

# Digitalization of Accounting in the Context of Business Competitiveness

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**Abstract:** Aims: The purpose of the article is to determine the optimal nomenclature of digital tools to increase the competitiveness of business community members through digital optimization of accounting processes. Methodology: To achieve this goal, the following methods were used: formation and analysis of expert opinion, rating analysis of digital solutions, structural analysis with the development of a scheme for the implementation of relevant digital solutions, modelling of the likely consequences of the impact of digitalization on the accounting system and the competitiveness of business organizations. Results: The current study has revealed that the digitalization of accounting processes is a powerful tool for increasing the competitiveness of enterprises. In particular, among the various digital solutions, Cloud-based accounting has been singled out as the highest rated in the context of business improvement. The study also allowed us to determine the structure of digitalization development vectors, such as the integrated system vector, automation vector, analytics vector, analytical automation vector, and security vector, which contribute to the competitiveness of business organizations. Scientific Novelty: At the current stage of development of the business environment, it is almost impossible to achieve sustainable development and competitiveness of business organizations without an optimal digitalization strategy. One of the main business structures that requires urgent digital transformation is the field of accounting and auditing. The digital optimization of accounting and auditing processes has a direct impact on the economic success and competitiveness of a business. Conclusion: The results of the study are of significant value to investors, as they provide them with an objective assessment of the prospects for investing in digital technologies in accounting and auditing processes. The optimal nomenclature of digital solutions, in particular the emphasized high rating of Cloud-based accounting, gives investors a clear idea of the technologies that have high potential in the business environment. Recommendations on the structure of digitalization development vectors are also of great importance for investors, as they allow them to focus on the areas that can most improve efficiency and ensure the success of the enterprise. Investors can focus their investments on key aspects, such as automation, analytics, and security, which will help to implement successful digital solutions and increase competitiveness.

**Keywords:** Optimal nomenclature, digital solutions, digital strategy, expert environment, business community, Cloud-based accounting, investment focus, Accounting 4.0.

**JEL Classification:** M41, M42, O13.

## 1. INTRODUCTION

### 1.1. Research Problem

Digitalization of accounting is important in the context of increasing the competitiveness of enterprises. Modern

economic conditions and technological innovations place demands on businesses to be efficient and optimize their accounting processes. The introduction of digital technologies in accounting, known as digitalization, helps to meet these requirements and provide competitive advantages (Oneshko & Pashchuk, 2021; Tkachuk et al., 2022; Vdovichenko et al., 2022).

One of the key arguments in favor of accounting digitalization is to increase work efficiency. Automation of routine processes such as journal entries, calculations, and reports reduces dependence on the human factor and achieves more

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accurate results. This allows businesses to focus on strategic financial management and informed decision-making (Prokopenko et al., 2019; Ladonko et al., 2022; Abdullayeva & Ataeva, 2022).

In addition, digitalization saves time and resources. Traditional accounting processes that involve manual work and the processing of paper documents are costly. The introduction of digital tools allows automating these processes, which frees up employees' time to perform more complex tasks (Seseli, Risakotta & Bawono, 2023; Cardinali et al., 2023; Kovaliuk et al., 2020).

Digitalization also helps to improve analytical capabilities and strategic planning. Analytical tools and data management systems allow for in-depth analysis of financial indicators, identify trends, and forecast results. This helps businesses respond quickly to changes in the market and competition, improve strategy, and make optimal decisions (Suartha et al., 2023; Wadan & Goetze, 2023; Aristova et al., 2020).

Control and compliance is another important aspect of accounting digitalization. Automated systems allow to monitor transactions, detect possible irregularities, and ensure compliance with financial standards and legislation (Alsharari & Ikem, 2023; Gnatiuk, Shkromyda & Shkromyda, 2023; Amzucă, Mititelu, & Nişulescu, 2023).

Digitalization also provides variability, flexibility, and mobility of business processes. The use of digital solutions in accounting allows you to work from anywhere and at any time. This improves productivity and simplifies communication with third-party auditors, partners, and clients (Knudsen, 2020; Keimer & Egle, 2023; Calderon-Monge & Ribeiro-Soriano, 2023).

**1.2. Research Focus**

Research on the digitalization of accounting in the context of ensuring business competitiveness is important and relevant. The introduction of digital technologies in accounting allows businesses to increase efficiency, ensure the accuracy and

speed of financial information processing, improve analytical capabilities and strategic planning, ensure control and compliance, and provide flexibility and mobility in working with financial data. This helps to increase the competitiveness of the business and facilitates its successful operation in the current environment.

**1.3. Research Aim**

The purpose of the study is to develop practical solutions for the integration of the latest digital tools into the professional field of accounting in order to ensure the competitiveness of enterprises in the business environment within the framework of the modern Accounting 4.0 paradigm.

