

Artificial Intelligence in Corporate Tax Administration: Emerging Legal Challenges and the Need for Regulation

Jaya Priya S¹ and Dr. Sreeja BG²

¹2nd Year, LL.M – Corporate & Commercial Law, ²Associate Professor

School of Law, Hindustan University, Padur, Chennai, India

¹priyasubramani507@gmail.com, ²sreejabg@hindustanuniv.ac.in

Abstract: *The increasing use of Artificial Intelligence (AI) in corporate tax administration has introduced a set of unique challenges. As governments look towards AI-based technologies, machine learning systems, automated risk assessment tools, data analytics, and algorithmic decision-making mechanisms to address the problem of tax evasion, identify areas of non-compliance, and enhance tax collection efficiency, there arise serious questions about how to ensure legal accountability while maintaining the effectiveness of such initiatives. With the ever-increasing sophistication of corporate taxpayer structures and the corresponding rise in their data-intensity, AI offers tax authorities a powerful means at their disposal to uncover anomalies within financial flows and mitigate against related risks. But where this technology begins to replace more traditional forms of manual audit processes – especially where algorithms are used to make decisions regarding taxpayer status and obligations – important issues around transparency, accountability and the nature of taxpayer rights become paramount considerations. This paper explores the implications arising out of the growing involvement of artificial intelligence as part of tax administration strategies and identifies several ways forward to deal with some of the resulting complexities. These include advocating for increased transparency in algorithmic processes, implementing mechanisms for providing explanations, introducing independent auditing of AI systems, ensuring adequate levels of data protection, and assigning clearly defined responsibilities for AI-assisted decisions. A key focus throughout the discussion is on achieving balance between the use of cutting-edge technologies and the need for upholding basic legal rights.*

Keywords: Artificial Intelligence, Corporate Tax, Tax Administration, Algorithmic Decision-Making, Taxpayer Rights, Data Protection.

I. INTRODUCTION

This section should introduce the rapid development of Artificial Intelligence and its increasing relevance to modern tax administration. It can explain how tax authorities are moving from traditional manual examination towards automated data analysis, predictive models, machine learning, and digital compliance systems. The introduction should establish that corporate taxation is particularly suitable for AI because corporate taxpayers generate substantial amounts of financial, transactional, accounting, and cross-border data. The section should also identify the central legal problem: although AI can make tax administration more efficient, the use of automated systems may affect legal rights and procedural protections available to taxpayers. The research should therefore examine whether existing tax and administrative laws are capable of addressing AI-driven decision-making or whether new regulatory safeguards are required.



Conceptual Understanding of Artificial Intelligence in Corporate Tax Administration:

This section should explain the meaning and practical application of AI in the corporate taxation environment.

Meaning and development of artificial intelligence (AI):

A discussion on what AI comprises as an umbrella term of technologies that enable data to be analysed and processed, patterns recognised, predictions made and decisions supported/performed by machines that are normally associated with human intelligence.

AI-based tools used by tax authorities:

An examination of various technologies including machine learning, predictive analytics, natural language processing, automated risk scoring, anomaly detection, intelligent document analysis etc., which are being utilised by tax authorities in their operations.

AI and transformational effect on corporate tax administration:

Explanation on the way in which AI will support tax authorities in identification of unusual transaction, inconsistency in corporate returns, selection of taxpayers for audit, examination of transfer pricing risks, identification of potential tax evasion and improvement of administrative efficiency.

II. EMERGING APPLICATIONS OF AI IN CORPORATE TAX ADMINISTRATION:

Automated Taxpayer Risk Assessment: Analyse how algorithms can classify companies according to perceived levels of tax compliance risk. Discuss the benefits of focusing limited administrative resources on taxpayers considered more likely to present compliance concerns.

Detection of Tax Evasion and Fraud: Explain how AI can identify unusual transaction patterns, inconsistencies between corporate declarations and third-party information, suspicious financial movements, or other indicators of potential non-compliance.

AI-Assisted Tax Audits: Discuss the possibility of AI selecting taxpayers for audit and assisting tax officers in analysing large volumes of accounting and financial information.

AI in Transfer Pricing and International Taxation: Examine how AI may assist tax authorities in identifying unusual related-party transactions, potentially aggressive transfer-pricing arrangements, and inconsistencies in multinational corporate structures.

Automated Communication and Taxpayer Services: Consider using AI powered systems to answer queries from taxpayers, process applications, identify missing information and provide compliance guidance

Legal Challenges Arising from AI-Based Corporate Tax Administration

The current section will serve as one of the primary analytical ones because I plan to go beyond discussing the technological benefits of adopting AI technology and discuss its legal implications.

