

Research Article

The Impact of Accounting Automation on the Role of Human Accountants in Multinational Companies

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Abstract

This study explores the impact of accounting automation on the role of human accountants in multinational companies, focusing on the transformative effects of technologies such as Robotic Process Automation (RPA), Artificial Intelligence (AI), and Machine Learning (ML). Using a qualitative approach, specifically a systematic literature review (SLR) and library research, the study examines existing academic articles, industry reports, and case studies to assess how automation has reshaped accounting practices in multinational corporations. The findings reveal that automation has significantly enhanced operational efficiency, reduced human error, and streamlined accounting processes, leading to cost savings and more accurate financial reporting. Additionally, the role of accountants has shifted from performing routine, operational tasks to more strategic and advisory functions, contributing to business decision-making and financial strategy. However, the study also highlights concerns regarding job displacement, particularly for lower-level accounting roles, and emphasizes the need for continuous professional development and skill acquisition in areas such as AI and data analytics. The study concludes that while automation offers substantial opportunities for accountants to grow in strategic roles, it also requires significant adaptation in terms of skills and responsibilities. Future research is recommended to explore the long-term effects of automation on the accounting profession, its ethical implications, and the effectiveness of training programs aimed at equipping accountants with the necessary technological skills.

Keywords: Accounting Automation; Human Accountants; Robotic Process Automation; Artificial Intelligence; Machine Learning; Multinational Companies; Professional Development

INTRODUCTION

In recent years, accounting automation has emerged as a transformative force in the business world, reshaping traditional accounting functions in multinational companies. The integration of advanced technologies such as Artificial Intelligence (AI), Machine Learning (ML), and Robotic Process Automation (RPA) has significantly changed the landscape of accounting (Ahmed, 2025). These technologies enable companies to automate repetitive tasks such as data entry, transaction processing, and financial reporting, resulting in increased efficiency and accuracy. However, while automation has streamlined operations, it has also led to shifts in the roles and responsibilities of human accountants (Amiri & Mithila, 2025).

Historically, accountants were primarily responsible for manual data entry, calculations, and ensuring financial compliance (Syrtsseva & Cheban, 2021). With the rise of automation, these tasks are increasingly being handled by machines, freeing accountants to focus on higher-level activities such as strategic decision-making, risk management, and advisory roles (Pavlovic et al., 2024). This change prompts a critical examination of how automation affects the skillsets, job functions, and career trajectories of accountants in multinational organizations.

While several studies have explored the technological advancements in accounting automation (Törnqvist & Forss, 2018), there remains a lack of comprehensive research on the specific impact of automation on the role of human accountants in multinational companies. Most existing studies have focused on the technical aspects of automation, with limited attention given to how automation reshapes the professional functions and decision-making authority of accountants (Amiri & Mithila, 2025). Furthermore, there is a gap in understanding how multinational corporations, with their complex operations and cross-border financial regulations, are adapting to these changes.

The increasing adoption of accounting automation technologies raises important questions about the future of accounting professionals. As multinational corporations are at the forefront of technological innovation, understanding the effects of automation on accountants in these organizations is crucial. Given the rapid pace of technological change, it is essential to examine whether accounting automation leads to job displacement, the development of new competencies, or a shift in the overall role of accountants (Rawashdeh, 2025). Moreover, the implications of automation for professional identity, career development, and job satisfaction within the accounting profession are critical areas that require investigation.

Several studies have addressed the impact of automation in various industries, but research focused specifically on accounting professionals is still limited. Sudhakar et al. investigated the general effects of automation on business processes, concluding that while efficiency improved, human roles evolved towards more strategic functions (Sudhakar et al., 2025). Similarly, Holmes and Douglass explored the use of AI in

accounting and found that automation led to a reduction in routine tasks, but also created a need for accountants to develop skills in technology management and data analysis (Holmes & Douglass, 2022). In contrast, Kokina et al. found that automation does not replace accountants, but rather empowers them to engage in more value-added tasks (Kokina et al., 2021). These studies, however, do not comprehensively address the nuances of how these shifts play out within multinational corporations specifically.