**1.4. Research Questions**

Purpose of the study

- to identify the range of possible variations of modern digital solutions that will help optimize and improve the efficiency of the accounting system;
- to determine the optimal range of digital solutions that have the potential to be implemented in the accounting system of the business environment for the current period;
- to develop a scheme for integrating the optimal nomenclature of digital solutions into the accounting system;
- to determine the potential impact of the project scheme and the optimal range of digital solutions for the digitalization of the accounting system on competitiveness indicators.

**2. LITERATURE REVIEW**

The introduction of the latest digital solutions has a significant impact on the accounting system. Key aspects of this impact are shown in Table 1.

**Table 1: Brief description of the key aspects of the impact of the introduction of the latest digital solutions on the accounting system.**

Key Aspect	Brief Description	Reference
<b>Process automation</b>	The latest digital technologies allow for the automation of routine accounting processes such as calculations, journal entries, and report generation. This reduces the reliance on manual labor and errors, ensuring more accurate and efficient processing of financial information.	(Langmann & Turi, 2023; Korhonen et al., 2021; Rawashdeh, Bakhit & Abaalkhail, 2023)
<b>Electronic reporting</b>	Digital solutions allow you to submit reports electronically, simplifying the process of interaction with fiscal authorities and other regulators. This reduces the cost of printing and delivering documents and increases the speed of processing and analyzing financial statements.	(Birt et al., 2022; Beuselinck et al., 2023; Thottoli & Ahmed, 2022)
<b>Cloud and online systems</b>	The use of cloud technologies and online systems allows you to store and process accounting data in a secure and accessible virtual environment. This helps to improve access to information, collaboration, and data exchange between different departments and branches of the company.	(Gădău, 2022; Rawashdeh & Rawashdeh, 2023; Li, 2023)
<b>Real-time analytics and reporting</b>	Digital solutions provide the ability to receive analytical information and reports in real-time. This allows management and financial analysts to quickly identify trends, risks, and opportunities, which helps them make informed decisions.	(Tiwari & Khan, 2020; Byström, 2019; Bose, Dey & Bhattacharjee, 2023)

<b>Ensuring data accuracy and security</b>	Digital solutions allow businesses to ensure the accuracy and reliability of accounting data by automatically entering and verifying information. The use of modern encryption and data protection methods helps to avoid unauthorized access and system hacking.	(Demirkan, Demirkan & McKee, 2020; Cram, Wang & Yuan, 2023; Stipić & Vičić, 2023)
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Source: authors' development.

**Table 2. Brief description of the key aspects of the impact of the introduction of the latest digital solutions on the competitiveness of business organizations.**

Key Aspect	Brief Description	Reference
<b>Process efficiency</b>	Digital solutions automate routine accounting processes, such as transaction processing, reporting, and tax calculation. This reduces the time and effort required to perform these tasks and helps free up resources for strategic financial analysis and planning.	(Coman et al., 2022; Blahušiaková, 2023; Ionescu-Feleagă et al., 2022)
<b>Precision and reliability</b>	The use of digital solutions reduces the risk of errors associated with manual data entry or complex calculations. This improves the accuracy of financial reporting and ensures data reliability, which is an important aspect for the trust of business partners and investors.	(BinSaeed et al., 2023; Wang, 2023; S Supriyati et al., 2022)
<b>Analytical capabilities</b>	Digital solutions allow you to collect, store, and analyse large amounts of data. This allows for in-depth financial analysis, identifying trends, and forecasting results. With the help of analytical tools, businesses can gain valuable insights to improve strategies and make informed decisions.	(Santos, 2023; He, 2023; Wahyuni, 2023)
<b>Mobility and flexibility</b>	Digital solutions allow access to accounting data and functions from anywhere and at any time. This provides flexibility in work and facilitates communication with third-party auditors, clients, and partners. Mobile access to information allows you to quickly respond to changes and take appropriate action.	(Ilcus, 2018; Gurău, 2020; Varaniūtė, Žičkutė & Žandaravičiūtė, 2022)
<b>Reducing costs</b>	The use of digital solutions can reduce accounting costs associated with the use of paper documents, physical storage, and delivery. This can lead to greater efficiency and increased business competitiveness.	(Kovalevska et al., 2022; Guanping, Debing & Mingchen, 2023; Sari, Kesuma & Muda, 2023)

Source: authors' development.

In general, the latest digital solutions improve the efficiency, accuracy, and security of accounting. They provide quick access to important information and facilitate better management decisions, which is an important factor in ensuring the success and competitiveness of enterprises.

