

LEVERAGING ARTIFICIAL INTELLIGENCE TO PROMOTE INTERNATIONAL TAX COMPLIANCE

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Abstract

The transformative potential of artificial intelligence (AI) in international tax compliance has been mentioned in much literature. AI has been described as the ultimate solution to the effective analysis of data and tax patterns, with immense potential to improve the efficiency and effectiveness of international tax compliance processes.

The trickle-down effects on tax authorities to prioritize high-risk areas and taxpayers are also mentioned in the literature. These benefits further accumulate with the early detection and mitigation of tax-related risks. Some studies have also mentioned the potential benefits of AI in tax compliance for taxpayers. According to these studies, AI can provide tailored recommendations that enhance their understanding of their tax obligations. Thus, reducing incidents of non-compliance.

This paper, similar to other studies, highlights the benefits of AI in tax compliance. However, it also underscores the need to address ethical and regulatory considerations, such as transparency, fairness, and privacy. The paper also advocates for the development of international guidelines, the adoption of a risk-based approach, consistent monitoring, effective collaboration among tax agencies, and data standardization to maximize the benefits of AI in international tax compliance.

This paper concludes that the responsible and transparent use of AI can revolutionize international tax administration. It also suggests that the responsible and transparent use of AI can promote trust in international tax processes and lead to more efficient and effective international compliance efforts.

Keywords: Artificial Intelligence, International Tax

1.0. Introduction

Artificial intelligence (AI) has created significant impacts in many industries². The first publicly recognized AI program was designed in 1951 by Christopher Strachey and Dietrich Prinz.³ However, the launch of ChatGPT in 2022 has created a sporadic rise in the law-aided AI chatbots and tools. While some may argue that these tools were designed to compete with

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² Mohd Javid and others, 'Understanding the Potential Applications of Artificial Intelligence in Agriculture Sector' (2022) 2 Advanced Agrochem 15 <<https://www.sciencedirect.com/science/article/pii/S277323712200020X>>.

³ Stuart Russell and others, 'Artificial Intelligence a Modern Approach' (1995) <<https://rodsmith.nz/wp-content/uploads/AIAMA-1ed.pdf>>.

ChatGPT, others would argue that the recent sporadic rise in the implementation of AI tools in legal matters is a trickle-down effect of about a decade of research and innovation.

Many studies have argued that AI technologies have the potential to transform the practice of law.^{4 5 6} According to these studies, AI can improve efficiency, reduce costs, and enhance the delivery of legal services. Some studies, however, suggested that this potential can only be achieved when AI is programmed to automate manual and routine legal tasks. As per the benefits of the implementation of AI tools for many legal practitioners, some studies suggest that it could save time on research, document review, and other repetitive tasks.^{7 8} However, other studies have hinted at a likely trickle-down effect of reduced legal service estimates and fees.^{9 10} This means that while legal practitioners earn less, clients can save some money on legal cases.

Aside from the technical benefits of the implementation of AI in the legal service, some studies have argued that it could play a pivotal role in broader applications of law.¹¹ One such application is international tax compliance. According to some studies, the current trends of international tax compliance influenced by global tax policy developments, regulatory changes, and initiatives like the Base Erosion and Profit Shifting (BEPS) project can create more room for the implementation of AI.¹² It is also an affordable tool to keep up with these legal trends.

Based on the suggestions of other studies about the likely impacts of AI on international law compliance, this study highlights the potential benefits and challenges of AI in international law compliance. By reviewing the practical implementations of AI in domestic tax compliance, the study gauges the successes and challenges of various public scenarios. It also recommends

⁴ W Bradley, 'Oklahoma Law Review Oklahoma Law Review the Promise and Limitations of Artificial Intelligence in the the Promise and Limitations of Artificial Intelligence in the Practice of Law Practice of Law the PROMISE and LIMITATIONS of ARTIFICIAL INTELLIGENCE in the PRACTICE of LAW' (2019) 72 <https://digitalcommons.law.ou.edu/cgi/viewcontent.cgi?params=/context/olr/article/1376/&path_info=02_wendel_article_blu7.pdf>.

⁵ O Brien and Cody O'brien, 'How Artificial Intelligence Will Affect the Practice of Law?' (2019) <<https://digitalcommons.sacredheart.edu/cgi/viewcontent.cgi?article=1283&context=acadfest>>.

⁶ B Alarie, A Niblett and A Yoon, 'How Artificial Intelligence Will Affect the Practice of Law' (2017) SSRN Electronic Journal <https://ssrn.com/abstract=2932409>

⁷ M S Biresaw and U S A, 'The Impacts of Artificial Intelligence on Research in the Legal Profession' (2022) *International Journal of Law and Society* 53.

