

DOI: [10.55643/fcaptop.1.48.2023.3951](https://doi.org/10.55643/fcaptop.1.48.2023.3951)

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Received: 28/12/2022

Accepted: 15/01/2023

Published: 28/02/2023

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ANALYSIS OF TRENDS IN THE IMPLEMENTATION OF DIGITALIZATION IN ACCOUNTING (UKRAINIAN CASE)

ABSTRACT

The digitalization of the economy is a necessary step for the development of any state in today's environment. The accounting sector is one of the key sectors in this area. Currently, various digital technologies are actively used in practice to optimize accounting and improve the level of data protection. In Ukraine, the process of digitalization is still at the stage of development, although the introduction of digital technologies in the economic sphere is approved by regulatory and legal documents. The state of war and irregular power supply have slowed down the spread and use of electronic accounting in enterprises. In addition, there are obstacles of another kind. The purpose of this study is to analyze the current trends in the introduction of digitalization in accounting in Ukraine. As a result, both the most popular information technologies used in the world practice and the software used by Ukrainian accountants were identified. The normative legal acts regulating the process of digitalization in Ukraine have been clarified. The basic advantages which give modern information technologies and the aspects which are slowing down the process of digitalization in Ukrainian enterprises are investigated. Thus, the latest technology can ensure the integrity of data, round-the-clock access to them, the accuracy of information transfer during operations, remote access to data, convenient and effective record keeping, etc. It is emphasized that in Ukraine it is worth paying attention to the imperfection of the relevant digital infrastructure for accounting systems, insufficient level of investment, low level of qualification of specialists, inconsistency of legislative regulations with global trends in the digitalization of accounting. Addressing these issues will significantly improve the functioning of the accounting system and increase the overall efficiency of enterprise management.

Keywords: accounting, digitalization, software, blockchain, cloud technologies, Big Data, Internet of Things, Robotic Process Automation

JEL Classification: M15, M41, O14, O52

INTRODUCTION

The development of digital technology in a market environment is one of the determinants of economic growth in the country, as it has a positive impact on improving the efficiency, effectiveness, cost, and quality of citizens in economic, social, and personal activities. In Ukraine, the process of digitalization of all spheres of activity is approved at the legislative level. Digitalization of the economy and the development of innovative activities in Ukraine continues even under martial law. This is an important process, because the automation of accounting leads to improved efficiency of the enterprise, reducing the cost and time to perform accounting operations, the timely provision of the necessary information to managers and owners of the companies. The use of the latest technologies will allow to store data electronically rather than on paper, which reduces the risk of losing information, and employees are able to use the system remotely, regardless of place and time. Despite the significant advantages of innovative accounting software, Ukrainian enterprises usually use traditional methods of accounting. This is due to many factors, such as the predominantly low level of qualifications of accountants (a small proportion of specialists are able to keep accounts using robotic systems, blockchain, etc.), the high cost of software, the small share of investment in

the digital economy, poorly developed relevant infrastructure, etc. However, the development of digital technology among Ukrainian enterprises is extremely important to improve the competitiveness of Ukrainian enterprises and the overall level of the economy.