The introduction of digital solutions in the field of accounting has a significant impact on the competitiveness of business environment participants. The key aspects of this impact are shown in Table 2.

All these advantages of digital accounting solutions help businesses improve their competitiveness. Fast and accurate financial reporting, analytical capabilities, and resource conservation contribute to effective financial management and strategic decision-making, which helps businesses succeed in today's competitive environment.

Despite numerous publications on the likely impact of the latest digital solutions on the competitiveness (through the digitalization of accounting policy) of participants in the modern business environment, there are currently no systematic studies that form an idea of the optimized nomenclature of digital tools and a practical strategy for their implementation in business processes.

### 3. METHODOLOGY

Taking into account the identified aspects, the following research methods were used:

1. Expert opinion. To determine the range of possible variations of modern digital solutions that will help optimize and improve the efficiency of the accounting system, open data from leading expert organizations that carry out analytical monitoring of systemic digitalization of business processes were used - Table 3. This method allowed us to determine the range of possible variations of digital solutions and their potential for optimizing and improving the efficiency of the accounting system.
2. The method of analyzing expert opinion followed by a rating comparison of the studied digital solutions by the following parameters: frequency of mention, frequency of occupation of the first leading positions (top 3). This method of analyzing expert opinion and rating comparison allowed us to obtain an objective assessment of various digital solutions based on expert knowledge and experience.

- The use of this method made it possible to identify the advantages, disadvantages, and potential of various digital solutions, contributing to making informed decisions on the selection of the most effective solutions for the accounting system.
3. Structural analysis and formation of a strategic scheme for the implementation of rating digital solutions in the accounting policy in order to increase the competitiveness of business process participants. In accordance with this method, a structural scheme was formed for the integration of multifocal digital tools of the Accounting 4.0 paradigm into the business process accounting system, taking into account the technical and technological capabilities of each application. This method helped to determine the optimal choice of digital tools, develop an implementation plan, and define success metrics.
  4. Modeling the likely consequences and impacts of the implementation of rating digital tools in the accounting policies of competitive business participants. This method identifies key factors that influence accounting policies, such as efficiency, accuracy, automation, and availability of digital tools. After that, a model was built that took into account the dependencies between these factors and possible consequences. After analyzing the modelling results, conclusions, and strategic recommendations for the implementation of rating digital tools in accounting policy were formed. Recommendations were made on the optimal choice of digital tools, the development of an implementation plan, the need for staff training, and the determination of success metrics. This method made it possible to take into account key factors, such as the effectiveness and availability of tools, and to predict possible consequences for accounting policy.

**Table 3. Description of the expert community.**

Name of the resource	Brief description	Source
<b>CapActix Business Solutions Pvt Ltd</b>	CapActix, as an expert organization, is a leading provider of accounting and financial services and consulting. They specialize in accounting services, financial analysis, and digital transformation for businesses of all sizes and industries. The company offers knowledge of the latest accounting trends and helps clients apply innovative solutions to improve the efficiency and competitiveness of their business.	<i>(Top 13 Accounting Trends 2023 To Keep An Eye On, 2023)</i>
<b>Invensis Technologies Pvt Ltd</b>	Invensis is a leading expert organization that specializes in outsourcing accounting and financial services. They provide data processing, accounting, financial analysis, and other services to companies of all sizes and industries. The company helps its clients to focus on their core business by providing efficient and reliable accounting that is in line with current accounting trends.	(Johnson, 2022)
<b>FinancesOnline</b>	FinancesOnline is a well-known portal that specializes in reviews and analysis of financial technology and accounting software. They provide objective reviews of various accounting and financial management software solutions, as well as articles on the latest trends in accounting and bookkeeping.	(Chang, 2023)
<b>Sagenext Infotech LLC</b>	The SageNext Group is a recognized expert organization specializing in cloud computing and accounting and finance solutions. They provide high-quality software hosting and consulting services to enterprises. The organization provides insight into future trends in accounting and finance, helping clients plan and implement innovative solutions.	(Chandra, 2023)
<b>Oracle netsuite</b>	Oracle NetSuite is a leading expert organization in cloud-based accounting solutions and business software. They provide innovative solutions for financial management, accounting, and financial reporting. The organization specializes in providing services to businesses of all sizes and industries, helping them improve efficiency, ensure data accuracy, and optimize financial processes.	(Beaver, 2023)
<b>Ab<sup>2</sup> Institute Pty Ltd</b>	Ab <sup>2</sup> Institute is an influential expert organization specializing in providing education and research in the field of accounting and finance. They actively analyze current trends in accounting and finance and provide insights and forecasts for the future development of the industry.	<i>(Top Accounting Trends for 2023 / Ab<sup>2</sup> Institute of Accounting? 2022)</i>
<b>INNOVATURE BPO</b>	INNOVATION BPO is a highly qualified expert organization specialized in accounting and finance. They focus on analyzing and forecasting trends in the accounting field, providing valuable insights into current changes and innovations.	<i>(Top 14 Accounting Trends to pay attention in 2023, 2022)</i>
<b>Amaka IO Pty Ltd</b>	Amaka is an influential expert organization specialized in research and analysis of accounting trends. They focus on emerging research, technological challenges, and goals relevant to the accounting industry.	(Tien, 2023)

