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RESHAPING ACCOUNTING PROCESSES IN THE AI ERA: A CONCEPTUAL FRAMEWORK

ABSTRACT: Artificial intelligence (AI) is reshaping contemporary accounting, moving the focus from the automation of routine tasks towards advanced information processing, analytical support and strategic decision-making. This paper examines how AI transforms the accounting function by analysing changes in accounting processes, in the quality of financial information, and in the professional role and competences of accountants. The study applies a conceptual research design based on a structured qualitative synthesis of peer-reviewed literature published between 2014 and 2026 and indexed in Scopus and Web of Science. Thematic analysis of the selected corpus identifies five interrelated dimensions of AI-driven change and yields an integrative conceptual framework accompanied by five testable research propositions. The framework positions accounting

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process transformation as the central mediating mechanism through which AI technological capabilities generate improvements in accounting information quality and changes in professional roles and competences, while organisational enabling conditions act as moderators of these relationships. A feedback loop describes transformation as an iterative rather than a linear process. The study concludes that AI creates value not through technology adoption alone but through the alignment of digital capabilities with organisational readiness, sound data governance and continuous professional development, and it provides a structured foundation for subsequent empirical testing.

Keywords: artificial intelligence; accounting process transformation; accounting information quality; accounting profession; conceptual framework.

INTRODUCTION

The development of artificial intelligence (AI) represents one of the most significant drivers of digital transformation in contemporary business. Within this context, accounting occupies a particularly important position due to its fundamental role in collecting, processing, and presenting financial information. Unlike previous stages of digitalisation, which were primarily focused on automating individual activities and increasing operational efficiency, the application of AI enables broader changes in the way accounting data are generated, processed, analysed, and utilised in business decision-making (Moll & Yigitbasioglu, 2019; Sutton et al., 2016).

The increasing adoption of AI technologies creates new opportunities for transforming accounting activities and strengthening the role of accounting information in organisational decision-making. However, the implications of AI extend beyond technological implementation, requiring a broader understanding of how accounting processes, organisational capabilities, and professional competencies evolve in response to technological change. In this context, AI-driven accounting transformation should be understood as part of a broader digital transformation process in which organisations develop new capabilities to integrate digital technologies, redesign processes, and create new forms of value (Vial, 2019; Warner & Wäger, 2019). The ability to effectively leverage AI depends on the development of organisational AI capabilities that combine technological resources with managerial and human competencies (Mikalef & Gupta, 2021).

Existing literature has provided valuable insights into specific aspects of AI application in accounting, including process automation, improvements in financial information processing, and changes in accountants' competencies (Issa et al., 2016; Zhang, 2019; Kokina et al., 2021; Leocádio et al., 2024). However, there remains a need for an integrative theoretical perspective that explains the relationships between AI capabilities, accounting process transformation, information quality, organisational conditions, and the changing professional role of accountants (Sutton et al., 2016). Addressing this research gap, this study examines how AI influences accounting transformation and identifies the mechanisms through which technological capabilities generate organisational value.

To guide this investigation, the study seeks to answer the following research questions:

- RQ1: How does AI transform key accounting processes?
- RQ2: How does AI-driven accounting process transformation influence the quality of accounting information?
- RQ3: How do transformed accounting processes affect the professional role and competencies of accountants?
- RQ4: Which organisational factors enable successful integration of AI into accounting processes?

The primary aim of this study is to develop an integrative conceptual model that explains the mechanisms through which AI influences the accounting function by linking technological capabilities, accounting process transformation, accounting information quality, organisational conditions, and the development of professional competencies among accountants. Methodologically, the study rests on a structured qualitative synthesis of peer-reviewed literature, from which a conceptual model and five research propositions are derived as a foundation for future empirical investigation.

The scientific contribution of the study lies in an integrative model that connects the technological, process, informational, organisational and professional dimensions of AI-driven accounting transformation, and that specifies how these dimensions interact through mediating, moderating and feedback relationships.

The remainder of the paper is organised as follows. The next section reviews the literature on AI in accounting and identifies the research gap. The third section presents the methodology. The fourth section develops the conceptual framework and the associated research propositions. The fifth section discusses theoretical and practical implications, and the final section concludes and outlines limitations and directions for future research.

LITERATURE REVIEW

Artificial intelligence as a driver of accounting process transformation

Digital transformation has fundamentally changed the way organisations generate, process, and utilise accounting information. Previous technological developments, including accounting information systems (AIS), enterprise resource planning (ERP) platforms, and workflow automation, primarily focused on improving efficiency, standardising procedures, and reducing manual activities. However, these systems were largely based on predefined rules and historical data processing, limiting their ability to support adaptive analysis and forward-looking decision-making (Moll & Yigitbasioglu, 2019; Rikhardsson & Yigitbasioglu, 2018).

