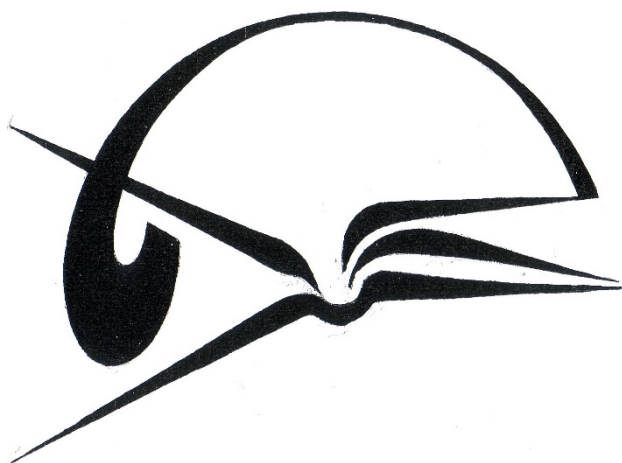


**УПРАВЛЕНИЕ И
ОБРАЗОВАНИЕ**

**MANAGEMENT AND
EDUCATION**



**ИКОНОМИКА, ФИНАНСИ
СЧЕТОВОДСТВО**

**ECONOMICS, FINANCE
ACCOUNTING**

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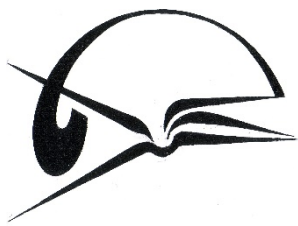
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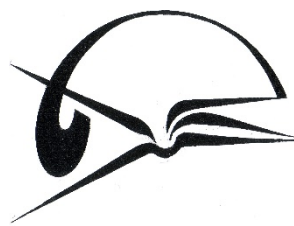
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DIGITALIZATION IN ACCOUNTING – DANGER, CHALLENGE OR TREND

Blagica Koleva, Mila Mitreva

ДИГИТАЛИЗАЦИЯТА В СЧЕТОВОДСТВОТО – ОПАСНОСТ, ПРЕДИЗВИКАТЕЛСТВО ИЛИ ТЕНДЕНЦИЯ

Благица Колева, Мила Митрева

ABSTRACT: *The business world is changing very fast and flexibility and adaptability are very important for every company. Therefore, Accounting as profession requires constant innovation and improvement, or more specifically, digital transformation. Software tools used with accounting primarily for data entry and archiving, as well as digitization of financial records through the so-called document management systems are the starting point for the digital transformation of this business function and activity. Digital transformation is making big changes in accounting and it is not only a change in the software used in the work or automation. Digital transformation refers to far greater changes, the so-called online-real-time mode that carry out all business activities that directly lead to an increase in business efficiency: accounting functions and business activities as a whole. Hence, the purpose of the paper is to explain what digital transformation is, what the concept means, what is the approach and the process of introducing digital transformation in companies, what impact digital transformation has on accounting, and what benefits companies have from it. Through empirical research, using a questionnaire, an evaluation and analysis of the attitude of accountants towards digital transformation has been made.*

Key words: accounting, digitalization, transformation, information system, development

Introduction

The world nowadays is changing very fast due to the phenomenon of digitalization. The accounting field is no exception from this transformation. Therefore, this process of digitalization and automatization will contribute to costs saving, lower error rates, better process performance and reporting quality (Stoica and Ionescu-Feleaga, 2021). Digital transformation brings concrete changes in business, development of new business models and increase in market competitiveness. Digital transformation is a process of integration of digital technologies in all areas of operation, with radical changes in the way of using technology, people and work processes, due to the improvement of the user experience in line with the constant changes in the market. Companies face daily the challenges of digital transformation and the need to use digital technologies to accelerate their growth, as well as to innovate processes, products and services to adapt to new generations of consumers. It is worth mentioning that the security of information in accounting information systems is of great importance because with the development of more modern forms of technology, more and