⁸ Michael Legg and Felicity Bell, 'ARTIFICIAL INTELLIGENCE and the LEGAL PROFESSION: BECOMING the AI-ENHANCED LAWYER Law' (2019) <<https://www.lawsociety.com.au/sites/default/files/2020-11/Artificial%20Intelligence%20and%20the%20Legal%20Profession%20-%20Becoming%20the%20AI-Enhanced%20Lawyer.pdf>>.

⁹ Chay Brooks, Cristian Gherhes and Tim Vorley, 'Artificial Intelligence in the Legal Sector: Pressures and Challenges of Transformation' (2020) 13 *Cambridge Journal of Regions, Economy and Society* 135.

¹⁰ G Marchant, 'Artificial Intelligence and the Future of Legal Practice' (2017) https://www.iadclaw.org/assets/1/7/10.4-_Marchant-ai_and_practice_of_law_SciTech_lawyer.pdf

¹¹ Anne Dulka, 'The Use of Artificial Intelligence in International Human Rights Law' (2023) <https://law.stanford.edu/wp-content/uploads/2023/08/Publish_26-STLR-316-2023_The-Use-of-Artificial-Intelligence-in-International-Human-Rights-Law8655.pdf>

¹² Roel Dom and others, 'INNOVATIONS in TAX COMPLIANCE Building Trust, Navigating Politics, and Tailoring Reform' (2022) <<https://documents1.worldbank.org/curated/en/805981645156742614/pdf/Innovations-in-Tax-Compliance-Building-Trust-Navigating-Politics-and-Tailoring-Reform.pdf>>

practical solutions to the potential challenges of the implementation of AI in international tax compliance.

2.0. The Current Challenges of International Tax Compliance

Tax compliance is beneficial to governments, individuals, and corporations.¹³ One study argues that tax compliance is essential for maintaining the finances of governments through tax revenue,¹⁴ while another opines that individuals and businesses must maintain international tax compliance to fulfil their obligations and protect themselves against the consequences of tax evasion.¹⁵ However, despite the benefits and necessity of tax compliance, the system is riddled with many challenges.¹⁶

According to some studies, the challenges of international tax compliance have been further highlighted by current trends of international tax compliance, especially in developing countries, and the impact of the COVID-19 pandemic.¹⁷ However, investigating these challenges based on existing records is a challenge in itself. Hence, there are limited studies and information on the best practices for international tax compliance.

Another challenge is the impact of tax policies on tax compliance. Evidence from research suggests that higher tax rates generally discourage compliance, while minimal exemptions can ease administrative burdens on tax administrations.¹⁸ Tax compliance forces also have a hard time keeping up with the rapidly shifting tax policies.¹⁹ To introduce the necessary systems to cater to these changes, compliance forces are challenged by the requirements to navigate current trends. Hence, domestic tax departments often struggle with limited resources and a lack of dedicated taxation software.

¹³ Ibid.

J Slemrod, 'Tax Compliance and Enforcement' (2019) *Journal of Economic Literature* 904.

¹⁴ C O Olaoye and A T Ekundayo, 'Effects of Tax Audit on Tax Compliance and Remittance of Tax Revenue in Ekiti State' (2019) *Open Journal of Accounting* 1.

¹⁵ Joseph Stiglitz and others, 'GLOBAL TAX EVASION REPORT 2024' (2024) <https://www.taxobservatory.eu/www-site/uploads/2023/10/global_tax_evasion_report_24.pdf>.

¹⁶ Wilson Prichard and others, 'Policy Research Working Paper 9032 Innovations in Tax Compliance Conceptual Framework Macroeconomics, Trade and Investment Global Practice & Governance Global Practice' (2019) <<https://documents1.worldbank.org/curated/en/816431569957130111/pdf/Innovations-in-Tax-Compliance-Conceptual-Framework.pdf>>

¹⁷ G Mascagni and F Santoro, 'The Tax Side of the Pandemic: Shifts in Compliance Attitudes and Perceptions in Rwanda' (2023) *Journal of Development Studies* 811.

¹⁸ Era Dabla-Norris, 'Tax Administration and Firm Performance: New Data and Evidence for Emerging Market and Developing Economies' (2017) 17 *IMF Working Papers* 1.

¹⁹ J Slemrod, 'Tax Compliance and Enforcement' (2019) *Journal of Economic Literature* 904. This paper reviews recent economic research in tax compliance and enforcement, discussing methodologies and empirical contributions related to tax evasion

Corporate tax departments are also challenged by uncertain regulatory landscapes, talent shortages, vulnerable supply chains, and reputational risks.²⁰ These challenges make it difficult for tax departments to effectively manage domestic and international tax compliance.