The emergence of artificial intelligence represents a new phase in the evolution of accounting technologies. Unlike traditional information systems, AI enables learning from data, pattern recognition, anomaly detection, predictive analysis, and intelligent decision support. Therefore, AI should not be understood merely as an additional automation instrument but as a transformational capability that reshapes accounting processes and expands the strategic role of accounting within organisations (Dwivedi et al., 2023; Raisch & Krakowski, 2021). From a dynamic capabilities perspective, AI adoption requires organisations to continuously sense technological opportunities, adapt existing processes, and reconfigure resources in response to changing environmental conditions (Teece, 2007). Successful AI implementation in accounting depends not only on technological availability but also on the organisation's ability to transform technological potential into sustainable operational and strategic improvements.

The transformative potential of AI derives from its ability to process both structured and unstructured information, enhance analytical capabilities, and support continuous monitoring of financial activities. Through these mechanisms, accounting evolves from a primarily retrospective reporting function toward a more proactive information and decision-support function (Issa et al., 2016). However, the value generated by AI depends on more than technological adoption alone. Consistent with the socio-technical perspective, sustainable transformation requires alignment between technological capabilities, organisational processes, and human competencies (Bostrom & Heinen, 1977). Accordingly, AI-driven accounting transformation should be viewed as a multidimensional process involving technological, organisational, and professional adaptation.

Mechanisms of AI-enabled accounting process redesign

Accounting processes encompass a broad range of activities, including transaction processing, reconciliation, financial reporting, internal control, and managerial information provision (Romney & Steinbart, 2021). The integration of artificial intelligence introduces a fundamental change in these processes by extending the capabilities of traditional accounting information systems through automation, advanced analytics, continuous monitoring, and intelligent decision support. Unlike conventional accounting technologies that primarily rely on predefined rules and historical data processing, AI-enabled systems are capable of learning from data, identifying complex patterns, and generating predictive insights that support more adaptive accounting practices (Bhimani & Willcocks, 2014; Dwivedi et al., 2023).

The transformation of accounting processes through AI occurs through several interconnected mechanisms. The first mechanism involves the automation of repetitive and standardised activities, including invoice processing, transaction classification, account reconciliation, and routine reporting procedures. Through machine learning and natural language processing, AI systems can analyse large volumes of accounting documents, extract relevant information and support automated classification and validation, thereby improving processing speed and consistency while reducing the risk associated with manual data entry (Zhang, 2019; Kokina & Davenport, 2017). By reducing manual intervention and increasing processing efficiency, AI allows accounting professionals to redirect their efforts toward activities requiring interpretation, professional judgement, and analytical reasoning (Brynjolfsson & McAfee, 2014; Issa et al., 2016).

The second mechanism relates to enhanced data integration and analytical capability. AI systems enable organisations to combine structured and unstructured data from multiple sources, identify relationships within large datasets, detect anomalies, and support forecasting activities. These capabilities extend the traditional role of accounting information systems by transforming accounting data from a historical reporting resource into a strategic source of organisational insight (Bhimani & Willcocks, 2014; Alles, 2015; Richins et al., 2017).

The third mechanism concerns the transformation of control and assurance activities. Through continuous monitoring, automated validation, and anomaly detection, AI enables organisations to move from periodic control procedures toward more dynamic and preventive approaches to internal control and auditing. Such capabilities improve the timeliness of risk identification and strengthen the reliability of accounting information (Vasarhelyi et al., 2015; Almufadda & Almezeini, 2022).

A fourth mechanism concerns generative applications that support the automated preparation of financial explanations, management commentary and analytical summaries. Because accounting is bound by regulatory requirements and professional standards, however, such applications raise specific requirements regarding transparency, accountability and explainability that do not arise in general-purpose automation (Zhang et al., 2022; Leocádio et al., 2024).

Finally, AI-driven transformation involves the redesign of accounting workflows and the development of integrated, adaptive accounting environments. The value of AI does not arise solely from technological adoption but from the ability of organisations to combine technological capabilities with appropriate processes, governance mechanisms, and professional expertise. Accordingly, AI-driven accounting process transformation represents a transition from traditional sequential and transaction-oriented accounting activities toward intelligent, continuously evolving, and decision-support-oriented accounting systems. Decisions involving accounting estimates, interpretation of standards, materiality assessment and evaluation of economic substance continue to require human expertise and contextual understanding, so that effective implementation depends on collaboration between intelligent systems and accounting professionals.

Artificial intelligence and the quality of accounting information

The fundamental purpose of accounting is to provide reliable and useful information for decision-making. According to the International Accounting Standards Board (IASB) Conceptual Framework, high-quality financial information should demonstrate relevance and faithful representation, supported by characteristics such as comparability, verifiability, timeliness, and understandability (International Accounting Standards Board, 2018).

