

Application of Digital Technologies in Accounting and Auditing at Enterprises of Ukraine

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Abstract. The rating of Ukraine among European countries in the field of digitalization of economic processes is high. Ukraine has chosen the path of maximum digitization of the national economy. To ensure successful economic activity at Ukrainian enterprises, it is important to introduce and use digital technologies in accounting and auditing. In the practice of accounting, a number of digital technologies are used, each of which has its own advantages and disadvantages. When choosing one or another digital technology, the management apparatus of enterprises takes into account its capabilities and peculiarities of activity. The relevance of the work lies in the importance of introducing digitization of accounting and auditing processes to facilitate the monotonous and uniform work of enterprises and to minimize errors in documents and reporting. The purpose of the article is to study the peculiarities of the use of digital technologies in accounting and auditing at enterprises of Ukraine. When writing the article, general scientific and specific methods were used, among which preference was given to the following: analysis, comparison, observation, synthesis, generalization, abstraction, induction, deduction, graphic. Based on the results of the research, the main types of digital technologies used by Ukrainian enterprises in accounting and auditing were identified, and the specifics of their use were determined. The paper analyzes the level of use of various types of digital technologies in accounting and auditing, outlines their advantages and disadvantages. Statistical data on the use of cloud technologies in accounting and technologies for working with large data sets at enterprises of Ukraine in 2018-2021 were analyzed. Conclusions were made regarding the prospects of using digital technologies in accounting and auditing at Ukrainian enterprises. The practical significance of the obtained results lies in the application of the block diagram by Ukrainian enterprises, which will help in choosing the implementation of a particular digital technology in the enterprise's activities. The manager will be able to familiarize himself with the advantages and disadvantages of each digital technology and make the optimal decision

Keywords: digitalization, cloud technologies, Artificial Intelligence, blockchain technologies, Big Data, internet of things

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Introduction

Since the outbreak of hostilities between Ukraine and Russia in 2014, and especially during the full-scale war that began on February 24, 2022, businesses have faced an urgent need to optimise accounting and auditing. It was the development and application of the latest software that allowed Ukrainian enterprises to transform the management process, especially accounting systems [1]. Therefore, the active introduction of digital technologies in accounting and auditing at Ukrainian enterprises is becoming even more relevant.

Scientist O.V. Butkevych examined the impact of digital technologies on the arrangements of accounting for tax payments [2]. The study provides a detailed analysis of software products used by enterprises for accounting and taxation (cloud technologies; artificial intelligence; blockchain; technologies for working with large data sets (Big Data); Internet of Things). The author argued for the necessity of digitalisation of accounting for tax payments of enterprises, which will prevent penalties from regulatory authorities. At the same time, the share of use of software products at Ukrainian enterprises is not presented. Y.M. Popivnyak studied the transformation of the accounting method in the era of digital technology development [1]. The author proposed and considered the process of digitalisation of elements of the accounting method in documentation, inventory, valuation, calculation, accounts, double entry, balance sheet and reporting. However, the proposed approach is rather theoretical and needs to be improved for application in the practical operations of Ukrainian enterprises.

The study by T. Korolyuk & O. Mazurenok examined the digitalisation of enterprises towards digital accounting [3]. The authors substantiate the features of further enhancement and main directions of development of digitalisation of accounting during the COVID-19 pandemic. However, the authors do not specify the features of the introduction of digital technologies in the accounting process in the context of Ukrainian enterprises depending on the type of economic activity. M.B. Kulynych studied the digitalisation of accounting, analysis, and taxation in the enterprise management system [4]. The author conducted an in-depth investigation of the implementation of artificial intelligence, machine learning, cloud technologies, and Big Data into the practice of accounting, analysis, and taxation. At the same time, the advantages and disadvantages of each of the technologies are not defined. S. Syrtseva analysed digital technologies in the organisation of accounting and control of settlements of tax liabilities [5]. The authors propose to create a modern information and analytical resource of the tax service at the enterprises, which can optimise the accounting and control system. This resource will ensure the de-shadowing of the economy and strengthen control over cash circulation. However, the study it concerns the obligations of budgetary institutions, and the proposed resource does not cover the digitalisation of accounting of enterprises for various types of economic activity. Thus, the issues of the application of digital technologies in accounting

and auditing at Ukrainian enterprises have not been fully considered, which prompted interest in further research.