3.0. Current Evaluation by Other Studies on Artificial Intelligence in International Tax Compliance

With the current challenges of international tax compliance, some studies opine that AI can play a very important role in changing the current international tax terrain.²¹ By leveraging AI technologies, the Asian Development Bank suggests that tax administrations and businesses can enhance their ability to uphold strict adherence to international tax policies.²²

One study opines that AI can be used to analyze large volumes of data and assess tax risks.²³ According to the study, this will allow tax administrations to classify taxpayers based on their probability of non-compliance. AI technologies can help tax administrations identify and take proactive steps to combat the most likely cases of fraud.²⁴ With such efficient structures in place, these studies are convinced that AI can further be utilized to automate the administrative functions of officials and personnel while also improving the efficiency of standard tax procedures. A good example of this has been implemented by the General Directorate of Cadastre in Spain.²⁵ The Directorate has developed a reference value for real estate using neural networks. This has reportedly aided the Directorate's management of tax procedures.

Some study²⁶ suggests AI models can analyze historical data, audit outcomes, and regulate feedback. Such AI models could be used to predict potential risks in tax strategies. The study hints that international businesses can assess and adjust their risk exposure to ensure optimum compliance with AI-powered international tax regulations. The study also implies that these AI models can be programmed to monitor real-time changes in tax regulations across

²⁰ A I Brühne and D Schanz, 'Defining and Managing Corporate Tax Risk: Perceptions of Tax Risk Experts' (2022) *Contemporary Accounting Research*.

²¹ Nembe J, Atadoga J, Mhlongo N, Falaiye T, Odeyemi O, Daraojimba A, and Oguejiofor B, 'The Role of Artificial Intelligence in Enhancing Tax Compliance and Financial Regulation' (2024) *Finance & Accounting Research Journal* 6, 241-251, doi:10.51594/farj.v6i2.822.

²² Nembe J, Atadoga J, Mhlongo N, Falaiye T, Odeyemi O, Daraojimba A, and Oguejiofor B, 'The Role of Artificial Intelligence in Enhancing Tax Compliance and Financial Regulation' (2024) *Finance & Accounting Research Journal* 6, 241-251, doi:10.51594/farj.v6i2.822.

²³ Qinghua Zheng and others, 'A Survey of Tax Risk Detection Using Data Mining Techniques' [2023] *Engineering* <<https://www.sciencedirect.com/science/article/pii/S2095809923003867>>

²⁴ Antonio Faúndez-Ugalde, Rafael Mellado-Silva and Eduardo Aldunate-Lizana, 'Use of Artificial Intelligence by Tax Administrations: An Analysis Regarding Taxpayers' Rights in Latin American Countries' (2020) 38 *Computer Law & Security Review* 105441.

²⁵ N Guadalajara, 'Influence of the Cadastral Value of the Urban Land and Neighborhood Characteristics on the Mean House Mortgage Appraisal' (2021) 10 *Land* 250.

²⁶ Olubusola Odeyemi and others, 'The Role of AI in Transforming Auditing Practices: A Global Perspective Review' (2023) 21 *World Journal of Advanced Research and Reviews* 359 <<https://wjarr.com/sites/default/files/WJARR-2024-0460.pdf>>

jurisdictions. Such innovations will enable businesses to swiftly adjust their strategies to new tax policies and remain compliant.

AI can also be automated to ensure routine tasks are efficiently recorded and financial data is accurately interpreted in compliance with legal regulations.²⁷ The study opines that this will drastically decrease human influence and the possibility of human errors, thus improving data efficiency in tax processes. The study also suggests that AI can relieve tax professionals of multiple routine tasks and allow them to focus on more complex tax compliance issues.

4.0. Case Studies of Artificial Intelligence in Domestic Tax Compliance

Contrary to the popular opinion that artificial intelligence will replace human intelligence, AI has thus far augmented human efforts, particularly in tax compliance.²⁸ Before the digitization of tax records, tax professionals relied heavily on manual methods.²⁹ However, with the advent of digitization and AI tools, professionals have witnessed a transformative shift that augments their capabilities. Over the last two years, the legal profession has witnessed the distinct impact of AI in various niches.³⁰ Through Natural Language Processing (NLP), an AI tool that enables computers to understand and interpret human language, legal practitioners have been able to automate tasks such as tax document analysis, and tax research, and even maintain close communication with taxpayers.³¹ However, it's important to note that despite the multiple benefits of AI tools, they have also created a need for the re-evaluation of regulatory frameworks, which demands the collaborative efforts of governments, businesses, and regulators. It also demands that legal practitioners upskill with training programs like AI concepts, data analytics, and interpretation of AI-generated data.

