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AI-Powered Tax Optimisation: Redefining the Taxation Profession in the Digital Age

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ABSTRACT

AI is transforming the taxation profession, altering the way tax professionals are expected to perform their jobs. This paper discusses how AI tools are changing how taxpayers approach tax optimisation, and what new set of skills and ethical thresholds need to be navigated in the digital world. AI enables tax practitioners to shift from time-expensive processes to advisory-based structures by automating repetitive tasks, streamlining compliance, and introducing predictive technology. It focuses on the potential merits of AI in the labour market, with the advent of growing efficiencies and interdisciplinary engagement with other professionals, as well as the exposure of professionals to complex issues arising from central global taxes. At the same time, it highlights the challenges of continuous reskilling and the ethical complexities of decision-making driven by artificial intelligence. That means that these data suggest AI will change the face of the taxation profession, and it will be up to professionals to navigate the new terrain.

Keywords: AI transformation, Tax Optimisation, Reskilling, Ethical Decision-Making, Interdisciplinary Collaboration

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INTRODUCTION

New challenges and opportunities introduce significant changes for the taxation profession. The rapid, exponential adoption of digital modes of operation has compelled tax administrations to catch up with the numerous complexities posed by rapidly evolving cross-border e-commerce, cryptocurrencies, and numerous intangible assets that transcend borders, which have traditionally been well-defined. Gupta and Singhania (2020) indicate that maintaining compliance and plugged revenue loss through tax evasion entails these changes, a robust technological apparatus, and related infrastructure. Digital platforms and automated systems have become integral to the real-time tracking of transactions, thereby reducing the risk of non-compliance and fraud. This transformation in the taxation profession also requires continuous development of skills among professionals to deal effectively with new technologies and complex global tax laws (PWC, 2021).

Tax optimisation is an intrinsic strategy that enables a business organisation to manage its financial health and achieve sustainable growth. It calls for designing a strategy which minimises tax liabilities through total compliance with regulations. Arguably, Singh and Soni (2019) state that every modern business faces dual challenges of adhering to diverse tax regimes and navigating emerging new dimensions of tax policies, such as Digital Service Taxes. Optimisation techniques will align a company's operations by utilising tax credits, deductions, and international treaties with favourable tax jurisdictions, thereby improving cash flow and profitability. Digital tools, including artificial intelligence, have also proven instrumental in identifying tax-saving opportunities and ensuring compliance, thereby creating a competitive advantage in dynamic markets (OECD, 2022).

Artificial intelligence is fast becoming a cornerstone technology in changing taxation processes for businesses and tax authorities. AI-driven tools

automate complex tax calculations, streamline audits, and detect irregularities by analysing vast datasets. Kroll and Hauser (2021) suggest that AI enhances decision-making through predictive insights, enabling businesses to adapt quickly to regulatory changes. For tax authorities, AI will facilitate easier fraud detection and enhance the efficiency of tax collection systems. As Gupta et al. (2020) describe, AI helps an organisation ensure accuracy and compliance without the heavy burden of manual processes, bringing greater transparency into the taxation ecosystem.

THE CHANGING ROLE OF TAX PROFESSIONALS

Traditionally, the taxation profession has focused on compliance-related activities, including preparing and filing tax returns promptly, as well as addressing other regulatory matters. The primary role of tax professionals was manual computation and administrative compliance with taxes. As the economy transitioned to digital platforms, these roles underwent significant changes. The role of a tax professional is increasingly being seen as one that must be more strategic and less routine, focusing on strategic tax planning and risk management. Gupta and Singhania (2020) state that the adoption of technology has reduced manual work and freed professionals' time to provide high-value advisory services. This broader role means that the contribution of tax professionals to decision-making processes will focus on aligning tax strategies with business objectives. The transition from manual computations to advisory roles is a defining feature of modern taxation.

Automation tools, such as enterprise resource planning (ERP) software and artificial intelligence (AI), have significantly reduced the time and workforce required for mundane tax work. According to Kroll and Hauser (2021), taxation rules become easier to calculate and verify for compliance against various standards, allowing tax professionals to focus

on providing insights that enable operational efficiency and regulatory compliance. This shift requires heightened focus on skills such as financial analysis, regulatory interpretation, and strategic forecasting. Consequently, tax professionals are stepping up from being task implementers to being consultants, assisting organisations in mastering the complexity of an increasingly convoluted tax landscape.

