing to use documents made manually, to the detriment of electronic documents. Thus, it culminated in the optimization of time, increasing agility in the processes.

Albuquerque Filho and Lopes (2021), in turn, sought to identify the benefits and difficulties from the implementation of SPED in the conception of accounting professionals in Fortaleza/CE.

The findings indicated that among the benefits identified after the implementation of SPED, the most prominent, according to the accounting professionals in Fortaleza, was the availability of quality information, while the most punctuated difficulty was the lack of knowledge about the *software* of the area.

### 3 METHODOLOGICAL PROCEDURES

The study is a descriptive research, which sought to identify the benefits and difficulties of the digital age in the perception of accounting professionals in Fortaleza/CE. Gil (2002, p. 46), mentions that this quality of research intends “[...] the description of the characteristics of a certain population or phenomenon or the establishment of relationships between variables”.

Regarding the criteria adopted, the research consists of a survey of information that brings in its core content of relevant importance for future studies. By the way, Martins and Theóphilo (2009) say that the surveys are suitable for analyzing facts and reports, considering that part or all of the research elements are studied, despite being designed for studies between variables.

In this line of thought, a quantitative approach was chosen. In this regard, Raupp and Beuren (2003) state that quantitative research differs from qualitative research in terms of the use of statistical instruments for data collection, as well as data manipulation.

The research involved only accounting professionals in the city of Fortaleza/CE. Data collection was carried out between September 15, 2020 and November 15, 2020. The research was carried out through an *online* questionnaire applied via *Google Forms* to accounting professionals through a network line, being made available through their social networks. (*WhatsApp* and *Facebook*). Initially, before sending the questionnaire to the professionals, a pre-test was carried out with 20 respondents so that the understanding of the questionnaire could be validated, which were later included in the research data. After validation of the questionnaire, the study used the Snowball method to collect information, which accounting professionals sent to their work colleagues.

The questionnaire used for data collection was divided into two parts: the first was dedicated to characterizing the profile of the respondents, which included questions regarding gender, age, position held, education, educational institution (whether public or private), time of work and frequency of participation in events (courses, congresses, lectures, *Workshops*, etc.). The second was prepared according to the literature on the constructs, considering a 5-point interval scale. The scale had ten items ranging from totally disagree to totally agree (1- totally disagree, 2- partially disagree, 3- neither agree nor disagree, 4- partially agree and 5 - totally agree). The research items were adapted from the studies by Primak (2009), Pan and Seow (2016) and Silva Filho, Leite Filho and Pereira (2015) on the subject as highlighted:

1. Greater consistency in issuing documents and tax bookkeeping;
2. Improved information quality;
3. New job and business opportunities;
4. Rationalization and simplification of ancillary obligations;
5. Valuing the accounting profession;
6. Lack of information and support for doubts;
7. Little offer of training for the accountant;
8. Missing or incomplete data;
9. Lack of knowledge about the Software; and,
10. Lack of information and support for doubts.

Data collection comprised a total of 124 responses, and 2 questionnaires characterized as inadequate were disregarded because they concentrated their responses in a single option, being



considered *outliers*. In addition, the electronic form did not allow students to leave questions unanswered, so it did not present *Missing*. In the stage of statistical treatment and data analysis, the SPSS® software was used (Statistical Package for Social Sciences) v.21 for Windows®.

For data analysis, descriptive statistical methods of trend and dispersion were used to analyze the characteristics of the respondents, Exploratory Factor Analysis (EFA) to evaluate the formation of latent variables related to the benefits and difficulties of the digital age (HAIR Jr. et al., 2010). To achieve the CFA, the following statistics were analyzed: i) factor loadings (= or > 0.5) (HAIR Jr. et al., 2010); ii) *Bartlett's Test of Sphericity* and *Kaiser-Meyer-Olkin - KMO* (> 0.5) (PESTANA; GAGEIRO, 2005); iii) *Commonality* (> 0.5) (Lee & Hooley, 2005; Hair Jr. et al., 2010) and Simple reliability of observable variables using *Cronbach's Alpha* (> 0.7) (Hair Jr. et al., 2010).