Many countries have adopted AI to boost tax compliance. Romania, Canada, Singapore, and Italy are some of the popular examples of countries that have adopted AI. A close examination of these case studies is a good foundation for further research on the impact of AI tools on tax compliance.

²⁷ Bernard Owusu Antwi, Beatrice Oyinkansola Adedokun and Augustine Obinna Eziefule, 'Transforming Financial Reporting with AI: Enhancing Accuracy and Timeliness' (2024) 6 *International Journal of Advanced Economics* 205 <<https://www.fepbl.com/index.php/ijae/article/view/1229>>

²⁸ A Najmiddinov, 'Will Artificial Intelligence (AI) Replace a Human in "IT"?' (2024) Zenodo (CERN European Organization for Nuclear Research).

²⁹ K Mbise and L Baseka, 'Impact of Digital Systems on Tax Compliance among SMEs' (2023) *The Journal of Informatics*.

³⁰ Mesfin S Biresaw and Umesh S A, 'The Impacts of Artificial Intelligence on Research in the Legal Profession' (2022) *International Journal of Law and Society* 53.

³¹ Roman Egger and Enes Gokce, 'Natural Language Processing (NLP): An Introduction' [2022] *Applied Data Science in Tourism* 307.

Romania claims to have boosted VAT receipts by up to 1% in 2023 through AI and robot technologies.³² Based on this success rate, the Romanian Tax Authority (ANAF) announced plans to introduce an advanced chatbot powered by AI to enhance taxpayer services. The chatbot is expected to address frequently asked tax questions more promptly and generally improve taxpayers' interactions with the authorities. However, this proposal has raised several questions on issues relating to data privacy, data security, and legal ethics.

On the Canadian front, the country has established itself as one of the leading countries that have implemented AI virtual assistance to improve the efficiency of tax compliance and other related administrative activities.³³ However, similar to the concerns in Romania, the AI virtual assistants in Canada have also raised concerns about data privacy and security. There are also concerns about the tax administrator's ability to utilize AI technology accurately and for its intended purposes.

In Singapore, the Tax Authority of Singapore (IRAS) has implemented AI tools and data to provide seamless and personalized services.³⁴ The IRAS has successfully expanded the use of data and AI to manage tax non-compliance. While the IRAS has recorded positive progress with AI, the potential challenges of data privacy and security still persist. The IRAS is also required to continuously monitor and update its AI systems alongside changing tax regulations and encourage transparency and accountability.

While other countries have been more focused on creating automated systems that coordinate tax processes, Italy has been one of the most fervent users of AI to detect tax evasion.³⁵ The country has identified over 1 million high-risk cases over the last two years. Having been able to drastically limit tax fraud, Italy has made significant progress. However, this progress is still riddled with its own challenges. They are concerned about the proper interpretation of tax laws, legal principles, and fairness. Since AI is programmed to rely on algorithms, the probability of AI tools interpreting legal grey areas accurately is a major source of concern.

³² HotNews.ro, 'Statul Vrea Să Folosească Inteligența Artificială Pentru Colectarea TVA Și Să Facă Un Institut de IA de 100 Milioane de Euro - HotNews.ro' (6 November 2023) <<https://hotnews.ro/statul-vrea-sa-foloseasca-inteligenta-artificiala-pentru-colectarea-tva-si-sa-faca-un-institut-de-ia-de-100-milioane-de-euro-34843>>

³³ Aviv H Gaon, 'The AI Momentum' [2021] Edward Elgar Publishing eBooks.

³⁴ Rex Chua, 'Tax Service Digitalisation' (2022) <<https://www.unescap.org/sites/default/d8files/event-documents/7%20ESCAP%20Workshop%20-%20Tax%20Service%20Digitalisation%20%28by%20IRAS%29%20Rex%20Chua.pdf>>.

³⁵ 'Data-Driven Approaches to Combat Tax Evasion and Fraud in Italy - European Commission' (*reform-support.ec.europa.eu*2021) <https://reform-support.ec.europa.eu/what-we-do/revenue-administration-and-public-financial-management/data-driven-approaches-combat-tax-evasion-and-fraud-italy_en>

5.0. Proposed Benefits of Artificial Intelligence in International Tax Compliance

The case studies of domestic AI tool implementation identify some potential opportunities and benefits for international tax compliance. From improved services to risk management, the potential benefits include the following:

