

DIGITAL AUTOMATION AND PROFESSIONAL ROLE TRANSFORMATION IN CONTEMPORARY ACCOUNTING PRACTICE

Ștefan CARABULĂ

Doctoral School of Economics and Business Administration, "Alexandru Ioan Cuza"
University of Iași, Romania.

stefan.carabula@student.uaic.ro

Abstract: *Automation and artificial intelligence are increasingly reshaping the accounting profession by redefining task structures, competence requirements and organizational arrangements. Although international research on accounting digitalization has expanded significantly, existing studies remain fragmented, often examining technological applications, professional skills or organizational factors in isolation. The purpose of this study is to address this gap by providing an integrated conceptual analysis of how automation and artificial intelligence jointly transform accounting tasks, professional competencies and role configurations within organizations. The study adopts a qualitative, conceptual research design based on the systematic analysis of peer-reviewed international literature indexed in Web of Science and Scopus, published between 2018 and 2025. Using a structured thematic synthesis, the analysis integrates insights from accounting information systems, auditing, management control and digital transformation research to identify recurring patterns and explanatory mechanisms. The findings indicate that automation extends beyond routine transaction processing and increasingly influences judgement-intensive activities, including anomaly detection, internal control evaluation, reporting quality and strategic analysis. The analysis further reveals that the impact of automation is mediated by digital competencies and organizational readiness, resulting in widening disparities between digitally mature organizations and those constrained by legacy systems, skill shortages and resistance to change. In parallel, the review highlights enabling conditions such as agile mindsets, continuous learning cultures and robust data governance frameworks. The contribution of this study lies in the development of an integrated socio-technical framework that consolidates fragmented international evidence and explains how automation reshapes accounting work through the interaction between technological infrastructure, professional competencies and organizational context. The findings offer implications for organizations navigating digital transformation and underscore the need for structured upskilling strategies, transparent algorithmic governance and alignment with emerging regulatory requirements.*

Keywords: *Automation; Accounting profession; Digital transformation; Artificial intelligence; Digital competencies; Cloud ERP systems*

JEL Classification: *M41; O33; M15; L86*

1. Introduction

Automation and artificial intelligence have become defining forces in the transformation of the accounting profession, reshaping not only operational

workflows but also the epistemic, cognitive and institutional foundations of professional judgement. Over the past decade, advances in cloud-based Enterprise Resource Planning systems, robotic process automation, machine learning, advanced analytics and generative artificial intelligence have converged to form a digitally embedded accounting environment in which professional practices are increasingly mediated by intelligent systems. Contemporary organizations rely on integrated digital platforms capable of real-time data processing, automated reconciliations, anomaly detection and predictive modelling, leading to substantial changes in how accountants generate, interpret and validate information. International research on digital transformation emphasizes that these developments represent more than incremental technological upgrades. Instead, they act as catalysts for structural reconfiguration in professional roles, competence requirements and organizational arrangements. Empirical studies indicate that digitalization alters the conditions under which accountants exercise professional judgement, interact with data and contribute to organizational decision-making processes. Topic modelling analyses of the accounting and artificial intelligence literature further reveal a growing scholarly focus on audit analytics, machine learning-based risk assessment, digital reporting infrastructures and continuous auditing systems. In parallel, research on cloud ERP adoption highlights the emergence of dialectical tensions between automation, standardization and real-time visibility on the one hand, and professional discretion, interpretive flexibility and contextual reasoning on the other. At the individual level, studies on digital literacy and professional skills development demonstrate that technological change requires more than technical proficiency. Agile mindsets, design thinking capabilities and the ability to interpret complex data flows increasingly shape professional effectiveness in digitally intensive environments. As automation absorbs routine and rule-based tasks and expands into cognitively demanding activities, accounting roles are progressively reoriented from procedural execution toward analytical reasoning, critical evaluation and oversight of algorithmic outputs. These transformations have significant implications for professional identity, autonomy and accountability. Despite the rapid growth of international research on accounting digitalization, the existing literature remains conceptually fragmented. Many studies focus on isolated technological components, such as cloud ERP systems, robotic process automation or analytics tools, without integrating these elements into a coherent socio-technical perspective. As a result, there is limited conceptual clarity regarding the mechanisms through which automation and artificial intelligence jointly reshape accounting tasks, professional competencies and role configurations within organizations. In particular, prior research seldom examines how technological infrastructures interact simultaneously with human expertise, organizational readiness and professional norms to reconfigure accounting work at the cognitive, organizational and institutional levels. Against this backdrop, the purpose of this study is to analyze, from an integrated conceptual perspective, how automation and artificial intelligence transform the structure of accounting tasks, professional competencies and the evolving role of accountants in contemporary practice. Specifically, the study synthesizes recent international research to identify the mechanisms through which emerging digital technologies such as robotic process automation, machine learning and cloud-based ERP systems reshape professional judgement, task allocation and

