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A STUDY ON USE OF ARTIFICIAL INTELLIGENCE IN CORPORATE GOVERNANCE AND COMPLIANCE MONITORING WITH RESPECT TO CORPORATE TAX COMPLIANCE

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Abstract:

The rapid advancement of Artificial Intelligence (AI) has significantly transformed corporate governance and compliance monitoring frameworks across organizations. In the context of increasing regulatory complexity and strict enforcement of corporate tax laws, AI has emerged as a strategic tool for enhancing accuracy, transparency, and efficiency in tax compliance processes. This study examines the role of Artificial Intelligence in corporate governance and compliance monitoring with specific reference to corporate tax compliance in the Thane region. The research adopts a descriptive research design and utilizes both primary and secondary sources of data. Primary data were collected through a structured questionnaire using a five-point Likert scale, while secondary data were sourced from books, journals, research articles, and regulatory publications. Reliability analysis was conducted to test the consistency of the scale, followed by one-sample t-tests for data analysis. The study incorporates key behavioral and competency variables such as frequency of AI usage, risk tolerance, digital literacy, motivation, consistency, herding behaviour, and financial literacy. The findings indicate that Artificial Intelligence plays a significant role in strengthening corporate governance practices and improving corporate tax compliance by enabling continuous monitoring, reducing human errors, and ensuring regulatory adherence. The study provides valuable insights for corporate decision-makers, tax professionals, and policymakers seeking to leverage AI for effective governance and compliance management.

Keywords: *Artificial Intelligence, Corporate Governance, Compliance Monitoring, Corporate Tax Compliance, Digital Literacy, Risk Tolerance, Thane Region*

Introduction:

The contemporary corporate environment is characterized by heightened regulatory scrutiny, complex tax structures, and increasing expectations for transparency and accountability. Corporate tax compliance has become a critical component of corporate governance, as non-compliance not only attracts financial penalties but also adversely affects corporate reputation and stakeholder confidence. Traditional compliance mechanisms, largely dependent on manual processes and periodic audits, are often inadequate in addressing the volume, velocity, and complexity of modern corporate transactions. In this context, Artificial Intelligence (AI) has emerged as a transformative force capable of redefining corporate governance and compliance monitoring practices.

Artificial Intelligence refers to the use of advanced computational systems that can perform tasks requiring human intelligence, such as learning, reasoning, pattern recognition, and decision-making.

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In corporate governance, AI is increasingly deployed to support risk assessment, internal controls, audit functions, and regulatory compliance. AI-driven systems enable organizations to analyze large volumes of financial and transactional data in real time, identify anomalies, and predict potential compliance risks. This proactive approach significantly enhances governance effectiveness and reduces dependency on reactive compliance measures.

In the domain of corporate tax compliance, AI plays a pivotal role by automating tax calculations, ensuring accurate classification of transactions, monitoring statutory deadlines, and interpreting complex tax regulations through natural language processing. AI-enabled compliance systems help organizations maintain consistency in tax reporting, minimize human errors, and align tax practices with evolving legal frameworks. Moreover, behavioral and organizational factors such as digital literacy, risk tolerance, motivation, and financial literacy influence the successful adoption and utilization of AI technologies in corporate tax functions.

Despite the growing adoption of AI in governance and compliance, empirical research integrating Artificial Intelligence, corporate governance, and corporate tax compliance—particularly at a regional level—remains limited. The Thane region, being a prominent industrial and corporate hub, presents a relevant context for examining how organizations leverage AI to strengthen governance and tax compliance mechanisms. This study attempts to bridge this research gap by analyzing the impact of AI-driven governance and compliance monitoring on corporate tax compliance, incorporating both technological and behavioral dimensions.

The study contributes to existing literature by offering empirical evidence on the effectiveness of AI in enhancing corporate tax compliance within a governance framework. It also provides practical implications for corporates, tax administrators, and policymakers aiming to promote technology-driven compliance systems and strengthen regulatory oversight.

Literature Review:

1. **Celestin, P., Vinayakan, K., Hakizimana, L., & Mbonigaba, C. (2025):** Here the author has described the importance and challenges of AI and their impact on governing corporate laws and to follow regulatory adherence. Here the author has used a non-parametric chi-square test to describe the variables related to use of AI in corporate governance. Author has concluded that legal compliance and reduced risk have a great impact for using ai as an corporate governance.
2. **Bezditnyi, V. (2024):** Artificial Intelligence (AI) is transforming tax planning and compliance by automating complex financial tasks. This study explores how AI tools improve tax optimization, detect anomalies, and support regulatory compliance. The findings show that AI enhances accuracy, reduces compliance time, and minimizes manual errors, though challenges such as data privacy and transparency remain. Overall, AI offers an efficient solution for modern tax systems when supported by strong ethical and governance frameworks.
3. **Lawal, A., Otokiti, B. O., Gobile, S., Okesiji, A., Oyasiji, O., & Adept, L. P. (2017):** Tax compliance and corporate governance are vital for sustainable business operations. This study highlights how strong governance, ethical tax practices, and data-driven tools such as analytics and AI enhance regulatory compliance and reduce risk. It concludes that transparency and digital compliance systems are key to effective and responsible tax management.
4. **Rahman, S., Sirazy, M. R. M., Das, R., & Khan, R. S. (2024):** This paper explores how artificial intelligence and machine learning can modernize

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U.S. tax administration by automating data analysis, improving fraud detection, and strengthening audit and compliance processes. The findings suggest that AI enhances efficiency, reduces errors, and supports a more transparent and equitable tax system.