Transparency and Explainability of Algorithmic Decisions

An area with particular importance concerns difficulties associated with explaining decisions made using complex AI systems. For instance, corporate taxpayers might be notified about their classification as high-risk (or selection for examination) but are not provided with an explanation of how this determination was arrived at. This could form the basis for research on links between algorithmic transparency and more conventional principles relating to provision of reasons for significant determinations under general administrative law.

Due Process and Procedural Fairness

AI-assisted tax administrations need to ensure that their application conforms to principles of procedural fairness. Taxpayers should not be subjected to adverse consequences simply because an automated system identifies a certain pattern. The paper will consider the issue of whether taxpayers are entitled to receive notification whenever the use of artificial intelligence (AI) has significantly influenced a tax-related decision as well as having access to explanations of the relevant factors. In addition, taxpayers may also seek opportunities for correcting inaccuracies and making representations before an adverse decision becomes finalized.



Human Oversight and Accountability

AI systems should assist tax officials rather than eliminate meaningful human responsibility in high-impact decisions. A major legal question concerns responsibility when an AI-assisted decision is incorrect. If an algorithm produces an erroneous tax assessment, who is accountable—the tax officer, the tax authority, the software developer, or another party. The research should argue for clearly defined institutional responsibility and mandatory human review in decisions capable of producing significant legal or financial consequences.

Data Protection and Privacy

The extent of use that AI-based systems are able to make of corporate tax administrative data will depend on their availability – both for corporate tax authorities themselves and those agencies which supply them with data about corporations (such as financial, transactional, ownership structure, employment or banking data) or have access to it through some other means including governmentally or internationally sourced data.

The collection and processing of such information creates concerns regarding:

- lawful collection of taxpayer information;
- purpose limitation;
- data minimisation;
- retention periods;
- access controls;
- sharing with third parties;
- cybersecurity; and
- unauthorised use of taxpayer information

Accuracy, Bias and Discrimination

The AI learns on basis of this historical data. There might be cases where the data has inaccuracies or systematic patterns which negatively impact certain taxpayer groups. Although corporate taxpayers are legal entities, there could be implications of an algorithmic tax system for other stakeholders including directors, shareholders, employees, contractors, associated businesses etc. The authors propose that the paper will explore if tax authorities need to carry out regular testing of their AI based systems for discriminatory outcomes, incorrect classifications, and disproportional application.

III. AI, CORPORATE TAXPAYER RIGHTS AND ADMINISTRATIVE LAW

This section should place AI within the broader framework of taxpayer rights.

Right to Know the Basis of a Tax Decision: Corporate taxpayers should be able to understand why they have been selected for an audit or subjected to additional scrutiny.

Right to Correct Incorrect Information: An AI system can generate an inaccurate risk assessment when the underlying data is incomplete, outdated, or incorrectly associated with a taxpayer. There should therefore be a mechanism through which taxpayers can identify and correct material inaccuracies.

Right to Human Review: The paper should examine whether taxpayers should have an explicit right to request human review where an automated system materially contributes to an adverse tax decision.

Right to Appeal and Judicial Review: Traditional tax systems generally provide mechanisms for administrative objections, appeals, and judicial review. AI should not weaken these protections.

The availability of judicial review becomes particularly important where taxpayers believe that an algorithm was improperly designed, applied to inaccurate data, or used without adequate human supervision.

Artificial Intelligence and Confidentiality of Corporate Tax Information

Tax information is generally regarded as highly sensitive. AI systems increase the amount and complexity of information that may be processed by tax authorities. This section should examine the legal duty of tax authorities to preserve taxpayer confidentiality and the risks associated with:

- cloud-based AI systems;



- external technology providers;
- cross-border data transfers;
- unauthorised employee access;
- cybersecurity breaches; and
- secondary use of tax information.

A central issue is whether tax authorities should be permitted to use taxpayer information collected for one statutory purpose for unrelated AI training or predictive purposes.

Liability for Errors in AI-Assisted Tax Decisions

A tax authority may argue that an AI system merely assists an officer, while the taxpayer may argue that the officer relied excessively upon an automated recommendation. The paper should analyse how existing legal principles can determine responsibility for erroneous assessments, unlawful audits, or wrongful enforcement actions.

Responsibility of the Tax Authority: The tax authority should remain legally responsible for official decisions even where AI tools are used internally.

Responsibility of Public Officials: Officials should retain responsibility for decisions that require professional or legal judgment.

Responsibility of Technology Providers: Where software defects or negligent design materially contribute to harm, contractual and regulatory mechanisms may be necessary to determine the responsibility of technology providers.

Cybersecurity Risks Associated with AI-Based Tax Administration

AI-driven tax systems create an attractive target for cyberattacks because they may contain extensive financial and corporate information.

This section should analyse risks including unauthorised access, manipulation of training data, attacks designed to distort algorithmic outcomes, theft of taxpayer information, and disruption of tax administration systems.