The purpose of the study is to determine the theoretical and practical features of the use of digital technologies in accounting and auditing at Ukrainian enterprises. The tasks that will contribute to the achievement of this objective are the following: to investigate the theoretical foundations of digital technologies in accounting and auditing at Ukrainian enterprises; to analyse the trends of digitalisation of accounting and auditing at Ukrainian enterprises; to identify the issues of digitalisation of accounting and auditing at Ukrainian enterprises; to outline the prospects for the introduction of digital technologies in accounting and auditing at Ukrainian enterprises.

Materials and Methods

The content of the study was based on the materials of the publication "Digital Transformation in Ukraine: Do Domestic Institutional Conditions Meet External Challenges and the European Agenda?" [6], created within the framework of the project "Support to the Ukrainian National Platform of the Eastern Partnership Civil Society Forum". The publication contains analytical reports of the Cabinet of Ministers of Ukraine, the Ministry of Digital Transformation of Ukraine, the results of the Digital Riser Report rating, data from the State Statistics Service of Ukraine, the Institute for Economic Research and Policy Consulting, the National Platform of the Eastern Partnership Civil Society Forum. The sources of information in the article were scientific articles and materials of scientific conferences.

The methodological basis of the article is formed by the general scientific and specific methods used. Methods of analysis, comparison, and graphical methods were used to assess the trends in the implementation of digital technologies in accounting and auditing at Ukrainian enterprises. These methodological approaches were used to assess the dynamics of the share of cloud computing in accounting at Ukrainian enterprises by type of economic activity and by the number of employees in 2018-2021. The methods of observation, synthesis, and generalisation were used to identify the challenges of introducing digital technologies in accounting and auditing, and to highlight their advantages and disadvantages. Methods of abstraction, induction, deduction, comparison and synthesis are used to determine the prospects for the digitalisation of accounting and audit.

The study was conducted in the following stages:

- The following types of digital technologies were characterised: cloud technologies; artificial intelligence; blockchain technologies; Big Data technologies; Internet of Things;
- the statistical data on the use of cloud computing in accounting and Big Data technology at Ukrainian enterprises in 2018-2021 were analysed. The absolute deviation of the above indicators by types of economic activity of enterprises is calculated and reflected in table and graphic form;
- a flowchart for selecting digital technologies in accounting and auditing at Ukrainian enterprises is compiled;

– the results of the study were compared to the findings of other scientists on this issue. The difference in the results of these studies is substantiated;

– the conclusions define the prospects for the development of digital technologies in accounting and auditing at Ukrainian enterprises. The directions of further scientific research are outlined.

Results

The modern trend in the development of the Ukrainian economy is its digitalisation, which is an important factor

in the economic growth of the state. The digital economy involves the widespread use of digital information and communication technologies in the implementation of any type of economic activity [7].

Digital information and communication technologies are actively used in accounting and auditing at Ukrainian enterprises. The study determines that enterprises use certain types of digital technologies in accounting and auditing. Thus, most scientists [8-10] distinguish the following types of digital technologies that are used in accounting and audit (Fig. 1).

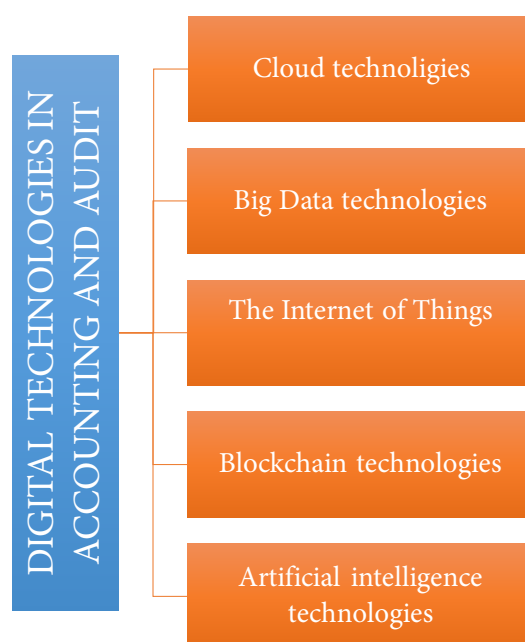


Figure 1. Types of digital technologies in accounting and audit

Source: compiled by the authors based on data [2-4]

According to S.Ya. Korol & A.O. Cloud: “cloud technologies are technologies for storing and working with data online in the cloud rather than on the hard drive of a computer or laptop” [8]. This technology allows accessing the computer resources of the server and using the software remotely, that is, the user can be anywhere and use any device that has an Internet connection to process and store electronic data. It is determined that at the enterprises

of Ukraine the most common is the application of cloud technologies, both in accounting and audit.