organizational expectations. The research objective is to develop an analytical framework that clarifies how automation modifies accounting tasks and decision processes, how digital competencies mediate professional effectiveness, and how organizational conditions shape readiness for AI-enabled transformation.

2. Literature Review

International research increasingly conceptualizes automation and artificial intelligence as transformative forces that reshape accounting work through the interaction between technological systems, professional competencies and organizational contexts. Early contributions framed automation primarily as a means of enhancing efficiency in routine accounting processes, such as transaction processing and reconciliations. More recent studies, however, demonstrate that intelligent technologies increasingly extend beyond routine task substitution and influence judgement-intensive activities, fundamentally altering the nature of accounting work (Kokina & Davenport, 2017; Bhimani, 2020). Empirical evidence shows that automation affects activities such as anomaly detection, internal control evaluation, continuous auditing and predictive reporting, requiring accountants to engage in validation, interpretation and supervision of algorithmic outputs rather than procedural execution (Richins et al., 2022). These findings suggest a reorientation of accounting roles toward analytical oversight and decision support. Despite this shift, much of the existing literature remains focused on task-level transformations and provides limited insight into how these changes translate into broader professional role reconfigurations.

A growing stream of research highlights digital competencies as a critical mediating factor shaping the impact of automation on accounting professionals. Studies consistently identify digital literacy, data analytics capabilities and proficiency in ERP environments as essential for effective performance in automated contexts (Scapens, R. & Jazayeri, M., 2022). At the same time, empirical evidence points to widening skill gaps driven by uneven access to training and heterogeneous levels of digital maturity across organizations, constraining professional adaptation to technological change.

Organizational context further conditions automation outcomes. Research on cloud-based ERP systems demonstrates that automation embeds new control logics and standardization mechanisms into accounting processes, generating tensions between efficiency, transparency and professional discretion (Ammar, 2025). These tensions highlight that automation outcomes are not technologically deterministic but depend on organizational readiness, governance structures and learning cultures.

Recent theoretical developments increasingly adopt the concept of hybrid intelligence to explain human-AI collaboration in professional settings. Rather than replacing professional judgement, intelligent systems complement human expertise by providing scalable analysis and pattern recognition, while accountants retain responsibility for contextual interpretation, ethical reasoning and accountability (Susskind & Susskind, 2022). This perspective challenges deterministic narratives of technological substitution and emphasizes the evolving nature of professional expertise in digitally mediated environments.

Taken together, the reviewed literature indicates that automation and artificial intelligence reshape accounting work through interconnected changes in task structures, professional competencies and organizational arrangements. However, existing studies predominantly examine these dimensions in isolation, resulting in a fragmented understanding of accounting digitalization. There remains a clear need for an integrated socio-technical perspective that explains how technological infrastructures, digital competencies and organizational readiness jointly reconfigure accounting roles and professional identity. Addressing this gap provides the foundation for the present study.

Based on the thematic synthesis of the international literature, the study develops an integrative conceptual model that summarizes the key mechanisms through which automation reshapes the accounting profession.