Based on the EFA results, further analyzes were performed. Using the latent variables from the scale used, the constructs were detected and the mean test (Kruskal-Wallis Test) of each constructed construct was applied, with the intention of verifying whether there are statistically significant differences between the constructs obtained based on the time of who work in the market, assuming the non-normality of the comparison variable between the groups confronted (Field, 2009).

## 4 ANALYSIS OF RESULTS

### 4.1 PROFILE OF RESPONDENTS

The results begin by presenting an analysis of the survey respondents' profile in terms of academic characteristics, as highlighted in table 1.

VARIABLES	CLASSES	ABSOLUTE FREQUENCY	RELATIVE FREQUENCY
Gender	Male	71	57.3%
	Female	53	42.7%
	Total	124	100.0%
Age	21 to 30 years	53	42.7%
	51 to 60 years	8	6.5%
	From 31 to 40 years	37	29.8%
	From 41 to 50 years	13	10.5%
	Over 61 years	13	10.5%
	Total	124	100.0%
Position	Controller	20	16.1%
	Assistant	26	21.0%
	Accountant	24	19.4%
	Teaching accountant	13	10.5%
	Teacher	13	10.5%
	Accounting entrepreneur	8	6.5%
	Others	20	16%
School	Master	14	11.3%
	Specialist	39	31.5%
	University graduate	53	42.7%
	Doctor	14	11.3%
	Post doctoral	4	3.2%
	Total	124	100.0%

Educational institution	Private	73	58.9%
	Public	51	41.1%
	Total	124	100.0%
Frequency that participates in events	Annually	51	41.1%
	Monthly	15	12.1%
	Does not participate	38	30.6%
	Weekly	6	4.8%
	Quarterly	14	11.3%
	Total	124	100.0%

Table 1 – Characteristics of the respondents

Table 1 shows that the study sample had a participation of 124 professionals in the accounting area, of which 71 (57.3%) are men and 53 (42.7%) women, most of them aged from 21 to 30 years (42.7%). Of these professionals, 21% work as assistants, 19.4% are accountants and 16% stand out in other positions covering cases such as tax analyst, accounting analyst, financial analyst, controller, among others.

It is also noteworthy that 58.9% of the respondents provided their higher education in a private higher education institution, among which the majority only have a degree (42%), 31.5% specialization, 11.3% master's, 11.3% doctorate and 3.2% postdoctoral. It is important to highlight that the sum of the number of professionals with a doctorate and master's degree is equivalent to 28, which may explain the number of professionals who work as professors or accounting teachers. Furthermore, in relation to the frequency with which they participate in events in the accounting area (courses, congresses, lectures, *Workshops*, etc.), most (41.1%) participate annually, while a significant part (30.6%) do not participate.

#### 4.2 VALIDITY AND RELIABILITY OF THE SCALE

In the EFA operationalization, in order to identify the predominant variables of the study scale, we proceeded with the Varimax rotation by main components, which resulted in the combination of the observable variables in 2 main factors (constructs), which were expected, since they are originated from consolidated research and researched by the specialized literature. The two factors signaled 62.85% of accumulated explanation of the variability. The EFA results are shown in Table 2.

CONSTRUCT	VARIABLES	COMMUNALITIES	FACTORIAL LOAD
BENEFITS OF THE DIGITAL AGE	B1- Greater consistency and reliability in the issuance of bookkeeping	0.724	0.837
	B2-Improvement in the quality of information	0.685	0.762
	B3-New job and business opportunities	0.661	0.782
	B4-Rationalization and simplification of accessory obligations	0.634	0.787
	B5-Appreciation of the accounting profession	0.515	0.715
KMO= 0.836; Bartlett's Test of Sphericity = 0.000; Cronbach's Alpha =0.825			
DIFFICULTIES OF THE DIGITAL AGE	D1-Shortage of qualified personnel	0.525	0.706
	D2-Lack of information and support for doubts	0.584	0.761
	D3-Little offer of training for the accountant	0.690	0.815
	D4-Lack of data or incomplete data	0.700	0.819
	D5-Lack of knowledge about software in the area	0.567	0.739
KMO= 0.730; Bartlett's Test of Sphericity = 0.000; Cronbach's Alpha =0.751			