The analysis of scientific sources [11-13] showed that cloud technologies in accounting and auditing are used according to three models: Software as a Service (SaaS) – software as a service; Platform as a Service (PaaS) – platform as a service; Infrastructure as a Service (IaaS) – infrastructure as a service. The characteristics of each model are shown in Table 1.

Table 1. Characteristics of cloud technology models used in accounting and auditing at Ukrainian enterprises

Model	Characteristics
SaaS	– using software remotely via the Internet; – temporary use if necessary without purchasing the software product; – minimal engagement of the system administrator; – the availability of the service at any location
PaaS	– a virtual platform consisting of one or more servers with installed operating systems and specialised applications; – providing the consumer with an option to choose the necessary cloud environment out of many solutions; – the consumer manages software products (applications), and the provider manages the operating system (OS)

Table 2, Continued

Model	Characteristics
IaaS	– lease of computer infrastructure, while the provider supplies and maintains servers, data storages, network components; – providing the user with a virtual server with a personal IP address; – providing a software interface

Source: compiled by the authors according to data [3; 8; 11]

Researchers T.M. Korolyuk, O.P. Mazurenok [3], & L.A. Kozachenko & O.A. Predchuk [14] determined that artificial intelligence technologies in accounting and audit are used by creating and using intelligent programmes, applications, services, and so on. Application of such technologies can improve the quality of accounting and the efficiency of operations. It is the use of artificial intelligence technology in accounting and auditing at Ukrainian enterprises that will significantly speed up the processing of accounting information.

Blockchain is a technology for distributing a peer-to-peer public network where permanent information about transactions is stored without the possibility of changing them, which is protected by cryptographic means [8]. The technology contains a decentralised and interconnected database that allows verifying and transmitting information in real time. In accounting and auditing, blockchain technology can reduce the cost of accounting and verification of consolidated registers, as it reduces the number of errors and manipulations with accounting records and reduces the time for auditing due to the automation of these processes [15]. According to KPMG, in 2018, only 1% of enterprises actively used blockchain technology. Ukraine has just begun to introduce blockchain technology, in particular in accounting and auditing [16].

Big Data technologies are a set of methods and tools for processing a large amount of information used in the conditions of the continuous and rapid growth of data collected from various sources [9]. Using Big Data, enterprises were able to improve the segmentation of analytical information. This approach made it possible to improve the flexibility of the business process scenario, which promoted a positive economic result [17]. The technology of working with large data sets in modern economic conditions is arguably one of the most promising for application in accounting and auditing. This is associated with the simplicity of searching, processing, transferring, and storing a large amount of information, which is typical for accounting. The necessity of full implementation of Big Data technology in accounting and auditing at Ukrainian enterprises requires adaptation to the requirements of these systems, which involves a significant amount of work at the initial stage [17].

The Internet of Things technology in accounting and auditing is the interaction of physical devices that have built-in technologies with each other through the use of the Internet in an automated manner. At the same time, there is no need for the constant support of such interaction by people, in particular regarding the collection and transmission of data. For example, if an industrial enterprise has mechanisms equipped with sensors and all primary

information is received using internet technologies, then it automatically enters the database for accounting, which facilitates the collection of primary data and ensures their reliability due to the automation of these processes.

According to the Digital Riser Report 2021, Ukraine actively implements digital technologies and constantly improves them in all types of economic activity, although over the past year its position has decreased by 66 points [18]. Digitalisation is also slowing down in Europe, while digitalisation processes and access to digital technologies are more active in East Asia, particularly in China and Vietnam.

