

УДК 004[657+005]338.4

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DOI: 10.32702/2306-6814.2025.14.211

ANALYSIS OF THE IMPACT OF DIGITAL ACCOUNTING AND MANAGEMENT SYSTEMS ON ORGANIZATIONAL EFFECTIVENESS

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АНАЛІЗ ВПЛИВУ ЦИФРОВИХ СИСТЕМ ОБЛІКУ ТА МЕНЕДЖМЕНТУ НА ЕФЕКТИВНІСТЬ ОРГАНІЗАЦІЙ

In the context of the rapid development of a set of interconnected information and communication technology sectors, digital accounting and management systems are increasingly recognized as a trigger for the transformation of management processes in organizations across various fields of activity. The implementation of digital accounting and management systems facilitates fundamental changes in approaches to decision-making, resource control, and strategic planning. However, despite the widespread adoption of digital solutions, their impact on the core performance indicators of organizations remains ambiguous. This article aims to investigate the main changes occurring in organizational processes under the influence of digital accounting and management systems, as well as to assess their impact on the overall efficiency of the organization's functioning. It has been established that organizational efficiency is shaped under the influence of digital accounting and management systems, which act as tools for the purposeful transformation of management and operational processes through a range of systems. So the system for recording labor costs and performing operations ensures the rational use of resources and supports decision-making processes. The system, providing access to information for analysis, planning, and control, by

creating an information platform with up-to-date data in real-time, enhances the organization's adaptability to changes in the external environment. The resource utilization optimization system operates based on integrated mechanisms of accounting, monitoring, and reporting, which contribute to cost reduction, increased productivity, and the achievement of strategic efficiency. The system for enhancing transparency and accountability ensures a structured and open exchange of information between organizational units and external stakeholders. The system supporting innovation and development creates a unified technological platform that activates innovative potential, stimulates the digital transformation of management processes, and strengthens strategic competitive advantages. The system for monitoring compliance with social standards and norms integrates social and ethical requirements into management practices.

В умовах стрімкого розвитку сукупності взаємопов'язаних галузей інформаційно-комунікаційних технологій цифрові системи обліку та менеджменту дедалі частіше розглядаються як тригер трансформації управлінських процесів в організаціях різних сфер діяльності. Впровадження цифрових систем обліку та менеджменту сприяє суттєвим змінам у підходах до прийняття рішень, контролю за ресурсами та стратегічного планування. Водночас, попри широке розповсюдження цифрових рішень, їхній вплив на базові показники ефективності організацій залишається неоднозначним. Саме тому метою статті є дослідження ключових змін в організаційних процесах під впливом цифрових систем обліку та менеджменту, а також оцінка їхнього впливу на загальну ефективність функціонування організацій. Встановлено, що ефективність організації формується під впливом цифрових систем обліку та менеджменту, які слугують інструментами цілеспрямованої трансформації управлінських і операційних процесів на основі інтегрованих системних рішень. Так, система формування трудовитрат і виконання операцій забезпечує раціональне витрачання ресурсів і підтримує процеси прийняття рішень. Система забезпечення доступу до інформації для аналізу, планування і контролю підвищує адаптивність організації до змін зовнішнього середовища. Система оптимізації використання ресурсів функціонує на основі інтегрованих механізмів обліку, моніторингу та звітності, що сприяють зниженню витрат, підвищенню продуктивності та досягненню стратегічної ефективності. Система підвищення прозорості та звітності забезпечує структурований і відкритий обмін інформацією між підрозділами організації та зовнішніми стейкхолдерами. Система підтримки інновацій та розвитку формує єдину технологічну платформу, що активізує інноваційний потенціал, стимулює цифрову трансформацію управлінських процесів і посилює стратегічні конкурентні переваги. Система моніторингу дотримання соціальних стандартів і норм інтегрує соціальні та етичні вимоги в управлінські практики. Перспективи подальших досліджень полягають у поглибленому аналізі взаємозв'язків між компонентами цифрових систем обліку, менеджменту та показниками ефективності діяльності організацій.

Key words: resource costs; accounting; operational processes; cost rationalization; productivity formation; management.

Ключові слова: витрати ресурсів; облік; операційні процеси; раціоналізація витрат; формування продуктивності; менеджмент.

PROBLEM STATEMENT

In the context of the rapid development of interconnected information and communication technology sectors, digital accounting and management systems serve as a trigger for transforming management processes in organizations across various fields of activity.

The implementation of digital accounting and management systems promotes fundamental changes in approaches to decision-making, resource control, and strategic planning.

Digital systems automate the collection, processing, and analysis of data in real time. These systems ensure transparency in the use of material, human, and financial resources and generate other beneficial changes.