- a. **Improved Compliance Service:** AI-powered virtual assistants and chatbots have proven to be quite effective in handling taxpayer queries and reducing the burden on tax authorities. Hence, AI can enhance the services and productivity of international tax agencies in terms of tax obligation aids and non-compliance deterrents.
- b. **Efficiency and Accuracy:** By analyzing large volumes of data, AI systems can identify tax patterns, anomalies, and potential risks and enable tax authorities to proactively address compliance hitches. Hence, AI-enabled predictive analytics and automation can streamline tax compliance processes, improve accuracy, and reduce manual errors.
- c. **Fraud Detection and Risk Management:** AI can help tax administrators across countries detect tax fraud and manage compliance risks. With AI tools like machine learning and programmed algorithms, tax managers can analyze different volumes of data and identify suspicious transactions and patterns of tax evasion across countries.
- d. **Unified Tax Compliance Policies:** To maximize the potential benefits of AI in international tax, there is a need for international collaboration and the development of common standards for AI across borders. By creating a system that allows different tax authorities to share best practices, insights, and data, AI tools can effectively promote consistency and uniformity in international tax compliance efforts.

6.0. Potential Challenges Of Artificial Intelligence in International Tax Compliance

Despite the benefits of AI in domestic tax compliance, this study recognized that some challenges will arise from implementing AI on international fronts. These challenges are hinged on data hitches, adaptability, and security. The potential challenges are multifaceted, and they include:

a. Data and security breaches

Tax data is sensitive and confidential information.³⁶ Thus, it is important that tax details remain secure and confidential at all times. In order to maximally achieve data privacy, international bodies and tax authorities have proposed and implemented various data protection policies and regulations. The General Data Protection Regulation (GDPR)³⁷ of the European Union is a good example. The GDPR was effected on May 25, 2018, as one of the stringent international data protection laws. It applies to any organization that processes the personal data of EU residents, regardless of where the organization is based. The GDPR mandates that organizations report any personal data breaches to the relevant supervisory authority within 72 hours of becoming aware of the breach. It also requires that affected individuals be notified if there is a high risk to their rights and freedoms.

Despite the GDPR's strict framework for data protection, it does not provide any guidance on how automated systems like AI can comply with its provisions. This can lead to inconsistent interpretations and implementations of the law when AI is involved. Since there are no specific restrictions, AI may adopt ambiguous data processes that are not transparent and thus hinder some international organizations from complying with GDPR principles on data minimization and purpose limitation. AI may also complicate the 72-hour reporting timeline where data breaches may not be immediately identifiable. This delay can hinder timely reporting and response, and potentially exacerbate the impact of a breach on individuals' rights.

Another great example is the OECD Guidelines on Information Exchange. The guidelines emphasize the importance of protecting taxpayer information during the exchange of tax data between countries. For instance, Article 26 of the OECD Model Tax Convention allows states to refrain from providing information that would disclose the trade, business, or professional secrets of taxpayers.

However, these guidelines lack specific, enforceable standards for data protection during information exchanges which can lead to varying interpretations and implementations across jurisdictions. The guidelines also fail to address the complexities of cross-border data transfers, especially in jurisdictions with varying levels of data protection. They also fail to establish clear accountability structures for countries that fail to protect taxpayer information adequately.

³⁶ Esther Huiskers-Stoop, Almut Breuer and Mark Nieuweboer, 'Exchange of Information, Tax Confidentiality, Privacy and Data Protection from an EU Perspective' (2022) 15 *Erasmus Law Review* 86.

³⁷ European Union, 'General Data Protection Regulation (GDPR)' (*General Data Protection Regulation (GDPR)*2018) <<https://gdpr-info.eu/>>

Without consequences for non-compliance, there is little incentive for countries to prioritize data protection in their tax information exchanges.

While the guidelines emphasize the importance of protecting sensitive data, they do not sufficiently address the rights of taxpayers regarding their personal information. This situation is further worsened by the fact that the guidelines do not address any risk associated with automation technologies and the potential for automated decision-making to infringe on taxpayer rights. This includes the right to be informed about how their data is used and the right to contest decisions made by AI systems.

b. Unethical practices

Ethical fairness is the backbone of the legal profession.³⁸ Thus, proposals to implement AI tools in tax compliance naturally raise ethical concerns. The novelty of these technologies and their lack of precedence further raise concerns about the consistent ethical standards of their implementation. This calls for the examination of the Principles of Proportionality, Transparency, and Data Governance in International Law.

The principle of proportionality is fundamental in balancing individual rights against the interests of the state or society. It requires that any limitation on rights, such as privacy, must be necessary and proportionate to the intended objective. This means that for data protection, the collection process must be proportionate to the purpose for which it is intended, ensuring that unnecessary data is not collected or retained. However, AI algorithms are designed to prioritize data-driven insights that can override individual rights. For instance, tax authorities might use AI to analyze patterns in taxpayer behavior, and still gather personal data that is not directly relevant to tax obligations. This can infringe on privacy rights and violate the proportionality principle.