LITERATURE REVIEW

The digitalization of accounting has been extensively researched in many publications. Jasim & Raewf (2020) examined the impact of emerging technologies on accounting information systems through an analysis of information resources and relevant literature. The researchers determined that innovations in information technology have had a positive impact on the development of corporate accounting systems. For example, the advent of cloud-based accounting has improved the efficiency of doing business. Nevertheless, one of the most important drawbacks of using information technology in an accounting information system is the lack of standardized technology, as businesses tend to be selective in choosing the right technology for their operations. Such actions weaken the transparency of the results of accounting information systems. Therefore, the authors recommend that all organizations invest some of their profits in developing specialized software for accounting systems and training accountants to work effectively and efficiently with these programs in order to maximize the benefits of the latest technology to offset the disadvantages of digitalization in the accounting information system. Kwilinski (2019) looked at the prospects of implementing blockchain in accounting. The author believes that this technology is capable of completely replacing traditional methods of calculations, recording and processing information, and record keeping. The need for double bookkeeping may disappear with the further development of digital technology, as bookkeeping is fully automated. Gao (2022) investigated the changes in business accounting under the influence of Big Data technology. The researcher introduced the concept and meaning of Big Data, analyzed the need to build financial accounting informatization, identified some of the challenges and problems they may face in the process of accounting digitalization. Effective strategies for managing the informatization of accounting in the implementation of Big Data were proposed. According to the study, this technology can not only improve the efficiency of accounting processes, provide an optimized level of financial management and, most importantly, maximize the economic benefits for businesses. With Big Data technology, enterprise accounting information management will become more knowledge-intensive and efficient, but there are also obstacles. The pace of development of financial accounting information management is still low. Therefore, it is necessary to make full use of Big Data technology to realize a new phase in accounting. In the future, financial informatization management should be optimized, a risk prevention system should be implemented, qualified specialists should be engaged, and information system infrastructure should be improved.

Many Ukrainian scholars have studied the processes of digitalization in the economy. Bulkot (2021) studied the formation and key factors of Ukraine's smart economy in the context of global threats. Applying historical and logical methods, the author analyzed those scientific developments that influenced the development of the concept of the creative economy. The article identifies the main elements forming the smart economy of Ukraine: intellectualization, informatization, innovations, investments, integration, social responsibility, and ecological transformation. This occurs under the influence of global actions. Attention should be drawn to the transformation of management processes, namely, to increase the intensity of the use of intelligent technologies, as it will strengthen the efficiency of management decision-making, which in turn will lead to the growth of public welfare, the development of smart economy and strengthen Ukraine's competitive position at the global level. In terms of the digitalization of accounting, Buriak & Petchenko (2021) investigated the impact of current and expected changes in the economic sphere on the accounting system and identified areas for further development of effective management. The authors point out that current changes in the world economy, namely the digitalization of the economy and the global implementation of the concept of sustainable development and regional economic sustainability, require a timely response from the Ukrainian accounting system, as the further development of the country depends on the modernization of the economic environment of enterprises. The study identified a number of factors that form both new opportunities and threats to the activities of accounting systems. Identification of potential threats to enterprises is particularly important because managers must be aware of the possible risks and respond to them in a timely and effective manner. Panasyuk et al (2021) identified the features of the further development of accounting in theoretical and practical aspects, which will allow the automation of a large number of processes in all market entities. As the authors researched, the main trends in the development of accounting and the expansion of professional competencies include the latest information technology, intelligent analysis, communication skills, and the spread of accounting services in social networks. The researchers believe that the internal content of the accounting profession should transform in a positive direction because, in the long run, the digitalization of accounting processes will take the profession to a new level. As digital technology will take over routine accounting procedures, accountants will be able to focus more on making important management decisions. Using cloud-based software, today's professionals will have easy access to preliminary accounting data for quick and in-depth analysis. Today, the digitalization of accounting allows for faster and more accurate functional

tasks, more efficient interpretation and reporting. In general, the modern accounting system is forced to capture possible changes in the economy and respond to them without delay, developing in cooperation with the main functions of the management system of market entities.

AIMS AND OBJECTIVES

The purpose of the study is to analyze current trends in the introduction of the latest technologies in accounting among different companies in Ukraine. For this purpose, the following tasks were set:

- to analyze and compare modern information technologies used in world practice;
- to study the process of implementing digital technologies in Ukraine;
- determine what software is currently used by Ukrainian accountants;
- identify the main obstacles to the successful digitalization of accounting;
- justify the need to use modern information technology in accounting and disclose their benefits.

