



Research Article

Artificial Intelligence, Internationalization, and the Future of Accounting: Redefining Global Financial Expertise

Marja-Liisa Tenhunen* 

Global Future Centre, Dimitrie Cantemir Christian University, Bucharest, Romania

Abstract

The accounting profession is undergoing a profound transformation driven by the convergence of artificial intelligence (AI), digital transformation, and internationalization. Rapid advances in machine learning, robotic process automation, predictive analytics, and intelligent auditing systems are fundamentally changing how financial information is generated, analysed, and utilized, while globalization continues to increase the complexity of financial reporting, regulatory compliance, and cross-border business operations. This study aims to examine how these technological and international developments are redefining the competencies, roles, and strategic value of accounting professionals in the digital economy. This research adopts a qualitative conceptual approach based on an extensive review and synthesis of contemporary academic literature in accounting, artificial intelligence, digital innovation, international business, and professional education. By integrating these interdisciplinary perspectives, the study develops a comprehensive framework explaining the evolution of accounting from a transaction-processing function toward a strategic, technology-enabled profession. The findings demonstrate that AI is automating routine accounting activities while significantly enhancing auditing, financial reporting, risk management, forecasting, and decision support. Simultaneously, internationalization requires accountants to possess global regulatory knowledge, intercultural competence, and the ability to operate effectively within multinational business environments. The study further identifies a new competency profile that combines accounting expertise, AI and data analytics capabilities, ethical judgment, digital literacy, and international business understanding. To conceptualize this transformation, the article introduces the framework of Global AI-Enabled Financial Expertise (GAIFE), which integrates professional accounting knowledge, digital intelligence, and global competence into a unified model for future accounting practice. The study concludes that competitive advantage in the accounting profession will increasingly depend on the successful integration of human expertise with intelligent technologies. Universities, professional accounting bodies, employers, and policymakers should therefore redesign accounting education and lifelong learning strategies to prepare professionals capable of creating strategic value in an increasingly AI-driven and globally interconnected financial environment.

Keywords

Artificial Intelligence, Digital Transformation, Internationalization, Accounting Profession

*Correspondence: Marja-Liisa Tenhunen (marja-liisa.tenhunen@anvianet.fi)

Received: 29 June 2026; Accepted: 10 July 2026; Published: 28 July 2026



Copyright: © The Author(s), 2026. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

1. Introduction

The accounting profession is undergoing a major transformation driven by digitalization, artificial intelligence (AI), and globalization. Technologies such as cloud computing, big data analytics, automation, and digital financial platforms have fundamentally changed how financial information is collected, processed, and communicated [5]. Digital transformation has shifted accounting from routine transaction processing toward strategic decision-making and value creation. Modern accountants are increasingly expected to interpret complex data, support organizational strategy, and provide forward-looking insights. As technological innovation reshapes professional requirements, analytical skills, technological literacy, and strategic thinking have become essential competencies [26]. Furthermore, real-time financial reporting improves efficiency, reduces costs, and strengthens organizational performance, positioning accounting as a strategic business function rather than a purely administrative one [7].

AI represents one of the most disruptive forces in modern accounting. Machine learning, predictive analytics, and intelligent auditing systems automate tasks such as transaction classification, fraud detection, forecasting, and risk assessment [20]. Beyond efficiency gains, AI supports decision-making by identifying patterns and risks that traditional methods may overlook [18]. At the same time, globalization has increased the need for internationally comparable financial information and global accounting expertise. The widespread adoption of IFRS and the harmonization of accounting standards reflect the growing importance of international financial reporting and cross-border compliance [22].

This article examines how AI and internationalization are jointly redefining accounting expertise. It explores the impact of AI on accounting processes, the role of internationalization in shaping professional competencies, and the combined effects of digital transformation and globalization on the future profile of accountants. By integrating technological and international perspectives, the study contributes to understanding how accounting professionals can remain competitive in an increasingly digital and global business environment.