The principle of transparency is key to fostering trust between data subjects and organizations that handle the data, in this case, the taxpayers and the tax authorities. This principle mandates that individuals should be informed about how their personal data is collected, used, and shared. For example, the GDPR emphasizes the need for data processing to be lawful, fair, and transparent, such that individuals are aware of their rights and the use of their data. Unfortunately, there are no limits to how AI algorithms can collect and process data. This can

³⁸ Jingwei Xu, Zhengmin Li and Siyu Li, 'Legal Ethics and Professional Responsibility in the Legal Profession' (2024) 190 SHS web of conferences.

therefore hinder transparency, such that taxpayers are not informed about how their data is processed.

Lastly, data governance covers the frameworks, policies, and practices that organizations implement to manage data effectively and responsibly. This principle emphasizes accountability and compliance with relevant laws and regulations. Good data governance ensures that data is handled ethically, securely, and in accordance with legal standards. This principle is crucial for maintaining the integrity of data management processes and protecting individuals' rights. With AI, however, the algorithm may not always comply with existing data governance frameworks and lead to potential breaches of data protection laws.

c. Legal misinterpretation

Tax laws and regulations are intricate, and their interpretation and application require some level of legal training and expertise.³⁹ Tax laws may also be subject to varying precedents, creating complexity around their interpretation and implementation.⁴⁰

The role of customary international law is a major concern in this regard as its nature and application are often misunderstood. Some taxpayers and even states assume that customary law is less binding than treaty law. However, customary international law is derived from consistent state practice and is considered legally binding on all states, provided they have not objected to the practice. This misunderstanding leads to the erroneous belief that states can ignore customary norms without consequence. Since AI is programmed to analyze and interpret tax laws. It can be programmed based on treaty laws that do not adequately incorporate customary practices. This will provide misleading guidance to taxpayers, which can lead to non-compliance and legal repercussions.

Another popular misinterpretation is human rights obligations under international human rights laws. Some groups argue that these laws are merely aspirational and do not impose concrete obligations on states. In reality, however, many human rights treaties create binding obligations for states to respect, protect, and fulfill the rights of individuals. The misconception that these laws are optional can lead to inadequate protection for vulnerable populations. If AI tools incorporated in international tax laws are not programmed to account for human rights

³⁹ Matthijs Alink and Victor Van Kommer, 'IBFD, Your Portal to Cross-Border Tax Expertise Title: Handbook on Tax Administration (Second Revised Edition) Handbook on Tax Administration (Second Revised Edition)' (2016) <[https://www.ibfd.org/sites/default/files/2021-12/15_090_Handbook_on_Tax_Administration_\(Second%20Revised%20Edition\)_final_web_0.pdf](https://www.ibfd.org/sites/default/files/2021-12/15_090_Handbook_on_Tax_Administration_(Second%20Revised%20Edition)_final_web_0.pdf)>

⁴⁰ Mesfin S Biresaw and Umesh S A, 'The Impacts of Artificial Intelligence on Research in the Legal Profession' (2022) *International Journal of Law and Society* 53.

obligations, they will recommend tax policies that overlook the protection of vulnerable populations. This could lead to policies that exacerbate inequality and fail to fulfill states' obligations to respect and protect individual rights.

Transfer pricing is another popular example in this regard. The rules of transfer pricing are critical in international tax law because they are the standards that determine arm's length pricing for transactions between related entities. It is, however, highly misunderstood because it fluctuates between local laws and international standards. The trickle-down effect of this misunderstanding leads to misconceptions in applicability, varying perceptions of tax avoidance, and variability in enforcement. Since AI relies on historical data, its integration in international tax may exclude specific local regulations and recent changes in international standards. This can result in incorrect pricing strategies and payments.

d. Compatibility and integration hitches

International tax systems already exist independently, especially in digital formats stored in the cloud.⁴¹ Hence, the attempt to supplement already existing international tax compliance methods with AI requires the integration of both systems. To effectively integrate AI technologies with existing tax compliance systems and avoid workflow disruptions, there is a need for a holistic review of their compatibility, data migration processes, and staff training. Effectively integrating AI technologies into existing tax systems requires the migration of large volumes of data from existing records to new platforms. This can be a complex task, depending on the volumes of data to be transferred.

