GLOBAL DIGITAL TRENDS AND THEIR IMPACT ON NATIONAL ECONOMIC PROGRESS

Monograph

Edited by

Irina Tatomyr

Communal institution «Center for Professional Development of Pedagogical Workers» Boryslav City Council (Ukraine)

Liubov Kvasnii

Precarpathian Institute named of M. Hrushevsky of Interregional Academy of Personnel Management (Ukraine)

Yurii Shulzhyk

Precarpathian Institute named of M. Hrushevsky of Interregional Academy of Personnel Management (Ukraine)

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Reviewers:

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Editors:
Irina Tatomyr PhD in Economics, Associate Professor

Liubov Kvasnii Ph.D in Economics, Associate Professor

Yurii Shulzhyk Ph.D in Economics, Associate Professor

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tel.: +420 770 626 166

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Konon Bagrii
Candidate of Economic Sciences, Associate Professor,
Associate Professor of the Department of Finance, Accounting and Taxation,
Chernivtsi Institute of Trade and Economics of SUTE,
Chernivtsi (Ukraine)
E-mail: kononbagriy@gmail.com
ORCID ID 0000-0002-3516-9565

Ghenadie Ciobanu
Doctor of Sciences (Economics),
Department of Finance and Accounting,
National Institute for ScientificResearch
in the Field of Labor and Social Protection,
Artifex University of Bucharest)
Bucharest (Romania)
E-mail: universitate@artifex.org.ro
ORCID ID 0000-0002-2361-9717

Nataliya Maksymiuk
Candidate of Phylological Sciences, Senior Lecturer,
Senior Lecturer of the Department of Management, Marketing,
and International Logistics,
Chernivtsi Institute of Trade and Economics of SUTE,
Chernivtsi (Ukraine)
E-mail: danatmax1981@gmail.com
ORCID ID 0000-0002-3970-7658

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Introduction. Modern IT technologies and the dynamics of their development objectively cause fundamental changes in various areas of the social environment and economic sectors. The intensive development of the digital economy naturally leads to organizational changes in the formation of the accounting system. The processes of using digital resources in this information system (digitalization) are becoming natural. Modern technologies cause significant changes in the design of the general information system of an enterprise, which, in turn, necessitates the organization of appropriate accounting practices. It actualizes the need to develop an accounting paradigm adequate to the new conditions - to substantiate the relevant content of theoretical statements and to develop practical recommendations.

The global automation of business management processes by using modern digital technologies and their application to accounting and analytical activities actually improve the quality of many processes, enhance security and increase the efficiency of enterprises. The benefits of implementing a particular type of digital technology in the accounting system are accompanied by the possibility of a number of challenges (cyberattacks, software errors, errors in algorithms, etc.). In these processes, there are also facts of insufficient legal regulation of certain issues related to the use of modern digital technologies in the accounting sector. In the context of the development of the digital economy the issues of the directions of accounting development are being discussed and various arguments are being given for its organizational structure in the context of accelerated digitalization, which actualizes this area of research. Existing theoretical developments and practical examples on the digital transformation of the accounting system sufficiently formulate a generalized view of these processes, but the problem of developing applied principles for the implementation of information technologies of a specific type remains unresolved.

Historically, accounting has been a business function that has been slow to adapt to changes and trends. Not many people expected to see a fully remote work environment in the accounting industry in the near future. However, recent technological advancements are fundamentally affecting all aspects of business, and accounting is no exception.

Literature review. Regarding the theoretical and practical aspects of the implementation of information technologies in the accounting field, scientists give various opinions and suggestions. In theoretical publications and among practicing accountants, the view that the accounting system is inevitably converted to digital accounting is held. For example I.V. Spilnyk and M. S. Paliukh consider "rethinking the role and place of accounting in the digital economy" to be an urgent issue and the direction of development of such a paradigm is considered in terms of the results of "research on changes in its substantive, methodological and conceptual foundations under the influence of digitalization and new stakeholder requirements for the relevance of information content" [1].

In a case study, V.V. Muravskyi substantiates that "the requirement of the time is to develop a form of accounting that will meet the challenges of our time and focus on the activation of electronic communication processes" [2]. The recognition of digital technologies as a priority in the development of accounting is also noted in the publication of O.V. Shaparenko [3].