2. Theoretical Foundations: Accounting in the Age of Digital Transformation

The accounting profession has evolved from a compliance-oriented function focused on transaction recording toward a strategic role supporting organizational decision-making and value creation [16]. Technological developments have accelerated this transition, moving accounting from manual bookkeeping to integrated digital systems such as ERP platforms, cloud-based solutions, and business intelligence tools that enhance efficiency, accuracy, and access to financial information [15].

Digital transformation represents more than technological

adoption; it involves fundamental changes in organizational processes, professional roles, and strategic objectives [27]. In accounting, technologies such as cloud computing, robotic process automation (RPA), blockchain, and big data analytics have automated routine activities while enabling real-time reporting and advanced financial analysis [5]. Artificial Intelligence (AI) has become a key driver of this transformation. Through machine learning, natural language processing, predictive analytics, and intelligent automation, AI supports fraud detection, risk assessment, auditing, forecasting, and compliance monitoring, improving both efficiency and decision quality [9, 20]. Rather than replacing accountants entirely, AI is increasingly viewed as complementing human expertise by reducing repetitive work and enabling greater focus on strategic analysis and professional judgment [6].

At the same time, globalization has increased the importance of international accounting standards, cross-border reporting, and global financial expertise. The adoption of IFRS and the expansion of multinational business activities require accountants to operate across diverse regulatory and cultural environments [22]. Consequently, professional competence now extends beyond technical accounting knowledge to include intercultural communication, international business understanding, and global collaboration skills [2]. The convergence of digital transformation, AI, and internationalization is creating a new paradigm in accounting where financial expertise combines technological literacy, analytical capability, strategic thinking, and global awareness. This framework provides the theoretical basis for understanding the future evolution of the accounting profession.

3. Artificial Intelligence and the New Accounting Paradigm

Artificial Intelligence (AI) is transforming accounting by reshaping how financial information is generated, analyzed, and used. As organizations face growing data volumes and regulatory complexity, AI enables greater automation, analytical capability, and strategic decision-making, creating a new accounting paradigm in which technology complements human expertise. AI applications such as machine learning, robotic process automation (RPA), and intelligent data-processing systems automate transaction recording, invoice processing, reconciliations, payroll administration, and tax compliance. These technologies reduce errors, improve efficiency, and allow accountants to focus on higher-value activities [20]. Automation should therefore be viewed as enhancing rather than replacing professional expertise [8].

AI is also transforming financial reporting and auditing. Intelligent audit systems can analyze entire transaction populations in real time, improving fraud detection, anomaly identi-

fication, and risk assessment compared with traditional sampling methods [18]. Likewise, AI-supported reporting systems enhance transparency, compliance monitoring, and data quality [7]. Through predictive analytics and decision-support systems, AI strengthens forecasting, budgeting, cash-flow management, investment evaluation, and risk management, enabling more proactive and data-driven decisions [3]. Consequently, accountants increasingly act as interpreters of analytical outputs and strategic advisors.

Despite these benefits, challenges remain. AI depends on high-quality data, while opaque “black-box” algorithms may create concerns regarding accountability, transparency, and regulatory compliance [6]. Ethical issues related to privacy, cybersecurity, bias, and professional responsibility further highlight the continuing importance of human judgment [26]. Rather than replacing accountants, AI is driving the emergence of a hybrid professional model in which intelligent systems perform repetitive tasks while accountants focus on strategic analysis, governance, communication, and decision support. Future success will depend on the ability to integrate technological capabilities with financial expertise and business judgment.

4. Internationalization of Accounting in a Global Business Environment

Globalization has transformed accounting from a nationally oriented discipline into a globally integrated profession. As organizations expand across borders, accountants must operate within diverse regulatory environments and support increasingly complex international business activities. Consequently, international standards, cross-border compliance, and digital connectivity have become central features of modern accounting practice.