7.0. Recommendations to Leverage Artificial Intelligence in International Tax Compliance

Multiple studies have shown that AI can boost international tax compliance.^{42,43} With increased efficiency, improved accuracy, and enhanced risk management, there can be tremendous progress in international tax compliance. Here are a few recommendations on how states can maximize AI for effective international tax compliance:

a. Data integration and standardization

⁴¹ Daniel Bunn, Elke Asen and Cristina Enache, 'Digital Taxation around the World' (2020) <<https://files.taxfoundation.org/20200527192056/Digital-Taxation-Around-the-World.pdf>>.

⁴² Islamiah Kamil, 'Influence Artificial Intelligence Technology for E-Filing and Digital Service Tax (DST) in Tax Administration on Tax Compliance' (2022) 4 <<https://ijmssr.org/paper/IJMSSR00616.pdf>>

⁴³ Zhuowen Huang, 'Discussion on the Development of Artificial Intelligence in Taxation' (2018) 08 American Journal of Industrial and Business Management 1817.

Integration is vital in collecting large volumes of data, while standardization has proven to be an effective method for unifying these data sets.⁴⁴ Thus, integrated and standardized data can ease the burden of sharing information across borders. This will allow tax authorities to collaborate and exchange data more efficiently and improve the identification of international tax risks and non-compliance.

When international tax data are integrated and standardized, AI systems will be able to effectively and efficiently analyze tax information. This will enable AI tools to swiftly identify patterns, anomalies, and potential risks and then inform tax authorities to take proactive measures to detect potential tax evasion schemes and identify non-compliant taxpayers across jurisdictions.

b. Collaboration between tax authorities

Effective data integration and standardization are only possible when tax authorities agree to collaborate and share information.⁴⁵ This study infers from the World Bank 2020 report that tax authorities could also exchange insights on best practices for using AI for tax compliance. By sharing their experiences and successful strategies, tax authorities can learn from each other and implement effective measures to enhance domestic and international tax compliance. By making collaborative efforts to ensure international tax compliance, authorities can share AI tax audit techniques, risk assessment methods, and strategies.

Through these partnerships, tax authorities can share feedback on the effectiveness of tax-oriented AI tools. This feedback will help AI developers and researchers gauge the effectiveness of their AI tools and make improvements where necessary.

This collaboration can also enhance cross-border enforcement efforts. By sharing information about the tax operations of multinational corporations, tax authorities can gain insights into potential tax risks and non-compliance. This will enable them to enforce international tax laws effectively and reduce the occurrence of tax evasion.

c. Human intervention and oversight

⁴⁴ Abdulaziz Aldoseri, Khalifa N Al - Khalifa and Abdel Magid Hamouda, 'Re-Thinking Data Strategy and Integration for Artificial Intelligence: Concepts, Opportunities, and Challenges' (2023) 13 Applied Sciences 7082 <<https://www.mdpi.com/2076-3417/13/12/7082>>

⁴⁵ World Bank, 'Exchange and Collaboration with Tax Administrations PART II KEY INSTRUMENTS for FIGHTING CORRUPTION' (2020) <<https://thedocs.worldbank.org/en/doc/336501611673567394-0090022021/original/ExchangeandCollaborationwithTaxAdministrations.pdf>>

AI tools can help tax professionals deliver value within a very limited timeframe. However, it can also be wrongly misconstrued to replace human expertise.⁴⁶

Having been trained to effectively utilize AI tax compliance tools, the authorities must be able to educate taxpayers on AI-based compliance tools. This will require them to provide sufficient information about the decision-making process of the AI technology so that taxpayers can understand and act upon its compliance measures.

On one hand, tax authorities need to explain the decisions of AI systems; on the other hand, they must encourage taxpayers to challenge the decisions of these AI systems if need be. Thus, this training must aid taxpayers to be able to detect and report inaccuracies in tax calculations or request a cancellation. Taxpayers should have the right to seek review by an official in cases of disputes with AI-based decisions. Their right to human intervention should allow them to have their cases reviewed by a human expert who can consider the specific circumstances and provide a fair assessment.

Having tax officials intervene in AI disputes ensures that tax decisions are not solely reliant on automated processes and that taxpayers can challenge decisions that they believe to be incorrect or unfair. This is pertinent to maintaining trust, ensuring fairness, upholding the rights of taxpayers, and maintaining fair tax implementation.

d. Consistent monitoring and updates

While AI systems can be automated, they can only operate optimally for a limited time.⁴⁷ Hence, regular monitoring and updating of AI systems are crucial. Clear guidelines on the use of AI in data processing should be established. Policymakers must develop specific frameworks that outline how AI can be deployed while ensuring compliance with GDPR.