METHODS

In conducting this study, the methods of theoretical analysis, comparison, and synthesis were used. By analyzing and comparing existing new technologies in the world practice, such as cloud technologies, Robotic Process Automation, blockchain, Big Data, Internet of Things, their strengths and weaknesses were identified. These factors are important for entrepreneurs and executives to consider when choosing programs in the process of digitalization of the company. The analysis of regulatory documents allowed to find out that the implementation of digital technologies in Ukraine is mandatory at the state level. Methods of analysis and comparison were used in the study of software used in this period by Ukrainian accountants, and to determine trends in the accounting system. Based on the synthesis of the information obtained, the main obstacles to successful digitalization in Ukraine have been identified. In addition, formulated the main advantages of using information technology in accounting, which confirms the need for the development of this area.

RESULTS

The digitalization of accounting involves the use of such information technologies as cloud technologies, software works, artificial intelligence, blockchain, working with large data sets, and the Internet of Things. In the case of cloud technology, data is stored and available for processing not on a computer's hard drive, but on a virtual server online. A significant advantage of this type of digital technology is that the user can access information regardless of the location or type of gadget. It also eliminates the need for a specialist to maintain this type of resource.

In the market of independent cloud technology providers, some companies recommend their services, such as American companies KashFlow, Netsapiens, Netsuite, Sage 50c Premium, British FreeAgent, German SAP Business One, Lithuanian Baltmeta, and Ukrainian GigaCloud. The use of cloud technology reduces the cost of acquisition of hardware and software, replacement of paper-based workflow with electronic, access to backup, and disaster recovery. Cloud technology can be used to organize both temporary and permanent archives of collaborative simultaneous work on documentation. It is also possible to create consolidated documentation for certain time intervals and automatically synchronize different versions of documents. The main disadvantage of such technology is a low level of security; only service providers can provide absolute confidentiality of data (Faccia et al., 2019).

Because accounting processes use established rules and procedures, they can easily be automated. Robotic Process Automation (RPA) is an example of a combination of software robots and artificial intelligence to automate business processes in enterprises. That is, it is used to provide automation for repetitive operations in financial accounting systems. Traditional automation requires special software development and lengthy integration into an organization's existing systems, which is a complex process. In contrast, RPA can be installed without interfering with the existing infrastructure of a business system. This will be a convenient option for those companies that simultaneously use both modern and outdated applications, or if the implementation of automation in a traditional format is impossible. Software works can partially or completely control the accounting processes. Because manual data collection and processing is time-consuming, it can lead to errors. Using RPA can speed up work and reduce errors. RPA is commonly used to create internal reporting because it is a routine process and does not require complex decisions. To summarize the benefits of this technology, the following

factors can be highlighted. RPA provides round-the-clock system operation and promptly processes current business processes, correctly enters data, and evaluates the results of the company's activities. This technology is fully compatible with other applications. It can automate the most time-consuming, standardized, and structured tasks. It will ease the work of accountants, as RPA can take over routine operations and saves workers time to perform intelligent work. This technology is affordable, and with its installation in the enterprise, there is no longer a need to purchase, maintain and update additional software. Moreover, the implementation of RPA into the structure of the enterprise does not take much time. For example, the English company Npower automated the formation of invoices, which involved more than 50 systems. As a result of RPA implementation, it was recorded that processing time was reduced from 20 minutes to several seconds, and there was no need to hire 21 additional full-time employees. The time to implement this technology in the company was three weeks (Jędrzejka, 2019). Such an indicator as rapid implementation of information technology is especially important for Ukrainian enterprises in war conditions. Nevertheless, RPA cannot work through those business processes that run on non-standardized scenarios and require analysis of the situation before making decisions. Works are able to perceive only structured template data and perform well-defined operations.

Blockchain literally translates as "a chain of blocks". In this technology, information about transactions or events is recorded and stored in a blockchain-like data structure. A block is a packet of information added to the chain according to the timing of a transaction. Each subsequent new block is linked to the previous block and contains an encrypted packet of information about the previous block. Blockchain technology is structured in such a way that new entries cannot be changed without breaking the integrity of the overall chain. All users will be notified by the system when a new entry is made. This makes the processes transparent and resistant to external influences. All the more, there is no need for a central authority to oversee the reliability of the system. All information covering sender and recipient identification, transaction amount and time, and other labels can be stored on users' computers. If the data has been validated and added to the chain, the blocks can no longer be undone or tampered with. This principle of operation ensures the transparency and reliability of the system (Valdeolmillos et al., 2019). Consequently, we can identify the main advantages of blockchain: transparency and absolute certainty of ownership, a list of assets and liabilities, the integrity of accounting data, increase in the efficiency of performing various operations due to the automation of processes.

