

## TRENDS IN THE ECONOMIC ENVIRONMENT – MANAGEMENT ACCOUNTING

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**Abstract:** *This paper explores the impact of digitalization on management accounting in the context of a changing economic environment. Emphasis is placed on how modern technologies improve decision-making processes through better data access and integration. The research uses a systematic literature review and qualitative analysis to identify key opportunities and challenges that digitalization brings to managerial accounting.*

**Key words:** *digitalization, management accounting, decision-making, performance, competitiveness*

**JEL: M41**

### 1. Introduction

The economic transformations generated by digitalization have a significant impact on management accounting, redefining the way financial and operational information is collected, analyzed and used. In an environment characterized by uncertainty, complexity and competitive pressure, companies are forced to adopt digital solutions that support strategic and operational decision-making processes. The topic of the paper is relevant in light of the growing need to adapt management accounting to new technological and information realities.

Management accounting, also known as management accounting, has the role of providing relevant information for planning, controlling and making internal decisions within an organization. It differs from financial accounting by its exclusive orientation towards the internal needs of management, emphasizing cost analysis, budgeting, forecasts and performance evaluation. In the current context, marked by accelerated digitalization, management accounting must integrate new technological tools and adopt a proactive approach in generating information to support strategic decisions.

Over time, management accounting has evolved from a cost-control-oriented system based on traditional methods to a flexible system focused on supporting strategic decisions. The first stages were marked by the use of standard costing techniques, variance analysis and budgetary control. Subsequently, the emergence of concepts such as activity-based costing (ABC), value chain analysis and strategic accounting contributed to the expansion of the functions of the management accountant. Currently, the evolution is accelerated by digitalization, which facilitates the collection and processing of large volumes of data in real time, thus supporting an analytical and predictive approach to management decisions.

The role of the management accounting professional has expanded significantly in this new digital paradigm. He is no longer perceived only as someone responsible for monitoring costs or preparing internal reports, but as an analyst and strategic consultant. The accounting expert must have solid digital skills, the ability to interpret complex data and the skills to communicate effectively with management teams. In this new context, he actively contributes to decision-making, risk assessment and the design of financial solutions that support long-term business objectives.

Optimization of management processes is one of the most important directions of action of modern management accounting. By using digital technologies and automated solutions, organizations can streamline internal activities, reduce the time allocated to repetitive tasks and improve the accuracy of information used in the decision-making process. The integration of information systems allows for continuous monitoring of performance indicators, generating an increased capacity to react to

changes in the business environment. Thus, management accounting becomes an active tool to support management in strategic planning, operational control and adaptation to market requirements. The relevance of this work lies in the need to adapt management accounting to the accelerated transformations of the economic and technological environment. In an era of digitalization, characterized by large volumes of data, information speed and increased decision-making complexity, the role of the management accountant is no longer limited to internal reporting, but involves a strategic contribution to management processes. This paper provides a current view on how emerging technologies influence the organization, analysis and use of accounting information to sustainably support the performance and competitiveness of enterprises.

The main purpose of the paper is to analyze the impact of digitalization on management accounting, by highlighting the transformations brought by new technologies in decision-making processes, accounting practices and value creation for organizations. The specific objectives aim to identify the opportunities and challenges generated by digitalization, as well as the means by which management accounting can contribute to improving economic performance.

The central question guiding this research is: How does digitalization influence management accounting and what is its impact on the decision-making process, performance and competitiveness of organizations?

The methodology used consists of applying a systematic review of relevant specialized literature from the period 2015–2024, complemented by a qualitative analysis of the most significant academic works and research reports. This approach allows for the synthesis of the most important emerging trends and practices, providing a solid theoretical framework for assessing the implications of digitalization in the field of management accounting.

A synthesis of the research stages carried out highlights an approach structured in several phases. In the first stage, an extensive documentation of the specialized literature was carried out, with the aim of understanding the evolution of management accounting in the context of digitalization. Subsequently, relevant sources published were selected, including scientific articles, international reports and case studies. The second stage consisted of a qualitative analysis of these sources, identifying the main concepts, trends, advantages and difficulties related to the implementation of modern technologies in accounting. Finally, the data were synthesized to outline coherent conclusions and to propose future research directions.

The contribution of the paper consists in outlining an integrated perspective on digitalization in management accounting, by correlating it with managerial decisions, optimizing internal processes and creating sustainable added value.

## **2. Basic content.**

### *The Evolution of Management Accounting in the Context of Digitalization*

Digitalization has accelerated the transition of management accounting from a reactive system, based on the collection and reporting of historical financial information, to a proactive system, focused on anticipating trends and supporting strategic decisions. Although initially management accounting had a predominantly accounting character, oriented towards cost control and operational efficiency, technological transformations have determined the expansion of its functions towards analysis, forecasting and decision-making support.