European countries use DESI (The Digital Economy and Society Index) to assess the level of technological development of individual countries, including in economic terms. In particular, this tool is used to assess the volume of human capital, the level of integration of digital technologies, services, the quality of communication and the Internet [19]. According to the data collected to calculate the DESI index [20], it was found that as of 2022, the three countries with the highest digitalisation rates are Finland, Denmark, and the Netherlands. Finland had 17.8% of human capital, 15.1% of communication quality, 14.8% of integration level and 21.8% of service digitalisation. Denmark ranked second, with 14.8% in the human capital sector, 19.3% in the communications sector, and 14.5% and 20.8% in the integration and digitalisation of services sectors, respectively. The Netherlands closed the top three countries in Europe by the degree of implementation of the latest technologies – 15.8% in human capital, 17.5% in the field of quality assurance of communication systems, 13.0% in the level of integration and 21% in the digitalisation of services. Among the European countries that are currently lagging behind in technological development are Greece, Bulgaria and Romania. According to the published data of the DESI index, in 2022 Greece had 10.0% of human capital, Bulgaria had 8.15% in the same category and Romania had 7.73%. The quality of communication for these three countries was comparatively higher: 12.4% in Greece, 12.7% in Bulgaria and 13.8% in Romania. The lowest values of the index are observed in the sector of the integration level – 6.66% in Greece, 3.88% in Bulgaria and 3.79% in Romania. In terms of integration among the three countries, Bulgaria received the highest indicators (13.0%), followed by Greece (9.85%), and Romania completed the indicators of the sector (5.26%). Analysing the European Union as a whole, the DESI index scores 16.8% in the digitalisation of services, 9.02% in the integration of technology, 15.0% in the quality of communication and 11.4% in human capital. Ukraine is pursuing a clear course of accession to the European Union, but as can be seen from the statistics, even European countries do

not always have high performance in the field of the digital economy.

The importance of digital technologies in accounting and auditing is confirmed by the analytical information of the Cabinet of Ministers of Ukraine, the Ministry of Digital Transformation of Ukraine, the Institute for Economic Research and Policy Consulting, the National Platform of the Eastern Partnership Civil Society Forum on strengthening cybersecurity and cybersecurity in Ukraine. This is especially relevant to critical information infrastructure facilities, so it is planned to create a State Register of such facilities

and a unified system of accounting and data storage [6]. To implement such a project, it is reasonable to introduce Big Data technology.

According to the State Statistics Service of Ukraine [13; 21], it is determined that cloud computing is the most widespread among digital technologies used in accounting, although the level of their use is still low and ranges from 5.5-6%. Table 2 estimates the dynamics of the share of the number of enterprises using cloud computing technologies in accounting in the total number of enterprises in Ukraine by type of economic activity in 2018-2021.

Table 2. Dynamics of the share of cloud computing application in accounting at Ukrainian enterprises by types of economic activity in 2018-2021, %

Types of economic activity	Years			Absolute deviation, (+/-)	
	2018	2019	2021	2021-2019	2021-2018
Processing industry	5.2	5.8	5.3	-0.5	0.1
Electricity, gas, steam and air conditioning supply	4.9	6	3.9	-2.1	-1
Water supply; sewerage, waste management	4.2	5.4	4.6	-0.8	0.4
Construction	5.4	5.8	3.7	-2.1	-1.7
Wholesale and retail trade, repair of motor vehicles	5.6	6.4	5.9	-0.5	0.3
Transport, warehousing, postal and courier activities	3.9	4.8	3.4	-1.4	-0.5
Temporary accommodation and catering services	5.2	5.6	5.9	0.3	0.7
Information and telecommunications	7.3	9.6	11.7	2.1	4.4
Real estate transactions	3.8	4	2.8	-1.2	-1
Professional, scientific, and technical activities	6.2	7.2	6.2	-1	0
Administrative and support services activities	5	5.1	3.3	-1.8	-1.7
Total	5.3	5.9	5.5	-0.4	0.2

Source: compiled by the authors according to [13]

In 2021, the share of enterprises using cloud computing in accounting among the total number of enterprises in Ukraine decreased by 0.4% compared to 2019, although it increased by 0.2% compared to 2018. Cloud computing was used most by enterprises in the Information and telecommunications type of economic activity, in 2021 the share increased by 2.1% compared to 2019 and by 4.4% compared to 2018. Cloud computing was least used by enterprises in the economic activity "Real

estate operations", in 2021 the share decreased by 1.2% compared to 2019 and by 1% compared to 2018. The decrease in shares was achieved due to the growth of the number of enterprises and the slower growth rate of the use of cloud computing technology in accounting at Ukrainian enterprises [13]. Figure 2 shows the dynamics of the share of cloud computing in accounting for the total number of enterprises in Ukraine by the number of employees in 2018-2021.