more innovative forms of fraud and theft are being developed. However, with each new problem IT experts design and create new solutions. Namely, the unprecedented expansion of information technology of the last few years together with the emergence of the Internet de facto did not leave accounting immune to changes and introduced new paradigms in the way this profession is practiced. Big data, the Internet of Things and cloud accounting and their combined impact is an example of such a new paradigm. Digitization is a major driver for innovation, competitiveness, job creation and growth in all sectors. Digitization is no longer a choice, but a necessity for businesses and economies around the world. Digital transformation can be described as the use of technology to improve business processes and business results. The ultimate goal is that using digital technologies, the company can optimize and improve its business, enable innovation and creativity, and encourage significant changes in the professional and private world of each person. Whether we are ready for innovation or not, it is certain that digital transformation will not bypass anyone - from government services to large industries. Hence, if the available data is properly used and analyzed, it

can influence strategic changes in any business. Undoubtedly, digitalization has and will continue having a profound effect on almost every profession. However, accounting is a profession that is constantly changing and adjusting to almost any new innovation. What this profession is today, what was and what will be is very different (Greenman, 2017). As it was mentioned in the papers of Kokina et al. (2021) and Bakarich and O'Brien (2021) the role of the human labor will increase only on the added value tasks and will decrease in non-value added tasks.

What is digital transformation?

Digital transformation is a process of integration of digital technologies in all areas of operation, through a digital business model. Digitization and digital transformation have been studied profoundly in both the information systems and organizational science literature. Although there are many papers in which these two concepts have been analyzed, still there is still a lot to understand considering that they are subject to vast and constant change (Mikalef and Parmiggiani, 2022). Some studies, such as the paper of Verhoef, P. C., et al. (2021) analyzed the extent to which digital transformation can create competitive advantages for the companies. Pittaway and Montazemi (2020) in their paper heightened the importance of the outcomes of the digital transformation. However, the pace of deployment and the speed of adoption are very important factors that have to be considered when implementing digital transformation. With digital transformation, the essence of the work does not change, only the form. Thanks to digitization, information becomes easily available for use on different platforms, devices and interfaces, hence, that is the digital world we live in today (Vial, 2019). Digital transformation is a completely new use of digital technology to solve new complex problems. This series of digital solutions can bring about new types of creative innovation, rather than just serving as an upgrade to what already exists. Digital transformation is a way of thinking, an incentive and direction for thinking among all employees in all workplaces, and covers all spheres and aspects of an enterprise. Digital transformation is a strategic tool for growth and development. In addition, it is an instrument for innovation, a way to improve efficiency, higher revenues, higher return on investments and reduction of IT costs (Magretta, 1998).

Digital transformation is also a process of integration of digital technologies in all areas of operation, with radical changes in the way of using technology, people and work processes, due to the improvement of the user experience in line with the constant changes in the market. It is a constant journey, not a final destination. Several things characterize digital culture seen from a business perspective: fluid workplaces, databased decisions, transparency, collaboration, multidisciplinary teams ready to accept failure, but also to accept an idea that comes from different places, eager to learn and to embrace change. Digital transformation is not dependent on the type of industry in which a company operates and is certainly not excluded depending on the geographical positioning of the company. Thus, the new technologies that are in use and serve the digital transformation are Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), Big Data, Business Intelligence (BI), Enterprise Resource Planning (ERP), Customer Relationship Management (CRM), Virtual Reality (VR), Augmented Reality (AR), 3DPrinting. All this is mainly realized through the cloud service, such as Infrastructure as a service (IaaS), Platform as a service, (PaaS) and Software as a service (SaaS) (Roser and Ritchie, 2013).

Undoubtedly, novel technologies can reshape the industries, but each company separately has to consider what process should be digitally transformed. This decision should be based on the importance and the impact this digitally transformed process will have for the organization. Robotic process automation will be beneficial for the manufacturing companies, while, improving and maintaining good customer relationships will be important for retail firms (Mikalef and Parmiggiani, 2022). According to Ng and Wakenshaw (2017), artificial intelligence, IoT, robotics and blockchain are major factors that will affect the companies and the consumers. Additionally, AI and blockchain will have positive impact on the firm's cost structure and the supply chain costs. On one hand, there already are and there will be cost benefits, but, on the other hand the competition will change drastically. Kannan and Hongshuang (2017) in their paper showed that consumer behavior is changing very fast due to the digitalization. This is due to their connection through the social media tools, which make them more informed and empowered.