The paper should argue that AI regulation in taxation cannot be separated from cybersecurity regulation. Strong access controls, security testing, audit trails, incident-response mechanisms, and regular system assessments are necessary.

IV. NEED FOR A COMPREHENSIVE REGULATORY FRAMEWORK

Rather than prohibiting AI in taxation, regulation should establish principles governing when and how AI can be used.

Principle of Legality: Tax authorities should use AI only where its application has an adequate legal basis and falls within the authority granted to the relevant institution.

Principle of Transparency: Taxpayers should receive appropriate information regarding the use of AI in decisions that materially affect them.

Principle of Human Oversight: Significant tax decisions should remain subject to meaningful human supervision.

Principle of Accountability: A clearly identifiable public authority should remain responsible for AI-assisted tax decisions.

Principle of Data Protection: Taxpayer data should be collected, processed, stored, and shared according to clearly defined legal safeguards.

Principle of Proportionality: AI should not be used in a manner that imposes excessive surveillance or enforcement in relation to the legitimate objective being pursued.

Principle of Accuracy: Tax authorities should regularly evaluate AI systems and correct errors in datasets, models, and risk classifications.

V. REGULATORY APPROACHES FOR AI IN CORPORATE TAX ADMINISTRATION

Risk-Based Regulation: AI applications involving low-risk administrative tasks may require fewer controls, whereas systems influencing audits, assessments, penalties, or enforcement should be subject to stronger safeguards.

Mandatory Algorithmic Impact Assessments: Before deploying high-impact AI systems, tax authorities could be required to evaluate potential effects on taxpayer rights, privacy, accuracy, fairness, and administrative accountability.



Independent Algorithmic Audits: Independent experts could periodically examine whether AI systems operate accurately, lawfully, securely, and without unacceptable discriminatory effects.

Record-Keeping and Audit Trails: Authorities should maintain sufficient records to establish how AI-assisted decisions were generated and how human officials considered the resulting recommendations.

Regulatory Sandboxes: Governments could establish controlled environments in which innovative tax technologies are tested before being introduced into high-impact tax decision-making.

The Indian Context: AI and Corporate Tax Administration

A separate section should examine the Indian legal and institutional context.

The discussion may consider the increasing digitisation of India's tax administration, the use of data analytics in compliance management, and the wider adoption of technology by tax authorities.

The section should examine the interaction between AI-based tax administration and principles contained in Indian tax law, administrative law, constitutional protections, privacy jurisprudence, and emerging digital governance regulation. Particular attention can be given to the principles of equality, non-arbitrariness, procedural fairness, privacy, and the right to an effective legal remedy.

The paper should also consider whether existing Indian legal frameworks provide sufficient safeguards for algorithmic decision-making or whether specific guidelines are necessary for the use of AI by tax authorities.

VI. INTERNATIONAL PERSPECTIVES ON AI REGULATION AND TAX ADMINISTRATION

- AI-driven tax administration is not exclusively a domestic issue. Corporate taxation increasingly involves multinational enterprises, cross-border transactions, international information exchange, and digital business models.
- This section can examine international developments concerning responsible AI, digital governance, data protection, algorithmic accountability, and tax administration.
- The research may consider whether international principles could contribute to common standards for AI use by tax authorities, particularly where multinational enterprises are subject to multiple jurisdictions.

Balancing Tax Administration Efficiency with Taxpayer Rights

The paper should recognise that AI provides genuine advantages for governments.

AI can potentially:

- reduce administrative costs;
- identify tax risks more quickly;
- improve consistency;
- detect sophisticated tax evasion;
- assist tax officials in processing large datasets; and
- improve voluntary compliance.

The appropriate regulatory objective should therefore be to achieve a balance between efficient tax collection and protection of legal rights. The section should argue that a tax administration that is technologically advanced but legally unpredictable may undermine taxpayer confidence and voluntary compliance.

Recommendations for a Future Regulatory Framework

The paper can provide the following recommendations:

- Create clear statutory rules about the use of artificial intelligence (AI) by tax authorities;
- Require human review for high-impact tax decisions; and
- Give taxpayers meaningful explanations about significant AI-assisted decisions.
- Create procedures for challenging algorithmic classifications. Require regular independent audits of high risk AI systems. Strengthen data-protection and cybersecurity requirements.
- Maintain detailed records of AI assisted decision making;
- Establish responsibility over AI related errors within the tax authorities;



- Undertake algorithmic impact assessments prior to deployment of high risk systems;
- Develop specialised expertise among tax officials on issues of AI governance and digital law.
- Make sure that AI systems cannot displace legal requirements for human judgment.
- Develop international co-operation on issues relating to cross-border AI-based tax administration.