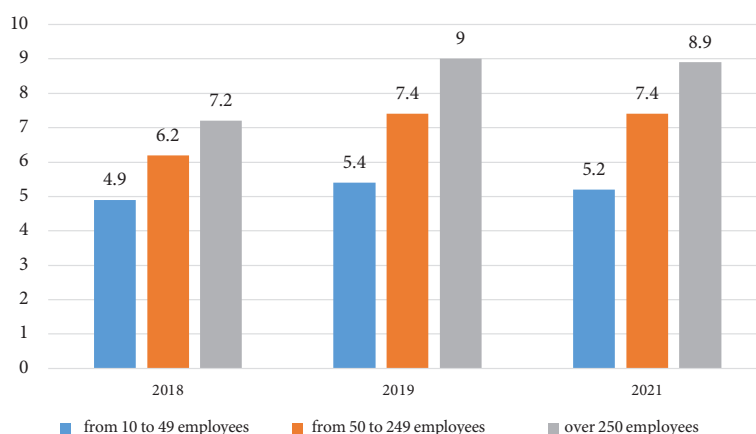


Figure 2. Dynamics of the share of cloud computing use in accounting at enterprises in Ukraine by the number of employed employees in 2018-2021, %

Source: compiled by the authors according to [13]

Analysis of Figure 2 shows that the largest share of cloud computing use is among large enterprises, in particular, during 2019-2021, the share of large enterprises using cloud computing in accounting fluctuated between 8.9-9% of the total number of enterprises in Ukraine. An analysis of the dynamics of the share of cloud computing use shows a slight decrease in 2021 compared to 2019 at

small and large enterprises, while at medium-sized enterprises it remained unchanged at 7.4%. In 2019, the share of cloud technology use increased in all types of enterprises compared to 2018. Table 3 assesses the dynamics of the share of the number of enterprises using Big Data technology in their total number by type of economic activity in 2018-2020.

Table 3. Dynamics of the share of Big Data use at Ukrainian enterprises by types of economic activity in 2018-2020, %

Types of economic activity	Years			Absolute deviation, (+/-)	
	2018	2019	2020	2020-2019	2020-2018
Processing industry	11.9	11.6	12.2	0.6	0.3
Electricity, gas, steam and air conditioning supply	18.8	18.2	17.2	-1	-1.6
Water supply; sewerage, waste management	12.8	12.6	12.1	-0.5	-0.7
Construction	10.4	9.8	11.5	1.7	1.1
Wholesale and retail trade, repair of motor vehicles	13.4	12.5	13.4	0.9	0
Transport, warehousing, postal and courier activities	14.2	14	15.1	1.1	0.9
Temporary accommodation and catering services	12	11.1	10.6	-0.5	-1.4
Information and telecommunications	14.5	14.5	17.7	3.2.	3.2.
Real estate transactions	10.7	9.7	10.5	0.8	-0.2
Professional, scientific, and technical activities	12.4	12.3	13.3	1	0.9
Administrative and support services activities	11.6	11	10.6	-0.4	-1
Total	12.5	11.9	12.7	0.8	0.2

Source: compiled by the authors according to [21]

In 2020, the share of Big Data use at Ukrainian enterprises increased by 0.8% compared to 2019 and by 0.2% compared to 2018 and amounted to 12.7%. Big Data technology was mostly used at enterprises engaged in the supply of electricity, gas, steam, and air conditioning, but in 2020 there was a decrease in the share by 1.0% compared to 2019 and by 1.6% compared to 2018. The

smallest share of Big Data technology was used at enterprises by type of economic activity "Real estate operations", in 2020 the share increased by 0.8% compared to 2019 and decreased by 0.2% compared to 2018 [21]. Figure 3 illustrates the dynamics of the share of Big Data use at Ukrainian enterprises by the number of employees in 2018-2020.

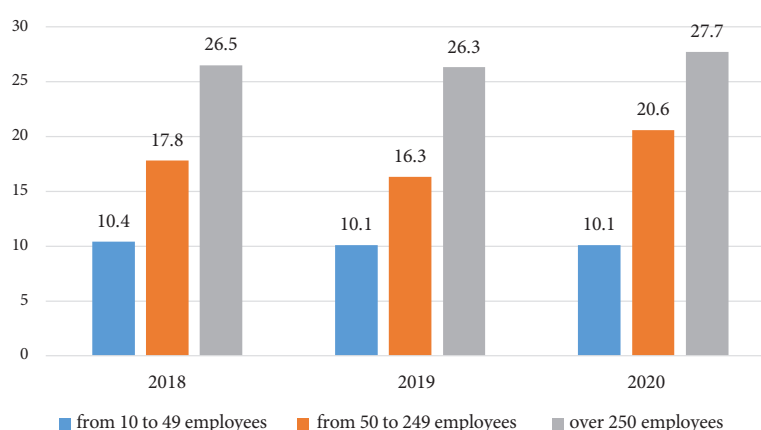


Figure 3. Dynamics of the share of Big Data use at Ukrainian enterprises by the number of employees in 2018-2020, %