Big Data technology is used to work through large arrays of unstructured data sets. Accountants can use additional analytical methods to generate reports, which improves workflow and reduces costs. This technology can integrate information from different databases, identify fraud risks and prevent data leakage, and speed up information processing (Balios, 2021). Big Data can be generated by the implementation of Internet of Things technology. This is a system of interconnected computer networks and remote physical objects equipped with sensors, sensors, etc. The Internet of Things reduces the capital and operational costs of collecting data sets. In accounting, this technology will save transaction time, ensure correct information flow, improve payment security, automate transaction processes, and optimize and personalize capital management. (Yilmaz and Hazar, 2019).

The priority in the process of digitalization of accounting is to change the chart of accounts and implement electronic financial reporting. Real-time reporting can be created through the creation of accounting entries in financial statement items available to users in all categories on the Internet after each business transaction is performed. The immediacy of the reporting items should be ensured if they are linked together with a chart of accounts. When generating financial statements electronically, it is better to use the XBRL (eXtensible Business Reporting Language) standard. This is an advanced business reporting language, which can provide fast and automatic report creation, greatly facilitate the formation of consolidated reporting. An important advantage of this technology is that it makes it easier to find information about financial statements on the Internet. XBRL format is convenient when submitting mandatory reporting to state-controlling bodies and to the web pages of companies. Currently, in the accounting software market, there are both Ukrainian and foreign software products. It should be noted that most companies use Ukrainian software vendors. This is due to the fact that they better meet the requirements of legislation and economic peculiarities of the country, more attractive in terms of the cost of goods and services than foreign ones. The most common programs for the automation of accounting in Ukraine are Galaktika, 1C: Accounting, Parus, BAS. Accent, Best, Sap, Fin expert, and others (Praskova & Godnyuk, 2022).

The digitalization of the Ukrainian economy and the formation of the information society is approved at the legislative level. Relevant laws were adopted: in 1998, "On the National Informatization Program", in 2007, "On the basis for the development of the information society in Ukraine for 2007-2015", in 2014, "On protection of information in information and telecommunication systems". In 2015, "On electronic commerce", in 2017, "On electronic trust services", in 2018, "On Electronic Documents and Electronic Workflow" and "On Protection of Personal Data", in 2019, "On Telecommunications". The Law of Ukraine "On Payment Systems and Transfer of Funds in Ukraine", "On Financial Services and State Regulation of Financial Services Markets". In 2009 the Doctrine of Information Security of Ukraine was approved, in 2013 - The Order

of the Cabinet of Ministers of Ukraine “On approval of the Strategy of development of information society in Ukraine”, in 2018 – “On approval of the Concept of development of the digital economy and society of Ukraine for 2018-2020 years and approval of the plan of measures for its implementation”. Also noteworthy is the Resolution of the Cabinet of Ministers of Ukraine “On Approval of the Regulation on Data Sets to be Made Public in the Form of Open Data” 2015 and “Some Issues of Digital Development”, 2019. According to the “Digital Agenda of Ukraine – 2020”, the transformation of the accounting system is one of the priority tasks, because the modernization of business processes will significantly increase the economic level of the state (Pilevych, 2019). In 2021, the Concept of the development of digital competencies and approval of a plan of measures for its implementation was approved. So, the process of digitalization of Ukraine's economy is supported by relevant regulatory and legal documents.