AI influences accounting information quality primarily by transforming the processes through which information is generated, processed, and communicated. Through automated processing, continuous validation, and advanced analytics, AI can improve the accuracy, timeliness, and analytical value of accounting information (Moll & Yigitbasioglu, 2019). Automated workflows, continuous reconciliation and real-time monitoring allow organisations to access relevant financial information more quickly and to respond more effectively to changing business conditions.

AI enhances relevance by enabling predictive analysis and integration of broader datasets, allowing organisations to identify trends, evaluate risks, and support strategic decisions. At the same time, automation and intelligent validation mechanisms may reduce processing errors and improve consistency.

Nevertheless, the reliability of AI-generated outputs remains dependent on data quality, algorithm design, governance mechanisms, and professional oversight (Sutton et al., 2016; Zhang et al., 2022). Therefore, AI should be viewed as a mechanism that enhances accounting information quality through improved processes rather than as a replacement for accounting principles or professional judgement.

Artificial intelligence and the accounting profession

The transformation of accounting processes inevitably affects the professional role of accountants. As AI increasingly performs repetitive and standardised activities, the importance of analytical interpretation, professional judgement, and strategic contribution becomes more pronounced. AI enables accountants to move beyond traditional responsibilities related primarily to transaction recording and compliance reporting toward activities involving analysis, advisory support, risk assessment, and business decision-making (Kokina & Davenport, 2017; Kokina et al., 2021). In this emerging role, accountants act as intermediaries between technological systems and business stakeholders: they interpret analytical outputs, evaluate potential risks and contribute to strategic decision-making.

Although AI systems can process large volumes of information, recognise patterns, and generate predictions, accountants remain responsible for evaluating the economic substance of transactions, assessing information reliability, and applying professional judgement. Consequently, AI represents a transformation of accounting expertise rather than a replacement of the accounting profession, which is consistent with the automation–augmentation perspective on AI in management (Raisch & Krakowski, 2021).

This transformation requires the development of complementary competencies. Four groups of competencies recur in the literature: digital accounting literacy, understood as an appreciation of the capabilities, limitations and risks of AI within accounting processes; data-analytical capabilities, enabling the interpretation of financial and non-financial data; professional judgement and critical evaluation of algorithm-generated outputs; and ethical awareness together with an understanding of governance issues such as transparency, accountability and algorithmic risk (Pan & Seow, 2016; Al-Htaybat et al., 2022; International Federation of Accountants, 2024).

These changes carry direct implications for accounting education. Traditional curricula centred on accounting rules, procedures and technical reporting requirements need to be extended to include accounting data analytics and visualisation, applications of AI in financial reporting and auditing, data governance and information quality management, digital internal controls, and the ethical implications of algorithm-based decision-

making (Tettamanzi et al., 2023). Because technological change continuously modifies accounting practice, professional bodies and educational institutions are increasingly expected to support lifelong learning models (Association of Chartered Certified Accountants, 2023; International Federation of Accountants, 2024). Evidence from the Serbian market points in the same direction, indicating that the benefits of digitalisation in accounting and auditing depend heavily on continuous training and skills development (Gruslav et al., 2026).

Organisational enabling conditions

The successful integration of artificial intelligence into accounting processes depends not only on technological capabilities but also on the organisational conditions that enable effective adoption, implementation, and long-term utilisation. From a socio-technical perspective, technological innovation creates value only when it is aligned with organisational structures, business processes, and human capabilities (Bostrom & Heinen, 1977). Therefore, AI-driven accounting transformation should be understood as a multidimensional organisational change process rather than a purely technological implementation.

Several organisational factors influence successful AI adoption. These factors reflect the development of complementary organisational capabilities that enable firms to integrate technological innovations into existing structures and processes (Teece, 2007; Warner & Wäger, 2019). Four conditions recur consistently in the literature.

First, effective data governance is required because AI systems depend on the availability, quality, consistency, and reliability of underlying information; organisations must establish appropriate mechanisms for data management, validation, security, and accountability. Poor data quality can limit the accuracy and usefulness of AI-generated outputs, reducing the potential benefits of AI adoption in accounting environments (Sutton et al., 2016).

Second, technological maturity matters. Organisations with developed accounting information systems, integrated enterprise platforms, and advanced digital infrastructures are better positioned to implement AI solutions because they possess more structured data environments and established information flows (Moll & Yigitbasioglu, 2019; Romney & Steinbart, 2021). However, technological readiness alone is insufficient; successful implementation also requires organisational alignment and effective change management.