Name of the resource	Brief description	Source
<b>Spiceworks Inc</b>	Spiceworks is an influential expert organization that specializes in technology, particularly in analyzing trends in the accounting industry. They provide valuable insights and recommendations on innovations and technological changes that can significantly change the way we approach accounting and finance.	(Shagun, 2023)
<b>TRANQUIL</b>	Tranquil Business Solutions is a renowned expert organization specialized in accounting solutions and consulting. They focus on providing clients with state-of-the-art, innovative approaches to accounting, financial reporting, and financial management.	(Accounting Trends for 2023, 2022)

Source: author's development.

**Table 4. Results of the rating assessment by the identified expert organizations on the impact of individual digital accounting solutions on the competitiveness of business organizations.**

Tools of digitalization of the accounting system	CapActix Business Solutions Pvt Ltd	Invensis Technologies Pvt Ltd	FinancesOnline	Sagenext Infotech LLC	Oracle netsuite	Ab <sup>2</sup> Institute Pty Ltd	INNOVATURE BPO	Amaka IO Pty Ltd	Spiceworks Inc	TRANQUIL
Blockchain	4	1		5	8	4	5			7
Cloud-based accounting	1	2	1	1	7	3		1	5	1
Big Data		5	5	2	6		4		4	3
AI-based automation	3	3	3	4	3	1		4	1	5
Data analytics	2	4	4	3	5		3		3	4
Automation	6	7	7	8	1	2		5	2	6
Artificial intelligence (AI)			2	6	2		1	3		
Robotics process automation (RPA)	5	6	6	7	4		2	2		2
Machine learning (ML)			9		10		7			
Accounting Standards (XBRL et al.)	7	8	8	8	9	5	6	6		

Source: authors' development.

The application of these research methods helped to identify the most effective digital solutions for optimizing accounting and increasing business competitiveness. The results of this study provide a basis for the informed selection and implementation of digital solutions, contributing to the further success of business processes.

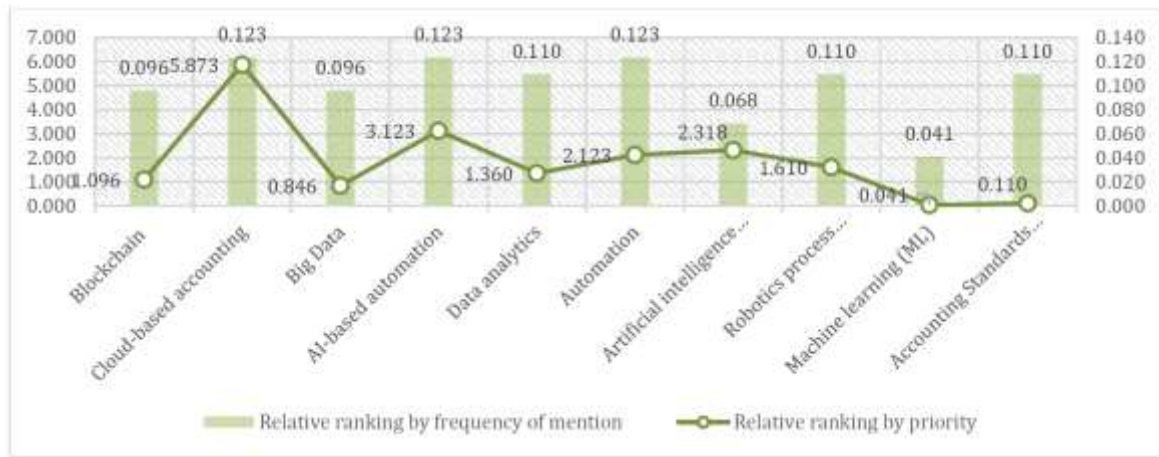
#### 4. RESULTS

In accordance with the proposed methodology, a study of open data from selected expert organizations was conducted (Table 3), according to which a rating table of digital solu-

tions for the accounting system that contribute to the competitiveness of modern business environment participants was formed - Table 4.

According to the data presented in Table 4, experts in the current search horizon have identified the following promising digital solutions (median expert opinion) - Table 5.