Table 2 - Latent and Observable Variables - Varimax Rotation - Principal Components

In EFA, the behavior of the predominant variables of the study's scale was analyzed using Cronbach's Alpha tests, Kaiser-Meyer-Olkin Measurement of Sampling Adequacy (KMO), Bartlett's Test of Sphericity, commonality analysis and factor loading. Thus, through Table 2, it is inferred that EFA revealed the grouping of the study scale into two constructs, namely: "Benefits of the digital age" and "difficulties of the digital age"

Thus, it is noteworthy that for this data set, considering the 10 variables, the KMO test presented a value equal to 0.836 for the construct "Benefits of the digital age" and a value of 0.730 for the factor "Difficulties of the digital age", which according to Hutcheson and Sofroniou (1999), are considered excellent. Bartlett's Test of Sphericity, in turn, showed statistical significance of less than 1% for both constructs. Regarding data reliability, *Cronbach's Alpha* signaled a statistic greater than 0.70 for both constructs formed (Hair Jr et al., 2010). Therefore, the test results confirm the adequacy of the factor analysis, attesting to the statistical validity of the research scale in two factors. In addition, from Table 2, the commonalities of the variables presented a value greater than 0.5, that is, at least 50% of their variance is explained by their factorial load (Lee & Hooley, 2005).

The factorial load of the variables was greater than 0.4, and it was not necessary to exclude any of the variables. In the construct, "Benefits of the Digital Age", the question with the highest load was B1 - Greater consistency and reliability in the issuance of bookkeeping (0.837). The adoption of operating systems requires companies to be more reliable in relation to the information provided to the government and customers, and it is also necessary to validate the documentation and verify its quality (Silva Filho, Leite Filho & Pereira, 2015). This result corroborates the considerations of Baines and Langfield-Smith, (2003) who emphasize that reports and financial statements, with the advent of information technology, became simpler to prepare, optimizing time and contributing to the decision-making process.

On the other hand, question B5 – Appreciation of the profession was the one with the lowest factorial load (0.715). Information systems make it possible for even people who do not understand accounting to be able to operationalize the systems (Kelton, Pennington & Tuttle, 2010), which may justify the fact that professional appreciation was the least highlighted benefit by professionals of accounting. Thus, in line with Cleto's (2006) research, professionals in the area need to change the focus from accounting as a process of preparing guides and releases to being an advisor in the management of their clients' businesses. In other words, the accounting professional needs to use their understanding, experiences and available resources to generate value for the country's business and prosperity.

In the construct "Difficulties of the Digital Age", question D4-Lack of data or incomplete data presented the highest load (0.819), while D1-Shortage of qualified personnel presented the lowest (0.706). This result signals the need highlighted by Cardoso, Sousa and Almeida (2006) of which the accounting professional of the future needs to have capacity and understanding, good oratory, market analysis, understanding of public policies, capacity manager, among others. In addition, they need to present technical capacity and connection between people and behavioral skills. In this perspective, accountants need to have an appropriate domain of information systems, know how to handle technology, especially systems offered through the internet whose purpose is to facilitate adaptation to the digital age (Thomaz, Gomes & Tessmann, 2011).

In general, it is pointed out that the results are in line with the findings by Ruschel, Frezza and Utzig (2011), Albuquerque Filho and Lopes (2021) and Aparecido (2021) which showed that, in a comprehensive way, advances in the digital age have brought benefits such as greater consistency, reliability and agility in operations and appreciation of professionals in the area, although

there are also difficulties, such as incomplete data and lack of qualified professionals to accompany this evolution of the area.

#### 4.3 TEST OF MEANS OF THE CONSTRUCTS BASED ON WORKING TIME

Finally, in order to analyze whether there are significant differences between the groups formed from the constructs formed by the EFA in relation to the time of work of accounting professionals, the Kruskal-Wallis test was used, considering that it is indicated as a non-parametric option for the ANOVA test (Field, 2009). Thus, the results are presented according to Table 3.