VII. CONCLUSION AND SUGGESTION

The emergence of Artificial Intelligence (AI) provides opportunities for improving corporate tax administration. Through the analysis of large volumes of financial data, AI technologies allow detecting tax risks, identify possible cases of tax evasion, and assist tax authorities in making tax administration more efficient. However, increased usage of AI creates numerous legal issues related to the need for ensuring transparency and accountability in AI operations, protecting taxpayers' private data, maintaining procedural fairness, ensuring accuracy, preventing cyberattacks, and upholding taxpayer rights. Therefore, there should be specific provisions ensuring proper human control over AI-assisted decisions concerning tax matters. Corporate taxpayers should be provided with opportunities for understanding, questioning, and challenging decisions made using artificial intelligence that significantly affect their tax liabilities. Thus, the development of a risk-based regulatory framework which implies establishing rules providing transparency and human supervision, protecting taxpayer data, performing independent audits of AI systems, ensuring accountability, and developing appealing mechanisms is needed. The overall goal should be the provision of strong regulations on utilizing Artificial Intelligence in corporate tax administration that will prevent replacing the principles of the rule of law, fairness, and due process. The implementation of proper measures regulating AI technology would help balance innovations in the field of taxation against the right of every taxpayer to enjoy various legal protections. Governments should develop a comprehensive regulatory framework governing the use of Artificial Intelligence in corporate tax administrations. In other words, Artificial Intelligence technologies should primarily serve as assisting tools rather than replace major decisions concerning tax assessments, audits, penalties, investigations, and enforcement procedures. Corporations should be supplied with enough details regarding the decisions made via AI assistance and offered possibilities to correct wrong data and contest these decisions within certain legal proceedings. A number of adequate actions should be undertaken in order to implement robust mechanisms that guarantee the security of taxpayer information, protect against hacking activities, perform frequent independent analyses of AI systems, and measure likely chances of biasedness and discrimination. Finally, tax authorities need to give appropriate trainings for their employees allowing them comprehending and evaluating recommendations generated by AI technologies. Besides, those companies whose AI programs might considerably influence the fundamental rights of corporations should receive additional requirements towards higher levels of AI safeguards. International cooperation should also be encouraged to develop common standards for the responsible use of AI in cross-border corporate taxation.

REFERENCES

1. **Artificial Intelligence (AI)** – OECD, *Recommendation of the Council on Artificial Intelligence* (OECD 2019, updated 2024).
2. **Corporate Tax Administration** – OECD, *Tax Administration 3.0: The Digital Transformation of Tax Administration* (OECD Publishing 2020).
3. **Machine Learning** – OECD, *Governing with Artificial Intelligence* (OECD Publishing 2025).
4. **Algorithmic Decision-Making** – Regulation (EU) 2024/1689 (Artificial Intelligence Act).
5. **Transparency** – OECD, *Recommendation of the Council on Artificial Intelligence* (OECD 2019, updated 2024).
6. **Explainability** – OECD, *Governing with Artificial Intelligence* (OECD Publishing 2025).
7. **Procedural Fairness** – *Maneka Gandhi v Union of India* (1978) 1 SCC 248.
8. **Natural Justice** – *Maneka Gandhi v Union of India* (1978) 1 SCC 248.
9. **Human Oversight** – Regulation (EU) 2024/1689 (Artificial Intelligence Act), art 14.



10. **Accountability** – OECD, *Recommendation of the Council on Artificial Intelligence* (OECD 2019, updated 2024).
11. **Privacy** – *Justice KS Puttaswamy (Retd) v Union of India* (2017) 10 SCC 1.
12. **Data Protection** – Digital Personal Data Protection Act 2023.
13. **Taxpayer Rights** – OECD, *Tax Administration 2025* (OECD Publishing 2025).
14. **Algorithmic Bias** – UNESCO, *Recommendation on the Ethics of Artificial Intelligence* (UNESCO 2021).
15. **Discrimination** – Constitution of India, art 14.
16. **Right to Information/Explanation** – Regulation (EU) 2016/679 (General Data Protection Regulation), arts 13–15.
17. **Automated Decision-Making** – Regulation (EU) 2016/679, art 22.
18. **Cybersecurity** – OECD, *Governing with Artificial Intelligence* (OECD Publishing 2025).
19. **Risk-Based Regulation** – Regulation (EU) 2024/1689 (Artificial Intelligence Act).
20. **Proportionality** – *Justice KS Puttaswamy (Retd) v Union of India* (2017) 10 SCC 1.
21. **Judicial Review** – *Maneka Gandhi v Union of India* (1978) 1 SCC 248.
22. **Non-Arbitrariness** – *E P Royappa v State of Tamil Nadu* (1974) 4 SCC 3.
23. **Transfer Pricing** – OECD, *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* (OECD Publishing 2022).
24. **Tax Evasion and Fraud Detection** – OECD, *Artificial Intelligence in Tax Administration* (OECD Publishing 2025).
25. **Algorithmic Audit** – OECD, *Governing with Artificial Intelligence* (OECD Publishing 2025).

