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## IMPACT OF DIGITALIZATION ON TAX ADMINISTRATION IN INDIA: E-FILING, COMPLIANCE, AND TRANSPARENCY

~ *Mansi Shrivastava*

India's tax administration has changed significantly over the past decade. Digitalization has become a key part of this reform. The use of technology in tax systems has transformed how the country collects revenue, monitors compliance, and interacts with taxpayers. From e-filing portals to artificial intelligence-driven checks, digitalization has improved the tax landscape, making it more efficient, transparent, and user-friendly. This article looks at the varied impact of digitalization on tax administration in India, highlighting e-filing, compliance improvements, increased transparency, and ongoing challenges.

### The Digital Revolution in Indian Tax Administration

In 2015, the Indian government launched the Digital India initiative to set the stage for broad reforms in various sectors, including taxation.<sup>1</sup> This program aimed to create a digitally empowered society and knowledge economy, making tax administration a key beneficiary. Digitalization has transformed the relationship between taxpayers and tax authorities, shifting from in-person interactions to smooth online processes.<sup>2</sup>

The introduction of the Goods and Services Tax (GST) in 2017 was a pivotal moment in India's indirect tax reform. The GST Network (GSTN), a partnership between public and private entities, supports GST implementation and serves as a prime example of effective digital infrastructure.<sup>3</sup>

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<sup>1</sup> Digitalization of Tax System in India: A Critical Analysis, FUTURISTIC TRENDS IN SOC. SCI. (2024)

<sup>2</sup> THE ROLE OF DIGITALIZATION IN WIDENING THE INCOME TAX BASE, ITATON (Nov. 9, 2023)

<sup>3</sup> Overhaul of GST Processes in Works for Easier Compliance, BUS. STANDARD (Oct. 27, 2025)

This platform allows businesses to register, file returns, and make electronic payments, creating a unified digital environment for indirect taxation.<sup>4</sup>

For direct taxation, the Income Tax Department has launched various digital platforms, such as the e-filing portal and the Income Tax Business Application (ITBA). These tools have streamlined processes from registration to refunds, linking taxpayer systems with internal departmental workflows.<sup>5</sup>

### E-filing: Simplifying Tax Return Submission

E-filing has become one of the most prominent and impactful features of digitalization in Indian tax administration. The Income Tax Department's e-filing portal offers taxpayers a one-stop solution for filing returns, responding to notices, and tracking refund statuses. The platform includes pre-filled forms with data from different sources, including salary details, interest income, dividend receipts, and tax deduction information.<sup>6</sup>

The growth of e-filing has been remarkable. For the Assessment Year 2024-25, a record 7.28 crore Income Tax Returns were filed by July 31, 2024, showing significant year-over-year growth.<sup>7</sup> This number reflects increasing taxpayer participation and confidence in digital filing. About 43.82% of these returns were filed using the online utility available on the e-filing portal, while the rest used offline options.<sup>8</sup>

The Annual Information Statement (AIS), introduced in 2021, has further improved the e-filing process. The AIS gives taxpayers a detailed view of their financial transactions throughout the year, including income sources, high-value purchases, bank deposits, and investment details. This real-time data gathering from banks, mutual funds, stock exchanges, and other financial institutions has enhanced compliance by allowing for cross-checking of income declarations.<sup>9</sup>

The Tax Information Network (TIN) 2.0, launched in 2022 and fully operational by April 2023, has upgraded the tax payment system. This platform replaced the older OLTAS system and offers

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<sup>4</sup> GSTN: Technological Backbone of India's GST System, AUTHBRIDGE (Oct. 28, 2025)

<sup>5</sup> Challenges of Digitalization for Tax Administrations, INT'L MONETARY FUND (Apr. 26, 2024)

<sup>6</sup> A Record of over 8.18 Crore Income Tax Returns (ITRs) Filed, PRESS INFO. BUREAU

<sup>7</sup> Record 7.28 Crore ITRs Filed for AY 2024-25 Till 31st July, PRESS INFO. BUREAU (July 30, 2024)

<sup>8</sup> Id.

<sup>9</sup> Annual Information Statement (AIS) – Overview, TAXMANN (May 31, 2024)

multiple payment methods, including internet banking, NEFT/RTGS, debit cards, payment gateways, and UPI.<sup>10</sup> The system allows for real-time credit of taxes to taxpayer accounts, making the payment and return filing process quicker and more efficient.

For GST compliance, the government has required e-invoicing for businesses with an annual turnover over Rs. 5 crores since August 2023.<sup>11</sup> In this system, businesses create invoices through their accounting software and report them in real time to the Invoice Registration Portal (IRP).<sup>12</sup> The IRP checks the data and returns an Invoice Reference Number (IRN) along with a digitally signed QR code. This process ensures immediate government access to transaction information, greatly reducing chances of tax evasion.