Based on the obtained ratings, we will assess the likely impact of the identified digital tools of the Accounting 4.0 paradigm on the accounting policy and competitiveness of business environment participants - Table 6.



**Fig. (1).** Graphical interpretation of the results of the analytical and rating comparison of expert opinion on the optimal range of digital solutions to improve the competitiveness of business organizations.

Source: authors' development.

In accordance with the proposed methodology in terms of analytical and rating comparison of expert opinion, we will determine the optimal nomenclature of digital tools to im-

prove the competitiveness of business organizations - Table 7, Fig. (1).

**Table 5. Median expert opinion on the benefits of using certain digital solutions in business processes.**

Digital solutions	Median expert opinion on the benefits of using certain digital solutions in business processes
<b>Blockchain</b>	The introduction of blockchain technology into the accounting system allows you to create a reliable and secure mechanism for storing and transmitting financial information. This technology ensures that data cannot be altered and guarantees the authenticity and integration of accounting information, which increases the reliability of financial statements and trust in the company.
<b>Cloud-based accounting</b>	Cloud-based accounting systems provide quick and convenient access to financial information from any device and location. This improves accounting efficiency, simplifies collaboration, and reduces the cost of maintaining accounting systems.
<b>Big Data</b>	The use of big data analysis in accounting allows for more detailed and accurate forecasts, identifying trends, and identifying possible risks. This helps to make informed decisions and increases business competitiveness.
<b>AI-based automation</b>	Using artificial intelligence to automate routine accounting processes helps reduce the risk of errors and increase employee productivity. This allows accountants to focus on more complex tasks and strategic planning.
<b>Data analytics</b>	Using data analytics, you can identify trends and patterns in financial data, which helps you respond to market changes in a timely manner and provides a better understanding of the company's financial stability.
<b>Automation</b>	Automation of various accounting processes simplifies the work of employees, reduces the likelihood of errors, and ensures efficient accounting.
<b>Artificial intelligence (AI)</b>	The use of artificial intelligence allows recognizing and solving complex tasks, which contributes to more accurate and efficient accounting.
<b>Robotics process automation (RPA)</b>	The use of robotic processes helps automate repetitive accounting tasks, which reduces labor costs and increases productivity.
<b>Machine learning (ML)</b>	The use of machine learning helps to predict future trends and changes in the financial sector, which contributes to informed decision-making.
<b>Accounting Standards (XBRL et al.)</b>	The use of accounting standards, such as XBRL, helps to standardize accounting reports and ensures that financial information is clear and unambiguous for external stakeholders.

Source: authors' development.

**Table 6. Express analysis of the likely impact of a certain set of digital solutions on the accounting system and competitiveness of business organizations**

Digital solutions	Impact on the accounting system	Impact on the competitiveness of business organizations
<b>Blockchain</b>	Ensuring the reliability and security of the storage and transmission of financial information.	Increase confidence in the company and its financial statements.
<b>Cloud-based accounting</b>	Convenient and quick access to financial information, collaboration, and cost reduction.	Improved accounting efficiency and reduced maintenance costs.
<b>Big Data</b>	Detailed and accurate forecasts, identifying trends and risks.	Increase competitiveness through informed decisions.
<b>AI-based automation</b>	Reduce the risk of errors and increase employee productivity.	Focus on more complex tasks and strategic planning.
<b>Data analytics</b>	Identification of trends and patterns, strengthening the understanding of financial stability.	Respond to market changes and improve strategic planning.
<b>Automation</b>	Simplify work and reduce the likelihood of errors.	Increase the productivity and efficiency of accounting.
<b>Artificial intelligence (AI)</b>	Recognize and solve complex tasks.	Accuracy and efficiency of accounting.
<b>Robotics process automation (RPA)</b>	Automate repetitive tasks.	Reduce costs and increase productivity.
<b>Machine learning (ML)</b>	Forecasting trends and changes.	Informed decisions and adaptation to market conditions.
<b>Accounting Standards (XBRL et al.)</b>	Standardization of accounting reports.	Clarity and unambiguity of financial information for stakeholders.

Source: authors' development.

**Table 7. Analytical and rating comparison of expert opinion on the optimal range of digital solutions to improve the competitiveness of business organizations.**

Tools for digitalizing the accounting system	Frequency of reference	Relative ranking by frequency of reference	Number of times the first leading position was taken	Number of times the second leading position was taken	Number of times the third leading position was taken	Relative ranking by priority
Blockchain	7	0,096	1	0	0	1,1
Cloud-based accounting	9	0,123	5	1	1	5,9
Big Data	7	0,096	0	1	1	0,8
AI-based automation	9	0,123	2	0	4	3,1
Data analytics	8	0,110	0	1	3	1,4
Automation	9	0,123	1	2	0	2,1
Artificial intelligence (AI)	5	0,068	1	2	1	2,3

Robotics process automation (RPA)	8	0,110	0	3	0	1,6
Machine learning (ML)	3	0,041	0	0	0	0,0
Accounting Standards (XBRL et al.)	8	0,110	0	0	0	0,1

Source: author’s development.