The view on the changes in the essential and substantive aspects of the accounting system as a result of the introduction of information technology tools can be summarised by the conclusions of S. V. Koliadenko with the argument that "the use of the latest technologies in the environment of the "digital economy" will allow more efficient application of knowledge of classical economics to solve economic problems" [4]. An analysis of the general trends in the digital economy was carried out by M. L. Varlamova and Y. O. Demianova with the conclusion that "digital technologies are becoming its integral part and a key direction of development of public policy", noting

the fact that "as a result of these processes, new risks are also created in the management and accounting spheres, including cybersecurity threats" [5].

In their thematic publication, M. Kulinich, I. Matviichuk, A. Safarova, and T. Gerasymenko conclude that "the digital transformation of accounting and related areas will make their processes more efficient and qualitative for enterprise management in terms of providing relevant information flows" [6]. In general, the analysis of research and publications shows that most authors share the view that the development of the topic of introducing modern information technologies into the accounting system is highly relevant, and that it is necessary to develop adequate methods for its digital transformation.

Results. The practical application of IT technologies has led to significant changes in all areas and has clearly outlined the trend of integrating accounting with other areas of management on this basis. The importance of introducing the studied tools in the subject area is explained by the fact that "almost the entire process of formation, processing and transfer of technical and economic information for the needs of management is occupied by the accounting system. The introduction of digital technologies implies a significant modernisation of the enterprise's IT infrastructure and the involvement of FinTech specialists, in particular those familiar with accounting specifics. The digital economy in accounting has a number of advantages, but there are also disadvantages (Figure 1).