### Enhanced Compliance Through Digital Tools

Digitalization has significantly boosted tax compliance in India through various means. The Faceless Assessment Scheme, implemented in 2019 and expanded in 2020, has removed physical interactions between taxpayers and assessing officers. Cases are randomly assigned to assessment units across India via the National e-Assessment Centre (NeAC), ensuring impartial and transparent assessments. All communications happen electronically, and taxpayers can request personal hearings only through video conferencing.<sup>13</sup>

This faceless system has reduced opportunities for corruption and bias while enhancing efficiency. It uses artificial intelligence and machine learning to analyze return data, identify discrepancies, and highlight possible non-compliance cases. By removing human discretion in case selection and promoting team-based assessments, the scheme has introduced a level of transparency in the assessment process that was previously unattainable.

The GST system incorporates several automated compliance tools. The invoice-matching system automatically aligns data from buyers' and sellers' returns to identify discrepancies and prevent fraudulent Tax Credit (ITC) claims.<sup>14</sup> The E-Way Bill system requires electronic documentation for the interstate movement of goods above certain amounts, creating a digital trail that makes

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<sup>10</sup> Income Tax Department Launches TIN 2.0, BUS. TODAY (Dec. 17, 2023)

<sup>11</sup> A Complete Guide to E-Invoicing in GST: Process, Benefits, and Compliance, TALLY SOLUTIONS (Nov. 20, 2024)

<sup>12</sup> E-invoicing Compliance in India, INVOICING HUB (Sept. 7, 2025)

<sup>13</sup> Faceless Assessment Scheme: Income Tax, DRISHTI IAS

<sup>14</sup> THE ROLE OF TECHNOLOGY IN REDUCING TAX EVASION IN INDIA, 5 SHODHKOSH 1361 (2024)

underreporting challenging. AI-driven analytics continuously review GST returns, detecting unusual patterns such as sudden increases in ITC claims or mismatched invoices.

For direct taxes, the e-Verification Scheme 2021 promotes voluntary compliance through guidance. The Central Board of Direct Taxes (CBDT) initiated electronic campaigns in 2024 to help taxpayers resolve mismatches between income reported in the AIS and filed returns.<sup>15</sup> Informational messages sent through SMS and email guide taxpayers to file revised or late returns, encouraging compliance through education rather than pressure.

The impact on tax revenues has been significant. India's tax collections reached Rs. 27.07 lakh crore in the Financial Year 2021-22, showing a 34% increase compared to the previous year.<sup>16</sup> This rise boosted India's tax-to-GDP ratio to 11.7%, which includes a direct tax-to-GDP ratio of 6.1%. Digital payment methods have played a major role in this growth, as studies confirm a strong positive link between digital payments and GST revenue in India.

## Transparency and Accountability

Digitalization has brought in a new level of transparency in Indian tax administration. Each digital action creates a permanent record, allowing taxpayers and authorities to trace transactions, filings, and payments. This interconnected data offers clarity that was not possible in a paper-based system.

The AIS is a prime example of this transparency, providing taxpayers with a consolidated view of their financial activities as recorded by tax authorities.<sup>17</sup> Taxpayers can review this information, provide feedback, and correct errors before filing returns. This proactive approach reduces disputes and fosters trust between taxpayers and the tax department.

For GST, the government is working on a major overhaul that includes digitized checks, automated refunds, and data-driven return filing.<sup>18</sup> The return-filing process is being redesigned to enable auto-population of forms using data from e-invoices, e-way bills, and supplier filings. This

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<sup>15</sup> CBDT Launches Electronic Campaign to Address Income, PRESS INFO. BUREAU (Dec. 16, 2024)

<sup>16</sup> Tax Revenues in India Mark a Record High in a Post-Pandemic Economy, PRESS INFO. BUREAU (Apr. 14, 2022)

<sup>17</sup> What is AIS (Annual information statement)?, GRANT THORNTON (Dec. 22, 2021)

<sup>18</sup> Overhaul of GST Processes in Works for Easier Compliance, BUS. STANDARD (Oct. 27, 2025)

integration will simplify the filing process, improve ITC matching, and allow for real-time detection of discrepancies through system checks.

CBIC is creating a digital scrutiny process that will automatically generate Form ASMT-10 when analytics detect discrepancies in GSTR-1, GSTR-3B, and GSTR-2B returns.<sup>19</sup> Taxpayers will then submit explanations and documents digitally, ensuring consistency in scrutiny and reducing subjective interpretation.

The ITBA portal has merged various business processes into one application, allowing smooth interaction between taxpayers and the tax department. In the Financial Year 2023-24 alone, refunds totaling Rs. 3,36,808 crores were processed online through this system. The Refund Banker Module within ITBA allows officers to manage refund blocking, unblocking, and revalidation electronically, ensuring accountability at every stage.