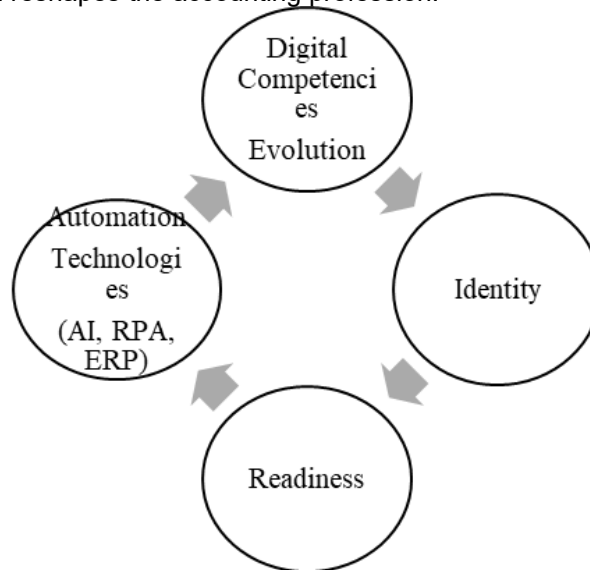


Figure 1: Conceptual Model of Automation and the Changing Role of Accountants

Source: Own elaboration based on information collected in the literature review

The model captures the dynamic interaction between automation technologies, the evolution of digital competencies, organizational readiness and professional identity, highlighting the recursive nature of accounting digitalization.

Theme	Description	Supporting Evidence
Automation of Routine Tasks	RPA, AI and ERP reduce repetitive tasks	Chen et al. (2024)
Shift Toward Analytical Roles	Accountants are becoming 'data navigators', shifting toward analysis, interpretation, and decision-making.	Terdpaopong, K., Visedsun, N. & Chotkunakitti, P. (2024)
Digital Competencies as Core Skills	Digital literacy, data modeling, and ERP proficiency are becoming mandatory competencies.	Enablers & Barriers Study (2023)

Hybrid Human-AI Collaboration	Professionals combine human judgment with AI outputs to achieve superior accuracy.	Oesterreich, T.D. & Teuteberg, F. (2019)
Cloud ERP Transformation	It introduces new institutional logics, creates role tensions, and changes process control.	Alsharari, N. M. (2020)
Ethical & Governance Challenges	Risks: bias, opacity, cybersecurity, technological dependence, weakened internal control.	EU AI Act (2024)
Identity and Professional Role Shift	Conflicts between the traditional role and the digital role; emergence of hybrid competencies	Digital Literacy & Agile Mindset Study (2024)
Organisational Readiness as a Moderator	The impact of automation depends on infrastructure, skills, culture, and digital leadership.	Umar, A. & Hasanah, U. (2024)

Table 1: Key Emerging Themes in Accounting Automation and Professional Transformation

Source: Own elaboration based on information collected in the literature review

These themes synthesis the core mechanisms identified in the literature and form the empirical and conceptual basis for the integrative model presented in Figure 1.

3. Research Methodology

This study adopts a conceptual, theory-building research design, consistent with the requirements of academic journals that emphasize analytical clarity and theoretical advancement in the context of technological change. The methodological approach does not aim to test hypotheses empirically, but to synthesize, integrate and reinterpret existing knowledge on automation and the evolving role of accountants within a coherent analytical framework. Accordingly, the study employs a structured conceptual synthesis, a method widely used in accounting, information systems and management research to consolidate fragmented insights, identify cross-disciplinary patterns and develop theoretically grounded propositions. Given the conceptual nature of the study, the data utilized in the analysis consist exclusively of peer-reviewed academic literature. The literature underlying the conceptual model was identified through a structured search process conducted across major academic databases, including Scopus, Web of Science, ScienceDirect, Emerald Insight and Wiley Online Library. The search strategy combined keywords such as automation, artificial intelligence, digital transformation, accounting profession, emerging technologies, cloud ERP, digital competencies, audit automation and controllers' skills. To ensure academic relevance and quality, only peer-reviewed journal articles were considered. Publications indexed as Q1 and Q2 according to the Scimago Journal Rankings were prioritized, while high-quality Q3 studies offering significant conceptual contributions were included where relevant. The selection process followed explicit inclusion criteria. Eligible studies examined automation, artificial intelligence or digital technologies within accounting, auditing or controlling; provided empirical findings or conceptual insights related to changes in professional roles, competencies or work processes; addressed organizational, cognitive, behavioural

