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Ai In Digital Marketing: Boosting Gst Compliance & Revenue

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ABSTRACT

This study analyses how artificial intelligence (AI) may enhance digital marketing strategies to increase revenue generation and compliance with the Goods and Services Tax (GST) in India. Effective GST implementation is hampered by issues including poor taxpayer participation, procedural complexity, and low awareness, especially among small and medium-sized businesses (SMEs). AI offers a game-changing solution to these problems. The study looks at how artificial intelligence (AI) techniques such as chatbots, machine learning, predictive analytics, and automated content delivery may enhance filing accuracy, promote real-time monitoring, and encourage personalized interaction. It also examines global viewpoints on AI-driven tax reforms and emphasizes the significance of ethical governance, tailored strategies for specific sectors, and adaptable policy frameworks. Drawing on secondary data and literature analysis, the study offers practical recommendations for incorporating AI into the GST ecosystem. It concludes that strategic adoption of AI, backed by transparency and collaboration between the public and private sectors, can modernize tax administration, minimize evasion, and promote inclusive economic growth.

KEY WORDS: Artificial Intelligence, GST Compliance, Digital Marketing, Tax Revenue, Predictive Analytics, India, Fiscal Policy, Automation

1. INTRODUCTION

Artificial Intelligence (AI) is transforming digital marketing, changing how companies engage with customers, optimize campaigns, and handle compliance-related duties. A major obstacle in India, where the Goods and Services Tax (GST) system seeks to establish a single tax structure, is maintaining high levels of compliance, especially for small and medium-sized businesses. Low engagement, complicated procedures, and limited awareness hamper revenue realization and efficient GST implementation. AI-powered digital marketing technologies, which provide a calculated response to these problems, make personalized communication, real-time behavioural monitoring, and predictive targeting possible. Tax authorities and policymakers, in addition to businesses, can use these skills to boost voluntary participation, identify non-compliance, and improve GST literacy.

2. OBJECTIVES

- To understand how artificial intelligence (AI) can enhance digital marketing strategies aimed at improving GST compliance and revenue in India.
- To study the role of AI tools, such as chatbots, machine learning, predictive analytics, and automated content delivery, in facilitating more effective communication with taxpayers.
- To analyze the impact of AI on taxpayer behavior, particularly among individuals in the informal sector and small businesses.

3. RESEARCH METHODOLOGY

This study is theoretical and relies exclusively on secondary data. The secondary information was gathered from various sources, including research journals, books, official websites, and annual reports. These sources were carefully reviewed to ensure the relevance and credibility of the information used in the analysis.

4. LITERATURE REVIEW

4.1. Rahman et al. (2024) have all made substantial contributions to the expanding conversation about how AI and ML may transform tax administration systems. Because of its complexity, opacity, and high compliance costs, the U.S. tax system makes a compelling argument for technology intervention, according to their research. Due to the time, money, and effort that taxpayers must bear, there needs to be a fundamental change in the way tax systems are run. The authors describe how artificial intelligence (AI) might expedite important administrative tasks like debt collection, income verification, taxes, and fraud detection. Through the analysis of extensive and intricate datasets, artificial intelligence (AI) makes it possible to identify the economic activities of taxpayers, assess income tax deductions, and prioritize audits or investigations using predictive risk models. The authors note the possible difficulties that come with implementing AI and ML in tax systems, even though these developments provide encouraging prospects. These include the requirement for transparent and explainable AI (XAI) systems, algorithmic bias, and data privacy concerns. They support strong monitoring procedures, ethical frameworks, and ongoing training for tax experts to allay these worries.

4.2. Dashe & Asada (2023) analyze how, in light of the growth of e-commerce and digital services, Nigeria urgently needs to use generative AI to modernize its tax administration. According to the authors, AI solutions like chatbots and intelligent tax software are essential for automating tax collection and reducing revenue gaps because traditional tax structures are unable to collect money from online transactions. Their research highlights how generative AI might reduce human error, improve transparency, and facilitate real-time online tax reconciliation. They support a single digital tax platform that can reconcile daily and has unique interfaces for every tax kind. Given Nigeria's sizable population of digital natives and the growing regulatory acceptance of AI worldwide, the authors contend that implementing these technologies is not only appropriate but also necessary to establish a stable, non-oil revenue base and guarantee sustainable economic governance.