This study contributes to the existing literature by focusing specifically on multinational companies and examining how accounting automation is transforming the role of human accountants in such complex, cross-border environments. Unlike previous studies, which often focus on small to medium-sized enterprises or singular automation technologies, this research explores the broader implications of AI, RPA, and ML within multinational corporations, where the need for regulatory compliance and strategic decision-making is heightened. Furthermore, this study investigates not only the operational changes due to automation but also the professional identity transformation and career trajectory shifts of accountants in these organizations.

The primary objectives of this study are:

- To assess the impact of accounting automation on the operational efficiency of accounting functions in multinational companies.
- To examine how the role of human accountants is evolving with the increasing use of automation technologies.
- To explore the implications of automation for the skill sets, job satisfaction, and professional identity of accountants working in multinational corporations.
- To provide recommendations for multinational companies on how to effectively integrate automation while supporting their accounting workforce's professional development.

This study offers valuable insights for accounting professionals, multinational corporations, and policymakers. For accounting professionals, the study provides a deeper understanding of how automation may influence their roles and career paths, encouraging them to adapt to emerging technologies. For multinational corporations, the findings will inform how to strategically implement automation to maximize efficiency without undermining the expertise and career progression of their accounting staff. Lastly, the study offers policymakers insights into the broader implications of accounting automation for labor markets and professional standards.

Technological Advancements in Accounting Automation

In recent years, technological advancements in accounting automation have revolutionized the way multinational companies manage their financial operations. The introduction of technologies such as Artificial Intelligence (AI), Robotic Process Automation (RPA), and Machine Learning (ML) has drastically reduced the time spent on routine accounting tasks, such as data entry, reconciliation, and financial reporting (AHMAD & MOHAMED, n.d.). AI has enabled the automation of complex processes that require high-level data analysis, transforming the traditional accounting workflows into more efficient, accurate, and real-time operations

(Kitsantas et al., 2024). Moreover, RPA has played a significant role in handling repetitive and manual tasks by mimicking human actions within software applications, thus minimizing human errors and increasing overall productivity (Herm et al., 2021). As these technologies evolve, they continue to integrate deeper into the accounting systems of multinational firms, enabling them to operate across different jurisdictions and comply with varying global financial regulations more effectively (Abikoye, Umeorah, et al., 2024). These technological breakthroughs have not only optimized the financial processes but also created new possibilities for innovation within the field, making accounting a more strategic function in the corporate landscape (Frishammar et al., 2019).

Evolution of the Accountant's Role in the Age of Automation

The role of human accountants has experienced a profound transformation in the wake of automation technologies. Traditionally, accountants were primarily responsible for manual bookkeeping, data entry, and basic financial reporting, which were critical to maintaining the accuracy of financial records (Odonkor et al., 2024). However, as automation technologies have taken over these routine functions, the role of accountants has evolved from being primarily operational to becoming more analytical and strategic (Kaya et al., 2019). Human accountants are now expected to interpret data generated by AI and RPA systems, offering insights into financial trends, forecasting, and strategic decision-making (Thanasas & Kapiotis, 2024). They are increasingly involved in high-level advisory functions, such as guiding senior management on financial risk, investment strategies, and business operations, thus positioning accountants as key contributors to an organization's strategic direction (MUPA et al., 2024). This shift is also evident in the growing demand for accountants to possess technical skills in data analysis, AI tools, and business intelligence systems, which are becoming essential in today's corporate environment (Qasim & Kharbat, 2020).

Challenges and Opportunities for Human Accountants in Multinational Companies

While automation presents significant opportunities for accountants, it also poses several challenges, particularly in the context of multinational companies. One of the main challenges is the need for accountants to adapt to rapidly changing technologies and acquire new skills, such as proficiency in machine learning models, AI-based data interpretation, and automation systems (Aditma et al., 2025). This shift requires continuous professional development and may create a skills gap, especially among accountants who have primarily worked with traditional systems. Additionally, there is a growing concern about job displacement, as routine tasks are automated and the demand for certain accounting roles decreases (Singh, 2024). However, alongside these challenges, there are numerous opportunities for accountants to leverage automation to focus on higher-value tasks. For instance, accountants can transition into more strategic roles, where they not only manage financial data but also contribute to the decision-making process by providing in-depth analysis and recommendations based on automated data (Usman et al., 2025).