As tax regulations continue to evolve, it is imperative that AI tools designed to ensure tax compliance are also updated. Tax authorities can ensure up-to-date AI algorithms by frequently incorporating new tax laws and their interpretations into their programs. This will enable AI systems to provide timely and relevant information to taxpayers, reduce compliance gaps, and enhance overall tax compliance.

⁴⁶ T Fuchs, 'Human and Artificial Intelligence: A Clarification' (2021) Oxford University Press eBooks 13.

⁴⁷ Matthew U Scherer, 'Regulating Artificial Intelligence Systems: Risks, Challenges, Competencies, and Strategies' (2016) 29 Harvard Journal of Law & Technology.

Upgraded AI systems can provide reliable data on the implications of new tax laws.⁴⁸ This will aid tax authorities and taxpayers in making informed decisions, ensuring their actions comply with international tax policies. Updated AI systems can also become well-documented audit trails for relevant stakeholders. By analyzing complex tax codes, AI systems can generate well-documented recommendations on effective tax compliance.

e. Adoption of a risk-based approach

A risk-based approach is often used by organizations and institutions to effectively allocate available resources and mitigate potential risks.⁴⁹ By adopting a risk-based approach that aids AI in tax compliance, tax authorities can recognize and focus the available resources on high-risk areas and taxpayers. By prioritizing high-risk areas and taxpayers, tax authorities can allocate their resources more efficiently, focusing on cases that require closer scrutiny and intervention, prioritizing their enforcement efforts, and focusing on cases with a higher likelihood of non-compliance.

With a risk-based approach, AI systems will constantly monitor financial transactions and tax-related data. Thus, the system is able to flag any inconsistencies or unusual tax compliance patterns based on historical data, industry trends, and taxpayer behavior. By understanding the specific risks associated with different taxpayers and industries, tax authorities can further develop targeted compliance strategies.

f. International standards and guidelines

The integration of AI tools with tax systems has raised concerns about privacy and data security.⁵⁰ This is one of the reasons a court in the Netherlands halted the prediction and prevention of non-tax compliance via machine learning algorithms.⁵¹ This case highlights the importance of a balance between verifiability and the taxpayer's privacy rights. This is where international guidelines and standards come in.

In order to maximally achieve data privacy, tax authorities must comply with relevant data protection regulations by adhering to principles of legality, fairness, transparency, and purpose

⁴⁸ Cas Milner and Bjarne Berg, 'Tax Analytics Artificial Intelligence and Machine Learning-Level 5' (2015) <<https://www.pwc.no/no/publikasjoner/Digitalisering/artificial-intelligence-and-machine-learning-final1.pdf>>.

⁴⁹ O Zhemchugova and V Levshina, 'The Risk-Based Approach in Organization Quality Management Systems' (2024) *Revista Galega de Economía* 1.

⁵⁰ Ziva Rubinstein, 'Taxing Big Data: A Proposal to Benefit Society for the Use of Private Information' (2021) 31 *Fordham Intellectual Property, Media and Entertainment Law Journal* 1199 <<https://ir.lawnet.fordham.edu/iplj/vol31/iss4/6>>.

⁵¹ 'Rechtspraak.nl - Zoeken in Uitspraken' (<https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:RBDHA:2020:1878>).

limitation. For example, the General Data Protection Regulation (GDPR) of the European Union has outlined the processes for documenting the personal data of taxpayers and emphasized the need for lawful and transparent data processing (Mondschein & Monda, 2019). Other domestic examples similar to the GDPR include Singapore's Personal Data Protection Act (PDPA), implemented in 2014; Brazil's General Data Protection Law (LGPD), which was effected in 2020; and South Africa's Protection of Personal Information Act (POPIA), which became effective in 2021.

To ensure the ethical and sustainable development of AI tools, the European Union has established the European AI Office (Press Corner). The office is saddled with the responsibility of participating in international dialogue and cooperation on AI governance and creating strict guidelines and standards. States that fall short of these provisions should face dire consequences as a deterrent to others.

Conclusion

AI can significantly enhance the efficiency and effectiveness of tax authorities. By maximizing AI tools to analyze data and recognize patterns, tax authorities can recognize high-risk areas and taxpayers early enough to implement effective mitigation measures. AI is also pertinent in automating repetitive tasks and reducing human errors in international tax compliance processes. It can also provide tailored advice and recommendations that will help taxpayers understand their tax obligations and reduce their risk of non-compliance.

Despite its benefits, the integration of AI into international tax compliance has raised ethical and regulatory concerns. These are hinged on issues such as transparency, fairness, and privacy. However, with data integration and standardization, collaboration between tax authorities, human intervention and oversight, consistent monitoring and updates, adoption of a risk-based approach, and international standards and guidelines, AI can create consistency and interoperability in international tax compliance across jurisdictions.