Based on the above data (Table 7, Fig. 1), we conclude that during the period of this study, on average, experts of the defined expert environment (Table 1) consider it appropriate to use the following digital solutions to increase the competitiveness of business companies in organizing their own accounting policy:

1. Cloud-based accounting: relative priority rating - 5.9.
2. AI-based automation: relative priority rating is 3.1.
3. Artificial intelligence (AI): relative priority rating - 2.3.
4. Automation: relative ranking by priority - 2.1.
5. Robotics process automation (RPA): relative priority rating - 1.6.

Other digital solutions also have relative potential, including:

1. Data analytics: relative priority rating - 1.4.
2. Blockchain: relative priority rating is 1.1.
3. Big Data: relative priority rating - 0.8.

Structural analysis shows that experts' preference for the use of Cloud-based accounting is significantly higher than all others. This is due to the significant development of cloud technologies and resources, which already have attractive investment proposals on the market and therefore have the ability to immediately affect the competitiveness of business environment participants.

The middle positions in the expert rating are occupied by solutions for the automation of accounting operations, which include two blocks: digital solutions for the automation of accounting processes, digital solutions for accounting data analytics, and related analytical and automated digital solutions that incorporate the advantages of the previous two groups. Automation and analytics of transactional data of accounting processes will undoubtedly increase the competitiveness of business organizations. It is worth noting the practical side of forming the relevant expert opinion, as there are currently many investment-attractive and ready-to-implement solutions on the digital market that have the potential to quickly optimize accounting processes.

Experts also consider it advisable to ensure the immutability and protection of credentials with an appropriate digital solution - Blockchain.

It is the practicality of applying digital solutions that significantly influences expert opinion. And this explains the latest positions of the analytical and rating comparison: Accounting Standards (XBRL et al.) is considered a systemic solution that should be implemented at the government level, and therefore the optimization properties of this solution in relation to business benefits are little seen by experts and are perceived only as “new rules of the game”; Machine learning

(ML) is a digital solution that is currently in the process of developing effective practical solutions, and therefore is not perceived by experts as potentially implementable as of the date of this study. However, the fact that these digital solutions have been included in the expert rating system indicates a practical interest in their application in the near future.

In accordance with the decisions obtained, we will form an analytical scheme regarding the likely impact of the optimal nomenclature of digital solutions on the competitiveness of business environment participants – Fig. (2).

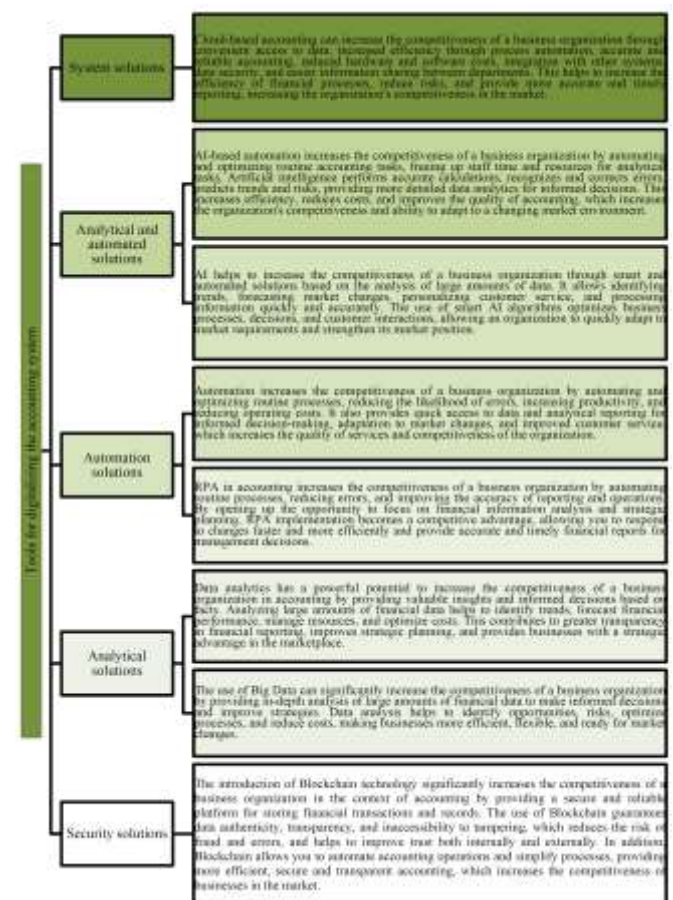


Fig. (2). Analytical scheme of the probable impact of the optimal range of digital solutions on the competitiveness of business organizations (taking into account the expert rating and structural analysis).