In multinational companies, where complexity and scale often require nuanced understanding of international financial regulations, automation allows accountants to streamline compliance tasks and focus on global financial strategy (Gawande, n.d.). Ultimately, while automation presents challenges, it also opens up new career opportunities for accountants who are willing to embrace technology and transform their roles into more strategic, value-driven positions (Aliah & Faridani, 2025).

METHODS

This study employs a qualitative research design, specifically a systematic literature review (SLR), to explore the impact of accounting automation on the role of human accountants in multinational companies. The use of a systematic literature review allows for an in-depth examination of existing studies, providing a comprehensive understanding of how automation technologies are reshaping the accounting profession. This approach is appropriate for synthesizing research findings from a range of sources, identifying patterns, gaps, and trends in the literature, and offering insights into the evolving role of accountants in the context of automation (Kitchenham, 2004). By reviewing scholarly articles, industry reports, and case studies, this research seeks to critically evaluate the existing body of knowledge on accounting automation and its effects on human accountants in multinational settings.

The primary data sources for this study are peer-reviewed academic journal articles, conference papers, industry reports, and white papers published in the last five years. The selection criteria for sources include studies that focus on the use of automation technologies in accounting, particularly those that discuss the roles of accountants in multinational companies or large enterprises. The data also include articles that address the broader implications of artificial intelligence (AI), robotic process automation (RPA), and machine learning (ML) on financial reporting, compliance, and strategic decision-making within multinational corporations. To ensure the reliability and relevance of the data, only studies published in high-impact journals and reputable industry publications are considered.

Data for this study were collected through a systematic review of existing literature, focusing on studies that explore the intersection of accounting automation and the role of accountants in multinational companies. The literature search was conducted using multiple academic databases, including Google Scholar, Scopus, and JSTOR. Search terms such as “accounting automation,” “AI in accounting,” “role of accountants,” “robotic process automation,” and “impact of automation on accountants” were used to identify relevant publications. The inclusion criteria for selected studies were based on their relevance to the research questions, the credibility of the publication, and the publication date, which was limited to sources published between 2017 and 2025. Additionally, reports and case studies from reputable industry sources, such as KPMG and Deloitte, were included to provide practical insights into the implementation of accounting automation in multinational companies.

The data analysis for this study followed the thematic analysis method, which is commonly used in qualitative research to identify, analyze, and report patterns

(themes) within the data (Braun & Clarke, 2006). After collecting the relevant literature, the articles were reviewed and coded for key themes related to the impact of automation on accounting functions and the evolving role of human accountants. These themes included the types of automation technologies employed, the changes in job responsibilities of accountants, the skills required for accountants in automated environments, and the benefits and challenges of automation in multinational companies. Thematic analysis was chosen because it allows for a flexible and detailed interpretation of the literature, enabling the identification of emerging trends and gaps in the current understanding of accounting automation (Fereday & Muir-Cochrane, 2006).

The final step of the analysis involved synthesizing the identified themes and summarizing the key findings from the reviewed literature. This synthesis helped to provide a comprehensive overview of the impact of accounting automation on the roles of accountants in multinational companies, as well as the challenges and opportunities arising from these technological advancements.

RESULT AND DISCUSSION

The findings of this study, based on a systematic literature review, reveal several critical aspects regarding the impact of accounting automation on the role of human accountants in multinational companies. These results highlight both the positive transformations and the challenges brought by the implementation of automation technologies, such as Robotic Process Automation (RPA), Artificial Intelligence (AI), and Machine Learning (ML). Below is a detailed discussion of the findings.