At present, the following programs are used in Ukraine for auditing in the accounting data processing system: IT Audit: Auditor, Express Audit: PROFI, Audit System, Audit Expert, Audit Information, Audit NET, SAP AG TER 10. Each has its own characteristics. So, for example, IT Audit: The Auditor is used to conduct financial audits, but this program does not take into account the configuration of the legislation in the field of tax accounting. With Express Audit: PROFI calculates indicators for the analysis, taking into account regional and industry specifics, but at the same time editing data in the program is difficult enough, because it uses a fixed format template. Audit System has a user-friendly interface, provides the ability to work in a group and individual format, but requires changes in some modules in accordance with the peculiarities of the accounting system of the country. Audit Expert is used to develop comparative data and economic, comparative, and correlation analysis. Audit-Inform is used to form a database of subjects, but it is not capable for audit risk assessment. Audit NET organizes work remotely and sends data to the central office, nevertheless it is a network system requiring some technical requirements. SAP AG TER 10 integrates all business operations and offers improved reporting because it is aimed primarily at automating the management processes of the organization. Although the listed programs increase the efficiency of accounting procedures, they require licensed software (which results in additional financial costs) and the ability to use them. According to Pilevych (2019), the use of these programs has not saved workers time, so they should be replaced with more relevant ones in the future. For example, to those that use blockchain, RPA, etc. at their core. Summarizing, the most common accounting programs can be identified (Table 1).

Table 1: Modern accounting software. (Source: Tenyukh & Pelekh, 2022)

Direction of digitalization	Scope of use	Example of the software
Accounting automation	Implementation of routine operations of economic activity with the help of computer programs	1C-Enterprise, Debit-Plus, BAS Accounting, iBuh Online, SMARTfin.ua, Zarplata 24, TORGSof, FIT Budget, KBS, BookKeeper, MASTER: Accounting, IT-Enterprise. Accounting, BJET, etc.
Database of Enterprises	Drawing up information on registers	Register of taxpayers, Register of insured persons of Pension Fund of Ukraine, Unified state register of legal entities and individual entrepreneurs, etc.
Electronic cabinet of the taxpayer	Up-to-date Directory of the tax legislation of Ukraine, submission of electronic reports, payment of taxes, check debt online	Taxer, cabinet.tax.gov.ua
Information and reference systems	Rendering legal assistance, professional consulting	LIGA: Law, INFO-Disk, Parus-Consultant, etc.
Reporting	Online-fulfillment and automatic sending of reporting forms	MEDoc, Sota, BAS Accounting, iFin, Liga: Report, iBuh Online, electronic accounting Privat 24, Sonata, etc.
Calculators	Simplification of mathematical calculations with changes in legislation	Salary calculator, Wage indexation calculator, Vacation term/number of (working) days calculator, Pension calculator, Tax return calculator, Fixed assets depreciation calculator, etc.
Services for obtaining a qualified electronic signature (CEP)	Online service for creation of an advanced electronic signature for submission of electronic reporting to state controlling bodies, signing of electronic documents, receipt of state e-services	Qualified provider of electronic fiduciary services of DSS Information and Referral Department (EGP IDD DSS), CSC “Ukraine”, MasterKey, DepositSignPortfel.ua, etc.
Electronic document management	Online service for creating, approving, and signing electronic documents	DEALS, On Time, Fredo, etc.
Software registrar of settlement transactions (SRPO)	Cash and settlement transactions	Cachalot, SmartCash, Checkbox, etc.
Miscellaneous	Services to simplify the accountant's work	Designer of accounting entries, service for determining codes of economic activities KVED

Despite the availability of specialized programs, the degree of digitalization of the accounting sector is still small (Figure 1). A large proportion is the use of spreadsheets in Microsoft Excel. That is, a significant part of accounting is not fully

automated, so there is a prospect of further implementation of information technology. As of 2022, the total share of digitalization in the Ukrainian accounting system is 43.4% (Tenyukh & Pelekh, 2022).