or institutional implications of digital transformation; and were published between 2018 and 2025, a period characterized by accelerated technological adoption in the accounting profession. Exclusion criteria eliminated sources that were purely technical, focused exclusively on IT systems without implications for accounting practice, or descriptive reports lacking theoretical grounding. In addition, several foundational works published prior to this period were consulted where necessary to ensure conceptual continuity. Methodologically, the analysis was conducted using a multi-stage thematic synthesis approach. In the first stage, the selected articles were read in full and manually coded according to recurring conceptual anchors, including task automation, digital competencies, emerging technologies, cloud ERP transformations, organizational enablers and barriers, psychological effects and hybrid human-AI collaboration. In the second stage, these codes were clustered into higher-order themes reflecting the structural forces reshaping the accounting profession. Comparative analysis enabled the identification of tensions across studies, such as discrepancies between technological potential and actual adoption, variations in digital literacy, and divergent interpretations of artificial intelligence's impact on professional autonomy and judgement. In the final stage, the thematic patterns were integrated into a coherent conceptual framework explaining how automation reshapes accountants' roles, skills and professional identity. This structured methodological approach ensures transparency, analytical rigour and theoretical robustness, allowing the study to articulate an integrated interpretation of technological change grounded in the most relevant empirical evidence and conceptual advances in contemporary accounting research.

4. Results and Discussion

4.1. Synthesis of Key Findings

The findings presented in this section derive from the multi-stage thematic synthesis described in the methodology. Through iterative coding and comparative analysis of the selected international literature, recurring patterns related to task transformation, digital competencies, organizational readiness and professional identity were identified and consolidated into higher-order themes. These themes constitute the analytical basis for the synthesis presented below. The analysis of contemporary international research indicates that automation and artificial intelligence are reshaping the accounting profession through a multidimensional transformation affecting task structures, competence requirements, professional identity and organizational arrangements. This overarching finding is consistent with prior international studies documenting the expanding scope of automation in accounting beyond routine transaction processing (Kokina & Davenport, 2017; Bhimani & Bromwich, 2023). Evidence drawn from cloud ERP research, digital transformation studies, behavioural accounting analyses and technology adoption models converges around several recurring patterns. The synthesis reveals that automation increasingly extends into judgement-intensive domains, influencing activities such as analytical evaluation, anomaly detection, internal control assessment, continuous auditing and predictive reporting. International research similarly demonstrates that

machine learning and advanced analytics increasingly support, rather than merely replace, professional judgement in accounting and auditing contexts (Rozario, A.M. & Vasarhelyi, M.A., 2018). The analysis highlights widening skill gaps driven by insufficient digital literacy, heterogeneous levels of IT maturity and unequal access to structured upskilling opportunities. This pattern aligns with international empirical evidence identifying digital competencies as a critical mediating factor shaping accountants' ability to adapt to automation and extract value from advanced digital technologies (Rikhardsson, P. & Yigitbasioglu, O. 2018). The findings indicate that adoption barriers, including legacy infrastructures, organizational resistance, technostress and limited managerial support, continue to constrain the effective assimilation of automation technologies. As reported in comparable international studies, these barriers contribute to persistent discrepancies between technological potential and realized organizational outcomes within accounting functions (Moll, J., 2023). The synthesis identifies emerging trends such as hybrid human-AI collaboration, cloud ERP dialectics, algorithmic oversight roles and the growing use of advanced analytics as defining features of the future accounting landscape. These developments are consistent with international research emphasizing the reconfiguration of accountants' responsibilities toward supervisory, interpretive and governance-oriented roles in digitally intensive environments.