Now, with the evolution of AI, the role of tax professionals has undergone a significant transformation, and they must complement their domain knowledge with tech-savvy skills. By automating complex analyses, machine learning has transformed the field of taxation. It has made real-time data analysis and modelling tools, as well as fraud detection and prevention tools, accessible to tax professionals. Tax professionals will continue to act in a dual role, interpreting ahead and seeking insights generated by AI, while applying human judgment to decision-making tasks that are unlikely to be automated (OECD, 2022). They are also expected to stay up to date with the regulatory frameworks surrounding AI in taxation and ensure compliance with ethical standards. With technology taking over the world, Singh and Soni, 2019, highlight that to remain relevant in this environment where companies rely more and more on the data for their strategic

choices and the optimisation of the tax results and dynamics of the changing environment, professionals who work in this sector needs to up-skill themselves to uptrend in the high level of AI technologies.

AI-DRIVEN TOOLS AND TECHNOLOGIES IN TAXATION

AI technologies have revolutionised the conventional approach to tax optimisation, which was previously performed manually by experts over several years. More AI technologies are now embedded in this industry, from automating complex analysis to achieving better accuracy. Their predictive analytics will provide necessary insights on tax liabilities to optimise cash flow management against historical data. Predictive models may enable companies to assess audit exposure more effectively and formulate more effective mitigation strategies. Other technologies include NLP, which helps analyse and interpret tax regulations and compliance requirements by extracting information from unstructured data, such as legal documents and policy texts. Automated compliance solutions are integrated with AI-powered workflows that ensure timely and accurate filings of taxes, with minimal human errors and penalties.

<i>AI Technology</i>	<i>Function</i>	<i>Impact</i>
<i>Predictive Analytics</i>	Analyses past data to foresee tax liabilities and manage cash flow.	<ul style="list-style-type: none"> - Helps understand audit exposure and formulate mitigation plans. - Proactively manages risks. - Optimises resource utilisation.
<i>Natural Language Processing (NLP)</i>	Analyses and interprets tax regulations and compliance requirements from unstructured data (e.g., legal texts).	<ul style="list-style-type: none"> - Keeps pace with ever-evolving tax laws. - Reduces the need for exhaustive manual reviews. - Enhances compliance.
<i>Automated Compliance Solutions</i>	Integrates AI-powered workflows for timely and accurate tax filings.	<ul style="list-style-type: none"> - Minimises human errors. - Prevents penalties. - Tracks tax data in real time. - Flags discrepancies.
<i>AI-powered Reporting Tools</i>	Flag inconsistencies to generate comprehensive reports for auditors.	<ul style="list-style-type: none"> - Provides real-time data insights. - Improves auditing accuracy. - Saves time.

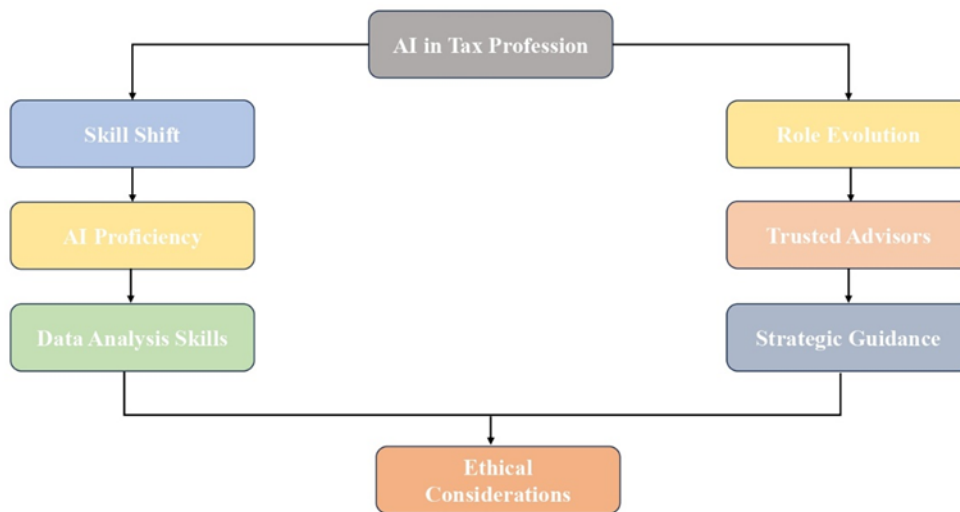
AI tools lighten the load for tax-related tasks, decreasing the time required for manual performance. Predictive analytics enables tax professionals to proactively manage risks more effectively, thereby enabling optimal resource utilisation. NLP provides ease in keeping up with ever-evolving tax laws and facilitates compliance without requiring exhaustive manual reviews. Automated compliance tools track tax data in real-time by flagging discrepancies and provide comprehensive reports to auditors in a standardised format. As Patel and Wong (2021) averred, "such a trend tends to improve not only in areas related to speed and greater efficiencies for various tax compliance matters, but also of higher value strategic decisions through lower administrative burden for your businesses." Thus, such savings through applying AI potentially keep organisations' costs within their means and protect organisations from more risk (because this makes them appear competitively operational) toward achieving and maintaining their goals by surmounting an overtaxingly arduous task amidst such a complicated world regulatory environment.