<b>BENEFITS OF THE DIGITAL AGE</b>	<b>TIME OF WORK</b>	<b>N</b>	<b>MEAN RANK</b>	<b>KRUSKAL-WALLIS TEST</b>
	Less than 2 years	36	62.93	0.420 Asymptotic Significance
	From 2 to 10 years	53	57.91	
	From 10 to 15 years	15	77.53	
	From 15 to 20 years	7	56.07	
	More than 20 years	13	66.15	
<b>BENEFITS OF THE DIGITAL AGE</b>	<b>TIME OF WORK</b>	<b>N</b>	<b>MEAN RANK</b>	<b>KRUSKAL-WALLIS TEST</b>
	Less than 2 years	36	66.83	0.910 Asymptotic Significance
	From 2 to 10 years	53	59.73	
	From 10 to 15 years	15	64.17	
	From 15 to 20 years	7	63.79	
	Over 20 years	13	59.19	

Table 3 - Mean level of constructs by time of work

Table 3 shows that those who have been in the market for more than 20 years are the ones who most show the benefits that the digital process and the emergence of software have brought to the accounting context, while those who are less than 2 years in the market were the ones that most emphasize the difficulties that this development process brought. Furthermore, it is inferred through the Kruskal-Wallis test that the associated probability (0.910) was not statistically significant at the level of 0.1, that is, the probability of the differences between the time-to-market groups and the formed constructs being related at random is greater than 10%. And therefore, there is no significant difference. Thus, it is possible to observe that the amount of time the professional works in the market does not cause an increase in the average of posts related to the constructs (Benefits of the digital age and Difficulties of the digital age).

Albuquerque Filho and Lopes (2021) highlighted that there is a concern of professionals in the area to be trained and qualified to exercise the profession, and this goes beyond the time of work in the area. In this way, Aparecido (2021) indicate that accounting professionals must present better preparation and technical quality, and for that, they need, for example, to seek outsourced consulting, SESCON/SINDICONT, in addition to the websites of the Federal Revenue and SEFAZ of State (Ruschel, Frezza & Utzig, 2011).

## 5 FINAL CONSIDERATIONS

In order to identify the benefits and difficulties of the digital age in the perception of accounting professionals in Fortaleza/CE, a questionnaire was applied to 124 respondents. To this end, the questions were verified through Exploratory Factor Analysis (EFA) to examine the process and behavior of the predominant variables of the study scale and, finally, the constructs formed by the EFA were used to verify if there are differences in the benefits and difficulties of the digital age under the respondents' conception of working time.

It was found that, from the scale formed based on the literature on the subject, two constructs were formed entitled “Benefits of the Digital Age” and “Difficulties of the Digital Age”. Based on the “Benefits of the Digital Age” construct, it was identified that the most highlighted benefit by accounting professionals was the promotion of greater consistency and reliability in the issuance of bookkeeping, while Appreciation of the professional was the least evident. With regard to the factor “Difficulties of the digital age”, it was inferred that the greatest difficulty encountered with digital development was the lack of data or incomplete data, while the least incurred was the shortage of qualified personnel.

In general, it is noted that accounting professionals are increasingly realizing the advances that digital technology has brought to the area, although there are still many difficulties to be overcome. From the analyzed data, accounting professionals recognize that this technology has brought greater efficiency and appreciation to the area, but also to the professional (although it was the least highlighted benefit in the study). This suggests that the accounting professional must keep up-to-date, since they have a fundamental role in the management of companies (Cavalcante & Schneiders, 2008). In addition, in the digital version, the accountant can count on safe and quality information that speeds up service provision (De Oliveira & Malinowski, 2016).

Regarding the limitations of the research, the instrument used for data collection, which was a questionnaire sent via *WhatsApp* and *Facebook*, stands out, but there was a difficulty in obtaining the participation of professionals in the area, with the participation of only 124 professionals. As future suggestions, one can consider the possibility of conducting a survey with professionals from another location, using another scale.

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