Increased Efficiency and Accuracy in Accounting Processes

A significant outcome of accounting automation is the remarkable increase in efficiency and accuracy within financial operations. Automation technologies like RPA and AI have streamlined several routine tasks traditionally handled by human accountants, such as data entry, transaction processing, and reconciliation (Zareen et al., 2024). According to studies, automation has led to a substantial reduction in time spent on these repetitive tasks, with some reports indicating a decrease of up to 60% in task completion time (Vermeulen et al., 2018). This efficiency boost is accompanied by a marked reduction in human errors, which has historically plagued manual accounting tasks. Moreover, the use of AI-driven tools enables real-time financial reporting, allowing multinational companies to respond swiftly to market changes and regulatory updates. In turn, this operational efficiency not only enhances productivity but also contributes to cost savings, as fewer human resources are required for basic accounting functions (Agusiady et al., 2024).

Transformation of the Accountant's Role from Operational to Strategic

With the automation of routine accounting tasks, the role of accountants has evolved from primarily operational to more strategic and advisory functions. Historically, accountants were tasked with manual calculations, financial record-keeping, and ensuring compliance with regulatory standards. However, as

automation takes over these functions, accountants are increasingly expected to focus on analyzing complex financial data, offering insights into financial trends, and contributing to business strategy (Thanasas & Kampiotis, 2024). This shift is particularly evident in multinational companies, where the scale and complexity of financial operations require accountants to move beyond traditional bookkeeping roles. As one study highlights, accountants are now engaged in providing strategic advice on areas such as cost optimization, investment decisions, and long-term financial planning, thereby becoming integral members of the decision-making team at senior management levels (Kamal, 2023). This transition reflects a broader trend towards the professionalization of accounting, where human accountants are expected to harness their expertise to drive business growth and sustainability.

Need for New Skills and Continuous Professional Development

The increased reliance on automation technologies has created a demand for new skills among accountants. In order to remain relevant in an increasingly automated environment, accountants must acquire proficiency in technologies like AI, machine learning algorithms, and advanced data analytics tools (Bose et al., 2023). The shift towards automation means that traditional accounting skills, such as manual ledger entries and simple financial reporting, are no longer sufficient. Instead, accountants must adapt to new tools and techniques for data analysis, decision support, and business intelligence. Moreover, as technology continues to evolve, continuous professional development is essential for accountants to stay updated with the latest automation tools and to gain expertise in managing and interpreting data generated by these systems (Amiri & Mithila, 2025). Thus, the accounting profession now requires a hybrid skill set that combines accounting knowledge with technological proficiency, a trend that is particularly important in multinational companies that operate in diverse and fast-changing global markets.

Enhanced Decision-Making and Strategic Advisory Roles

Accounting automation has also enhanced the decision-making capabilities of accountants, allowing them to take on more advisory roles. With automation handling time-consuming tasks, accountants can dedicate more time to analyzing financial data and providing strategic insights (Pavlovic et al., 2024). This shift has enabled accountants to take on higher-value roles, where their expertise is essential in guiding senior management on decisions related to investments, risk management, and overall financial strategy. According to Thanasas and Kampiotis, real-time data provided by automated systems enables accountants to offer timely and accurate recommendations, helping businesses navigate financial uncertainties and make informed decisions (Thanasas & Kampiotis, 2024). In multinational companies, where financial data spans multiple jurisdictions, automation tools also help accountants stay on top of complex regulatory requirements, thereby improving compliance while fostering innovation in financial decision-making (Mayienga et al., 2024).

Job Displacement and Security Concerns

Despite the clear benefits of automation, one of the key concerns highlighted by the literature is the potential for job displacement. As automation technologies increasingly take over routine tasks, there is concern that certain traditional accounting roles may become obsolete. Some studies suggest that while automation does not eliminate the need for human accountants entirely, it does reduce the demand for lower-level tasks such as basic bookkeeping and transaction processing (Hall, 2024). This shift may lead to job insecurity for accountants whose roles are heavily focused on these routine functions. However, experts argue that the impact of automation on job displacement can be mitigated by equipping accountants with new skills and by enabling them to transition into more strategic roles (Rawashdeh, 2025). Thus, while automation presents challenges in terms of job security, it also creates opportunities for accountants to evolve and contribute more value to their organizations.