Third, management support and strategic commitment are necessary because AI adoption often requires significant adjustments in processes, responsibilities, and organisational routines. Therefore, leadership plays an

important role in defining strategic objectives, allocating resources, encouraging acceptance of technological change, and supporting the development of employee competencies.

Finally, organisational culture and continuous employee development influence acceptance and effective utilisation of AI technologies. These organisational dimensions are consistent with the digital transformation perspective, which emphasises that technology implementation requires simultaneous changes in organisational structures, capabilities, and human resources (Vial, 2019). A culture that promotes learning, innovation, and collaboration between accounting professionals and technology specialists increases the likelihood of successful AI integration. To these four conditions the literature increasingly adds ethical and regulatory governance, which determines whether AI outputs used in financial reporting can be explained, audited and defended (Zhang et al., 2022).

Taken together, these complementary perspectives provide the conceptual foundation of the proposed model: they explain how AI capabilities are converted into organisational outcomes through accounting process transformation, and why organisations with access to comparable technologies achieve different results.

Research gap and positioning of the study

Although prior studies have significantly advanced understanding of AI adoption in accounting, they primarily examine individual dimensions of this phenomenon, such as AI capabilities, process automation, information quality, or changes in accountants' professional roles. A comprehensive conceptual framework integrating these perspectives into a single model remains limited. To address this gap, Table 1 positions the proposed framework within the existing literature and highlights its theoretical contribution.

Table 1. Positioning of the proposed conceptual model within the existing literature

Existing studies	Primary focus	Main limitation	Contribution of the proposed model
Sutton et al. (2016)	AI and automation in accounting processes	Primarily technology and process oriented; limited consideration of organisational and professional outcomes	Integrates process transformation with information quality, accountants' competencies, and organisational outcomes.
Moll and Yigitbasioglu (2019)	Digital transformation of the accounting profession	Focuses mainly on changing professional roles; does not provide an integrated transformation framework	Connects role transformation with AI-enabled process redesign, information quality, and organisational factors within a single framework.
Mikalef and Gupta (2021)	AI capability and organisational performance	Developed at a general organisational level rather than within accounting	Adapts AI capability theory to the accounting context and explains how technological capabilities generate accounting transformation.
Rikhardsson and Yigitbasioglu (2018)	Business intelligence and analytics in management accounting	Emphasises analytical tools rather than comprehensive organisational transformation	Extends analytical perspectives by incorporating AI-enabled organisational redesign and professional competence development.
Leocádio et al. (2024)	AI in auditing practice	Confined to the audit function; organisational conditions treated as context rather than as moderators	Broadens the scope to the accounting function as a whole and models organisational conditions explicitly as moderating variables.
Proposed conceptual model	AI-driven accounting transformation	Addresses limitations of previous fragmented approaches	Provides an integrative framework linking AI technological capabilities, accounting process transformation, accounting information quality, accountants' changing roles and competencies, organisational moderators, and continuous feedback mechanisms.

Source: Authors

Unlike previous studies, which typically examine isolated aspects of AI adoption — such as technological capabilities, process automation, information quality, or changes in accountants' professional roles — the proposed framework integrates these perspectives into a single conceptual model. Its primary theoretical contribution lies in explaining the mechanisms

through which AI technological capabilities are translated into organisational and professional outcomes. In addition, the model incorporates organisational enabling conditions as moderating factors and introduces a continuous feedback loop, emphasising that accounting transformation is a dynamic and iterative process rather than a linear sequence of events.

METHODOLOGY

Research design

This study adopts a conceptual research design based on a qualitative synthesis of existing academic literature. Rather than collecting primary empirical data, the study integrates theoretical and empirical findings from prior research to develop an explanatory conceptual framework of AI-driven accounting transformation. This approach is appropriate for emerging research areas where theoretical integration is required to explain complex relationships among technological, organisational, and professional dimensions.

Identification and selection of the literature

The conceptual model was developed through a structured review of the contemporary academic literature addressing artificial intelligence in accounting and related disciplines. The analysis primarily draws upon peer-reviewed journal articles indexed in Scopus and Web of Science, supplemented by targeted searches in Google Scholar and by professional reports issued by international accountancy bodies. The search was conducted in July 2026 and covered publications issued between January 2014 and June 2026. Seminal earlier works were retained where they provide the theoretical foundations of the framework (Bostrom & Heinen, 1977; Teece, 2007).

The literature search used Boolean combinations of the following search strings, applied to title, abstract and keyword fields: ("artificial intelligence" OR "machine learning" OR "intelligent automation") AND ("accounting" OR "accounting information system*" OR "financial reporting" OR "audit*") AND ("transformation" OR "process*" OR "competenc*" OR "information quality").