A major driver of this transformation has been the adoption of International Financial Reporting Standards (IFRS), which enhance the comparability, transparency, and consistency of financial reporting worldwide. By reducing information asymmetries and supporting global capital flows, IFRS has become a cornerstone of international accounting harmonization [1, 22]. The growth of multinational enterprises has further increased the complexity of accounting. Professionals must navigate different tax systems, reporting requirements, governance structures, and legal frameworks while managing international financial information and compliance processes [11]. As a result, accounting expertise increasingly extends beyond traditional financial reporting.

Digital transformation has accelerated the globalization of accounting services. Cloud computing, ERP systems, and digital collaboration platforms enable real-time processing and sharing of financial data across countries, supporting centralized accounting functions and globally integrated service models [5]. Similarly, remote auditing, automated compliance monitoring, and digital reporting systems allow organizations

to access specialized expertise across borders while maintaining efficiency and consistency [4].

Multinational corporations require sophisticated systems capable of consolidating financial information across currencies, regulations, and business cultures. Consequently, accountants increasingly act as coordinators of global financial information, supporting strategic planning, performance measurement, and risk management [12]. The internationalization of accounting has expanded professional competency requirements. In addition to technical knowledge of international standards, accountants need digital literacy, intercultural communication skills, and an understanding of global business environments [2]. As globalization and digital innovation continue to advance, accounting professionals will play an increasingly strategic role in ensuring transparency, compliance, and effective decision-making in international organizations.

5. Redefining Financial Expertise: Competencies for the Future

The integration of artificial intelligence, digital technologies, and globalization is redefining the competencies required of accounting professionals. Traditional expertise in bookkeeping, reporting, and compliance is no longer sufficient. Future accountants must combine financial knowledge with technological proficiency, analytical capability, strategic thinking, ethical judgment, and global awareness. Digital literacy has become a core professional competence. Accountants increasingly work with cloud-based systems, AI applications, business analytics tools, and digital platforms, requiring the ability to interpret data, evaluate algorithmic outputs, and manage technology-driven financial information [5]. Closely related is the growing importance of data analytics, which enables accountants to transform large datasets into strategic insights and support evidence-based decision-making [3].

The availability of real-time information has also strengthened the role of accountants in forecasting, risk assessment, performance measurement, and organizational planning. While AI provides predictive capabilities, professional judgment remains essential for interpreting results and supporting strategic decisions [9]. Consequently, accountants are increasingly evolving into strategic advisors rather than transaction processors.

Ethical competence remains equally important. The use of AI raises concerns regarding privacy, cybersecurity, transparency, bias, and accountability. Accountants must ensure that technological solutions comply with professional standards and ethical principles while maintaining appropriate human oversight [26]. Globalization further requires intercultural communication skills, understanding of international business environments, and familiarity with global regulatory frameworks. As financial professionals increasingly operate in mul-

tinational and virtual teams, international competence has become a critical professional requirement [2].

Finally, rapid technological change makes lifelong learning essential. Accountants must continuously update their knowledge of emerging technologies, regulations, and business models to remain professionally relevant [21]. In this new environment, financial expertise is defined by the integration of technological literacy, analytical skills, strategic insight, ethical responsibility, and global competence. Accountants who successfully combine these capabilities will be best positioned to create value and support organizational success in an increasingly digital and international economy.

6. Higher Education and Professional Training for the AI Era

The rapid advancement of artificial intelligence (AI), digital technologies, and globalization is reshaping the competencies required of future accounting professionals. Traditional accounting education, focused primarily on reporting, auditing, taxation, and compliance, must evolve to prepare graduates for a technology-driven and internationally connected business environment. A major challenge is the redesign of accounting curricula. Future accountants need not only technical knowledge but also digital literacy, analytical skills, critical thinking, and problem-solving capabilities. As AI, automation, and data analytics become integral to financial processes, educational programs must prepare students for a profession characterized by continuous technological change [21].