Improved Compliance and Risk Management

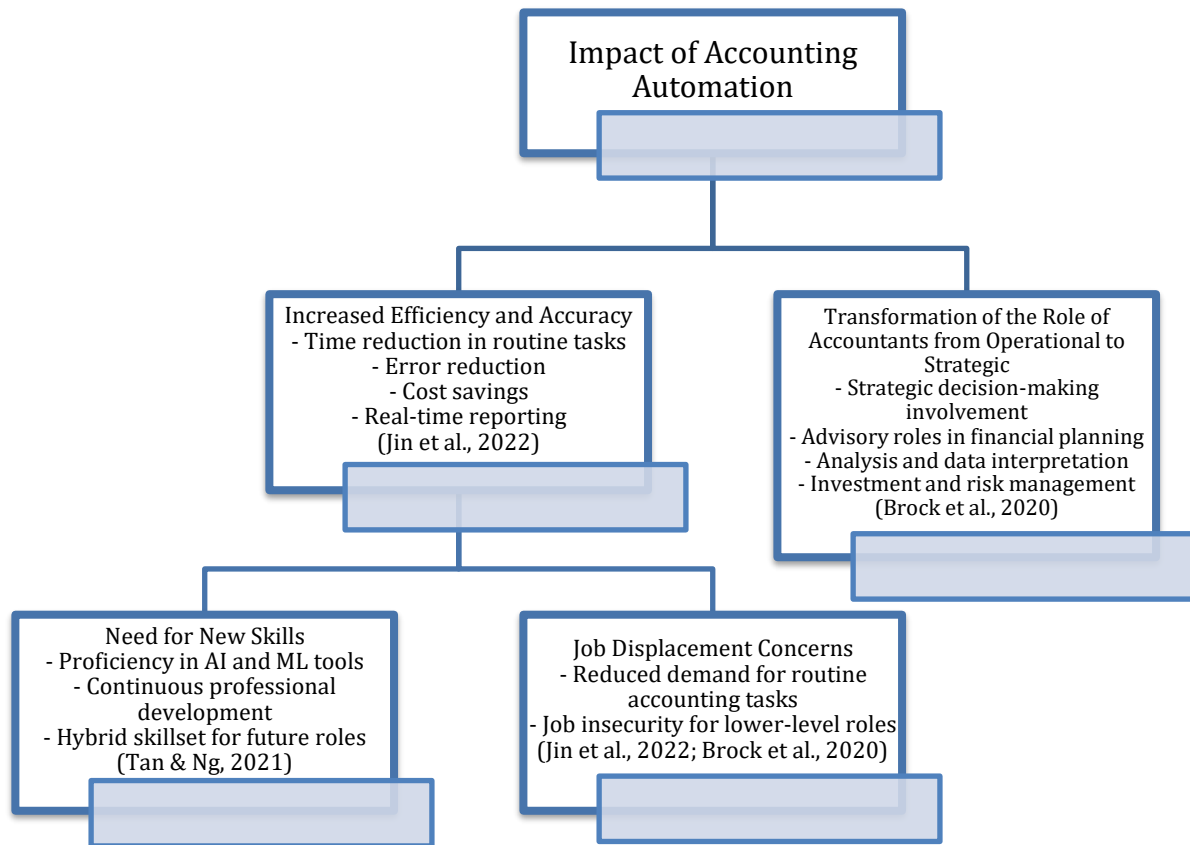
Automation has significantly improved compliance and risk management within multinational companies. With increasing regulatory complexity across different countries, multinational firms face substantial challenges in ensuring their financial operations adhere to local and international regulations. Automation technologies, such as AI and RPA, help ensure that financial reporting complies with relevant standards and guidelines (Adesanya et al., 2021). These systems can be programmed to automatically detect discrepancies in financial data, flagging potential issues before they become significant problems. Furthermore, automated systems enable continuous monitoring of financial data, providing real-time updates on compliance status and helping firms mitigate financial risks (Abikoye, Akinwunmi, et al., 2024).