Studies were retained if they (i) were published in a peer-reviewed journal or issued by a recognised professional body, (ii) were written in English, and (iii) addressed the organisational, process-related, informational or professional consequences of AI in accounting. Studies were excluded if they dealt exclusively with the technical architecture of algorithms without an accounting application, if they were editorials or unrefereed conference

abstracts, or if they duplicated findings already covered by a more comprehensive source. The screening produced a final corpus of 31 sources, of which 26 are peer-reviewed journal articles, two are monographs, and three are reports or pronouncements issued by international professional and standard-setting bodies.

Thematic synthesis and construction of the framework

The selected literature was examined using thematic analysis and conceptual synthesis. Each source was coded in a structured extraction matrix recording the research question addressed, the theoretical lens applied, the accounting activity examined and the reported organisational or professional outcome. Recurring concepts, theoretical constructs, and relationships identified across previous studies were systematically compared and integrated into broader conceptual categories. This process resulted in the identification of five core dimensions of AI-driven accounting transformation:

- AI technological capabilities;
- accounting process transformation;
- accounting information quality;
- transformation of the accountant's professional role;
- organisational enabling conditions.

Based on the theoretical relationships identified in the literature, the study develops an integrative conceptual framework and formulates five research propositions intended for future empirical validation. The propositions were derived by mapping the direction and the conditionality of the relationships reported in the coded corpus, and by distinguishing direct effects from mediated and moderated ones.

Use of generative artificial intelligence tools

In accordance with the journal's policy on generative AI and AI-assisted technologies, the authors declare the following. Generative AI tools were used for language editing, for structuring the manuscript in accordance with the journal's formatting requirements, and for preparing the graphical layout of Figure 1. The identification of the research gap, the selection and interpretation of the sources, the construction of the conceptual framework and the formulation of the research propositions are the authors' own intellectual work. No AI tool is listed as an author. The authors have verified the authenticity and the bibliographic accuracy of every reference cited in this paper against the original sources, and they bear full responsibility for the content, the interpretation and the conclusions presented.

Data availability

This study is conceptual and does not use primary or secondary quantitative data; consequently, no raw data set is associated with the results. To support transparency and replicability of the literature synthesis, the coding matrix of the reviewed corpus — listing every source together with its publication type, theoretical lens, the accounting activity examined, the reported outcome and the conceptual dimension to which it was assigned — is deposited at Mendeley Data:
https://data.mendeley.com/datasets/2rzs7wjvyx/1(DOI:10.17632/2rzs7wjvyx.1).

Together with the search strings and the screening criteria reported above, the matrix allows the corpus and the coding decisions underlying the framework to be reconstructed independently.

RESULTS: AN INTEGRATIVE CONCEPTUAL FRAMEWORK

Constructs of the framework

Building on the theoretical foundations presented in previous sections, this study develops an integrative conceptual model explaining how artificial intelligence influences accounting transformation and the evolution of the accounting profession. The central assumption of the model is that AI does not create organisational value through technological adoption alone. This assumption is consistent with the AI capability perspective, which argues that organisational value emerges from the combination of technological resources, organisational capabilities, and the ability to effectively utilise AI-driven insights (Mikalef & Gupta, 2021). Instead, value emerges through the interaction between technological capabilities, transformed accounting processes, improved information quality, organisational conditions, and enhanced professional competencies. Accounting process transformation is therefore conceptualised as the central mechanism through which AI capabilities generate organisational and professional outcomes. The framework consists of five interconnected dimensions.

AI technological capabilities

AI technological capabilities represent the primary driver of accounting transformation. This dimension includes the ability of AI systems to automate complex activities, process large volumes of structured and unstructured data, detect patterns, identify anomalies, and support predictive analysis. These capabilities span process automation, cognitive insight and cognitive

engagement applications, which differ in the degree of judgement they substitute for or support (Davenport & Ronanki, 2018). However, technological capabilities alone are insufficient to generate sustainable value. Their impact depends on the organisation's ability to integrate AI into existing accounting systems, redesign workflows, and develop appropriate governance mechanisms.

Accounting process transformation

Accounting process transformation represents the central mediating mechanism of the model. It refers to changes in accounting activities, workflows, and information-processing structures resulting from AI implementation. Through automation, intelligent data processing, continuous monitoring, and advanced analytics, AI transforms accounting from a transaction-oriented function into a more integrated and decision-support-oriented capability. This transformation enables organisations to improve operational efficiency while increasing the analytical and strategic contribution of accounting functions.

Accounting information quality

Accounting information quality represents a key outcome of AI-driven process transformation. The model assumes that transformed accounting processes improve the relevance, timeliness, reliability, consistency, and analytical value of financial information. AI contributes to information quality through faster processing, improved validation procedures, continuous monitoring, and advanced analytical capabilities. Nevertheless, the quality of AI-generated information remains dependent on data governance, algorithm reliability, and professional oversight.