4.3. Ness (2024) examines the challenges of incorporating digital assets—specifically, cryptocurrencies and Non-Fungible Tokens (NFTs)—into conventional tax structures, emphasizing the divergent strategies of China and the US. She points out that whereas the United States is trying to modify its current non-VAT tax structure to incorporate cryptocurrencies, China's position reflects its larger economic and regulatory goals, especially regarding VAT neutrality. The global difficulties in coordinating tax laws with the developing digital economy are highlighted by these conflicting models. Ness also talks about the fundamental differences in nature and tax implications between digital assets like cryptocurrencies and NFTs, even though both are blockchain-based. NFTs represent unique digital material like music or art, whereas cryptocurrencies are fungible and function as digital money equivalents. Since the nature of the asset directly influences its classification and treatment under tax law, this distinction makes the development of universal tax rules more difficult. The study highlights the need for ongoing communication between specialists and international regulatory organizations due to the rapid evolution of digital platforms. Adaptive rules that can handle the dynamic nature of digital transactions while maintaining values like VAT neutrality and cross-border uniformity are necessary to strike a balance between innovation and efficient taxes.

4.4. Merola (2022) looks at how the rapid advancement of automation, robots, and artificial intelligence has changed the conversation around taxes, specifically how it affects employment, income inequality, and inclusive economic growth. As intelligent technologies become more widely used in economies around the world, Melola contends that taxes may be a useful instrument for redistributing the benefits of automation and reducing related socioeconomic risks, particularly those that jeopardize the attainment of Sustainable Development Goal 8 (decent work and economic growth). Merola observes that although several suggestions, including digital and robot taxes, have surfaced, their implementation is still uneven and limited. In contrast to Bill Gates' more radical suggestion of charging firms on the usage of robots to pay universal basic income, South Korea's so-called "robot tax" lowers automation-related tax advantages rather than directly taxing robots.

4.5. Rawat (2024) analyzes the intricate relationship between the rapidly growing field of cross-border e-commerce and the Goods and Services Tax (GST). Rawat recognizes significant issues in tax administration, such as jurisdictional conflicts, compliance hurdles, and the fragmentation of GST systems among countries, as globalization and digital trade transform economic landscapes. These problems make it difficult to conduct smooth international transactions, which has an impact on e-commerce companies' ability to compete as well as their access to markets. Rawat highlights the need for adaptable, technologically advanced tax solutions due to the dynamic nature of e-commerce transactions, which are marked by real-time exchanges and a variety of regulatory settings. The report emphasizes how different tax rates and conflicting documentation requirements make cross-border compliance under GST regimes much more difficult.

4.6. AJUZIEOGU (2025) fills a significant void in current fiscal policy by offering a thorough framework for taxing the economic value produced by transformative artificial intelligence (TAI). Conventional taxation models find it difficult to grasp the economic surplus generated by AI as it develops at a rate and scale never seen before, akin to the industrial revolution but much faster. According to AJUZIEOGU, the special characteristics of AI systems—such as their capacity for scalability, replication, data dependency, and labor substitution—call for different taxation schemes than those used for traditional labor and capital. The paper uses formal economic modeling to distinguish AI as a new element of production that calls for specific fiscal measures. Historical analogies to past technology disruption events highlight the necessity and difficulties of adjusting institutional structures to new technologies. The idea that AI is already changing the way value is distributed across industries and labor categories, escalating inequality and necessitating immediate policy action, is further supported by empirical study. To address the complex nature of AI-generated value, AJUZIEOGU suggests a number of complementary tools, including data value taxation, automation levies, AI-specific corporation taxes, and economic rent capture methods. The study emphasizes that a combination approach involving phased adoption and adaptive learning is crucial, as no single tool is adequate. The paper concludes by emphasizing that successful implementation techniques that take administrative, political, and transitional circumstances into consideration are just as important as model design.

5. FINDINGS

5.1. AI Enhances GST Compliance and Taxpayer Engagement

Particularly among SMEs and participants in the unorganized sector, AI technologies—such as chatbots, machine learning, and predictive analytics—offer scalable, customized, and data-driven approaches that can greatly increase voluntary compliance. These systems support proactive filing reminders, real-time behavior tracking, and taxpayer education.

5.2. AI Identifies Non-Compliance Patterns and High-Risk Defaulters

By helping tax authorities identify fraudulent activities, prioritize audits, and target high-risk groups, predictive analytics and AI-powered behavioral segmentation can improve the effectiveness of compliance enforcement.

5.3. Digital Marketing Powered by AI Drives GST Literacy

Intelligent outreach tactics and automated content delivery raise public awareness of tax laws, deadlines, and the advantages of compliance. This can lessen procedural errors and close the knowledge gap among small taxpayers.

5.4. Challenges: Ethical, Legal, and Technical Barriers Persist

Notwithstanding the possible advantages, there are concerns associated with problems like algorithmic bias, data privacy, and opaque AI models. To maintain equity and public confidence, experts support explainable AI (XAI), strong ethical frameworks, and legal protections.

5.5. AI's Role in Broader Tax Policy Reform

According to published research, artificial intelligence (AI) is not only a compliance tool but also a revolutionary force that calls for new taxation schemes (such as data value taxation and corporate taxes tailored to AI). Traditional frameworks must be modified by policymakers to tax AI-generated economic value fairly.