Increased Demand for Hybrid Roles in Accounting

The rise of automation has led to the creation of hybrid roles in the accounting profession. These roles combine traditional accounting skills with technological expertise, allowing accountants to bridge the gap between automated systems and business decision-making (Amiri & Mithila, 2025). Multinational companies, in particular, have seen a demand for professionals who can not only manage automated systems but also leverage data analytics and business intelligence to drive strategic initiatives. Hybrid roles such as Financial Data Analyst or AI Accounting Specialist are becoming increasingly common, requiring accountants to possess both deep knowledge of accounting principles and proficiency in technological tools (Mukherjee et al., 2025).

The following diagram illustrates the impact of accounting automation on the role of human accountants in multinational companies. The diagram visually represents the key findings identified from the literature review, focusing on the major areas where automation influences accounting practices. These areas include the increased efficiency and accuracy of accounting processes, the transformation of

accountants' roles from operational to strategic, the growing need for new skills, job displacement concerns, and the rise of hybrid roles in accounting. Each of these findings highlights how automation is reshaping the profession and creating new opportunities and challenges for accountants in multinational settings.



The diagram summarizes the core findings of the study on the impact of accounting automation on human accountants in multinational companies. It outlines the interconnections between different themes that emerged during the literature review:

1. **Increased Efficiency and Accuracy**
This segment reflects the enhanced operational efficiency and accuracy of accounting processes due to automation. Routine tasks such as data entry, financial reconciliation, and transaction processing have become more efficient, allowing for significant time reductions, cost savings, and error minimization (Malipeddi, 2025).
2. **Transformation of the Accountant's Role from Operational to Strategic**
As routine tasks are automated, accountants have moved from operational roles to strategic ones. Accountants are now expected to contribute to decision-making processes, such as financial forecasting, risk management, and investment strategies, rather than just performing basic data entry and compliance work (Elumilade et al., 2023).

3. Need for New Skills

Automation necessitates that accountants acquire new technological skills, such as proficiency in AI and machine learning (ML), as well as data analysis and business intelligence tools (Kasztelnik & Campbell, 2023). This hybrid skill set is essential for accountants to remain relevant and competitive in the digital age, especially in multinational companies where technological demands are higher.

4. Job Displacement Concerns

While automation creates efficiency, it also raises concerns about the displacement of jobs that traditionally involved manual, repetitive accounting tasks. As automation handles more routine work, accountants may face job insecurity if they do not transition to roles that require more strategic input (Amiri & Mithila, 2025).

This diagram serves as a visual representation of the various interconnected factors influencing the role of human accountants in multinational companies. It underscores the multifaceted nature of accounting automation, which involves both challenges (such as job displacement concerns) and opportunities (such as enhanced roles in decision-making and strategic advisory).

Discussion

The findings of this study provide valuable insights into the profound impact of accounting automation on the role of human accountants in multinational companies. As discussed in the results, automation has significantly enhanced efficiency, reduced errors, and streamlined accounting processes, leading to substantial cost savings for multinational corporations. These operational improvements align with the predictions made by scholars like Salih Aydiner et al., who argue that automation reduces the time spent on routine tasks, enabling accountants to focus on more value-added activities (Salih Aydiner et al., 2023). The ability to perform real-time financial reporting has been particularly beneficial for multinational companies, as it allows for quick responses to market fluctuations and regulatory changes, a necessity in the complex global landscape of international business (Celestin et al., 2025).

The transformation of accountants' roles from operational to strategic functions, as found in this study, mirrors the shift in the accounting profession discussed by (Coman et al., 2022). As automation takes over repetitive tasks, accountants are increasingly taking on advisory roles, contributing to decision-making processes, and guiding senior management with data-driven insights. This transformation is essential for the evolution of the profession, particularly as multinational companies face increasingly complex financial challenges. Accountants are now expected to not only interpret financial data but also provide strategic recommendations regarding investments, risk management, and cost optimization. This shift, however, also requires accountants to develop new skills, including proficiency in AI tools and machine learning algorithms (Karim et al., 2025). The demand for hybrid roles—combining accounting expertise with technological know-how—is increasingly critical in this evolving landscape, as highlighted by the growing

number of roles such as Financial Data Analysts and AI Accounting Specialists (Mukherjee et al., 2025).