Source: compiled by the authors according to [21]

Analysis of Figure 3 shows that the largest share of Big Data technology use is in large enterprises, which ranges from 26.5-27.7% during the analysed period. The

share of their application in 2020 increased by the number of employees at large and medium-sized enterprises and amounted to 27.7% and 20.6% of the total number

of enterprises in Ukraine, respectively [21]. Based on the study, a flowchart of selecting the best option for the use of

digital technologies in accounting and auditing was compiled, as shown in Figure 4.

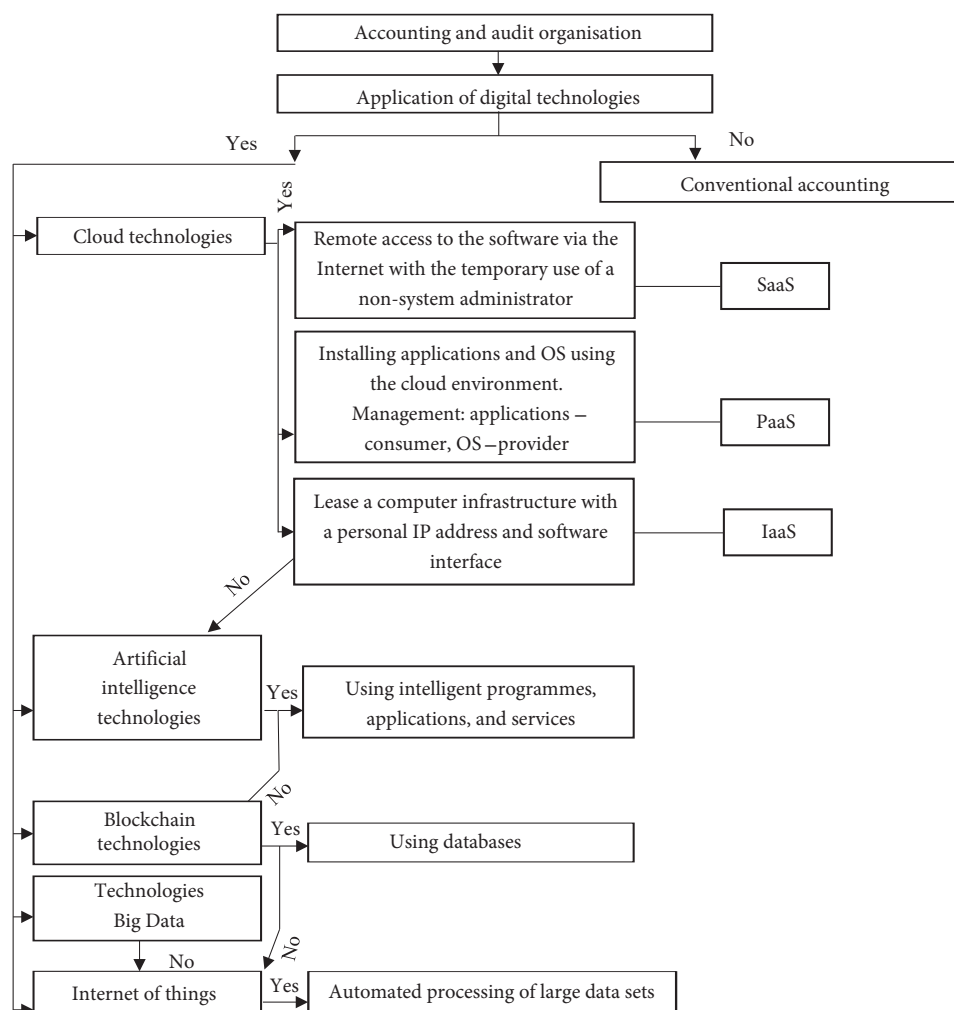


Figure 4. Flowchart of the selection of digital technologies in accounting and auditing at Ukrainian enterprises

Source: compiled by the author of this study.

The proposed flowchart will allow management to choose the best option for the use of digital technologies in accounting and auditing at the enterprise, given its needs and capabilities.