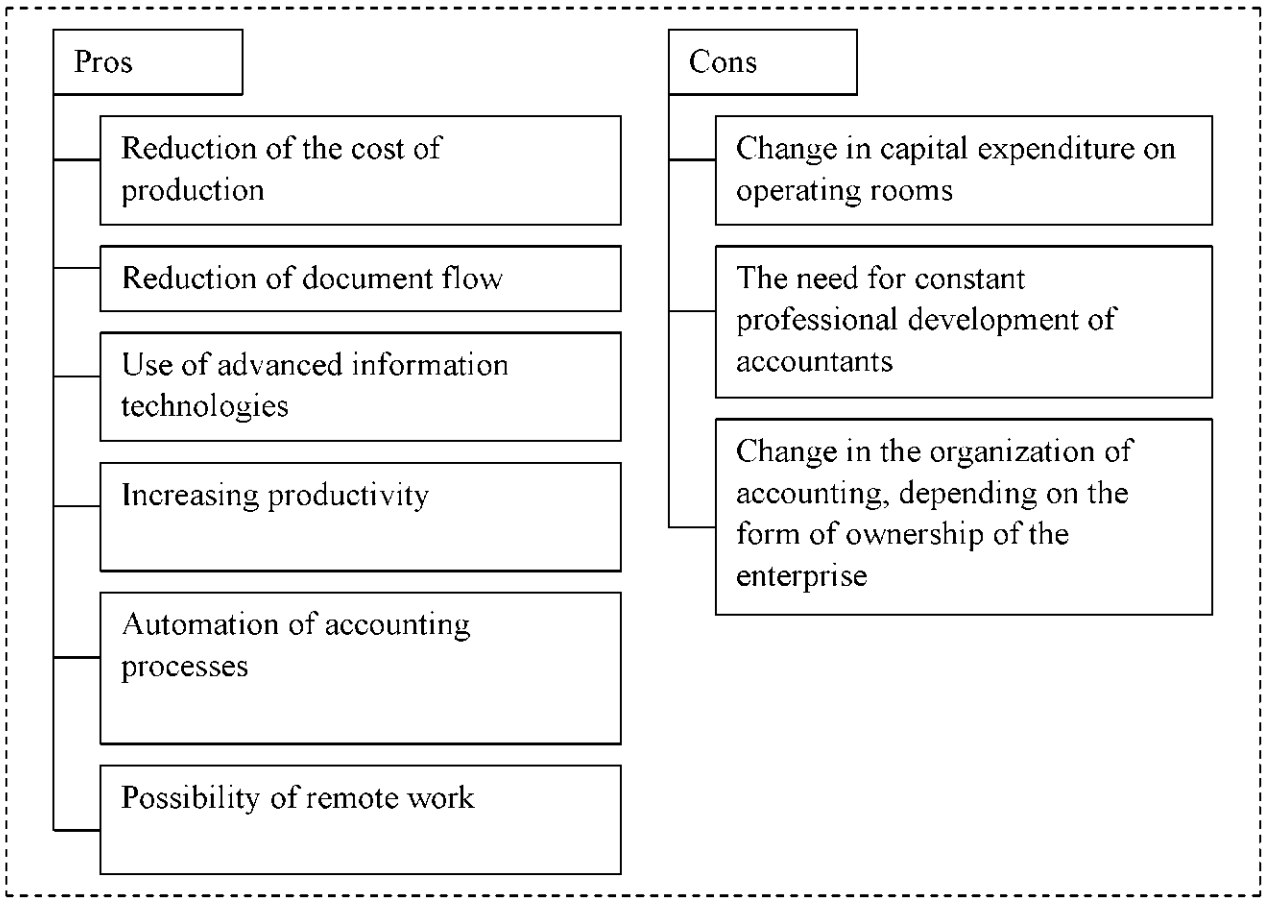

Fig. 1. Pros and cons of using digitalisation tools in accounting
Source: compiled by the authors

Blockchain is an accounting technology. It is related to the transfer of ownership of assets and the maintenance of a ledger with accurate financial information. The accounting profession is concerned with measuring and communicating financial information, as well as analysing that information. Most professions are concerned with establishing or measuring rights and obligations over property or planning how best to allocate financial resources. For accountants, the use of blockchain provides clarity on the ownership of assets and the existence of liabilities and can significantly increase work efficiency [7, p. 268].

Blockchain has the potential to improve the accounting profession by reducing the cost of maintaining and verifying books and providing absolute certainty about the ownership and history of assets. Blockchain can help accountants gain clarity on their organisations' available resources and liabilities, and free up resources to focus on planning and valuation rather than bookkeeping.

Blockchain may replace accounting and data reconciliation. This could put accountants' jobs in these areas at risk, while empowering those focused on delivering value in other areas. For example, in M&A due diligence, distributed consensus on key metrics allows more time to be spent on areas of judgement and advice, and speeds up the process overall [8].

Using the example of Fig. 2, (the essence of the blockchain tool.)