Although there are many benefits, still, there are companies that consider digital transformation to be suitable only for IT companies or banks.

However, digital transformation is the process or what happens after digitization. In this context, Attaran, et al. (2020) in their study point out that most of the organizations consider that the necessary tools for digital transformation are e-mail and social media. Therefore, digital transformation does not refer only to buying new computers for employees, opening a web shop, activating social networks, switching to electronic banking, installing POS terminals in all stores, introducing new software or upgrading the existing one, introducing robots in production or implementation of digital literacy training among employees. And it is never just one aspect, and progress in one sphere. Digital transformation are not the activities that only begin with "e": e-banking, e-business, e-government, e-commerce". All of this has been around for a while and has already transformed all of these areas, but that in itself is not digital transformation. Additionally, Williams and Schubert (2018) in their paper tried to define what digital workplace means and they have identified three categories: organizational strategy and design, technology platform and people and work. Through the first category, digital workplace is seen as a place where collaborative and flexible work will be supported. The second category refers to the need, the companies to provide the necessary tools for supporting the employees. The third category relates to the need to increase and support the process of increasing the productivity of the employees (Williams and Schubert, 2018). Finally, yet importantly, digital transformation enables the work to be completed regardless of the time and location (Schmidt, et al, 2018).

Importance of digital transformation

Digitization is necessary for rapid economic growth and progress of any company. The process implies the use of digital technology to change business models. Digital transformation brings concrete changes in business, development of new business models and an increase in market competitiveness. The IT sector has great potential for growth and with appropriate incentives there is potential for creating overall economic growth. Challenges to the growth of the IT industry are detected in the lack of investment in new technology, insufficient utilization and application of cloud platforms, low level of electronic commerce, as well as big data analysis, better known as data mining. Technology is advancing at a high speed, with which the pressure to implement new technology is becoming greater and companies

are already becoming aware that digitization is necessary to survive in today's world - it is no longer an option but a necessary need for all companies, regardless of size and sector. In addition, digitalization is a continuous process, and to be successful, it requires professional people, a company's digitalization strategy and technology (Bharadwaj, et al, 2013). Moreover, in order for the companies to be competitive on the global markets, all work processes should be transferred to a digital platform, regardless of whether it is about projects, products, services, marketing or sales. It is a real challenge for companies to decide which of the new technologies will work in the best interest for the advancement of their business operations, which will make them competitive in the world market. It is very important that the digitization of companies takes place in parallel with the digitization of the institutions of the system, which requires cooperation with companies that provide support for new innovative IT solutions. Technology can reduce jobs, but also can be a job creator. The increased efficiency enabled by digital technology allows companies to expand and be present anywhere. Therefore, digital transformation is a necessity in every sector. However, there are some factors that accelerate and hold back this process. Some of the accelerating factors include the need to introduce efficiency in business, increase the expectations from the customers, create better culture in the company, decrease the unnecessary and unproductive costs and creating competitive advantage against the competitors. Some of the factors that can hold back are the lack of vision and determination from management structures, lack of budgets and financial resources, lack of innovation culture and limited access to change, resistance from employees to changes, inability to connect systems and low level of engagement among employees. Meske and Junglas (2020) in their paper claim that employees should be involved in the process of digital transformation, because the employees want to feel included, involved, and supportive. Given what has been said, digitalization and digital transformation improve the efficiency of the businesses, faster the decision making process, improve the customer satisfaction and in the end lead to better profitability. Finally, when working more efficiently, better decisions are made, agility is increased, and the customer's perception of the business is improved. The fact is that digital transformation will transform the entire business, and when done right, it will significantly improve overall profitability (Pereira, et al, 2022).