4.2. Critical Discussion

The integration of automation and artificial intelligence into accounting practice generates both significant opportunities and persistent structural tensions. On the one hand, intelligent systems enhance analytical capacity, accelerate reporting cycles, improve control effectiveness and enable real-time decision support. These benefits are widely documented in international research on automation and artificial intelligence adoption in accounting and auditing, particularly in digitally mature organizational contexts (Kokina & Davenport, 2017). On the other hand, the findings underscore a range of challenges associated with the increasing pervasiveness of automated systems. Automation may contribute to cognitive overload, ambiguity in role boundaries and a potential erosion of professional autonomy as decision processes become increasingly system-mediated. Similar concerns regarding autonomy loss, role ambiguity and reduced discretion have been highlighted in international behavioural accounting studies, especially within highly standardized and algorithm-driven environments (Bhimani & Willcocks, 2022). The analysis further indicates that automation amplifies existing organizational conditions rather than producing uniform outcomes. In organizations characterized by high levels of digital maturity, strong governance structures and continuous learning cultures, automation supports professional development and value creation. Conversely, in low-readiness contexts, digital technologies tend to exacerbate fragmentation, resistance and uneven performance outcomes. This finding is consistent with international evidence demonstrating that organizational digital maturity moderates the relationship between automation and professional role transformation (Pan, G. & Seow, P. S., 2016). Moreover, the growing reliance on AI-enabled analytics introduces new forms of dependency on algorithmic outputs, raising concerns related to automation bias and diminished professional skepticism. International studies on algorithmic

decision-making report comparable risks, suggesting that without adequate oversight mechanisms, professional judgement may be constrained rather than enhanced by intelligent systems. At the psychological level, the results suggest that continuous technological change may generate uncertainty, identity disruption and digital fatigue among accounting professionals. Such effects mirror findings from international research on technostress and digital work intensification in professional occupations (Appelbaum D., et al., 2017). Taken together, these findings indicate that the impact of automation on accounting practice is contingent upon the interaction between technological capabilities, digital competencies and organizational readiness. By explicitly aligning the results with prior international evidence, the present study situates its conceptual framework firmly within the global research stream and strengthens its external validity.

4.3. Theoretical Contributions

This study makes several theoretical contributions to the international literature on accounting digitalization. First, it integrates previously fragmented research streams, including automation technologies, digital competencies, ERP dialectics, algorithmic decision-making, behavioral accounting and hybrid intelligence, into a unified socio-technical framework. By doing so, the study responds directly to calls in the international literature for stronger theoretical consolidation and cross-disciplinary integration in research on the digital transformation of accounting. Second, the study advances theoretical understanding by clarifying the mechanisms through which automation reshapes professional roles, how digital competencies mediate professional performance, and how organizational readiness moderates' transformation outcomes. In contrast to prior studies that examine these dimensions in isolation, the proposed framework captures their interdependencies and explains how technological, human and organizational factors jointly reconfigure accounting work. A central theoretical contribution lies in the conceptualization of hybrid accounting expertise, which describes the complementary interaction between algorithmic intelligence and human judgement in contemporary accounting practice. This perspective aligns with and extends emerging international theories of hybrid intelligence by explicitly situating human-AI collaboration within the accounting profession, thereby moving beyond deterministic narratives of technological substitution. Finally, the framework contributes to institutional theory by demonstrating how embedded digital system logics reshape professional norms, accountability structures and interpretive practices. By linking technological infrastructures to institutional change, the study aligns with and extends international research examining the institutional consequences of digital technologies in professional service contexts.

4.4. Practical Implications

The findings of this study offer several practical implications for practitioners, organizations, policymakers and professional bodies involved in the digital transformation of accounting. For accounting professionals, the results highlight the

increasing importance of strengthening digital literacy, data analytics proficiency, algorithmic awareness and ERP fluency. These competencies are no longer complementary but constitute core professional capabilities, a conclusion that is consistent with international professional guidelines and empirical evidence emphasizing the strategic role of digital skills in contemporary accounting practice. At the organizational level, the findings suggest that effective automation outcomes depend on deliberate investments in structured upskilling programmes, agile learning cultures, transparent data governance frameworks and algorithmic oversight mechanisms. International evidence indicates that organizations adopting such practices are better positioned to mitigate technostress, skill displacement and the emergence of informal workarounds, while achieving more sustainable and value-enhancing automation outcomes. Managers are therefore encouraged to align automation initiatives with clear communication strategies, continuous training and participatory implementation processes. Prior international research demonstrates that human-centered implementation approaches reduce resistance to change and enhance employee acceptance of digital technologies. From a regulatory and policy perspective, the results underscore the need for updated frameworks that reflect the growing use of algorithmic decision-making, continuous auditing and AI-based risk assessment in accounting and auditing. Similar regulatory challenges have been identified across international contexts, highlighting the importance of clarifying accountability, transparency and control mechanisms for automated systems. Standard-setting bodies should therefore provide clearer guidance on documentation requirements, explainability standards and professional responsibility in algorithmically supported accounting processes. The findings have important implications for accounting education and professional development. Universities and professional organizations are encouraged to integrate digital competencies, analytics capabilities and hybrid human-AI collaboration skills into accounting curricula and continuing professional development programmes. Such initiatives are essential to ensure that current and future accounting professionals are equipped to operate effectively within digitally intensive and algorithmically mediated environments, in line with evolving international education and professional regulation trends.