KEY TRANSFORMATIONS IN THE TAX PROFESSION

As the role of tax professionals continues to become more digitised, the skill sets needed also continue to diverge widely. Beyond analytical skills, proficiency in AI tools and strategic advisory capabilities have emerged as significant differentiators. Analysing large

quantities of financial data and drawing actionable insights from it is an indispensable skill. Professionals must utilise AI-driven tools, such as predictive analytics and autonomous tax software, to make informed professional decisions. This transformation also demands a shift from traditional compliance roles to trusted advisors, offering strategic guidance to businesses navigating complex legal regimes. Gupta et al. (2021) argue that strengthening these skills enhances a professional's adaptability, enabling them to remain relevant in the AI-driven ecosystem and transition from mere advisors to integral contributors.

This growing reliance on AI in taxation poses a challenge and an ethical dilemma, primarily regarding the fairness of compliance and the potential for bias in AI-generated recommendations. Algorithms' inherent bias can amplify existing biases in the data, potentially leading to unfair tax assessments or enforcement actions (Jones & Lee, 2020). Professionals must ensure that AI tools are developed and trained responsibly, using diverse and unbiased datasets. Furthermore, establishing effective personnel supervision mechanisms to verify AI-powered outcomes and compliance with ethical and legal regulations is fundamental. Incorporating transparency and accountability into AI systems can ensure stakeholders develop trust in such systems, minimising the potential issue of misuse (Wong & Fernandez, 2022).



With AI increasingly encroaching on the taxation profession, tax professionals must work more closely with data scientists, engineers, and legal experts. Tax experts must collaborate with data scientists to develop algorithms that conform to the unique standards of tax law, while engineers ensure that the AI systems are technically robust. Legal specialists guide companies through the regulatory maze, ensuring compliance with evolving domestic and international tax regulations. This multi-pronged approach leverages AI tools while maintaining ethical and legal integrity. Patel and Wong (2021) asserted that such initiatives significantly improve the overall utility of AI systems, propelling innovation in taxation.

CHALLENGES AND OPPORTUNITIES FOR TAX PROFESSIONALS

Struggles with AI Adoption in Taxation:-

Need for reskilling: One significant challenge arising from the continuous changes that AI brings to the taxation profession is the need for reskilling. Tax professionals must move beyond their traditional roles, which are primarily focused on manual calculations and compliance work, to adapt to new, emerging roles that require specialised technical knowledge. They must get acquainted with using AI tools, analysing vast volumes of data, understanding machine learning algorithms, and interpreting AI-generated recommendations. This shift can be overwhelming, especially for those less familiar with technology. According to Hughes & Yates (2020), for many professionals, keeping pace with these ever-

changing skill demands is a challenge noted by Singh (2021).

Obsolescence Fear: The second significant fear is the fear of job loss. Although AI performs repetitive tasks, such as data entry and compliance checks that a tax professional used to handle, there is an underlying fear of becoming obsolete. Li and Zhang (2021) note that 62% of participants in the tax industry are concerned that their jobs will become obsolete because of AI. While this anxiety is understandable, experts like Peterson and Zhang (2022) argue that AI is more likely to work alongside humans, enhancing their abilities rather than entirely replacing them. By embracing these tools, tax professionals can remain indispensable, taking on more strategic and analytical roles.

Understanding AI's Limitations and Boundaries: While AI holds immense promise, limitations must be recognised. AI systems are only as good as the data they are fed. Poor data can lead to inaccuracies, and AI often struggles to interpret complex or nuanced human behaviours or adapt to sudden legal changes. Furthermore, the regulatory framework for AI in taxation is still developing, making compliance a moving target. Additionally, according to McClure and Lee, this is where tax professionals must exercise caution. Whether AI is subject to local and international tax laws is a complex and evolving issue.

Opportunities Provided by AI in Taxation:
Improved Efficiency and Productivity – It holds immense potential to significantly enhance the efficiency of professionals in tax consulting by automating tasks such as data entry, computation, and review. The International Tax Technology Council projects savings of up to 40% in processing time for various tax compliance needs, thanks to the use of AI-driven solutions. By achieving such efficiencies, tax professionals can use less time on routine operations and allocate more time to high-

priority activities. It reduced operational costs, quicker turnaround times, and improved client service.