Digital transformation of accounting

Accounting as a business function and activity without digital transformation is unthinkable in the 21st century. Software tools used with accounting primarily for data entry and archiving, as well as digitization of financial records through the so-called document management systems are the starting point for the digital transformation of this business function and activity. According to a survey by the Global Certified Management Accountants (CGMA) and the American Institute of Certified Public Accountants (AICPA), with a statistical sample of more than two thousand financial managers and professionals, 87% agree that big data will change the way we do business in the next ten years. The public has witnessed the change in the accounting and finance profession in the last few years when from just reporting and working with numbers, the competencies of these professions have expanded to include the analysis of data and information at the level of business entities and entire industries. This change is expected to be greater in the years ahead. One of the accounting areas that will be directly affected is management accounting or cost accounting. The people in charge of this need to know what the critical data is and what can be seen from it. They already know how to work with different types of data, so they know how the business entity works in detail and are ready to turn the knowledge extracted from big data into a competitive advantage. Thus, management accounting accountants can add value by collaborating with data scientists to gain knowledge about new data (O'Leary, 2013). Additionally, the Accounting businesses that look for convenience and flexibility should focus more on using cloud-based infrastructure. According to Beaming (2018) in the research conducted in 2018, 62% of the analyzed accounting firms said that they plan to invest in cloud-based infrastructure, while 14% of accounting practices plan to invest in data analytics as part of their digital transformation. According to the same research, 26% of the Accounting firms plan to invest in Virtual Private Networks.

There have been done several researches on the issue of the relationship between digital transformation and accounting information systems. Nguyen et al. (2021) in their paper showed that digital transformation will increase the company's competitiveness and the effort related to the accounting work will be improved. Phornlaphatrachakorn and NaKalasindhu (2021) showed that

digital accounting will increase the effectiveness of the work and it will positively affect the decision-making process. Rehm (2017) in his study presented the steps that must be followed in order to prepare the accounting information systems for digital transformation. Demiröz and Heupel (2017) claimed that the internal obstacles within the company are the main reason that organizations lack the awareness of the benefits of digital transformation. According to the paper of Meraghni, et al. (2021), some of the technologies that will help in developing the accounting information systems are Blockchain, Cloud Computing and Big Data. Blockchain helps in accounting because it reduces the margin of error, shortens the time and effort of the accountants, and creates more intertwined accounting systems. Cloud services are beneficial for accounting work because they reduce the cost, contribute to data protection, better connectivity, and higher speed. Big Data surpasses the capacity of traditional software, which is why it can be used in the accounting profession. Furthermore, Guerrero and Sierra (2018) in their paper identified six levels of evolution on information systems: transactional, tactical, analytical, strategic, advanced and innovative. According to Gonçalves, et al. (2022) robots are replacing the routine tasks of the accountants and enable them to have more time for analytical work. The digitalization of the accounting practices will contribute to the value creation process of the organization.

Moreover, The Internet of Things is yet to bring many changes to accounting and auditing. Properly applied, this technology will change the sources and flow of information related to billing policy, resource planning, and other key accounting systems. Although chartered accountants must personally monitor information and manage financial transactions, with the Internet of Things, methods and practices will change significantly. For example, they will automatically get everything they need through a digital system instead of going to the bookkeepers to collect customer information. Also, accountants will have direct access to transactional details in real time as they happen along with many controls and disclosures in the processes already in place. But the real excitement about the use of the Internet of Things in this branch is that accountants will be able to easily connect and serve clients using the information obtained from this technology. This will lead to the emergence of new services and solutions to use the full potential of technology and enable improved flow of all processes with an emphasis on

inventory management, collections and payments, human resources and others. Apart from this, the Internet of Things leads to stress reduction. If all the books are linked, transactions are recorded, ordered and verified in a timely manner and each transaction can be traced, the entire accounting team will save time and avoid the stress of lost documents or sources of funds that cannot be immediately discovered. For this purpose, the use of Internet-related tools is encouraged to analyze, consolidate, store and process financial information in real time as it occurs (Payne, 2019).

Empirical analysis

For conducting an analysis, a questionnaire was created. The survey includes a total of 50 respondents, accountants. The subject of this research is to see what is the approach of accountants and what are their thoughts and attitude towards digital transformation in accounting. The empirical research was conducted using a questionnaire consisting of several questions, to which the accountants gave their answer.