### Artificial Intelligence and Future Innovations

India is leading the way in adopting artificial intelligence in tax administration. Project Insight is a data analytics and business intelligence platform that assesses large amounts of taxpayer data to find patterns that suggest tax evasion or non-compliance. CBIC's ADVAIT (Analytics Suite for Indirect Taxes) gives a complete view of taxpayers by tracking business transactions, supply chains, and trade flows.<sup>20</sup>

These AI systems can identify anomalies that human auditors may overlook, like complex layering schemes or sudden shifts in transaction patterns. Machine learning algorithms continually refine their accuracy by examining historical data and outcomes, making the detection of fraudulent activities more sophisticated.

AI's growth in taxation is expected to be exponential, with predictions suggesting a significant increase in market size over the next five to ten years. Tech companies are developing innovative AI-based tax compliance and advisory solutions, while financial institutions are using AI to enhance services for clients.<sup>21</sup>

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<sup>19</sup> Id.

<sup>20</sup> AI in Indian Taxation: Redefining Compliance, Administration & Policy, TAXGURU (Oct. 28, 2025)

<sup>21</sup> Artificial Intelligence in Indian Taxation: Market Size and Projected Growth, INDIAAI (Apr. 14, 2024)

## Reducing Tax Evasion

Digitalization has greatly reduced opportunities for tax evasion in India. The e-invoicing and e-way bill systems provide complete digital trails for business transactions. Each invoice created through the IRP is reported to tax authorities immediately, making it nearly impossible for businesses to hide sales or purchases.<sup>22</sup>

Combining data from various sources creates a network of cross-checking that uncovers discrepancies. When a buyer claims ITC based on a seller's invoice, the system verifies that the seller also reported the transaction and paid the relevant tax. This real-time checking helps prevent common indirect tax evasion.

For direct taxes, the AIS gathers information from banks, mutual funds, property registrars, GSTN, and other sources to create a detailed profile of each taxpayer's economic activities. Large cash deposits, high-value purchases, foreign money transfers, and property transactions are tracked and made visible to tax authorities.<sup>23</sup> Operation Clean Money, launched post-demonetization, effectively used AI and data analytics to spot tax evaders by analyzing cash deposit activities.

Studies show that digitalization and financial inclusion discourage shadow economy activities by improving tax monitoring and collection. Formalizing the economy through digital payments boosts consumption and investment, leading to increased taxable income and tax revenues.

## Challenges and Constraints

Despite significant advancements, the digitalization of tax administration still faces challenges. The digital divide is considerable, particularly in rural areas with limited internet access and reliability. Digital literacy varies widely, making mandatory e-filing difficult for some people, particularly the elderly and those in remote regions.

Concerns about cybersecurity and data privacy remain as sensitive financial data moves online. Although the government spends heavily on security measures like encryption and firewalls, past cyber-attacks on the GSTN have raised fears about potential vulnerabilities.

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<sup>22</sup> THE ROLE OF TECHNOLOGY IN REDUCING TAX EVASION IN INDIA, 5 SHODHKOSH 1361 (2024)

<sup>23</sup> Compliance Issues with Form 26AS and AIS, TAXTMI (July 2, 2025)

The costs of implementing and maintaining digital tax infrastructure can be high. The complexity of new digital platforms may confuse taxpayers, leading to errors in filing and compliance. Integrating older systems with new digital solutions continues to pose challenges.

Resistance to change from both taxpayers and officials who find new systems confusing can delay adoption. Rapid changes in policies necessitate frequent regulatory updates, leading to uncertainty and compliance issues.

The rapid growth of the digital economy also presents taxation challenges, as traditional tax rules based on physical presence have trouble addressing businesses operating worldwide without local infrastructure. India has initiated measures like the Significant Economic Presence concept to tackle this issue, but evolving business models keep introducing new challenges.<sup>24</sup>

## Conclusion

The digitalization of tax administration in India represents a significant change that has improved efficiency, compliance, and transparency. Through initiatives like e-filing portals, the GST Network, faceless assessments, and AI-driven analytics, India has developed a modern tax system that serves as a model for emerging economies globally. The measurable outcomes include record tax collections, a growing taxpayer base, and fewer opportunities for evasion.

However, maximizing the benefits of digitalization requires addressing ongoing challenges tied to digital literacy, infrastructure gaps, cybersecurity, and the changing nature of digital commerce. Continued investment in technology, capacity building, and taxpayer education will be crucial. As India moves towards its goal of Viksit Bharat (Developed India), digital tax administration will be vital in mobilizing resources for national development while promoting a culture of voluntary compliance and mutual trust between citizens and the government.

The shift from paper-based methods to a fully integrated digital tax system shows that technology, when applied thoughtfully, can transform governance, empower citizens, and create a more transparent, accountable, and efficient public administration. India's experience offers valuable lessons for other countries embarking on similar digital transformation journeys, proving that with

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<sup>24</sup> Leveraging Technology for Tax Reform in India, 11 INT'L J. SCI. RES. & ENG'G TRENDS 1194 (2025)

vision, investment, and determination, even complex administrative systems can be modernized to meet the demands of the 21st-century digital economy.