Transformation of the accountant's professional role

The transformation of accounting processes directly influences the professional role of accountants. As AI performs increasingly standardised activities, accountants move toward responsibilities requiring interpretation, professional judgement, analytical reasoning, and strategic support. The model therefore conceptualises AI as a factor that reshapes accounting expertise rather than reducing the importance of accountants. The future relevance of the profession depends on combining accounting knowledge with technological literacy and analytical capabilities.

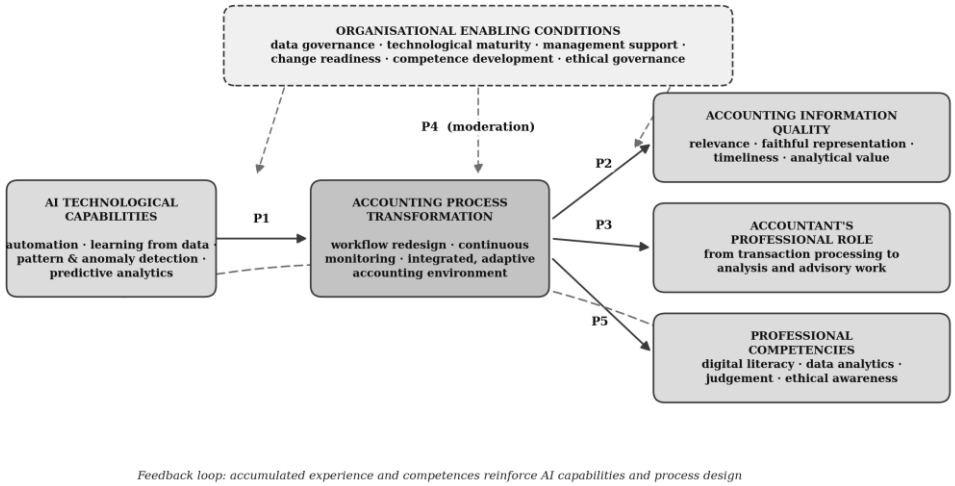
Organisational enabling conditions

Organisational enabling conditions represent contextual factors that determine the effectiveness and sustainability of AI implementation. These conditions include data governance and information quality management; technological maturity and accounting system capabilities; top management support and strategic commitment; organisational readiness and change management; employee competencies and continuous development; and ethical and regulatory governance. The model assumes that organisations with stronger complementary capabilities are better positioned to transform AI potential into sustainable accounting improvements.

The conceptual framework

The conceptual framework presented in Figure 1 illustrates the relationships among the main dimensions of AI-driven accounting transformation.

Figure 1. Conceptual framework of AI-driven accounting transformation



Source: Authors

The framework positions AI technological capabilities as the primary antecedent of accounting transformation. Their influence is first reflected in the transformation of accounting processes (P1), representing the initial stage of organisational change enabled by AI adoption through the automation of routine activities, intelligent data processing, continuous monitoring, advanced analytics, and integrated workflows.

Accounting process transformation, in turn, positively influences the quality of accounting information by enhancing its relevance, timeliness, reliability, consistency, and analytical value (P2). Simultaneously, it contributes to changes in accountants' professional roles by shifting responsibilities from transaction processing toward analytical, advisory, and strategic activities (P3). Furthermore, it increases the importance of advanced competencies, including data literacy, analytical thinking, professional judgement, digital literacy, and ethical responsibility, which enable accountants to create value in AI-supported accounting environments (P5).

The model further proposes that organisational factors — including management support, technological infrastructure, data governance, organisational culture, employee competencies, and clear governance rules — do not directly influence the constructs themselves but moderate the relationships among them (P4). These enabling conditions strengthen the extent to which AI technological capabilities are translated into process transformation and, ultimately, into organisational and professional outcomes.

Finally, the framework incorporates a continuous feedback loop, emphasising that experience gained from changes in accounting roles and competencies continuously informs and improves AI capabilities, accounting processes, information quality, and organisational capabilities. This feedback mechanism highlights the dynamic and iterative nature of AI-driven accounting transformation rather than a one-way linear process.

Research propositions

Based on the proposed framework, the following research propositions are developed for future empirical testing.

P1: AI technological capabilities positively influence accounting process transformation.

P2: Accounting process transformation mediates the relationship between AI technological capabilities and accounting information quality.

P3: Accounting process transformation contributes to the transformation of the accountant's professional role by shifting responsibilities from routine processing toward analytical, advisory, and strategic activities.

P4: Organisational enabling conditions positively moderate the relationship between AI technological capabilities and accounting process transformation.