The first question is: “Have you thought about and would you invest in the digital transformation of your company, if you knew all the advantages that you would have with the digitization and automation of processes?”. In addition to the question, the suggested answers are: “I haven't thought about investing because I don't have enough information about what benefit my company will have from that investment” and “I have thought and would invest”.

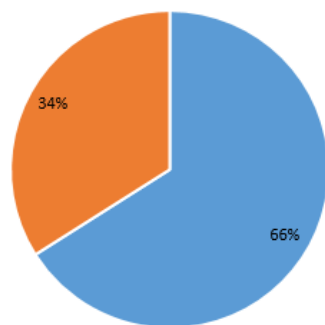


Fig 1. Respondents' answers to the first question
Source: Author's calculation

The results obtained from the first question show that a larger number of respondents (66%) are thinking and would invest in digital transformation in business, seeing the advantages of its application, and a smaller part of them (34%) are

not thinking about investing and are not sufficiently familiar with what benefits their company would have from digital transformation.

Furthermore, the second question is: “What is the main reason that motivates you to start the digital transformation?” The suggested answers for this question were the following: “We want to be the first in this field, competitors are still thinking about digital transformation”, “My competitors have already introduced or are planning to introduce digital services, solutions, etc.” and “My clients ask me to introduce digital solutions”.

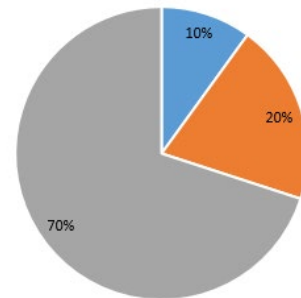


Fig. 2. Respondents' answers to the second question
Source: Author's calculation

The results from the second question show that 10% of the respondents or 5 of the accountants answered on the question “We want to be the first in this field, competitors are still thinking about digital transformation”. Additionally, 70% of the respondents or 35 of the accountants chose the following answer: “My competitors have already introduced or are planning to introduce digital services, solutions, etc.”. Lastly, 20% of the respondents, or 10 of the accountants answered on the question “My clients ask me to introduce digital solutions”

Furthermore, on the third question “How do you prepare a VAT return?”, where the offered answers are “By printing the VAT return, manually filling and scanning” and “Through a software solution with automatic generation and import of the VAT return to the IRS service”, 86% of the respondents or 43 of the accountants chose the second answer and 7 accountants or 14% chose the first answer.

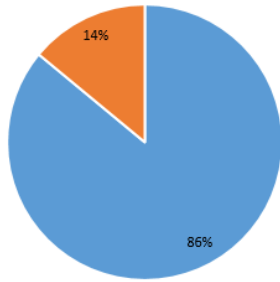


Fig. 3. Respondents' answers to the third question
Source: Author's calculation

The fourth question is: "Do you have automated import of bank statements from e-banking?" The suggested answers are "Yes" and "No, we receive the statements by e-mail and then manually enter them item by item". Therefore, the results obtained from the fourth question show that 38 of the respondents (76%) use automated import of bank statements from e-banking, and only 12 of the respondents (24%) receive the statements by e-mail and then manually enter them item by item.

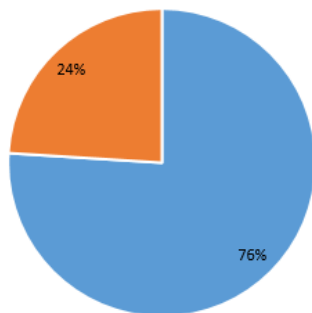


Fig. 4. Respondents' answers to the fourth question
Source: Author's calculation

Moreover, the fifth question is: "Do you use the electronic services of public services from the state, such as: Electronic submission of the VAT return; EPDD form; Electronic final invoice; MPIN; and E-Taxes?" The suggested answers were "Yes" and "No". Hence, the results obtained from the fifth question show that as many as 92% of the respondents use the electronic services of public services from the state or 46 of the respondents. Only 4 of the respondents, or 8%, answered that they do not use them.