The integration of AI into accounting education is therefore essential. Students should understand technologies such as machine learning, predictive analytics, robotic process automation, and intelligent decision-support systems, while also developing the ability to interpret AI-generated outputs and apply professional judgment in complex business situations [9]. Internationalization is equally important. Accounting programs must incorporate global perspectives, including IFRS, international taxation, and cross-border financial management [22]. Intercultural competence, foreign language skills, and virtual international collaboration have become increasingly valuable, supported by initiatives such as Collaborative Online International Learning (COIL) [10]. University–industry cooperation is another critical factor. Partnerships involving internships, industry projects, guest lectures, and professional certifications help align academic programs with labor market requirements, particularly in digital technologies and business analytics [19].

Professional accounting organizations also emphasize technology-related competencies, ethics, and lifelong learning, recognizing that professional development must continue beyond formal education [17]. Ultimately, accounting education must integrate technology, internationalization, and professional relevance. By embracing AI, strengthening

global perspectives, and deepening industry collaboration, universities can prepare graduates to succeed in an increasingly digital and international profession.

7. Challenges, Risks, and Governance Implications

Although artificial intelligence offers significant benefits for accounting, including improved efficiency, accuracy, and decision-making, it also creates important risks and governance challenges. As accounting becomes increasingly dependent on digital technologies, organizations must address issues related to cybersecurity, algorithmic accountability, regulatory compliance, and human oversight. One major concern is data security. Modern accounting systems process large volumes of sensitive financial information, making them attractive targets for cyberattacks, data breaches, and ransomware incidents. Such threats can result in financial losses, reputational damage, and regulatory penalties, highlighting the need for strong cybersecurity measures and governance practices [5].

Algorithmic bias and transparency represent additional challenges. AI systems depend on the quality of underlying data and may produce inaccurate or discriminatory outcomes if trained on biased information. Furthermore, many advanced AI models operate as “black-box” systems, making it difficult to explain how decisions are generated. This creates accountability concerns in financial reporting, auditing, and risk assessment [14, 24]. Consequently, transparency and explain ability have become key principles of responsible AI governance.

The rapid adoption of AI also raises regulatory and legal issues. Existing accounting standards were largely developed before advanced AI technologies and may not fully address automated decision-making. Regulatory initiatives, particularly within the European Union, increasingly focus on trustworthy AI, data protection, and digital governance [13].

Despite technological advances, human oversight remains essential. Accounting decisions often involve ethical considerations, professional judgment, and contextual interpretation that cannot be fully automated. Therefore, organizations should adopt a “human-in-the-loop” approach in which professionals review and validate AI-generated outputs before implementation [26].

Professional bodies, universities, regulators, and technology developers all share responsibility for promoting responsible AI adoption. Effective governance must balance innovation with transparency, accountability, privacy, fairness, and public trust [17]. Ultimately, the successful integration of AI in accounting depends not only on technological capability but also on robust governance frameworks. Cybersecurity, transparency, regulatory compliance, and meaningful human oversight will remain critical for maintaining confidence in financial information and safeguarding the integrity of the profession.

8. A Framework for Global AI-Enabled Accounting Expertise

The convergence of artificial intelligence (AI), digital transformation, and internationalization is creating a new model of accounting expertise. Traditional accounting knowledge alone is no longer sufficient in a business environment characterized by automation, global connectivity, and data-driven decision-making. Future accountants must integrate three complementary dimensions: accounting expertise, AI and digital competencies, and international business capabilities. This article proposes the concept of Global AI-Enabled Financial Expertise (GAIFE) as a framework for understanding the future of the accounting profession. GAIFE combines technical accounting knowledge with digital intelligence and global competence. Professionals operating within this framework are not only preparers of financial information but also strategic interpreters of AI-generated insights, managers of digital financial ecosystems, and facilitators of international business decision-making.

The framework consists of three interconnected pillars. The first pillar is professional accounting expertise, including financial reporting, auditing, taxation, compliance, and governance. The second pillar is digital and AI capability, encompassing data analytics, machine learning applications, intelligent automation, cybersecurity awareness, and technology-enabled decision support. The third pillar is international competence, including IFRS knowledge, intercultural communication, global business understanding, and cross-border collaboration.