P5: Accounting process transformation increases the importance of advanced analytical, technological, interpretative, and advisory competencies among accounting professionals.

The emerging profile of the accounting professional

The transformation of accounting under AI does not imply the disappearance of professional expertise but rather the emergence of a new professional model. The future accountant combines traditional accounting knowledge with technological understanding, analytical capabilities, strategic thinking, and ethical responsibility. Table 2 summarises the main differences between the traditional accountant and the emerging AI-enabled accounting professional.

Table 2. Comparative analysis of traditional and future accountant archetypes

Dimension	Traditional accountant	Future accountant
Work focus	Recording and processing historical transactions	Analysis, interpretation, and strategic insight generation
Reporting paradigm	Periodic and retrospective reporting	Continuous, real-time, and analytical reporting
Main skillset	Accounting procedures and compliance knowledge	Data analytics, technological literacy, and professional judgement
Decision-making role	Providing financial information for decisions	Supporting strategic organisational decisions
Control function	Manual verification of transactions	Evaluation of information quality, algorithmic risks, and system reliability

Source: Authors

DISCUSSION

The proposed conceptual framework contributes to the growing body of literature on artificial intelligence in accounting by providing an integrative explanation of how AI technological capabilities are translated into organisational and professional outcomes. While previous studies have examined individual aspects of AI adoption, such as automation, information quality, organisational capabilities, or changes in accountants' professional roles, they have generally treated these dimensions separately. In contrast, the proposed framework integrates these previously fragmented perspectives into a single explanatory model.

Unlike previous AI capability models developed at the organisational level (e.g., Mikalef & Gupta, 2021), the proposed framework explicitly adapts the AI capability perspective to the accounting domain. More importantly, it positions accounting process transformation as the central mediating mechanism through which AI technological capabilities influence both accounting information quality and the transformation of accountants' professional roles. This conceptualisation extends existing AI capability research by explaining not only whether AI creates value but also how such value is generated within accounting functions.

The framework also extends previous accounting literature that primarily conceptualises AI as a tool for automation. Earlier studies have largely emphasised operational efficiency, transaction processing, and cost reduction. Although these contributions remain important, they provide only a partial explanation of AI adoption in accounting. The proposed model argues that AI should be understood as a broader transformational capability that simultaneously reshapes accounting processes, information quality, organisational capabilities, and professional competencies. In this respect the model complements domain-specific frameworks confined to the audit function (Leocádio et al., 2024) by extending the analysis to the accounting function as a whole.

The proposed model is also consistent with the socio-technical systems perspective, which emphasises that technological innovation generates value only when aligned with organisational structures and human capabilities. However, the framework expands this perspective by explicitly incorporating organisational enabling conditions — including data governance, technological maturity, management support, organisational readiness, and professional competencies — as moderating factors that influence the effectiveness of AI-driven accounting transformation. Rather than treating these organisational factors merely as contextual variables, the proposed framework explains their active role in strengthening or constraining the relationships among the core constructs.

Furthermore, the proposed framework confirms previous findings suggesting that AI enhances the quality of accounting information through improved automation, analytical capabilities, and continuous monitoring. Nevertheless, it extends existing conceptualisations by identifying accounting process transformation as the mechanism through which these improvements emerge. This perspective provides a more comprehensive explanation than approaches that directly associate AI adoption with improvements in accounting information quality without specifying the intermediate organisational processes involved.

The framework also contributes to the literature on the accounting profession. Previous studies consistently argue that AI shifts accountants'

responsibilities from routine processing toward analytical and advisory activities. The proposed model confirms this general direction of professional evolution while extending prior research by integrating professional role transformation within a broader organisational transformation process. Rather than viewing changes in accountants' competencies as an isolated consequence of AI adoption, the framework conceptualises professional evolution as one of the principal organisational outcomes of AI-driven accounting transformation.

Finally, unlike previous conceptual frameworks that implicitly assume a linear process of technological adoption, the proposed model introduces a continuous feedback mechanism. This feedback loop emphasises that experience gained through transformed accounting processes, improved information quality, and evolving professional competencies continuously contributes to the further development of organisational AI capabilities. Accordingly, AI-driven accounting transformation should be understood as an iterative and dynamic process rather than a one-time technological implementation.

Practical implications

For practitioners, the framework carries three implications. First, organisations should approach AI implementation as a strategic transformation programme rather than as a technology procurement decision: investment in tools that is not accompanied by workflow redesign is unlikely to improve information quality. Second, because organisational conditions act as moderators rather than as direct causes, firms should sequence their investment, establishing data governance and baseline technological maturity before scaling AI applications in reporting and control. Third, professional bodies and employers should treat competence development as a component of the implementation programme itself rather than as a subsequent training activity, since the analytical, interpretative and ethical competences identified in the framework determine whether AI outputs can be relied upon in financial reporting.