4.5. Limitations

This study has several limitations that should be acknowledged when interpreting its findings. First, the research adopts a conceptual, theory-building approach, and the proposed framework has not yet been empirically validated. This limitation is inherent to conceptual research and is consistent with prior studies in the international accounting literature that prioritize theoretical integration and explanation over empirical testing. Second, the literature synthesis is integrative and thematic rather than fully systematic. Although the review draws on peer-reviewed studies from leading international databases and follows explicit selection criteria, it is possible that some relevant empirical contributions were not included. Such limitations are commonly recognized in conceptual and integrative reviews and reflect the trade-off between analytical depth and comprehensive coverage. Third, the generalizability of the findings is constrained by the heterogeneity of regulatory,

technological and institutional contexts across countries, industries and organizational settings. International accounting research frequently highlights that digital transformation processes are context-dependent, which limits the universal applicability of conceptual insights. In addition, the rapid pace of technological development in artificial intelligence, cloud-based ERP systems and advanced analytics means that some recent innovations may have emerged after the period covered by the reviewed literature. This temporal limitation reflects the dynamic nature of digital innovation and underscores the need for continuous theoretical refinement and empirical updating.

4.6. Future Research Directions

Future research should build on the conceptual framework developed in this study by employing empirical, mixed-methods and longitudinal research designs to examine how automation reshapes accounting tasks, competencies and professional identity over time. Longitudinal approaches are particularly valuable for capturing the dynamic and recursive effects of digital transformation, as international research increasingly emphasizes the need to observe professional change processes beyond cross-sectional snapshots. Cross-country comparative studies are also warranted to explore how regulatory environments, cultural norms and institutional arrangements influence automation adoption and professional outcomes in accounting. Such comparative approaches are widely recommended in international accounting research to enhance external validity and to better understand context-specific variations in digital transformation trajectories. Further research should examine psychological mechanisms associated with automation, including autonomy loss, algorithm aversion, overreliance and technostress, which remain underexplored in behavioral accounting studies. In addition, future work could investigate emerging areas such as algorithmic auditing, ethical governance of automated decision systems, digital maturity assessment and the development of validated instruments for measuring digital competencies in accounting. Research focusing on the design of hybrid human-AI collaboration models would further contribute to understanding how professional judgement can be effectively integrated with algorithmic intelligence in accounting practice.

5. Conclusions

Automation and artificial intelligence are redefining the accounting profession by transforming task structures, redistributing expertise and reshaping the nature of professional judgement. The analysis developed in this study demonstrates that automation extends well beyond routine task substitution, influencing cognitive work, altering knowledge flows and redefining how accountants create, validate and interpret financial information. Rather than diminishing professional relevance, intelligent systems reorient the accountant's role toward analytical supervision, exception management, algorithmic auditing and strategic interpretation. By synthesizing fragmented international research, this study offers an integrated conceptual perspective that links automation intensity, digital competencies, organizational readiness and emerging professional roles within a socio-technical

framework. This perspective helps explain why the effects of automation vary substantially across organizations, roles and levels of digital maturity. It also clarifies how accounting professionals must develop hybrid skillsets that combine technical knowledge, data analytics capabilities, agile mindsets, design-thinking skills and ethical judgement, competencies that are increasingly emphasized across contemporary research and professional discourse. The implications for practice are significant. Organizations are encouraged to prioritize structured digital upskilling initiatives, adopt transparent governance frameworks for automated decision systems and foster learning cultures that support responsible experimentation and cross-functional collaboration. Ensuring that algorithmic outputs remain explainable, auditable and aligned with professional standards is essential as cloud-based ERP systems, robotic process automation and advanced analytics become embedded in everyday accounting workflows. At a broader professional level, automation reinforces the need to redefine accounting identity around hybrid human-machine collaboration while safeguarding professional judgement, ethical standards and public trust. As intelligent systems become integral to financial reporting and assurance, the future of the accounting profession will depend on its ability to integrate technological innovation with human expertise in ways that promote accuracy, accountability and sustainable professional development.