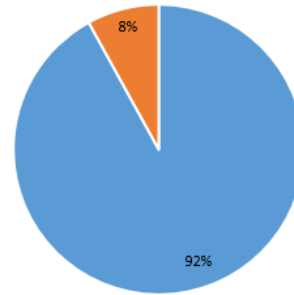


Fig 5. Respondents' answers to the fifth question
Source: Author's calculation

Additionally, the sixth question is: "Do you have an electronic archive of your documentation and do you keep the documents in digital form?" The suggested answers were "We keep documents only on paper and in cardboard folders" and "Yes, we scan them and store them in a special directory on the computer". The results obtained from the sixth question show that 44 of the respondents or 88% have an electronic archive of the documentation and keep the documents in digital form, i.e. they scan them and keep them in a special directory on the computer, while only 6 of the respondents or 12% answered that the documents kept exclusively on paper and in cardboard folders.

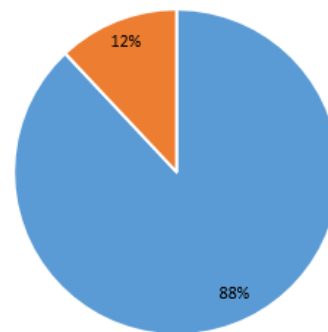


Fig. 6. Respondents' answers to the sixth question
Source: Author's calculation

Conclusion

How digital transformation is becoming an integral part of today's modern business and how successful the transformation in a company is, is evident from the results it achieves at any time. In such a business environment, which is inevitably globalized, virtual, dynamic and highly competitive, a strategic approach to digital business transformation is almost the only way to successfully complete this process. Digital transformation in

Accounting is a critical guide to navigating the effects of digital technology advances, digital disruption, and the digital transformation of the accounting profession. The accounting profession is not immune to digital disruption. In fact, compelling arguments have been made that accounting tops the list of professions most at risk of digital disruption. In addition, institutions, such as the International Federation of Accountants (IFAC), accountancy associations, accountancy professional bodies and accountancy professional services firms, are calling for changes in accountancy roles, activities and responsibilities so that accountants are able to adapt to disruption and reshape their value. Despite claims that accounting is at high risk of losing relevance due to digital disruption, researchers, governing bodies and futurists are converging on the view that the advancement of digital technology and the transformation of digital business actually make accountants more important than ever. This is because digital business transformation and digital business come with significant financial, technological and strategic risks.

Accountants need to play critical roles in helping organizations safely undertake digital business transformation, make the most of advances in digital technology and realize the full benefits of becoming a digital business. However, playing these critical roles requires changes in the roles, activities and competencies of accountants. Moreover, it requires accountants to understand key digital technologies and their implications for organizations, to understand digital transformation and digital business capabilities and practices, and to understand how digital technologies and digital business capabilities affect the creation and practice of accounting value.

There are three main reasons why people change professions. One is competition, the second is globalization and the third is digitization or technological progress. If we go back to the time when accounting was done without any technology, then we will see how much effort and work force was required. Due to increased demand, businesses have grown in size and it became difficult to manage the accounting of large firms without any mechanical assistance. This profession faced many challenges and required the adaptation of technology. The main problem was that accounting had to be done by following uniform rules and methods and it became a challenge to adapt the technology and maintain the basic principles. Digital transformation will help ac-

countants use their insights and skills to better interpret system-generated data. Accounting has become one of the professions most affected by technology and digitization. Due to the digital transformation, the following changes have been observed: The tasks and activities of accountants are changing; Customer expectations are increasing and becoming more specific; Reduction of work pressure and workload of employees, and Repetitive tasks are done more easily and conveniently with greater efficiency.

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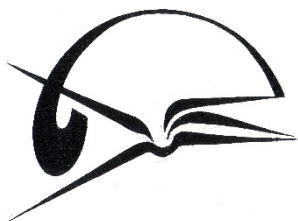
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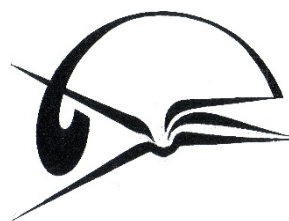


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