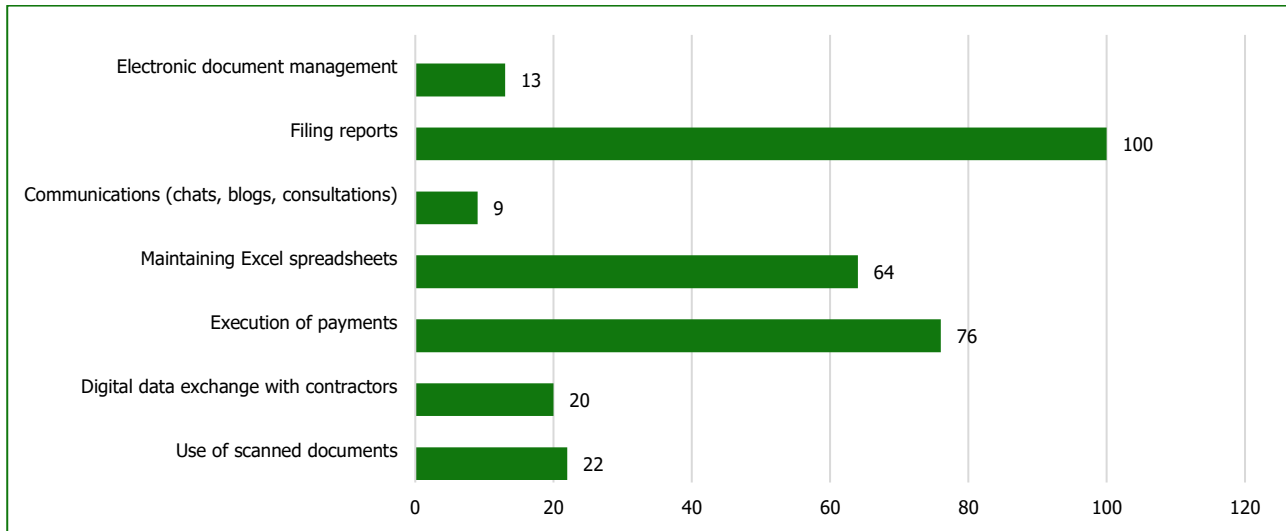


Figure 1. Current status of the process of digitalization in accounting among Ukrainian enterprises (% of the total number of enterprises). (Source: Tenyukh & Pelekh, 2022)

In the process of digitalization of accounting in Ukraine, there are such obstacles as an inefficient increase in the automation process and the degree of functionality of information systems. Especially the cost of cloud software is quite high, and in wartime conditions access to the Internet may be irregular. There are risks associated with the security of customer data storage. As the use of digital technology increases, so do the threats of cyberattacks. To combat hacker attacks, it is necessary to introduce legislative regulations to protect customers' personal information and to actively develop methods to combat cyber threats. In general, obstacles hindering the process of digital transformation in Ukraine can be divided into three groups: institutional, infrastructural, and ecosystem (Müller, Kuznetsova, Khrystoforova, Karpachova & Sulyma, 2021).

The first group includes factors of state influence. The system of normative and legal support is fragmented, there are no mechanisms for the implementation of regulations and by-laws. There is institutional uncertainty, which hinders the implementation of global standards in accounting practice in Ukraine. The legislative framework and mechanisms for regulating the processes of digitalization should be developed in accordance with global trends in the strategy of development of the country.

The second group responds to the formation of digital infrastructure. Infrastructural imperfections hinder entrepreneurs and businesses from carrying out digital innovations at all levels. There is a lack of equality in access to digital technologies for the population and insufficient coverage of the territory of the state with modernized digital infrastructure. In addition, the required cost of implementation and maintenance of appropriate software is high, not all enterprises in Ukraine have the financial capacity to digitalize the accounting system.

The third group includes ecosystem factors. This list includes the lack of conditions for the formation of a favorable investment climate, the low level of education of specialists, lack of qualified personnel.

It follows from the latter that, in addition to the investment, the training process of specialists plays a major role, which in its current state does not meet the required level. The list of competencies of an accountant should include information literacy, communication, interaction with digital content, the ability to navigate when filtering and selecting information, understanding the specifics of digital auditing, and using neural networks, and other modern technologies. An accountant needs to be able to use modern technology, information platforms, and services, and to create, modify and enhance digital content. This also involves knowing the regulatory and legal factors about copyright and peer review policies, using simulation modeling, and adapting accounting software to modern requirements. The employee is tasked with storing and protecting digital information that could become available to third parties (fraudsters, competitors, etc.), as a leak of confidential information would have a negative impact on the business (Rudenko & Pohribniak, 2021).