References

1. Alsharari, N. M. (2020). Institutional change of cloud ERP implementation in the public sector: A transformation of strategy. *International Journal of Disruptive Innovation in Government*
2. Ammar, S.F. (2025). Unveiling the rivalry of cloud ERP dialectics, underpinning logics and roles of accounting and information system professionals. *International Journal of Accounting Information Systems*, 56.
3. Appelbaum, D., Kogan, A., Vasarhelyi, M. & Yan, Z. (2017). Impact of business analytics and enterprise systems on managerial accounting. *International Journal of Accounting Information Systems*, 25, 29-44.
4. Bhimani, A. & Bromwich, M. (2023). Digitalisation and the new boundaries of management accounting. *Accounting and Business Research*, 53(5), 516-538.
5. Bhimani, A. & Willcocks, L. (2022). Digitization, AI and the transformation of accounting functions. *Journal of Accounting and Organizational Change*, 18(3), 403-421.
6. Bhimani, A. (2020). Digital data and behavioural impacts on accounting. *Accounting, Organizations and Society*, 81.
7. Chen, Y., Lu, C. & Li, Z. (2024). How does digital transformation affect corporate accounting employees? *China Journal of Accounting Research*, 17.
8. European Parliament & Council (2024). *Artificial Intelligence Act*. Official Journal of the European Union.
9. Rikhardsson, P. & Yigitbasioglu, O. (2018). Business intelligence & analytics in management accounting research: Status and future focus. *International Journal of Accounting Information Systems*, 29, 37–58.

10. Pan, G. & Seow, P. S. (2016). *Preparing accounting graduates for digital revolution: A critical review of information technology competencies and skills development*, Journal of Education for Business, 91(3), 166–175.
11. Kokina, J. & Davenport, T. (2017). The emergence of artificial intelligence: How automation is reshaping accounting. *Journal of Emerging Technologies in Accounting*, 14(1), 115-122.
12. Moll, J. (2023). The digital accountant: Competencies, challenges and future directions. *Accounting Horizons*, 37(2), 45-62.
13. Oesterreich, T.D. & Teuteberg, F. (2019). Understanding the implications of digitisation and automation in the context of Industry 4.0: A triangulation approach. *Computers in Industry*, 105, 260-272.
14. Richins, G., Stapleton, A., Stratopoulos, T.C. & Wong, C. (2022). Machine learning, data analytics and the future of accounting. *Journal of Information Systems*, 36(1), 101-121.
15. Rozario, A.M. & Vasarhelyi, M.A. (2018). How AI will impact auditing: A framework and future directions. *Journal of Emerging Technologies in Accounting*, 15(2), 71-92.
16. Satpathy, A. & Patel, D. (2023). Enablers, barriers and strategies for adopting new technology in accounting firms. *Journal of Contemporary Accounting*, 5(2), 34-57.
17. Scapens, R. & Jazayeri, M. (2022). ERP, automation and the reshaping of management accounting practices. *Management Accounting Research*, 57.
18. Susskind, R. & Susskind, D. (2022). *The Future of the Professions: How Technology Will Transform the Work of Human Experts*. Oxford University Press.
19. Terdpaopong, K., Visedsun, N. & Chotkunakitti, P. (2024). Navigating the transformation of accountants' roles through digital and environmental challenges. *Journal of Infrastructure Policy and Development*
20. Tutticci, I., Cheng, M. & Tan, W. (2023). Digital literacy, agile mindset and management control competencies in accounting. *Accounting Education*, 32(1), 89-110.
21. Umar, A. & Hasanah, U. (2024). *Adaptation of organizational culture in supporting digital transformation in accounting*. Jurnal Mutiara Manajemen, 167–178