One of the most significant findings of this study is the concern regarding job displacement. As automation continues to replace routine tasks, there is a growing fear that certain accounting roles may become redundant, especially those focused on basic bookkeeping and transaction processing (Amiri & Mithila, 2025). While automation indeed has the potential to displace traditional accounting jobs, it is important to note that, as noted by (Sutton et al., 2018), automation does not eliminate the need for human accountants; instead, it shifts their roles. The key challenge lies in ensuring that accountants are provided with the necessary training and professional development to transition into higher-level, more strategic positions. This perspective is supported by the theory of technological displacement in the labor market, which argues that while some jobs may be lost to automation, new roles that require advanced skills and knowledge are created (Autor et al., 2003). Therefore, job displacement is not necessarily a negative outcome but an opportunity for accountants to evolve with the changing technological landscape, provided that they acquire the necessary skills.

The increased need for accountants to develop new skills and engage in continuous professional development is another essential aspect discussed in the findings. This aligns with the theory of human capital development, which emphasizes the importance of investing in the workforce to ensure that employees remain competitive in the face of technological advancements (Becker, 1918). In the context of accounting, this means that accountants must not only stay current with accounting standards but also be proficient in using advanced technological tools that are becoming integral to their roles. As multinational companies adopt more automation technologies, the demand for accountants with expertise in managing and interpreting automated systems will only increase. This trend reinforces the notion that ongoing education and skill development are vital for the survival and growth of the accounting profession in the digital era.

In conclusion, the findings of this study underscore the dual nature of accounting automation: while it presents opportunities for enhanced efficiency, strategic involvement, and career growth, it also poses challenges related to job displacement and the need for skill development. The shift towards more strategic and data-driven roles for accountants in multinational companies is inevitable, but it requires both individuals and organizations to invest in professional growth and technology adoption. From a broader perspective, the findings align with global trends in the workforce, where technological disruption is reshaping traditional job roles, and workers must adapt to remain relevant in their fields. Future research should explore the long-term implications of accounting automation on workforce dynamics and its broader societal impact, particularly in terms of educational and training initiatives aimed at equipping accountants for their evolving roles.

CONCLUSION

This study provides a comprehensive analysis of the impact of accounting automation on the role of human accountants in multinational companies. The

findings indicate that automation, driven by technologies such as Robotic Process Automation (RPA), Artificial Intelligence (AI), and Machine Learning (ML), has significantly improved the efficiency, accuracy, and cost-effectiveness of accounting operations. These advancements allow accountants to transition from routine, operational tasks to more strategic roles, focusing on financial analysis, risk management, and strategic decision-making. However, while automation presents substantial opportunities for professional growth, it also raises concerns about job displacement, especially for roles heavily reliant on routine tasks. The need for continuous professional development and the acquisition of new skills, such as proficiency in AI tools and data analytics, has become imperative for accountants to remain competitive in this evolving landscape. In light of these findings, multinational companies must invest in reskilling initiatives to ensure that their accounting workforce can adapt to new technological advancements and continue to add value in strategic, advisory roles.

Recommendations for Future Research

Future research should explore the long-term effects of automation on career trajectories within the accounting profession, particularly in multinational companies. Studies could focus on how automation influences job satisfaction, professional identity, and employee retention among accountants. Additionally, research could examine the specific challenges faced by accountants in smaller multinational companies or emerging markets, where technological adoption may vary. A deeper investigation into the ethical implications of automation, including its potential impact on employment and the redistribution of tasks across the workforce, would also be valuable. Furthermore, exploring the effectiveness of training programs and educational curricula in preparing accountants for the technological demands of the future could provide insights into how the profession can better equip its workforce for the changes brought by automation.

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