Discussion

It is determined that in the process of accounting and auditing at Ukrainian enterprises, cloud technologies and Big Data technologies are widely used, as evidenced by the data in Tables 2, 3 and Figures 2, 3, although the level of their use in comparison with the leading countries of the world is still low. In the study by M.V. Plekan, T.S. Hayduchok & G.V. Golovchak, it is determined that a necessary prerequisite for the integration of digital technologies is planning technological changes, the sequence of technical tasks, and the construction of a plan for the financial costs of technology implementation [22]. The authors agree with the views of the researchers. It is also worth considering that the proposed ways of using digital technologies are a prerequisite

for the application of the flowchart of the selection of digital technologies in accounting and auditing at Ukrainian enterprises from Figure 4. Also, the authors reviewed the advantages and disadvantages of accounting automation programmes, as well as online accounting using digital technologies. The advantages of digital technologies include: relevance, accessibility, economy, and security. The disadvantages are: automation of work with staff reduction, high dependence on electronics, protection from external interference.

Scientists L.V. Kononenko, G.B. Nazarova & V.I. Kuts identified the priority of the use of digital technologies in accounting [23]. They stressed that the use of digital technologies in accounting transforms the algorithm of information processing from the moment of receiving primary information to the moment of reporting. The authors of this study believe that the Internet of things and Big Data technologies simplify primary accounting. The use of digital technologies, regardless of their type, optimises the costs of

the enterprise, allows for an accurate form of accounting and tax reporting, and conducting an audit.

S.L. Bezruchuk & I.L. Grabchuk claims that the use of digital technologies expands the possibility of the flexibility of accounting processes [24]. The authors share the belief that the use of any digital technology facilitates management decision-making.

S.V. Bardash & I.L. Grabchuk divided the process of applying digital technologies in accounting at Ukrainian enterprises into three stages: collection and registration of primary data, formation of business transactions, and obtaining results for the reporting period [10]. The authors believe that this approach is a prerequisite for the use of a flowchart for selecting digital technologies in accounting and auditing at Ukrainian enterprises. Researchers have described in detail the types of digital technologies but have not supported the level of their use with statistical information, which is done in this study. These statistics show the prevalence of digital technologies in accounting at Ukrainian enterprises.

S.Y. Korol & A.O. Klochko believes that it is convenient to use blockchain technology in auditing because it "... creates the prerequisites for displaying both sides of the transaction simultaneously in the general ledger in real time, even if the accountant and auditor maintain a private database" [8]. The authors of this article agree with this argument. Blockchain technologies facilitate the work of auditors, especially the analysis of transactions between consumers and businesses. Blockchain technology will help automate the audit process and carry it out at a faster pace, minimizing the cost of its implementation.

Scientists of Singapore Management University G. Pan & B. Lee substantiated the feasibility of transforming accounting functions in small and medium-sized businesses [25]. Scientists emphasise that most small and medium-sized businesses do not use digital technologies in accounting and auditing. This study also determined that digital technologies (cloud computing, Big Data) are mainly used by large enterprises, while the share of their use in small and medium-sized enterprises is not high (Tables 2 and 3). The authors fully agree with the conclusion of G. Pan and B. Lee on the presence of technical, behavioural, and project barriers in the activities of small and medium-sized enterprises.

Scientists of the University of Zagreb D. Gulin, M. Hladika & I. Valenta studied the challenges of digitalisation of accounting for the profession of accountant [26]. They proved that digital technologies have a significant impact on the strategic and competitive goals of enterprises. According to the results of the study conducted by the authors, it can be argued that this is not entirely true. Strategic and competitive objectives of any enterprise are formed on the basis of the main mission of the enterprise, i.e., they relate to the overall activities of the enterprise, not just accounting. It has been established that the use of digital technologies in accounting and auditing will allow a specialist to easily compare and analyse planned and reporting

indicators in the outlined strategic and competitive objectives of enterprises. The authors agree with the expert opinion of D. Gulin, M. Hladika & I. Valenta that the use of digital technologies in accounting will increase the speed, quality, and accuracy of data. This is exactly what was described in the detailed description of each type of digital technologies used in accounting and audit. The digitalisation of accounting will ensure the smooth operation of any enterprise. One of the issues of introducing digital technologies in accounting and auditing is the high cost of acquiring digital technologies, which explains the low level of digitalisation in small and medium-sized businesses.