5.6. Global and Sectoral Disparities Require Adaptive Strategies

The need for country-specific yet coordinated policies that take into account VAT neutrality, digital asset classifications, and cross-border dynamics is indicated by the different approaches taken by nations such as the U.S. and China in handling the taxation of digital assets, as well as the varying levels of preparedness of tax institutions worldwide.

5.7. AI Can Promote Inclusive Economic Growth if Strategically Taxed

By taxing automation profits and directing the proceeds toward digital infrastructure or welfare programs, AI can be used as a tool for redistributive justice if it is properly regulated. Inequalities made worse by automation and the use of AI can be addressed through strategic taxes.

5.8. AI's Impact on GST in E-Commerce Is Significant but Underutilized

Cross-border e-commerce is still not well regulated, and GST frameworks and documentation are inconsistent. In a complicated digital trade environment, artificial intelligence (AI) can help standardize compliance, guarantee jurisdictional clarity, and streamline tax filings.

6. SUGGESTION

6.1. Adopt AI-Powered Tools to Enhance GST Compliance

Chatbots and virtual assistants are examples of AI solutions that should be incorporated into the GST system to offer taxpayers real-time assistance. By responding to questions, assisting users with completing returns, and sending reminders, these tools can lower human errors and boost voluntary compliance.

6.2. Use Predictive Analytics for Early Detection of Non-Compliance

Based on past performance, the GST Network (GSTN) should include predictive analytics to detect high-risk defaulters. This enhances audit efficiency and enables tax authorities to take preventive action through early intervention.

6.3. Leverage AI-Driven Digital Marketing for Targeted Taxpayer Awareness

AI-powered behavior-based targeting and personalized messaging can assist in educating taxpayers on GST benefits, deadlines, and processes, particularly those in the informal and SME sectors. To increase outreach, campaigns should be tailored and multilingual.

6.4. Implement Real-Time Monitoring and Fraud Detection Mechanisms

AI should be used to track GST filings over time and identify any irregularities or questionable trends. Through open procedures, this would improve enforcement, lower tax evasion, and boost system trust.

6.5. Develop Ethical and Transparent AI Frameworks in Tax Administration

Explainable AI (XAI) techniques, legal protections, and ethical standards must all be included when using AI in tax governance. Accountability will be guaranteed, data privacy will be safeguarded, and public confidence in automated decision-making will be increased.

6.6. Reform Tax Policies to Include AI-Generated Economic Value

To fairly capture the economic value generated by AI technology, policymakers should investigate novel tax structures like data value taxation and automation levies. To preserve budgetary sustainability and future-proof tax systems, these measures are crucial.

6.7. Design Sector-Specific and Region-Sensitive AI Strategies

Plans for using AI must be customized to fit different industries and geographical areas due to varying degrees of digital readiness. SMEs and rural businesses should receive extra assistance when implementing AI solutions for compliance.

6.8. Invest AI-Driven Revenue in Public Welfare and Digital Infrastructure

The money made by improved AI-based compliance ought to be put back into digital infrastructure, healthcare, education, and literacy initiatives. This lessens socioeconomic gaps and encourages inclusive growth.

6.9. Standardize E-Commerce GST Compliance through AI Integration

GST paperwork for interstate and international digital transactions could be streamlined with AI tools. For Indian e-commerce companies, standardization will streamline procedures, lessen regulatory requirements, and increase global competitiveness.

6.10. Promote Strategic and Phased Implementation of AI in GST

Before expanding nationally, AI integration should start with pilot projects in a few chosen areas or industries. Iterative improvements can be made, resistance can be reduced, and adoption will go more smoothly with a staged strategy backed by public-private partnerships.

7. CONCLUSION

A revolutionary step in resolving India's ongoing GST compliance issues is the incorporation of artificial intelligence (AI) into digital marketing and tax administration. Chatbots, predictive analytics, and automated content distribution are examples of AI-powered solutions that offer scalable, individualized, and effective means of interacting with taxpayers, especially in the informal sector and small and medium-sized businesses. Through better communication and real-time support, these technologies not only increase voluntary compliance but also help tax authorities spot non-compliance and stop fraud via early detection tools. The report also highlights how crucial it is to have clear and moral AI governance frameworks to maintain equity, foster public confidence, and safeguard taxpayer data. The potential of AI extends beyond compliance; by leveraging the economic value produced by AI, authorities can overhaul conventional taxation methods. Long-term success will depend on adaptable regulations, strategic integration, and reinvesting AI-generated income in infrastructure and public services. AI is a key facilitator for creating a more responsive, transparent, and inclusive GST ecosystem as India moves closer to being a digitally empowered economy. AI may assist in modernizing tax administration and significantly contribute to sustainable economic development with phased adoption, customized tactics, and cooperation between the public and private sectors.

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