However, despite the widespread adoption of digital solutions, their impact on key organizational performance indicators can be polarized, and this polarity may encompass various aspects of activity — from internal processes to interactions with the external environment. Such polarity means that these changes can bring both

System of labor cost formation and execution of operations ¹		System for enhancing transparency and accountability. ⁴	
<i>Impact — through the operational structure.</i>		<i>Impact — through a unified information platform.</i>	
System for ensuring access to information for analysis, planning, and control. ²	Basic systems of the impact of digital accounting and management systems on organizational efficiency.	System for supporting innovation and organizational development ⁵	
<i>Impact — through a unified information platform.</i>		<i>Impact — through a unified technological platform.</i>	
System for optimizing the use of material, financial, and labor resources. ³		System for monitoring compliance with social standards and norms ⁶	
<i>Impact — through integrated accounting and reporting mechanisms.</i>		<i>Impact — through a unified information platform.</i>	

Fig. 1. Specifics of the impact of digital accounting and management systems on organizational efficiency

Note:

1 The processes of resource expenditure and decision-making involve the formation of an operational structure with varying degrees of flexibility (the ideal being a structure capable of adjusting resource expenditure and decision-making).

2 The processes of organizational adaptability to changes involve the formation of a unified information platform that provides varying levels of access to analytical data on market conditions, technological trends, the competitive environment, and other external factors.

3 The processes of cost rationalization and productivity formation involve the creation of integrated accounting and reporting mechanisms, which provide varying levels of cost rationalization and productivity.

4 The processes of data exchange between departments and external stakeholders involve the formation of a unified information platform that provides varying quality levels of data exchange between departments and external stakeholders.

5 The processes of implementing technologies, management models, and analytical methods involve the formation of a unified technological platform that provides varying levels of enhancement of the organization's competitive advantages.

6 The processes of integrating social standards and norms into a unified information platform, which provides varying levels of support for corporate social responsibility and the organization's image.

Source: compiled based on [1; 5—6].

positive outcomes and unexpected challenges. Therefore, it is extremely important to have a deep understanding of the mechanisms behind their impact.

ANALYSIS OF RESEARCH AND PUBLICATIONS

The issues of achieving overall organizational efficiency through the digitalization of accounting and management systems are addressed in the works of Holovachko V., Korolovych O., Havrylets O., Talakh T., Holiachuk N., and others. In particular, researchers study the impact of digital technologies on improving accounting accuracy, optimizing management processes, as well as integrating innovative solutions to ensure the adaptability and competitiveness of organizations in modern conditions.

At the same time, the specific nature of the main changes occurring in organizational processes under the influence of digital accounting and management systems has been examined rather narrowly. Digitalization simultaneously covers numerous aspects of an organization's activities — from technical to socio-organizational — which creates conditions for significant detail in analysis rather than a comprehensive overview of the changes.

FORMULATION OF THE ARTICLE'S OBJECTIVES

This article aims to investigate the main changes occurring in organizational processes under the influence of digital accounting and management systems, as well as to assess their impact on the overall efficiency of the organization's functioning.

THE PAPER MAIN BODY

Within the article, organizational efficiency is considered a comprehensive characteristic of an enterprise's activity, reflecting the degree of achievement of set goals with minimal resource expenditure and maximum quality of results. It includes economic, social, and organizational indicators that ensure the competitiveness, sustainability, and development of the organization in a dynamic external environment [3].

Based on the above, it is clear that organizational efficiency is an aggregate category that can be shaped by the multifaceted impact of digital accounting and management systems. This impact includes [5—6]:

1. The system of labor cost formation and execution of operations, which directs the processes of resource expenditure and decision-making.

2. The system that ensures access to information for analysis, planning, and control, which determines the organization's adaptability to changes in the external environment.

3. The system for optimizing the use of material, financial, and labor resources through integrated accounting and reporting mechanisms, which guide the processes of cost rationalization and productivity formation.

4. The system for enhancing transparency and accountability provides the formation of a unified information platform for open data exchange between departments and external stakeholders.

5. The system for supporting innovation and development provides the formation of a unified technological platform that guides the implementation of management models and analytical methods, thereby enhancing the organization's competitive advantages.

Table 1. Impact of the system for labor cost formation and execution of accounting and other operations on organizational efficiency

Capabilities of accounting and reporting specialists	Specifics of developing the capabilities of accounting and reporting specialists
to adjust production and management processes	By analyzing accurate data on actual task performance and identifying bottlenecks or deviations, it is possible to promptly adjust work schedules, reassign tasks, review technological operations, or implement additional control points to improve efficiency.
to optimize resource allocation	Using analytics of labor costs and operational actions, it is possible to identify where there is a surplus or shortage of human resources, materials, or time, allowing for their redistribution between departments or projects, thereby reducing costs and increasing efficiency of use.
to increase labor productivity	By identifying unproductive or redundant operations, as well as analyzing working time, measures can be implemented such as automation, staff training, optimization of work procedures, and incentive programs that promote more efficient and focused work.