CONCLUSION

AI has become a major catalyst of transformation in accounting, influencing not only operational activities but also the broader structure, purpose, and professional orientation of the accounting function. This study demonstrates that the impact of AI extends beyond the automation of routine tasks by enabling new forms of information processing, analytical support, and strategic decision-making.

The conceptual framework developed in this study identifies accounting process transformation as the key mechanism through which AI capabilities generate organisational value. AI contributes to the redesign of accounting workflows by improving automation, data integration, continuous monitoring, and analytical capabilities. Through these changes, accounting information becomes more timely, relevant, reliable, and useful for managerial decision-making. However, these benefits are not generated automatically; they depend on appropriate data governance, organisational readiness, technological infrastructure, and effective human oversight.

In relation to the research questions, the study concludes that AI transforms accounting processes through intelligent automation, predictive analysis, continuous control mechanisms, and improved information integration (RQ1). These transformations enhance accounting information quality (RQ2) while simultaneously redefining professional competencies and responsibilities (RQ3). Furthermore, successful AI adoption depends on organisational factors such as management support, data quality, technological maturity, supportive organisational culture, and continuous employee development (RQ4).

Unlike previous conceptual studies that examine isolated aspects of AI adoption in accounting, this study develops an original integrative framework that explains how AI technological capabilities, accounting process transformation, accounting information quality, organisational enabling conditions, and professional evolution interact within a single explanatory model. By positioning process transformation as the central mechanism of change, the framework provides a more comprehensive explanation of AI-driven accounting evolution than approaches focused solely on automation.

This study is subject to several limitations. As a conceptual contribution, the proposed framework requires empirical validation; the propositions are analytically derived rather than tested, and the reviewed corpus is restricted to English-language sources, which may under-represent evidence from non-Anglophone accounting systems, including those of South-East Europe. Future research should test the proposed relationships using quantitative methods, including structural equation modelling, and investigate how AI-driven accounting transformation develops across different organisational contexts and accounting domains. Comparative studies contrasting large and small entities, and studies situated in transition economies, would be particularly valuable in establishing the boundary conditions of the framework.

Overall, AI should be understood as an evolutionary force that enhances rather than replaces the accounting profession. The future of accounting will depend on effective collaboration between intelligent technologies and human expertise, with accountants remaining essential for interpretation, ethical

evaluation, professional judgement, and ensuring the credibility of financial information.

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Use of generative AI: see the Methodology section.

REZIME
PREOBLIKOVANJE RAČUNOVODSTVENIH PROCESA U ERI VEŠTAČKE INTELIGENCIJE: KONCEPTUALNI OKVIR

Veštačka inteligencija (AI) pokreće fundamentalnu transformaciju savremenog računovodstva, pomerajući fokus sa jednostavne automatizacije ka naprednoj obradi informacija, analitičkoj podršci i strateškom donošenju odluka. Ovaj rad istražuje uticaj veštačke inteligencije na računovodstvenu funkciju analizirajući promene u računovodstvenim procesima, kvalitetu finansijskih informacija, profesionalnoj ulozi računovođa i kompetencijama koje su potrebne u savremenom poslovnom okruženju. Studija primenjuje konceptualni istraživački pristup zasnovan na strukturiranoj kvalitativnoj sintezi recenzirane literature objavljene u periodu 2014–2026. godine i indeksirane u bazama Scopus i Web of Science. Tematskom analizom identifikovano je pet međusobno povezanih dimenzija promena vođenih veštačkom inteligencijom, na osnovu kojih je razvijen integrativni konceptualni okvir sa pet istraživačkih pretpostavki. Okvir pozicionira transformaciju računovodstvenih procesa kao centralni posrednički mehanizam kroz koji tehnološke sposobnosti veštačke inteligencije utiču na kvalitet računovodstvenih informacija i na promenu profesionalne uloge i kompetencija računovođa, dok organizacioni uslovi deluju kao moderatori tih odnosa. Konceptualni okvir polazi od pretpostavke da veštačka inteligencija stvara vrednost ne samo kroz usvajanje tehnologije, već kroz usklađivanje digitalnih sposobnosti sa organizacionom spremnošću, efikasnim upravljanjem podacima i kontinuiranim razvojem profesionalnih kompetencija. Rad doprinosi postojećoj literaturi predstavljanjem višedimenzionalne perspektive transformacije računovodstva zasnovane na primeni veštačke inteligencije i pruža teorijsku osnovu za buduća empirijska istraživanja.

Ključne reči: veštačka inteligencija; transformacija računovodstvenih procesa; kvalitet računovodstvenih informacija; računovodstvena profesija; konceptualni okvir.

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