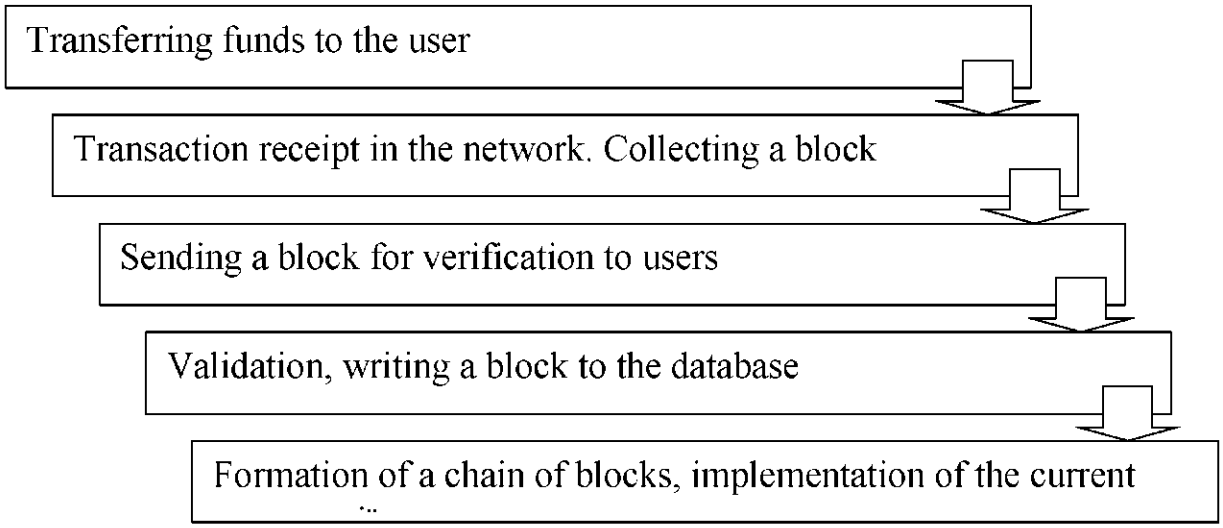

Fig. 2. Application of blockchain technology in financial transactions of business entities

Source: compiled by the authors

Along with other automation trends, such as machine learning, blockchain will lead to more and more transaction-level accounting being performed - but not by accountants. Instead, the successful accountants will be those who work to evaluate the real economic interpretation of blockchain records, connecting the records to economic reality and valuation. For example, the blockchain can make the existence of a debtor seem imaginary, but its recoverable value and economic value are still in dispute. And the ownership of an asset can be confirmed by blockchain records, but its condition, location and true value still need to be verified.

By reducing the need for reconciliation and providing certainty of transaction history, blockchain may also allow the scope of accounting to be expanded to include more areas that are currently considered too complex or unreliable to measure, such as the value of the data a firm holds.

A decade ago, a significant number of researchers argued that emerging technologies, particularly automation, would lead to the digital death of accounting as we know it. However, the events that are happening now - a full-scale war, including the Covid-19 pandemic - have shown that accountants, like other professionals, need to worry more about adaptation than replacement.

There is no doubt that the digital transformation of the economy has radically changed the environment. Big data has become a rich resource that must be harnessed to compete effectively. But for businesses ready to harness the potential of digital tools, this shift is an opportunity, not a threat. Artificial intelligence is having a huge impact on the world of accounting and finance, just as it does in any other business. Artificial intelligence has recently become available in accounting software. It is having a huge impact on the accounting and finance industry, just like any other field.

Accounting procedures that used to take full days to complete can now be performed more correctly by artificial intelligence in the shortest possible time. Artificial intelligence in accounting and financial solutions will help financial experts and their companies stay energised. It also attracts the next generation of employees and clients. Because it saves time and money and provides insight. Let's outline the following benefits of artificial intelligence in accounting (Fig. 3).

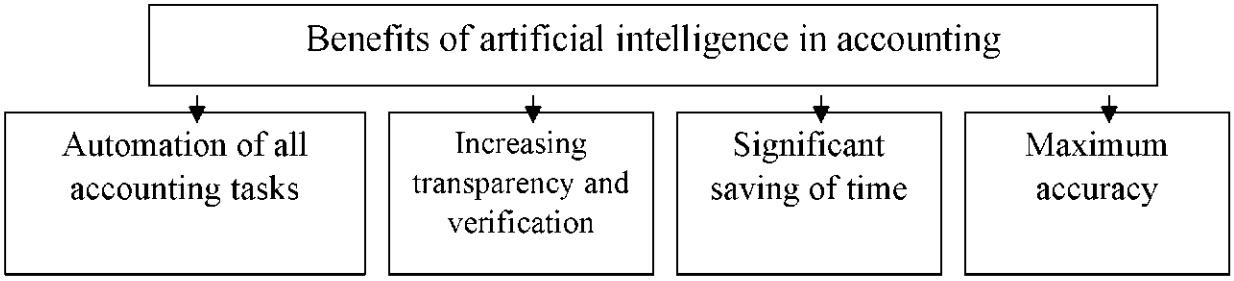

Fig. 3. Benefits of artificial intelligence in accounting
Source: *compiled by the authors*

Artificial Intelligence should be used to solve tasks that are regularly repeated (management of receivables and payables, expenses, cash flows, etc.) and to solve non-standard tasks (management of commodity flows, creation of forecast models, identification of fraud schemes). The main feature of artificial intelligence technology is the ability to process huge amounts of information in the shortest possible time, and its application has powerful prospects in accounting, in particular in collecting, processing and analysing data in various studies.