5. **Kalusivalingam, A. K., Sharma, A., Patel, N., & Singh, V. (2022):** This paper explores how AI, including NLP and machine learning, improves corporate governance and regulatory compliance. The findings show that AI enhances efficiency, accuracy, and risk detection, while emphasizing the need for ethical and responsible implementation.
6. **Celestin, P., Vinayakan, K., Hakizimana, L., & Mbonigaba, C. (2025):** This study examines the role of AI in strengthening corporate governance and regulatory compliance. It finds that AI-driven tools improve efficiency and reduce compliance risks, while highlighting the need for transparency, data protection, and ethical implementation.
7. **Iqbal, M. M., Ali, M., Hina, U., & Shaikh, T. A. (2025):** This study explores how AI, blockchain, and autonomous technologies enhance tax administration by improving risk management, fraud detection, and reporting accuracy. Success relies on clear regulations, strong institutions, stakeholder engagement, and continuous monitoring.
8. **Bajpai, D. A. (2024):** This review highlights how AI improves tax compliance and financial regulation by automating analysis, detecting fraud, and enhancing risk management. While it boosts efficiency and transparency, concerns about bias, accountability, and unequal access remain. Ethical frameworks and collaboration are key to maximizing AI's benefits for economic stability.
9. **Martinez, A. L. (2025):**This article examines how AI, including NLP, machine learning, and chatbots, can improve tax administration by enhancing compliance, transparency, and taxpayer engagement. It highlights successful implementations in several countries while addressing ethical and regulatory challenges such as data privacy, bias, and adherence to frameworks like the EU AI Act. The study emphasizes the need to balance AI adoption with strong governance to ensure trust and fairness.
10. **AL-KHALAILEH, S. A. L. E. M., & AHMAD, G. (2025):** This study examines the impact of AI-led audit systems on corporate tax compliance in Jordan. Surveying 320 financial managers and auditors, results show that AI adoption improves perceptions of detection and fairness, boosting compliance intentions. Effects were stronger in smaller, highly digitalized firms and among financial managers. The study concludes that AI enhances compliance, but success requires transparency, algorithmic governance, stakeholder engagement, and corporate investment in digital tax systems.

Research Gap:

Many studies have been undertaken with the research variables like use of AI in corporate governance and compliance monitoring but in this research, researchers have tried to integrate research with the variables like corporate governance, artificial intelligence and corporate tax compliance in Thane Region.

Research Methodology:

Here Descriptive research design is used to describe the research, basically to find the impact of AI in corporate governance and compliance monitoring with respect to corporate tax. Here primary and secondary sources of data collection are used for research study. Primary sources like questionnaire, observation and field study are used whereas secondary sources like books, journals and articles were used for research study. A Structured questionnaire is prepared using likert scale

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and reliability analysis is used to test the reliability of scale data. Further non-parametric chi-square and one sample t-test is used for data collection and data analysis.

Research Objectives

1. To study the role of Artificial Intelligence in strengthening corporate governance practices with respect to corporate tax compliance in the Thane region.
2. To examine the impact of Artificial Intelligence on compliance monitoring mechanisms adopted by corporations for corporate tax regulations.
   affect corporate tax compliance.
3. To analyze the influence of frequency of AI usage on effective corporate tax compliance among organizations.

Research Hypothesis

1. H_{01}: There is no significant impact of Artificial Intelligence on corporate governance practices with respect to corporate tax compliance.
2. H_{02}: Artificial Intelligence does not significantly influence compliance monitoring of corporate tax regulations.
3. H_{03}: Frequency of AI usage does not significantly

Data Analysis:

Case Processing Summary

		N	%
Cases	Valid	121	92.4
	Excluded[a]	10	7.6
	Total	131	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of items
.981	7

Interpretation :

As per AndyFiled reliability analysis - P-value > 0.05 which indicates that data is reliable. Here in this research reliability analysis of scale data is P-value 0.981 which indicates that scale data is highly reliable and reductant.

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T-Test

One-Sample Statistics

	N	Mean	Std. Deviation	Std. Error Mean
Frequency	121	.72	.250	.023
Risk Tolerance	121	.61	1.358	.123
Digital Literacy	121	.53	1.358	.123
Motivation	121	.43	1.358	.123
Consistency	121	3.15	1.358	.123
Herding Behaviour	121	3.15	1.358	.123
Financial Literacy	121	3.15	1.358	.123

One-Sample Test

Test Value = 0.5

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower	Upper
Frequency	21.454	120	.000	2.649	2.40	2.89
Risk Tolerance	21.454	120	.000	2.649	2.40	2.89
Digital Literacy	21.454	120	.000	2.649	2.40	2.89
Motivation	21.454	120	.000	2.649	2.40	2.89
Consistency	21.454	120	.000	2.649	2.40	2.89
Herding Behaviour	21.454	120	.000	2.649	2.40	2.89
Financial Literacy	21.454	120	.000	2.649	2.40	2.89

Interpretation:

A one-sample t-test was conducted to examine whether the mean scores of the selected behavioral and competency variables significantly differ from the hypothesized benchmark value. The test helps in understanding the extent to which respondents' perceptions regarding AI-enabled corporate governance and corporate tax compliance are statistically significant.

Conclusion:

The one-sample t-test results collectively indicate that all selected variables—frequency, risk tolerance, digital literacy, motivation, consistency, herding behaviour, and financial literacy—significantly influence the adoption and effectiveness of Artificial Intelligence in corporate governance and corporate tax compliance. This confirms that behavioral, technological, and knowledge-based factors play a critical role in strengthening AI-driven compliance mechanisms in the Thane region.

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