The interaction of these pillars creates a new profile of financial professionals capable of operating effectively in digitally enabled and globally interconnected organizations. Emerging technologies such as generative AI, autonomous financial systems, continuous auditing platforms, blockchain-based accounting infrastructures, and digital regulatory technologies will further strengthen this transformation [6, 7]. The GAIFE framework has important implications for universities, employers, and policymakers. Accounting education should integrate AI literacy, data analytics, cybersecurity, sustainability reporting, and international business studies. Organizations should promote lifelong learning and multidisciplinary competence development, while regulators and professional bodies should strengthen ethical AI governance and human oversight mechanisms [17]. Ultimately, Global AI-Enabled Financial Expertise represents a new paradigm in which accountants create value by combining technological capability, professional judgment, and global awareness. In the digital economy, competitive advantage will increasingly depend on the ability to transform financial data into strategic intelligence within an international context.

9. Conclusion

This study examined how artificial intelligence (AI) and internationalization are reshaping the accounting profession and

redefining financial expertise in the digital economy. The findings show that accounting is evolving from a transaction-oriented profession into a technology-driven, knowledge-intensive, and globally connected discipline [5]. A key finding is that AI has become a strategic capability influencing financial reporting, auditing, risk management, compliance, forecasting, and decision-making [9]. At the same time, globalization requires accountants to operate effectively within complex international business environments and regulatory frameworks [22]. Future accounting expertise will therefore depend on the integration of three competencies: accounting knowledge, digital and AI capabilities, and international business understanding [23].

This article introduces the concept of Global AI-Enabled Financial Expertise (GAIFE), describing a new professional paradigm in which accountants act as strategic interpreters of financial intelligence generated through the interaction of human judgment, AI, and global information networks. Their role increasingly includes managing algorithmic risks, ensuring ethical governance, supporting international compliance, and contributing to strategic decision-making [17]. Emerging technologies such as generative AI, blockchain, autonomous agents, continuous auditing, and RegTech are expected to further strengthen this transformation [6, 7, 18].

These developments suggest that future competitiveness will depend less on transaction-processing skills and more on analytical thinking, technological competence, ethical judgment, and interdisciplinary collaboration [21]. Consequently, universities should integrate AI, data analytics, cybersecurity, and international business into accounting curricula, while employers and professional bodies should strengthen lifelong learning and digital competency development [10, 17].

In conclusion, the future of accounting will be shaped by the interaction of technological innovation, internationalization, and human expertise. The accountant of the future will not be replaced by AI; rather, the most successful professionals will be those who effectively combine intelligent technologies, global perspectives, and professional judgment to transform financial information into strategic value [23, 25].

Abbreviations

AI	Artificial Intelligence
COIL	Collaborative Online International Learning
ERP	Enterprise Resource Planning
GAIFE	Global AI-Enabled Financial Expertise
IFRS	Financial Reporting Standards
RegTech	Regulatory Technology
RPA	Robotic Process Automation

Author Contributions

Marja-Liisa Tenhunen: Conceptualization, Formal Analysis, Investigation, Methodology, Writing – original draft,

Writing – review & editing

Conflicts of Interest

The author declares no conflict of interest.