Source: compiled based on [1—2; 5].

Table 2. Impact of the system ensuring access to information for analysis, planning, and control on organizational efficiency

Capabilities of managers and accounting specialists	Specifics of capability development of managers and accounting specialists
Effectively analyze the current situation	Thanks to the centralized information platform, specialists have access to up-to-date performance indicators in real time, allowing for detailed analysis, identification of deviations from the plan, and problematic areas for further optimization.
Forecast trends	The system ensures the accumulation and structuring of historical data, enabling the use of forecasting methods (trend analysis, scenario modeling) to identify potential risks, resource needs, and changes in the external environment.
Promptly respond to external challenges	Rapid monitoring and analytics tools enable specialists to make managerial decisions promptly, adjust plans, adapt resources, and respond to market, regulatory, or other external changes within short timeframes.

Source: compiled based on [2; 5].

Table 3. Impact of the system for optimizing the use of material, financial, and labor resources on organizational efficiency

Capabilities of managers and accounting specialists	Specifics of capability development of managers and accounting specialists
Promptly identify inefficient expenditures	Thanks to integrated resource monitoring mechanisms, specialists receive prompt access to data on deviations from normative expenditures, enabling quick identification and response to irrational costs.
Make well-founded managerial decisions	The system provides complete and reliable information on resource usage, allowing for comparative analysis, evaluation of decision effectiveness, and development of economically sound development scenarios.
Direct the enterprise's activities toward achieving strategic goals	Analytical data on resource consumption are integrated with long-term plans, enabling informed strategy adjustments that focus resources on the most promising directions and projects.

Source: compiled based on [1; 5—6].

6. The system for monitoring compliance with social standards and norms provides the formation of a unified information platform to support corporate social responsibility and the organization's image.

So, the specifics of the impact of digital accounting and management systems on organizational efficiency are outlined in more detail in Fig. 1.

The impact of digital accounting and management systems lies in their integration of various aspects of accounting and managerial activities through the operational structure, technological, and information platforms, which, under certain conditions, create the prerequisites for effective functioning in the modern dynamic market environment [1].

So, the system of labor cost formation and execution of operations, through the operational structure, ensures accurate and timely accounting of actual working time expenditures and operational actions, allowing for the prompt identification of deviations from planned indicators. Thanks to this system, accounting and management specialists gain the ability (see Table 1) to: adjust production and management processes; optimize resource allocation; increase labor productivity.

This system also supports automated report generation and performance analysis of task execution at various organizational levels, which significantly improves the quality of managerial decision-making.

The system for ensuring access to information for analysis, planning, and control creates a unified information platform that provides fast and seamless access to up-to-date data in real time. This allows managers and accounting specialists (see Table 2) to: effectively analyze the current situation; forecast trends; promptly respond to external challenges [5].

Thanks to the integration of analytical tools and automated control systems, the organization can flexibly adjust its strategies and operational plans, enhancing its resilience and competitiveness in a dynamic market environment.

The system for optimizing the use of material, financial, and labor resources is formed based on integrated mechanisms of accounting, monitoring, and reporting. In the context of digitalization, these mechanisms provide comprehensive tracking of resource consumption indicators, which allows (see Table 3) to: promptly identify inefficient expenditures; make well-founded managerial decisions; direct the enterprise's activities toward achieving strategic goals.

Through its integration with analytical tools, the system enhances the economic

efficiency of resource utilization and fosters sustainable growth in labor productivity across all levels of the organizational structure [1].

The system for enhancing transparency and reporting ensures the creation of a unified integrated information platform that supports open, structured, and secure data exchange between the organization's internal units and external stakeholders — partners, regulatory authorities, investors, and others.

The implementation of unified reporting standards and centralized access to real-time information significantly enhances the system's effectiveness. This contributes to several key areas, including (see Table 4): increasing trust in management processes; minimizing the risks of information distortion and data duplication; strengthening control over task execution and compliance with regulatory requirements; and fostering an open information environment that supports effective managerial decision-making [1—2].

The system for supporting innovation and development is aimed at stimulating the implementation of modern management models and advanced data analysis methods. It forms a unified technological platform that promotes continuous improvement of processes, generation of new ideas, and transformation of management and accounting approaches.

Thanks to this, management and accounting (Table 5): activate the internal innovation potential at all levels of the organization; ensure adaptation to dynamic changes in the market and technological environment; support

Table 4. Impact of the system for enhancing transparency and reporting on organizational efficiency

Capabilities of managers and accounting specialists	Specifics of capability development of managers and accounting specialists
Increasing trust in management processes	Ensuring open access to reliable financial and operational information increases the transparency of decision-making, building trust among internal and external stakeholders.
Minimizing risks of information distortions and data duplication	Thanks to unified accounting approaches and automated reconciliation mechanisms, the system reduces the likelihood of errors, duplications, and data manipulation during report generation.
Strengthening control over task execution and compliance with regulatory requirements	The centralized reporting system enables continuous monitoring of key performance indicators, controls task deadlines, and promptly detects violations or deviations from standards.
Creating an open information environment for effective managerial decision-making	The unified information platform provides real-time access to analytical and reporting materials, allowing management to make decisions based on complete, up-to-date, and verified information.