Increased Focus on Strategic, Value-Based Services – As AI assumes repetitive and time-consuming tasks, tax professionals will focus on strategic advisory services that involve assisting businesses in optimising their tax strategies, managing their risks, and making smarter decisions regarding tax planning. This will also enable the tax professional to become a trusted advisor by offering insights that not only assist businesses in merely adhering to tax laws but also help them navigate both the domestic and international tax complexities.

Managing Complex Global Tax Scenarios – AI changes the game when dealing with complex international tax challenges in a multi-jurisdictional environment involving diversified tax laws with cross-border transactions. Various compliance processes can be automated through AI tools, enabling the international tax function to be more effective in its global tax reporting and compliance with various regulatory requirements. According to Wilson and Rao (2021), AI can analyse millions of data points across several jurisdictions to discover tax-saving opportunities, thereby making the tool valuable in handling international taxation issues with ease.

FUTURE OF TAXATION AS A PROFESSION IN THE AI ERA: -

AI-powered Audits – AI is transforming the traditional auditing process by implementing AI-powered tools that can process volumes of data within a remarkably short timeframe with a high degree of accuracy. It identifies anomalies, projects financial risks, and establishes other areas that might be non-compliant. AI enhances the audit process with greater efficiency and accuracy through real-time analysis and the detection of discrepancies in financial statements. According to Collins et al. (2021), frauds

can be detected with minimal human intervention using AI-powered auditing systems; hence, audits will be more reliable. This helps process and analyse the immense amounts of financial data needed for multiple clients simultaneously, which is crucial in big audits.

Global Tax Compliance Systems - As more businesses operate internationally, the need for tax compliance across various jurisdictions is likely to become increasingly complex. AI will be integrated into global tax compliance systems, enabling businesses to stay compliant with various local regulations while optimising their tax positions. Such systems automatically upgrade themselves with the evolution of new tax laws in multiple countries, thereby helping firms maintain compliance. Additionally, AI-powered solutions can analyse cross-border tax risk and advise on how best to structure international transactions with limited tax liabilities. The ever-improving relevance of such automated cross-border tax compliance tools is transforming the profession and pressuring tax professionals to stay ahead with the technology.

With the continuous evolution of the taxation profession driven by AI, among other technological advancements, there is an increasing need for ongoing learning and adaptation to ensure career development. Professionals must adapt to changing tax regulations and adopt new technologies to perform their services efficiently. Continuous professional development in AI and machine learning is what will keep tax experts updated, according to Davis & Zhang (2021). Furthermore, tax laws and regulations are in a constant state of flux, hence the need for professionals to engage in lifelong learning to stay up-to-date with these changes. The ability to learn new technologies, coupled with adaptation to a changing regulatory environment, will determine the long-term success of individuals concerned with taxation.

CONCLUSION

Most will immediately note the tremendous transformative potential AI has and is beginning to have in the realm of the taxation profession—again, profoundly changing just about everything regarding how practitioners do their business. Automation of basic tasks, such as data entry, tax computations, or compliance verification, is being replaced by AI systems, primarily utilising machine learning, natural language processing, and predictive analytics. This will enable the accountant, from a strategic perspective, to shift more toward tax planning, tax advisory services, and maintaining customer relationships. This produces the required outcome of such automation, with reduced human error and complete accuracy in financial reporting and subsequent tax filing, as represented by Brenner & Patel (2020) and King et al. (2022). Beyond this, AI-powered tools assess the presence of tax risks across numerous jurisdictions, evaluate complex financial information, and indicate the possibility of optimisations; this increases the value from a business perspective concerning the contribution of the tax function.

However, the introduction of AI in the field of taxation should not threaten the livelihood of tax professionals but rather provide an opportunity for growth. AI should, therefore, be welcomed and accepted as a valuable partner, not a competitor. Professionals can use AI to manage their work, freeing themselves from the burden of performing mundane tasks that would otherwise consume a significant amount of time. Instead, they can concentrate their efforts on creative problem-solving or strategic decision-making. In particular, embracing change is a key aspect of career development, as transitioning to new technologies enables professionals to position themselves for better outcomes in their continuously evolving markets. Accordingly, Davis & Zhang articulate that AI does not attempt to replace human judgment. By contrast, AI amplifies tax professionals' capacity for making informed, comprehensive, data-

driven tax decisions, coupled with optimal tax solutions.

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