Cloud and mobile applications are the most common trends for accounting software in 2024. Quickbooks, Freshbooks, and Zoho Books (Figure 4) remain the dominant vendors in the accounting software market, and their popularity is driven by their adaptation to the cloud model.

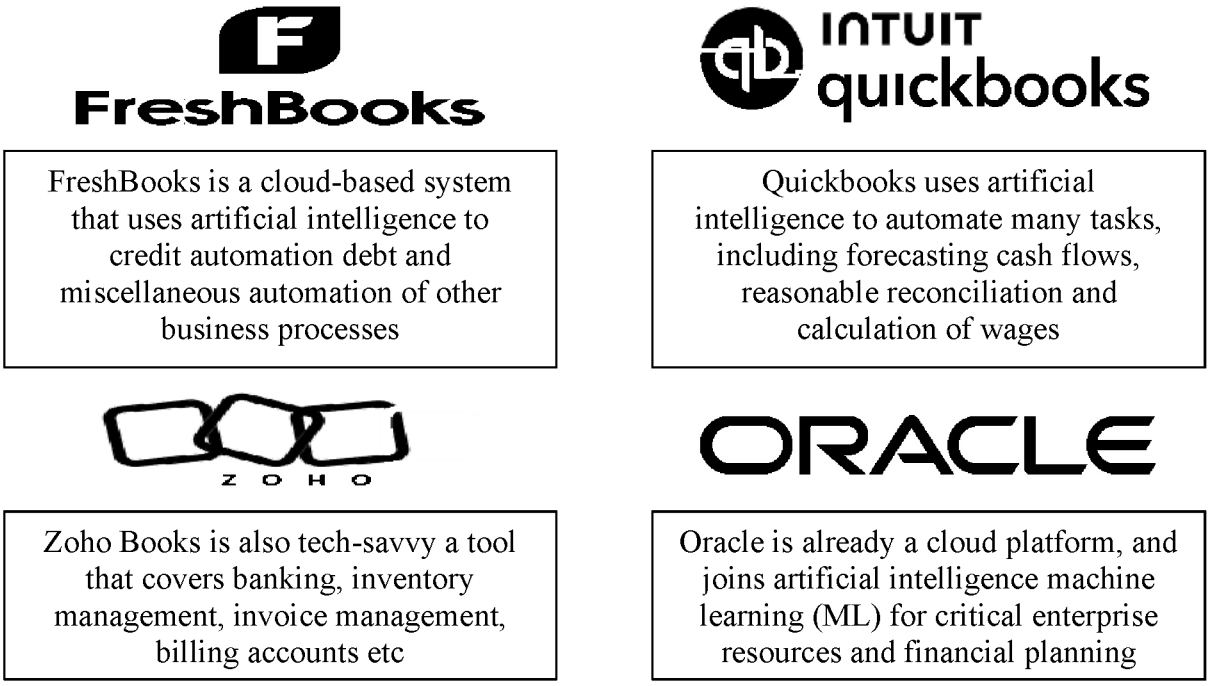

Fig. 4. Accounting software with elements of cloud technologies and artificial intelligence

Source: *compiled by the authors based on [7].*

The list of the best cloud-based accounting software designed to serve and meet the needs of small, medium and large businesses and start-ups is shown in Figure 5.

Each type of this software is unique and fully functional, providing comprehensive solutions and enabling many businesses to operate more efficiently. As technology evolves, modern solutions offer AI-based data analytics tools that allow you to collect, store and organise data to gain meaningful insights and make smart business decisions.There are many AI solutions available for businesses to use, and many more are being developed that are more robust and effective.

Since 2016, the leading Big Four firms have announced that they will implement AI in tax, accounting and auditing. Since then, Deloitte, KPMG, EY, and PwC have been involved in Artificial Intelligence initiatives, competing with each other.

Today, digitalisation will significantly increase labour productivity in Ukraine and become a powerful multiplier capable of launching the Ukrainian economy in the shortest possible time and ensuring its real growth by 10-12% per annum. The total investment in digitalisation and the use of blockchain technology in industry could reach up to USD 70 billion by 2030. and in digital infrastructures - up to USD 16 billion. (80% of which will come from private companies). Accordingly, the consumption of products and services of the information and communication technologies (ICT) sector by the local market will range from USD 86 to 100 billion.