References

- [1] Alexander, D., Britton, A. & Jorissen, A. (2020). *International Financial Reporting and Analysis*. 8th ed. Cengage Learning. pp. 22-27.
- [2] Alon, I. & McKee, D. (2023). *Global Business and International Management*. Routledge. pp. 48-55.
- [3] Appelbaum, D., Kogan, A. & Vasarhelyi, M. A. (2017). Big Data and Analytics in the Modern Audit Engagement: Research Needs. *Auditing: A Journal of Practice & Theory*, 36(4), pp. 30-35.
- [4] Arnold, V. (2018). The Changing Technological Environment and the Future of Behavioral Research in Accounting. *Accounting Horizons*, 32(1), pp. 1–18.
- [5] Bhimani, A. (2021). *Accounting Disrupted: How Digitalization Is Changing Finance*. Wiley. pp. 15-115.
- [6] Brynjolfsson, E. & McAfee, A. (2014). *The Second Machine Age*. New York: W. W. Norton & Company. pp. 175-190.
- [7] Dai, J. & Vasarhelyi, M. A. (2017). Toward Blockchain-Based Accounting and Assurance. *Journal of Information Systems*, 31(3), pp. 5-10.
- [8] Davenport, T. H. & Kirby, J. (2016). *Only Humans Need Apply: Winners and Losers in the Age of Smart Machines*. Harper Business. pp. 58-62.
- [9] Davenport, T. H. & Ronanki, R. (2018). Artificial Intelligence for the Real World. *Harvard Business Review*, 96(1), pp. 110-116.
- [10] De Wit, H. & Altbach, P. G. (2021). Internationalization in Higher Education: Global Trends and Recommendations for Its Future. *Policy Reviews in Higher Education*, 5(1), pp. 7–35.
- [11] Douppnik, T. & Perera, H. (2020). *International Accounting*. 5th ed. McGraw-Hill Education. pp. 9-39.
- [12] Drury, C. (2021). *Management and Cost Accounting*. 11th ed. Cengage Learning. pp. 623-628.
- [13] European Commission. (2024). *Artificial Intelligence Act: Regulatory Framework for Trustworthy AI*. Brussels, pp. 8–15.
- [14] Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Pagallo, U., Rossi, F. & Schafer, B. (2018). AI4People—An Ethical Framework for a Good AI Society. *Minds and Machines*, 28(4), pp. 689–707.
- [15] Granlund, M. (2011). Extending AIS Research to Management Accounting and Control Issues. *International Journal of Accounting Information Systems*, 12(1), pp. 5-9.
- [16] Hopwood, A. G. (2009). Accounting and the Environment. *Accounting, Organizations and Society*, 34(3–4), pp. 1255-1258.
- [17] IFAC (2023). *International Education Standards and Future-Ready Professional Accountants*. New York: International Federation of Accountants, pp. 15-24.
- [18] Issa, H., Sun, T. & Vasarhelyi, M. A. (2016). Research Ideas for Artificial Intelligence in Auditing. *Journal of Emerging Technologies in Accounting*, 13(2), pp. 147-151.
- [19] Jackson, D. (2015). Employability Skill Development in Work-Integrated Learning: Barriers and Best Practice. *Studies in Higher Education*, 40(2), pp. 927-932.
- [20] Kokina, J. & Davenport, T. H. (2017). The Emergence of Artificial Intelligence: How Automation is Changing Auditing. *Journal of Emerging Technologies in Accounting*, 14(1), pp. 117–120.
- [21] Lawson, R. A., Blocher, E. J., Brewer, P. C., Cokins, G., Sorensen, J. E., Stout, D. E., Sundem, G. L., Wolcott, S. K. & Wouters, M. J. F. (2014). Focusing Accounting Curricula on Students' Long-Run Careers. *Issues in Accounting Education*, 29(2), pp. 295–317.
- [22] Nobes, C. & Parker, R. (2022). *Comparative International Accounting*. 15th ed. Pearson. pp. 12-125.
- [23] OECD. (2024). *Artificial Intelligence, Skills and the Future of Work*. Paris: OECD Publishing. pp. 45-50.
- [24] O'Neil, C. (2016). *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Crown Publishing, pp. 15–22.
- [25] Schwab, K. (2023). *The Future of Jobs Report*. Geneva: World Economic Forum. pp. 12-20.
- [26] Sutton, S. G., Holt, M. & Arnold, V. (2016). The Reports of My Death Are Greatly Exaggerated—Artificial Intelligence Research in Accounting. *International Journal of Accounting Information Systems*, 22, pp. 3-68.
- [27] Vial, G. (2019). Understanding Digital Transformation: A Review and Research Agenda. *The Journal of Strategic Information Systems*, 28(2), pp. 118–144.