Source: compiled based on [1—2].

Table 5. Impact of the innovation and development support system on organizational efficiency

Capabilities of managers and accounting specialists	Specifics of capability development of managers and accounting specialists
The internal potential for innovation is activated	The creation of an open environment for idea exchange, participation in cross-functional projects, and the implementation of innovative practices stimulates employee initiative and a focus on continuous improvement.
Adaptation to changes in the market and technological environment is ensured	Thanks to the use of modern IT solutions and analytical tools, accounting systems become flexible and capable of rapidly adapting to new market and technological conditions.
Implementation of digital management transformation projects is supported	The integration of innovative solutions in accounting and reporting contributes to the effective implementation of digital strategies across the entire organization, enabling process optimization and accelerating automation.
Operational efficiency of accounting processes is improved	Automation, digitalization, and the application of data analytics reduce the labor intensity of routine tasks, decrease the likelihood of errors, and accelerate information processing, thereby increasing overall productivity.
Competitive advantages are strengthened	Through the strategic use of accumulated knowledge, digital technologies, and new analytical models, the organization develops the ability to respond quickly to challenges and implement unique management solutions.

Source: compiled based on [3; 6].

Table 6. Impact of the system for monitoring compliance with social standards and norms on organizational effectiveness

Capabilities of managers and accounting specialists	Specifics of capability development of managers and accounting specialists
Timely identify and eliminate violations of social norms	Integration of standards into the digital platform enables prompt detection of violations of labor laws, occupational safety regulations, and gender equality norms, as well as the rapid implementation of corrective measures.
Increase the level of trust among employees, clients, and the public	Open reporting on compliance with social standards creates an atmosphere of transparency and accountability, which strengthens internal employee motivation and loyalty among external stakeholders.
Strengthen reputation as a responsible and reliable market participant	Systematic monitoring and public communication of social responsibility shape a positive image, enhancing market competitiveness and attracting new partners and clients.
Ensure long-term sustainable development	Compliance with ESG indicators (environmental, social, and governance aspects) lays the foundation for sustainable development, minimizing the risks of sanctions, protests, or conflicts related to social or environmental issues.

Source: compiled based on [4—5].

the implementation of digital transformation projects in management; improve the operational efficiency of accounting processes; strengthen the organization's competitive advantages through strategic use of knowledge, data, and technologies [6].

The system for monitoring compliance with social standards and norms integrates these standards into a unified information platform, thereby creating a mechanism for ensuring corporate social responsibility [6]. This contributes to building a positive image of the organization in the eyes of society, clients, and partners.

Thanks to such monitoring, the organization can (Table 6): promptly identify and eliminate violations of social norms; increase the level of trust among employees, clients, and the public; strengthen its reputation as a responsible and reliable market player; ensure long-term sustainable development by taking social and environmental requirements into account.

Thus, the system for monitoring social standards integrates into the overall mechanism of digital management, enhancing the organization's effectiveness not only in economic terms but also in the social aspect, which is an important component of modern corporate culture.

CONCLUSIONS

Organizational effectiveness is a multidimensional category that encompasses economic, social, and organizational components, reflecting the enterprise's ability to achieve strategic goals with minimal resource expenditure and maximum quality of outcomes in a dynamic external environment.

It has been established that effectiveness is shaped under the influence of digital accounting and management systems, which serve as tools for the purposeful transformation of managerial and operational processes through a number of systems.

The system for recording labor costs and executing operations ensures rational resource expenditure and supports decision-making processes.

The system that provides access to information for analysis, planning, and control enhances the organization's adaptability to changes in the external environment.

The system for optimizing resource use contributes to cost reduction, productivity improvement, and the achievement of strategic efficiency.

The system for enhancing transparency and reporting ensures structured and open information exchange between organizational units and external stakeholders, promoting trust-building, process control, and informed managerial decision-making.

The system of innovation support and development creates a unified technological platform that activates innovation potential, stimulates digital transformation of management processes, and strengthens strategic competitive advantages.

The system for monitoring compliance with social standards and norms integrates social and ethical requirements into management practices, forming the infrastructure of corporate social responsibility and promoting the maintenance of a positive organizational image.

The prospects for further research lie in a more in-depth analysis of the interrelationships between the components of digital accounting and management systems and the performance indicators of organizations.

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Стаття надійшла до редакції 04.07.2025 р.