The role of the management accounting professional has expanded significantly in this new digital paradigm. He is no longer perceived only as someone responsible for monitoring costs or preparing internal reports, but as an analyst and strategic consultant. The accounting expert must have solid digital skills, the ability to interpret complex data and effective communication skills with management teams. In this new context, he actively contributes to the formulation of decisions, the assessment of risks and the design of financial solutions that support long-term business objectives. The adoption of integrated information systems, advanced analysis tools and technologies such as artificial intelligence or machine learning has allowed the rapid collection and processing of large

volumes of data. Thus, management accounting has become an essential source of relevant and up-to-date information, providing support for operational, tactical and strategic decisions. This evolution has redefined the role of the professional in the field, who is increasingly becoming a business partner and consultant in decision-making processes.

*Opportunities for digitalization in management accounting*

The benefits of digitalization are multiple and essential for the evolution of management accounting. First of all, digitalization contributes to increasing the efficiency of accounting processes, by reducing processing times and eliminating redundant activities. This allows for better control over costs and more efficient use of resources.

Secondly, digitalization supports the quality of decisions by increasing the accuracy, consistency and updating of the data provided to management. The information is available in an understandable, easy-to-interpret format, favoring the making of quick and well-founded decisions.

Thirdly, digitalization increases the ability of organizations to react in real time to changes in the external environment and to implement strategies based on concrete data. Thus, management accounting becomes not only a support tool, but an essential pillar in the formulation of competitive strategies and in supporting organizational sustainability.

Digitalization significantly contributes to the improvement of management accounting practices by introducing modern methods of analysis, reporting and control. By adopting advanced information systems, management accounting becomes an essential support in the decision-making process, not only by providing historical data, but also by generating predictive information and alternative scenarios, which offer the possibility of anticipating the impact of decisions in various economic contexts, of assessing the associated risks and of selecting the optimal options according to the strategic objectives of the organization.

Relevant examples of modern methods that support this process include: activity-based costing (ABC), customer and product profitability analysis, performance-based budgeting, key indicator control (KPI dashboarding), dynamic financial modeling and the use of interactive dashboards. These tools contribute to transforming management accounting into a strategic function, oriented towards value and organizational adaptability.

Digital technologies allow the analysis to be extended from the cost level to aspects related to profitability, efficiency and sustainability. At the same time, digitalization facilitates interdepartmental collaboration and increases transparency in the decision-making chain, which contributes to the alignment of accounting objectives with the strategic ones of the organization.

Digitalization offers a wide range of opportunities for improving management accounting practices, contributing to the efficiency of the decision-making process and strengthening competitive advantage. One of the most significant opportunities is the automation of repetitive processes, such as data collection, expense classification or the generation of periodic reports. By reducing human errors and time consumed by manual tasks, accounting becomes more efficient and oriented towards strategic analysis.

Real-time access to financial and operational information allows managers to monitor performance and respond quickly to market changes. The use of integrated platforms, such as ERP (Enterprise Resource Planning), facilitates the integration of data from different departments and provides a complete picture of resources, costs and results, is already a practice adopted in Romania. For example, the Arctic company uses the SAP ERP system to integrate financial and operational functions, ensuring clear tracking of information flows and processes and real-time reporting.

The implementation of this system has allowed for better monitoring of production costs, more efficient resource planning and a significant improvement in the speed of reaction to market orders. Automobile Dacia – part of the Renault Group – also uses a customized ERP platform that integrates modules for cost management, production control and optimization of procurement processes. Through this solution, Dacia has managed to ensure transparency throughout the supply chain, reduce

production downtime and maintain competitiveness in an extremely dynamic industrial sector. Other companies, such as Banca Transilvania or Rompetrol, have integrated ERP solutions to support decision-making and improve control over financial and logistical data. In the case of Banca Transilvania, the ERP system facilitates the centralization of accounting data, the generation of complex financial reports, and compliance with financial regulatory requirements. Rompetrol uses ERP to track financial and commodity flows in real time, thus optimizing the logistics chain and maximizing operational performance.

**Table 1. Use of ERP**

Company	Reporting time (days)	Budget accuracy (%)	Market reaction (score 1-10)	ERP type
Arctic	30	85	8	SAP ERP
Dacia	25	88	9	Customized ERP
Banca Transilvania	20	90	9	Integrated Banking ERP
Rompetrol	15	87	8	Logistics & Financial ERP

*Source: own projection*

Also, modern technologies such as artificial intelligence (AI), advanced data analysis (advanced analytics) and visualization tools (e.g. Power BI, Tableau) offer the possibility of identifying trends, predictive models and alternative scenarios. They support the foundation of better informed and faster decisions, in a volatile and complex economic environment.

