

A STUDY ON RESHAPING TAX COMPLIANCE, ENFORCEMENT AND TAXPAYER SERVICES THROUGH ARTIFICIAL INTELLIGENCE

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ABSTRACT

Artificial intelligence (AI) is a disruptive technological innovation set to change tax compliance, enforcement, and taxpayer services for the better by improving monitoring, detecting tax fraud, targeting audits, boosting revenue, and providing high-quality assistance to taxpayers. This study aims to examine how exactly AI can be applied to transform tax compliance, enforcement, and taxpayer services for the better and what challenges it faces in doing so. Predictive analytics, electronic invoicing, automated risk assessment, chatbots, natural language processing, and pre-filled tax forms are some of the AI solutions that can be integrated into tax systems to help tax authorities process vast amounts of data faster and more accurately than ever before, thereby reducing errors, detecting fraud, targeting audits more efficiently, and offering better taxpayer assistance. At the same time, the review finds that AI can make tax administrations more accountable, efficient, and effective while reducing compliance costs and revenue losses due to fraudulent activities. Therefore, the study recommends enhancing human decision-making capabilities through AI rather than relying solely on automated processes and emphasizes the importance of effective governance, accountability, transparency, taxpayer protection, and strong cybersecurity infrastructure in ensuring secure and trustworthy digital taxation systems.

Keywords: Artificial intelligence, Tax compliance, Tax enforcement, Taxpayer services, Predictive analytics, Tax fraud, Tax administration, Effective governance, and Digital taxation.

INTRODUCTION

Tax administration presents a major challenge to governments worldwide, because taxation is a crucial source of revenues for the state. Nevertheless, tax administration faces a number of problems, among which are

tax evasion, fraudulent refund claims, understatement of income, errors in returns, late payments, unreported transactions, and the rise of digitalization of business processes. Traditional tax administration relies on labor-intensive verification procedures, audits, paper-based processing, and analytical reporting, which often prove to be inadequate in the modern economy, where a huge amount of data is generated on a daily basis. However, the use of artificial intelligence can fundamentally change tax administration, by enabling effective analysis of big data sets, automation of processes, and provision of digital taxpayer services. The paper sheds light on the possibilities of implementing AI in modern tax administration systems across jurisdictions. The importance of applying AI in taxation goes beyond improving tax revenues, as it can make honest taxpayers' compliance less time-consuming and costly. Thus, tax administration can build a sustainable system, based on voluntary compliance, aided by AI-driven processes and digital services, such as auto-populated returns, reminders, and chatbots, while being mindful of net privacy, equal treatment, procedural fairness, and access to redress and remedy.

REVIEW OF LITERATURE

- **OECD (2025)**, conducted a study on the use of artificial intelligence in tax administration and revealed that tax agencies globally are already using it in tax fraud detection, taxpayer risk assessment, administrative decision-making, taxpayer service, and pre-filled tax return preparation. The report demonstrates how the technology can be used to scan data, identify patterns, and target enforcement actions to ensure compliance.
- **Aslett et al. (2024)**, presented a study that provides an overview of the application of artificial intelligence in tax and customs. The authors discussed the application of technologies like machine learning, predictive analytics, natural language processing, fraud detection, segmentation, audit selection, and virtual assistants. They concluded that AI could increase administration efficiency while also helping authorities identify potential compliance risks early.
- **International Monetary Fund (2024)**, explored the role of analytics in compliance risk management practices. The publication sheds light on ways through which tax administrations could leverage data analysis to improve compliance planning, taxpayer profiling, and audit case selection. While the article does not explicitly mention AI, it provides critical nuances regarding the application of analytics in compliance that could support the implementation of machine learning processes.
- **Mucolli et al. (2024)**, conducted an analysis of the impact of digital taxation, artificial intelligence, machine learning, and blockchain on tax compliance behavior using a systematic review method. The study found that digital technologies could increase compliance by making more transactions visible, streamlining tax processes, and facilitating faster exchange of information between the authority and taxpayers.
- **Milenković (2022)**, conducts research on AI in the context of tax administration. In particular, this article focuses on the use of artificial intelligence (AI) in tax auditing. The author emphasizes the need to use technology to classify taxpayers, assess risks, detect tax fraud, and select taxpayers for inspection. It concludes that automated analysis of information helps to find the most relevant cases for a tax audit, as well as to identify tax fraud.