Source: authors’ development

Based on the data provided (Fig. 2), it is currently advisable to introduce rating digital tools to achieve the goal of increasing the competitiveness of business community members through digital optimization of accounting policy:

- integrated system solutions;
- automation solutions;



analytical solutions;

analytical and automated solutions;

security solutions.

The established optimal range of digital solutions will allow potential applicants to determine the vector of development and investment focus to form a competitive company that meets modern business conditions.

## 5. DISCUSSION

Given that the research vector identified in this article is extremely relevant (due to its direct economic impact), there is an array of relevant publications containing a relevant analysis of the impact of the strategy of digitalization of accounting processes on the competitiveness of business organizations. To establish the correlation factor in relation to the chosen direction of research, we will compare the results of the current study with similar results and conclusions reported in specialized publications.

The results of the study (Dabbous, Barakat & Kraus, 2023) confirm the feasibility of involving digital solutions in business processes and record the impact of the studied digital tools on ensuring sustainable development and competitiveness of business community members. Thus, this publication confirms the feasibility and general conclusions of the current study. At the same time, the article (Dabbous, Barakat & Kraus, 2023) provides only general recommendations for the implementation of a digital strategy in business activities, and the results of this study determine the optimal composition of digital tools to increase business competitiveness in the short term (by the factor of investment attractiveness and probable economic effect).

Wu (2022) states that the digitalization of accounting and auditing is the basis for the competitiveness of modern enterprises, which correlates with the results of the current study. However, the study (Wu, 2022) focuses on the need to develop digital competencies of accountants and auditors, as well as their adaptation to digital solutions of the Accounting 4.0 paradigm, in contrast, this publication focuses on the technological and digital component of ensuring the competitiveness of modern business organizations with practical suggestions for investing in certain digital tools, so the results will be more useful for potential seekers of optimization solutions for business processes.

The article (Wu et al., 2021) contains substantive analytical statements on the impact of digital strategy on the competitiveness of various industries, in particular, the relationship between the impact of implemented digital solutions and the sustainable development of knowledge-intensive enterprises. Despite the empirical nature of the research, the publication (Wu et al., 2021) does not contain practical recommendations for achieving higher competitiveness by modern digital means, so, compared to this study, it is purely visualization and confirms the general vector of sectoral development of accounting (as one of the business structures that needs immediate digitalization).

The publication (Esmeray & Esmeray, 2020) is a retrospective analysis of the evolutionary development of accounting with an assessment of the impact of modern digital solutions

of the Accounting 4.0 concept on it. The authors note that at the present stage, it is difficult for businesses to achieve sustainable competitiveness without implementing appropriate digital solutions that significantly optimize accounting processes. The article (Esmeray & Esmeray, 2020), in particular, notes the significant importance of the digital solution for the accounting industry - Cloud-based accounting. The results of this work largely correlate with the results of the current study, targeting the attention of potential applicants to certain digital solutions aimed at optimizing business accounting processes, however, the current study has a wider range of potential digital solutions with an assessment of their likely industry impact on competitiveness and business development, which is of greater practical interest.

The article (Sepashvili, 2020) states that digitalization is a goal not only for individual business sectors, but also a strategic goal at the national level, and without the implementation of appropriate digital solutions at the present stage, it is unlikely that economic benefits, competitiveness, and efficiency for state economies as a whole will be achieved. Therefore, the results of (Sepashvili, 2020) raise the issue of optimizing business processes by integrating advanced digital solutions at the national level, which significantly actualizes the current study, the results of which are practical not only for individual members of the business community but also for governments and relevant state authorities.

The study (da Silva et al., 2023), as well as the current study, focuses on the role of technology, in particular digitalization and automation, in the field of accounting. This study focuses on the practical significance of digital solutions for investors, determining the optimal variations for optimizing accounting. The publication (da Silva et al., 2023) examines the perception of professional accountants regarding the impact of digital transformation on accounting processes, and the results confirm the significant impact of digitalization on automatic document classification, digital archiving, and communication with clients. Both studies support the idea of introducing technology into accounting processes to improve efficiency and ensure the competitiveness of organizations in the modern business environment, which can help enterprises achieve competitive advantages in the market.