This does not include the public segment (excluding private consumption in households) [9, p. 188]. However, an analysis of key indices of digital development currently shows that Ukraine is not ready to implement digital technologies.

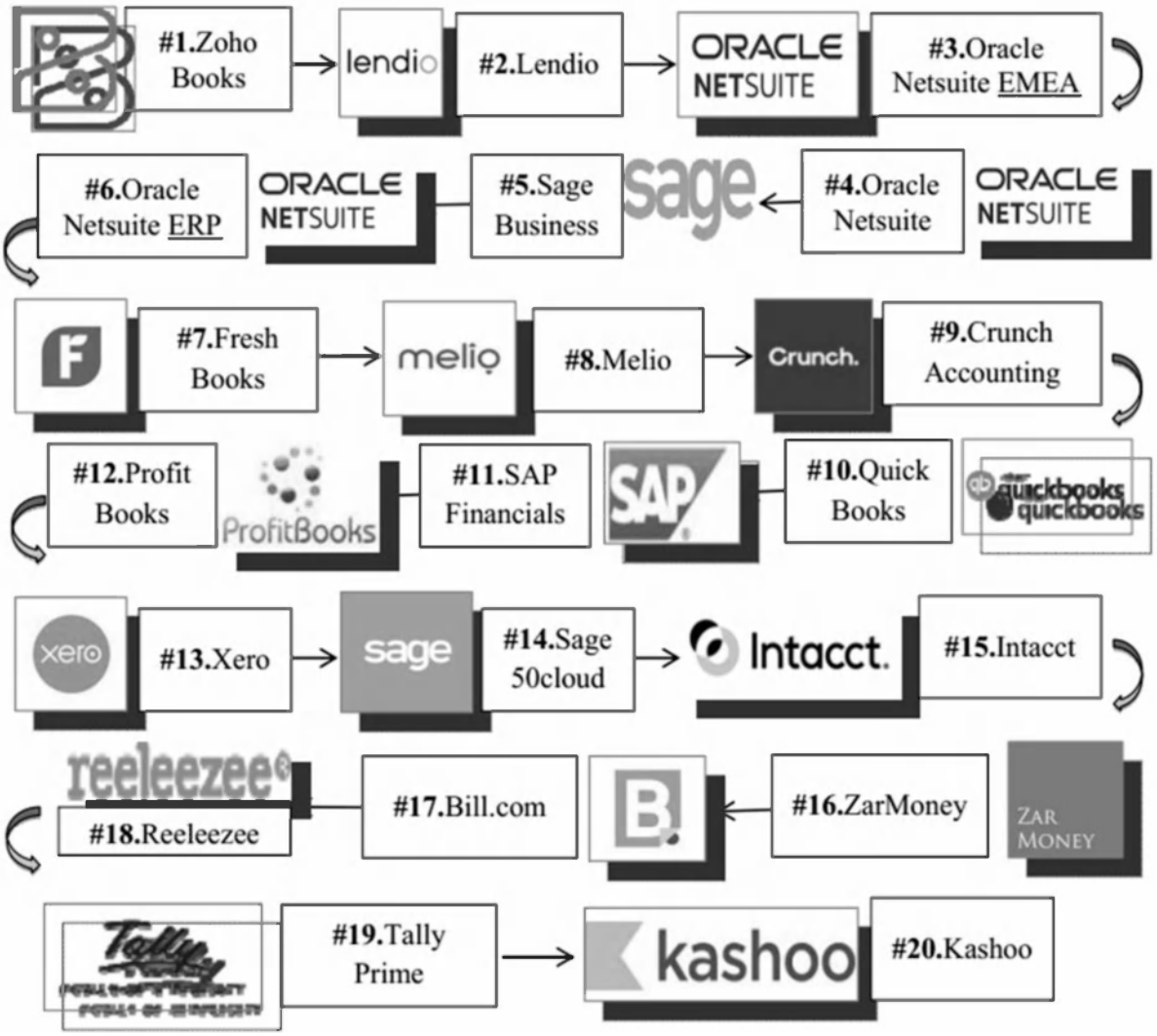

Fig. 5. The best accounting software
Source: *compiled by the authors on the basis of [7; 8].*