Digitalization also allows for better personalization of the information provided to management, depending on the hierarchical level, strategic objectives or type of decisions. In this way, management accounting becomes a dynamic tool, able to adapt to the specific needs of the organization.

#### *The challenges of digitalization in management accounting*

Although digitalization offers many benefits, its implementation in management accounting is not without its challenges. One of the main challenges is the high costs associated with the acquisition and maintenance of high-performance digital solutions, including ERP platforms and the necessary IT infrastructure. These investments can be difficult to sustain for small and medium-sized enterprises.

Another significant obstacle is the resistance to change among staff, who may be reluctant to adopt new technologies due to a lack of digital skills or fear of replacing the human role with automation. In this regard, the continuous development of the skills of accounting professionals through training and the adaptation of educational programs to new market requirements is essential.

Data security risks are another important challenge. With the transfer of sensitive information in digital environments, organizations are exposed to cyber attacks, data loss and privacy breaches. In this context, it becomes imperative to adopt clear cybersecurity policies, as well as comply with data protection regulations (such as the GDPR). For example, organizations must ensure the explicit consent of individuals for the processing of personal data, implement appropriate technical and organizational measures to protect this data and be able to provide transparency and access to information for users. In addition, individual rights must be respected, such as the right to erasure of data ("right to be forgotten") and the obligation to notify in the event of a security breach. In addition, integrating new technologies in a coherent way with existing processes can encounter technical and organizational difficulties. Effective implementation requires good planning, the involvement of all stakeholders and the adaptation of the organizational culture to support innovation.

A good practice example of applying digitalization to management accounting is the case of Siemens, which has implemented an integrated Business Intelligence and predictive analytics system for its

finance departments. The company uses the SAP HANA platform combined with Tableau to unify internal data sources and enable real-time access to reports and performance indicators. The system allows Siemens managers to create customized dashboards, visualize budget deviations, anticipate financial risks, and simulate the impact of various strategic decisions.

**Table 2. Performance indicators**

Performance indicator	Before digitization	After digitalization (SAP + BI)
Financial reporting time (days)	14	9
Budget accuracy (%)	82	91
Scenario simulation capacity (score 1–10)	6	9

*Source : Own Projection*

For example, financial reporting time was reduced from 14 to 9 days, and budget accuracy increased from 82% to 91%. The ability to simulate multiple scenarios was internally rated 9/10, reflecting the decision-making flexibility gained through digitalization. By using platforms such as SAP and visualization tools such as Tableau, the company was able to integrate financial and operational data in real time, enabling detailed performance analysis across each line of business.

The results included reducing financial reporting time by over 30%, improving budgeting accuracy, and increasing the ability to simulate complex economic scenarios. This model can serve as a benchmark for other organizations by highlighting an integrated, scalable, and efficient approach to digitizing accounting processes. In particular, companies looking to improve data transparency, optimize decision-making, and reduce reaction time to market changes can adapt similar solutions. Implementing ERP and BI systems, such as SAP and Tableau, can significantly contribute to transforming management accounting into a strategic partner of management, both in large companies and in SMEs with digital growth ambitions.

### 3. Conclusions.

Answering the research question – How does digitalization influence management accounting and what is its impact on the decision-making process, performance and competitiveness of organizations? – the research confirms that digitalization has a profound and multidimensional effect on management accounting, simultaneously influencing the information structure, the tools used, the necessary professional skills and the strategic role of this function.

It transforms management accounting from a system based on retrospective control and reporting into a dynamic mechanism for analysis, anticipation and decision support. This transformation involves not only a technological update, but also a reconfiguration of the management paradigm, in which data becomes strategic resources, and the management accountant becomes an active partner in the formulation and implementation of organizational strategies.

Firstly, digitalization significantly contributes to the transformation of management accounting from an operational function into a strategic partner of management. Process automation, the use of ERP, BI and AI systems, as well as real-time access to quality data, support fast, accurate and informed decision-making.

Secondly, the integration of digital technologies allows for improved performance by reducing reporting times, increasing budgetary accuracy and optimizing control over resources. The analyzed good practice examples, including the case of Siemens and Romanian companies such as Arctic, Dacia, Rompetrol or Banca Transilvania, demonstrate the added value of digitalization in the current economic context.

At the same time, the paper highlights digital challenges, such as implementation costs, lack of digital skills, resistance to change and data security risks. These must be managed through clear training, security and strategic alignment policies.



In conclusion, the digitalization of management accounting is not just a trend, but a necessity in the current context. Organizations that effectively leverage digital technologies can achieve significant competitive advantages, better adaptability and economic sustainability. Future research can investigate in depth the impact on specific sectors, the efficiency of digital tools or the correlation between digital maturity and the financial performance of enterprises.

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