The current work and the research work described in O'Leary (2023) are aimed at studying digitalization in business organizations but focus on different aspects. This study focuses on the practical benefits of accounting digitalization, its value for investors, and opportunities to optimize business processes. The publication (O'Leary, 2023) defines and applies the definition of digital transformation in accounting, e-commerce, and supply chains, and considers the role of integration, process re-engineering, and technology in this process. O'Leary (2023) also provides examples of processes that can undergo digital transformation and draws attention to technologies that are important for the further evolution of digitalized organizations. In addition, the author highlights several scenarios of digital transformation and identifies some relevant research questions. Both studies are important for understanding the impact of technology on the efficiency and competitiveness of organizations in the modern world.

The study (Savić & Pavlović, 2023), like the present study, aims to reveal the impact of digitalization on accounting and

financial reporting in organizations. The researchers focus on the general implications of digitalization for the professional roles and competencies of accountants. Savić & Pavlović (2023) focus on the impact of technological changes on accounting processes, changes in financial reporting and management accounting, as well as innovative ways of communicating information. The current study focuses on the practical benefits of technology in accounting and its implications for investors. Both studies are based on academic sources, which allows them to support their conclusions with knowledge gained from specialized literature and data from Web of Science and Scopus databases. Both studies are important for accounting professionals, management, investors, and other stakeholders in the corporate reporting process.

Liu, Cai, & Cai (2023) also investigate the impact of digital technologies on various business areas and business processes. The study (Liu, Cai, & Cai, 2023) focuses on digitalization in the oil and gas industry and its impact on the sustainability and competitiveness of enterprises. This study focuses on the digitalization of accounting processes and its impact on the competitiveness of business organizations. Both studies have practical implications for enterprises and help to understand the benefits of digitalization and the use of digital technologies to achieve competitive advantage in their respective industries. Both studies can be used as a basis for developing strategies and making management decisions on the use of digital technologies in the respective industries, but the results of the current study are more universal in nature since accounting and auditing are used in almost all areas of economic activity.

The publication (Košovská et al., 2023), as well as the current study, contains information on the impact of the latest digital tools on business and economic processes. The study by Košovská et al. (2023) also examines the progress and level of development of digital competitiveness in the European Union countries using the Digital Economy and Society Index (DESI). However, the authors focus on the global impact of the government's strategy for the digitalization of the economic sphere, while the current study examines the impact of digital technologies on accounting processes in organizations, in particular in accounting, and points out the positive effects of automation and data analytics. The findings of this study also emphasize the importance of data security and the use of blockchain technology to improve accounting reliability. Both studies provide useful conclusions and recommendations for the use of technology and digital solutions in accounting processes and sectors of the economy to achieve increased efficiency, accuracy, and competitiveness.

According to the results of a comparative analysis of various studies with the current study, we conclude that the digitalization of accounting processes and the introduction of digital technologies affect the competitiveness of business organizations in various sectors and countries. The introduction of digital technologies allows increasing the efficiency of resource use, identifying opportunities for cost optimization, and forecasting financial performance. The reviewed research results indicate the need and relevance of digital transformation in accounting and bookkeeping to ensure the

sustainability, efficiency, and competitiveness of business organizations in the modern global environment.

## 6. CONCLUSION

The results of the current study have shown that the digitalization of accounting processes has significant potential to increase the sustainable competitiveness of business environment participants:

- digitalization of accounting and bookkeeping processes has a significant potential to increase the sustainable competitiveness of business environment participants;
- the optimal nomenclature of digital solutions with a likely potential to increase the competitiveness of business organizations is determined, among which the highest rating was given to the digital solution - Cloud-based accounting;
- the structure of the vectors for the development of digitalization of the accounting industry to increase the competitiveness of business companies: integrated system vector, automation vector, analytics vector, analytical automation vector, security vector;
- the investment focus for potential seekers of business optimization tools and solutions is determined, which determines the practical interest in this study.

Further research in this area will focus on detailing the preliminary results and a separate study of each of the identified digital solutions for the optimal range of digital tools.

## LIMITATIONS

The sample size used in the study may be limited, which may affect the generalizability of the results to a broader population of businesses or industries. A larger and more diverse sample may provide a more complete understanding of the impact of digitalization on accounting and finance processes. Dependence on secondary sources and certain methods of data collection may limit the depth of analysis or fail to take into account certain aspects of the impact of digitalization on accounting and finance processes. Combining different research methodologies may increase the validity of the study. The study may not fully take into account the impact of contextual factors, such as the size, industry, or level of development of companies, which may have different implications for the effectiveness of digitalization. The study may not sufficiently consider ethical issues related to the introduction of digital technologies, data privacy, or cybersecurity risks, which are important aspects when assessing the effects of digitalization. The study may not take into account the long-term effects of digitalization on accounting processes and possible challenges that may arise over time. Analyzing the sustainability and adaptability of digital solutions is important for a comprehensive analysis.

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