According to the Economic Strategy of Ukraine 2030, in 2030 Ukraine aims to be ranked 10th in the global ranking for each of the key indicators of digital development. However, as of today, due to Russia's armed aggression and other factors, the situation has not improved. Ukraine is a country with a degrading industry, low regulatory efficiency, weak domestic demand for technology (including Industry 4.0 technologies), and at the same time a strong IT industry, developed segments of integrators and developers of control systems and IT, and a still quite powerful (compared to emerging markets) system of higher education institutions. The approval of the Economic Strategy of Ukraine 2030 was a positive development for digital technologies in Ukraine. According to the Strategy, digitalisation will be the main tool for achieving Ukraine's strategic goal of increasing GDP by 8 times and ensuring the welfare, comfort and quality of life of Ukrainians at a level higher than the European average. If the accelerated scenario of digital economy development is implemented in

Ukraine, the share of the digital economy in GDP may reach 65% (50-60% in other countries), and Ukraine will become a European leader in innovation and new technologies, turning into an intellectual hub with the most attractive conditions in the region for developing people's potential [10].

Today, a professional accountant can no longer imagine the process of accounting without the use of automation tools. That is why one of the main problems of reliable accounting is the process of combining it with the latest trends in the world of computer technology [11, p. 11].

An important aspect is also the study of problems and challenges that may arise during implementation. The main ones are low trust in information security and classical inertia; dependence on the quality of Internet connection; instability of the economic situation in the country; insufficient regulation at the legislative level; high cost, which makes them unavailable to most enterprises; lack of knowledge and skills of accountants and managers, as well as some other shortcomings of the technologies themselves.

However, the advantages of introducing digital accounting in organisations prevail over the problems associated with them, but it should be realised that a number of significant measures will be needed to facilitate the transition to full digitalisation, including both the training of qualified personnel and the introduction of information and communication technologies themselves, including the preparation of the necessary equipment, resources, and information base [12, p. 11].

To ensure effective digitalisation and transition to a new innovative level of accounting development, we suggest that enterprises should not focus on any one technology but use various combinations of them, since only through combination can all positive effects be maximised (Table 1).

Table 1.

Combining new technologies for accounting purposes

№	Accounting process	Technology			
		Cloud technologies	Artificial intelligence	Big data	Blockchain
1	Fast processing	+	-	+	+
2	Processing of large amounts of data	+	-	-	-
3	Automation of accounting processes	+	+	-	+
4	Efficient inventory management	+	-	-	-
5	Ensuring the accuracy and efficiency of accounting	-	+	-	-
6	Achieving transparency in accounting	-	+	-	+
7	Preventing manipulation	-	-	-	+
8	Data integrity	+	+	+	+
9	Simplified taxation process	-	-	-	+
10	Controlling tax evasion	-	-	-	+

Source: *compiled by the authors on the basis of [1]*

We emphasise the relevance of applying an integrated approach to the introduction of technologies into the accounting system, which includes a combination of measures implemented at the macroeconomic level (the state) and at the micro level (enterprises). For the effective implementation of innovations, it would be advisable to systematise information on the prospects and benefits of using artificial intelligence,

cloud technologies, blockchain and BigData in the national accounting system, as well as assessing obstacles, threats and shortcomings, and, accordingly, conducting a SWOT analysis.

Conclusion.

Based on the analysis of the current state of innovation in accounting practice in countries around the world, it can be said that the introduction of technology is taking place at a frantic pace in all areas, including accounting, which will undoubtedly lead to the inevitable transformation of accounting in the near future. Implementation of innovative developments in the accounting system is a rather complicated process, as there are still a significant number of unresolved issues related to both the shortcomings of the technologies themselves and certain obstacles caused by the peculiarities of our country's economy, the mentality of citizens, unwillingness to change and many other factors. However, the strategy has been chosen, and we are already taking small but confident steps towards a developed economy and digital transformation that will allow us to achieve progressive changes.

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