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- **International Monetary Fund (2025)**, assessed the impact of generative AI on the compliance-risk analysis in tax and customs administrations. The article explores the potential application of generative AI in processing case files, supporting tax officers in their research, extracting information from documents, and facilitating compliance analysis. The study warns of the risks of hallucination, data leakage, and reasoning non-clarifiability associated with using such technology.
 - **Sajid et al. (2025)**, conduct a study on intelligent tax systems and the role of artificial intelligence in modernizing tax compliance and enforcement practices. The manuscript establishes the relationships between the use of AI, automation of filing processes, detection of fraud, predictive analytics, the creation of electronic records, and enhanced revenue mobilization. The study demonstrates the potential of intelligent tax systems in improving the accuracy and speed of tax administration through the combined application of relevant data sources.
 - **Owens et al. (2025)**, explored AI governance and taxpayer rights in the digital age. Specifically, the authors established the legal and ethical implications of using algorithms in tax administration. Owens et al. argued that the use of algorithms in the tax collection process raises issues of transparency, privacy, equality, explainability, and the right to taxpayer redress. The authors concluded that taxpayers are entitled to the rights they have accrued and sustained that tax administration agencies must answer for the decisions made through the use of algorithms.

STATEMENT OF PROBLEM

Tax authorities should be able to collect taxes from delinquents efficiently while delivering good service to taxpayers. However, in reality, the majority of taxpayers suffer from inconsistent, complicated, slow, paper-based, and error-prone processes and responses. Tax authorities, on the other hand, are frequently stretched too thinly to examine the vast amount of financial data that individuals and companies create. Tax evaders and criminals are becoming increasingly sophisticated in their ability to utilize technology, markets, networks, and various flows of value, making it hard for tax authorities to detect and prosecute them effectively. Random audits of honest taxpayers who do not evade or commit tax fraud are time-consuming and inefficient. Modern technologies such as AI can analyze vast amounts of data, identify, and even forecast fraudulent activities, and provide digital front-end services to millions of consumers.

PURPOSE OF THE STUDY

The aim of this study is to assess how artificial intelligence can digitalize tax administration. The research will consider the connection between the use of AI and the following factors:

- Voluntary compliance.
- Detection of evasion and fraud.
- Effective allocation of resources (audit).
- Minimization of taxpayer errors and costs.
- Enhancement of interaction and service quality.

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- Privacy, equity, transparency, and the right to a hearing.

OBJECTIVE OF THE STUDY

The objectives of the study include

- ✧ Investigating the role of AI in promoting voluntary compliance.
- ✧ Analyzing the use of AI in detecting tax fraud.
- ✧ Studying the ways in which AI-powered services can be used to enhance taxpayer satisfaction.
- ✧ Determining the benefits and limitations of using AI in tax administration.
- ✧ Exploring the ethical and legal risks of using automated systems in tax administration.
- ✧ Suggesting measures to ensure transparency, accountability, and taxpayer-centric governance of AI application.

SCOPE OF THE STUDY

The study covers the application of artificial intelligence in three main areas for taxpayers, for tax audits, and for customer service. Among others, pre-filled returns, electronic filing, error detection, payment reminders, taxpayer education, and personalized compliance communication fall under the first category. Fraud detection, identification of anomalies, risk-based auditing, taxpayer segmentation, network analysis, detection of hidden income, and support of investigations belong to the second. Chatbots, assistants, multilingual support, automated notifications, e-payment support, status inquiries, and personalized help are examples of the third.

RESEARCH METHODOLOGY

In accordance with the objectives, this study is qualitative and descriptive in nature. In conducting this study, secondary data from various resources including OECD, IMF, scholarly articles, policy briefs, technical reports, and publicly available repositories were used. In particular, the application of AI in tax areas was examined, with a focus on major areas of generating benefits from using the technology, as well as possible risks and challenges. Specifically, the following themes were explored:

- ✧ AI and voluntary compliance
- ✧ AI and combating tax fraud
- ✧ AI-driven risk management
- ✧ Digitalization of taxpayer services
- ✧ Privacy and data protection
- ✧ Fairness and explainability
- ✧ Human interaction and taxpayer appeals

RESEARCH DESIGN

The type of research conducted in this study can be classified as descriptive research design because the study aims to describe and explicate the implication of existing AI applications, identify their relationship with digital technology, and assess how these two aspects affect tax administration.