Scientists of the Helsinki School of Economics Sh. Kruskopf, Ch. Lobbas, H. Meinander, K. Soderling, M. Martikainen & O. Lehner believe that the future accounting at enterprises will be based on robotics and artificial intelligence [27]. We can only partially agree with this argument, because the use of robotics and artificial intelligence is important but cannot completely replace a highly qualified analyst in the field of accounting and auditing. Although in present conditions every enterprise should apply digital technologies in its activities, especially in the field of accounting and auditing, to be able to easily adapt to new digital challenges in the future.

Conclusions

Thus, the study of the use of digital technologies in accounting and taxation at Ukrainian enterprises made it possible to conclude that in present circumstances, when Ukraine has chosen the path of digitalisation, their use is a prerequisite for enhancing it and, accordingly, improving the efficiency of business processes in general. The proposed flowchart of the selection of digital technologies in accounting and auditing at Ukrainian enterprises will allow the management to choose one or another digital technology in accordance with the set task. It is determined that the most common digital technologies in accounting at Ukrainian enterprises are cloud technologies and technologies for working with large data sets.

It was revealed that in the last reporting year, the share of cloud technologies has decreased at Ukrainian enterprises, but the share of using technologies for working with large data sets has increased. Blockchain technologies are being actively implemented in the activities of international companies. Unfortunately, in Ukraine, this technology is implemented only in the operations of foreign companies or companies with foreign investments. Artificial intelligence technologies are not used in accounting and auditing at Ukrainian enterprises. The prospects for the development of digital technologies in accounting and auditing are: reduction of "paperwork"; simplification of accounting through a simple interface; simplification of the reporting procedure; optimisation of financial risk assessment; transparency of the tax administration mechanism; reduction of the shadow economy; cost savings for enterprises. For small and medium-sized businesses, to overcome technical, behavioural and project barriers in the implementation

of individual provincial regions of the country, where the issue of outdated accounting methods is quite acute. Ways to introduce digitalisation in the accounting departments of small cities, towns and villages can be elaborated on the basis of similar processes in large cities, but with regard to the specifics of each individual place. Special attention should be paid to the issue of ensuring a high-quality stable Internet connection, on the basis of which new digital approaches to settlements at local enterprises are gradually being introduced.

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Застосування цифрових технологій в бухгалтерському обліку й аудиті на підприємствах України

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Анотація. Рейтинг України серед країн Європи у сфері цифровізації економічних процесів є високим. Україна обрала шлях максимальної діджиталізації національної економіки. Для забезпечення успішної економічної діяльності на підприємствах України важливим є впровадження та застосування цифрових технологій в обліку й аудиті. У практиці ведення бухгалтерського обліку використовують низку цифрових технологій, кожна з яких має свої переваги та недоліки. При обранні тієї чи іншої цифрової технології, управлінський апарат підприємств зважає на свої можливості та особливості діяльності. Актуальність роботи полягає у важливості введення діджиталізації процесів бухгалтерського обліку й аудиту для полегшення монотонної та однотипної роботи підприємств та мінімізації помилок у документах і звітності. Метою статті є вивчення особливостей застосування цифрових технологій в бухгалтерському обліку й аудиті на підприємствах України. При написанні статті використано загальнонаукові та специфічні методи, серед яких перевага надана таким: аналізу, порівняння, спостереження, синтезу, узагальнення, абстрагування, індукції, дедукції, графічному. За результатами дослідження виокремлено основні види цифрових технологій, що застосовуються українськими підприємствами у бухгалтерському обліку й аудиті, та визначено особливості їх використання. У роботі проаналізовано рівень використання різних видів цифрових технологій в бухгалтерському обліку й аудиті, окреслено їх переваги і недоліки. Проаналізовано статистичні дані застосування на підприємствах України у 2018–2021 роках хмарних технологій в бухгалтерському обліку та технологій роботи з великими масивами даних. Зроблено висновки щодо перспектив застосування цифрових технологій в бухгалтерському обліку й аудиті на підприємствах України. Практична значущість одержаних результатів полягає у застосуванні українськими підприємствами блок-схеми, що допоможе у виборі впровадження тієї чи іншої цифрової технології у діяльність підприємства. Керівник зможе ознайомитися із перевагами і недоліками кожної цифрової технології і прийняти оптимальне рішення.

Ключові слова: діджиталізація, хмарні технології, штучний інтелект, блокчейн-технології, Big Data, інтернет речі