One of the key obstacles to successful digitalization is mainly the low level of qualification of accountants. In order to use the latest information technology professionally it is necessary to have the appropriate skills. To this end, mandatory

courses, seminars, and training should be introduced for employees. With the spread of distance education, specialists have been able to study online. It is much more convenient than attending classroom sessions tied to a certain time and place. As for students who are just obtaining the relevant qualification, it is necessary to modernize the curriculum according to international standards. The educational program should include the study of modern ways of accounting. The government of Ukraine has already approved a relevant concept for the development of the digital competence of society, so upgrading the qualifications of accountants is mandatory at the legislative level.

Removing these obstacles in the process of digitalization will provide numerous benefits for businesses. The latest technology will ensure secure data storage and access, accurate information transfer during transactions, remote access to data, convenient accounting implementation, increase accountants' productivity, integrate and synchronize business processes. Thus, digitalization will increase the reliability of the information, allow access to financial data regardless of place and time, allow the accountant to perform operations of preparing and sending financial statements in a short period of time (a few minutes). Digital technologies, such as cloud storage, make it possible to back up the necessary information in case of system failure. This is especially important in wartime situations where there are risks of losing physical data carriers and infrastructure. Such systems are flexible and will be able to synchronize with other business tools or applications, thereby ensuring the free exchange of information.

DISCUSSION

We support the research of Spivak et al. (2021) and Nakonechna & Gutsaliuk (2022), which highlight the following factors that entail the active development of the accounting system: improvement of technology and communication, automation of accounting operations using digital technology, development of control system, finding ways to minimize the occurrence of errors, the possibility of automation of documenting facts of economic life; the appearance of new technologies in accounting. The accounting information system should automate the management of any organization and meet the following requirements: to have a correct and logical methodological basis for the construction of planning and accounting indicators, to conduct an accounting of all business operations and processes accurately quickly and efficiently, while maintaining the reliability and completeness of accounting data. The authors highlight the most popular automated accounting systems in Ukraine and more deeply disclose the advantages. 1C: Accounting 8.3 version was developed specifically for accounting in Ukraine, this program saves time when generating documents and filing electronic statements, allows you to connect a large number of users into a single information system, and make adjustments and additions in the course of the company. Available after-sales support for the program. With the help of the program "Business manager," you can connect a lot of users, there is a function of personal connection to the interface, according to the responsibilities. Key functions are accounting, document management, cash flow control, and relationship management with counterparties. IT Enterprises allows you to combine different aspects of business activities in one system, manage funds, reduce the number of errors and increase the accuracy of accounting. Debit Plus is useful for small and medium-sized businesses, this program has an accounting and management accounting module. BAS Accounting is used to automate all services in an organization or separately in accounting. The software allows you to work simultaneously with several organizations, its functionality provides management of various financial transactions, the regulation of relationships with customers and suppliers. This article provides specific examples of Internet services based on cloud technology. Among them, the following platforms are highlighted. Using the information service, it is possible to prepare and submit electronic reports in real time. The platform can be accessed around the clock, which means that reports can be submitted at any time, which are checked and forwarded by the service to certain government agencies. The processes of preparing and submitting reports to the State Tax Service are free for holders of electronic digital signatures. The cloud platform jParus allows you to keep records of costs and revenues, generate sales reports, register primary documents (contracts, invoices), report payments, etc. The platform is easily integrated with other local or specialized programs of accounting automation or company management in general. The use of jParus is available on a commercial basis only, with free test access to the demo database. iFin is a multifunctional cloud service for submitting reports to regulatory authorities and warehouse management in enterprises, which automatically calculates the depreciation of fixed assets. It becomes available to automate personnel accounting, namely the processes of calculating wages, vacations, etc. through a personal calendar, create various accounting document packages with automatic filling of company details, and organize workflow with partners in electronic format. Since the service was developed based on SkyDrive from Microsoft, the protection of personal data is guaranteed. Use of the service, as in the case of jParus, is available only on a commercial basis and free test access is provided. Thus, information about existing accounting services in this paper was not discerned.