The variables influencing the effect include data quality, digital infrastructure, taxpayer awareness, legal protection, labour, and trust. The study can also be considered exploratory since the application of AI in taxation is still emerging, and new opportunities and challenges will arise with the development of more advanced technologies, such as generative AI and automated systems, which require additional research.

SAMPLING METHOD

This article relies on secondary data, it is possible to apply purposive sampling to select the documents for analysis. The methodology is explained by the relevance of particular sources to the research problem. Specifically, the inclusion criteria involve the proximity of the source subject to artificial intelligence, tax administration, compliance, enforcement, taxpayer services, and taxpayer rights. Therefore, the following resources can be included in the search:

- ◆ OECD reports on AI and tax administration,
- ◆ IMF technical notes and working papers,
- ◆ Academic articles and working papers,
- ◆ Official documents from governments and tax authorities, and
- ◆ Research on digitalisation, tax compliance, and algorithms.

DATA COLLECTION

The study includes the analysis of the documents in order to retrieve the information on the following issues:

- ❖ Current applications of artificial intelligence (AI) in tax administration.
- ❖ Impact on tax compliance and enforcement.
- ❖ Enhancement of taxpayer service quality.
- ❖ Implementation and institutional requirements.
- ❖ Emerging risks, including privacy and bias, transparency, and cybersecurity.
- ❖ Recommendations on responding to risks and implementing AI.

TOOLS FOR ANALYSIS

The tools used for the analysis include researching articles and manuscripts to classify them according to themes such as compliance, enforcement, service, efficiency, privacy, and accountability.

The documents were reviewed to establish patterns and differences regarding the impact of AI on taxpayers and tax authorities. The comparison determined the differences and similarities of applications of AI in the three categories: compliance, enforcement, and taxpayer services. The study established a connection between AI capability, administrative performance, taxpayer aptitude, and trust. Other tools used in an empirical study could be percentage analysis, mean, correlation, regression, and SPSS, or Python data analysis software.

FINDINGS

- ♪ AI-assisted filing can help taxpayers detect errors, identify areas of concern, receive reminders, and ensure easier and faster filing and completion of duties by providing pre-filled information.
- ♪ Additionally, machine learning and analytics can help detect fraudulent refund claims, anomalies, and non-genuine transactions.
- ♪ Chatbots and assistants can help provide first-line support and respond to simple queries instantly and be available to taxpayers outside of regular working hours.
- ♪ Moreover, AI can facilitate communication in multiple languages and help taxpayers understand the procedures better.
- ♪ Additionally, AI can help with classifying, automating, and prioritizing documents and correspondence and help analysts by eliminating some of the more routine tasks.
- ♪ This will free human analysts to handle complex audits, cases, and taxpayer inquiries. The effectiveness of AI is reliant on the accuracy and quality of information and data provided.

SUGGESTIONS

- Tax authorities can start implementing AI in tax collection by introducing few and simple tasks like document classification, alerts, translations, and general assistance.
- Tax authorities can start using AI for such processes as audit selection or enforcement, but it should be done after completing trials that will assess AI's accuracy, absence of discrimination, and other factors that have an impact on inequalities.
- Tax authorities should notify taxpayers of the relevance of AI application every time taxpayers are substantially affected by AI recommendations.
- Governments and tax authorities should ensure that information about tax-related risk flags, claim rejections, and other AI interventions is explained simply and transparently.
- Tax authorities should make sure that all substantial decisions, including assessing the size of taxes, penalties, and liabilities, conducting audits, and denying taxpayer rights, are made by human.
- Tax authorities should ensure that there are accessible procedures allowing for challenging the AI decisions and asking for human involvement.

CONCLUSION

Artificial intelligence could impact tax compliance, enforcement, and taxpayer services. For example, it could be used to make tax compliance easier by providing defaulted forms, guidance, alerts, and support. Second, it could help enforce tax laws by detecting and flagging tax fraud and assessing risks appropriately. Third, it could also improve taxpayer services by providing chatbots, assistants, translation services, and other digital services. The study discovers that AI is not inherently fair, transparent, or accurate. The technology requires adequate data, infrastructure, personnel, security, governance, and procedures to be dependable, trustworthy, and

effective. In addition, poor AI governance may cause issues such as privacy infringements, discrimination, and taxpayer mistrust. Therefore, the study recommends adopting a human-centered AI approach, in which humans perform critical judgment and decision-making while robots execute data-heavy and routine processes.

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