Kulynych et al. (2021) stressed that, according to the European Business Association, to improve Ukraine's position in the World Bank's Doing Business ranking (in 2020 the country ranked 64th) it is important to abolish the manual filling of

taxpayer details in tax reporting, except for the single identifier, through which the system will recognize the taxpayer, reduce the number of single-type declarations, indicators, and additional documents, move to a permanent exchange of administrative data between government services, simplify outdated paperwork. We support this approach but do not consider it in detail in this study.

CONCLUSIONS

As a result of the work done, all the objectives were met and the goal of the article was achieved. Cloud technologies, software works, blockchain, Big Data, and other modern technologies have significant advantages over traditional accounting methods. First and foremost, they increase the speed of the accountant by taking over routine tasks. Nevertheless, the risks of errors in such systems are not excluded, and the protection of confidential information is not absolute. Currently, Ukraine is gradually introducing the latest technology in the structures of enterprises. The relevant documents have been approved at the legislative level. Nevertheless, in conditions of war and the lack of permanent power supply in many regions of Ukraine, this process is seriously complicated. However, it is the digitalization of accounting that can protect and save important information companies in electronic form. One of the most significant obstacles to digitalization in Ukraine is the low share of investment in the information technology sector and the poor quality of training. Future studies should focus on ways to improve the quality of accounting education.

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АНАЛІЗ ТЕНДЕНЦІЙ УПРОВАДЖЕННЯ ЦИФРОВІЗАЦІЇ ТА ДИДЖИТАЛІЗАЦІЇ В БУХГАЛТЕРСЬКИЙ ОБЛІК (УКРАЇНСЬКИЙ КЕЙС)

Диджиталізація економіки є обов'язковим кроком на шляху розвитку будь-якої держави в сучасних умовах. Сектор бухгалтерського обліку – один із ключових у цій сфері. Наразі на практиці активно застосовуються різноманітні цифрові технології, що дозволяють оптимізувати ведення обліку та покращити рівень захисту даних. В Україні процес диджиталізації ще перебуває на етапі розвитку, хоча впровадження цифрових технологій в економічну сферу затверджене нормативно-правовими документами. Воєнний стан та нерегулярне енергопостачання загальмували поширення й використання електронного обліку на підприємствах. Крім того, існують інші перешкоди. Метою цього дослідження є проаналізувати нинішні тенденції запровадження диджиталізації в бухгалтерський облік в Україні. У процесі дослідження визначені найпопулярніші інформаційні технології, що використовуються у світовій практиці, і програмне забезпечення, яким користуються українські бухгалтери. Уточнені нормативно-правові акти, які регулюють процес диджиталізації в Україні. Досліджені основні переваги, які надають сучасні інформаційні технології, та аспекти, що сповільнюють процес диджиталізації на українських підприємствах. Зроблено висновок, що новітні технології здатні забезпечити цілісність даних, цілодобовий доступ до них, точність передачі інформації при виконанні операцій, дистанційний доступ до даних, зручне та ефективне ведення обліку тощо. Акцентовано, що в Україні варто звернути увагу на недосконалість відповідної цифрової інфраструктури для систем бухгалтерського обліку, недостатній рівень інвестицій, низький рівень кваліфікації спеціалістів, невідповідність законодавчих постанов світовим тенденціям щодо диджиталізації бухгалтерського обліку. Вирішення перерахованих проблем дозволить значно покращити функціонування бухгалтерської системи та збільшити загальну ефективність управління підприємством.

Ключові слова: бухгалтерський облік, диджиталізація, програмне забезпечення, блокчейн, хмарні технології, великі дані, інтернет речей, роботизована автоматизація процесів

JEL Класифікація: M15, M41, O14, O52