

**CONFRONTING THE DIGITAL PARADOX: UNRAVELING THE LEGAL AND
REGULATORY CHALLENGES OF
AI, BLOCKCHAIN, AND CYBERSECURITY IN INDIA'S CYBER CRIME
LANDSCAPE**

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ABSTRACT

This paper examines the complex regulatory and legal landscape surrounding blockchain technology and Virtual Digital Assets (VDAs) in India. Characterized by a dichotomy between embracing technological innovation and mitigating systemic financial risks, India's approach has evolved from outright prohibition to nuanced taxation and anti-money laundering compliance. This paper analyzes the historical jurisprudence, the current statutory framework, the conflict between immutable ledger technology and data privacy laws, and the validity of smart contracts under Indian contract law. Ultimately, it proposes structural recommendations for a balanced, innovation-friendly regulatory framework.

I. INTRODUCTION

Blockchain technology, fundamentally a distributed and decentralized ledger, represents a paradigm shift in data storage, financial transactions, and trust systems. However, its core defining feature—decentralization—creates what is known as the "Decentralized Dilemma" for nation-states. Regulators are forced to balance the immense economic potential of Web3 and blockchain innovation against the inherent risks of decentralized finance (DeFi), including capital flight, money laundering, and loss of monetary sovereignty³

In India, this dilemma is particularly pronounced. With one of the world's largest pools of Web3 developers and a high grassroots adoption rate of crypto assets, the Indian government has historically adopted a cautious, oscillating approach. This paper

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³ Narayanan, A., et al. (2016). Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction. Princeton University Press. Provides foundational context on the friction between decentralized systems and state control.

dissects the legal trajectory of blockchain in India, examining how existing laws stretch to accommodate unprecedented technological architectures.

II. THE HISTORICAL JURISPRUDENCE OF BLOCKCHAIN IN INDIA

A. THE 2018 RBI CIRCULAR AND INITIAL HOSTILITY

The Reserve Bank of India (RBI) initially viewed blockchain-based cryptocurrencies strictly through the lens of macroeconomic risk. In April 2018, the RBI issued a circular prohibiting all commercial banks and regulated financial institutions from dealing in or providing services to any individual or business dealing with virtual currencies⁴. This effectively choked the fiat-to-crypto pipeline, forcing many Indian blockchain startups to shutter or relocate to friendlier jurisdictions.

B. INTERNET AND MOBILE ASSOCIATION OF INDIA (IAMAI) V. RBI (2020)

The regulatory winter was broken by the Supreme Court of India in 2020. In the landmark IMAI v. RBI judgment, the Court struck down the 2018 RBI circular. The Court ruled on the grounds of "proportionality," stating that while the RBI possessed the statutory authority to regulate virtual currencies, a blanket ban was a disproportionate measure, given that the RBI could not demonstrate empirical harm suffered by its regulated entities⁵. This judicial intervention legitimized the existence of the blockchain industry in India, albeit in a regulatory vacuum.

III. CURRENT STATUTORY AND REGULATORY FRAMEWORK

Rather than introducing a comprehensive Web3 bill, the Indian government has integrated blockchain activities into existing financial and penal frameworks through targeted amendments.

A. TAXATION OF VIRTUAL DIGITAL ASSETS (VDAs)

The Finance Act of 2022 provided the first definitive statutory recognition of blockchain assets, classifying them as "Virtual Digital Assets" (VDAs). The government introduced a stringent tax regime:

⁴ Reserve Bank of India. (2018). Prohibition on dealing in Virtual Currencies (VCs). RBI Circular DBR.No.BP.BC.104/08.13.102/2017-18.

⁵ Supreme Court of India. (2020). Internet and Mobile Association of India v. Reserve Bank of India, Writ Petition (Civil) No. 528 of 2018.

- a. A flat **30% tax** on the income generated from the transfer of any VDA, without provisions to offset losses against other income.
- b. A **1% Tax Deducted at Source (TDS)** on all VDA transfers exceeding a specific threshold, designed to create a traceable footprint of crypto transactions⁶

While criticized by the industry for being punitive, this regime established a legal reality: VDAs are taxable assets, even if they lack legal tender status.

B. ANTI-MONEY LAUNDERING (AML) AND FIU-IND COMPLIANCE

In March 2023, the Ministry of Finance brought VDAs under the ambit of the Prevention of Money Laundering Act, 2002 (PMLA)⁷ Entities dealing in VDAs (exchanges, custodians, wallet providers) are now legally classified as "Reporting Entities." They are mandated to register with the Financial Intelligence Unit-India (FIU-IND), implement robust Know Your Customer (KYC) protocols, and report suspicious transactions. This aligns India's framework with the Financial Action Task Force (FATF) travel rule.

IV. LEGAL FRICTIONS AND SYSTEMIC CHALLENGES

Despite taxation and AML guidelines, applying traditional jurisprudence to decentralized networks creates profound legal frictions.

A. SMART CONTRACTS AND THE INDIAN CONTRACT ACT, 1872

Smart contracts are self-executing code deployed on a blockchain. Under the Indian Contract Act, 1872, a valid contract requires offer, acceptance, lawful consideration, and free consent.

- a. **Validity:** The Information Technology (IT) Act, 2000 (Section 10A) validates contracts formed through electronic means. Therefore, smart contracts are theoretically valid in India.

⁶ Ministry of Finance, Government of India. (2022). The Finance Act, 2022. (Insertion of Section 115BBH for taxation of VDAs).

⁷ Ministry of Finance (Department of Revenue). (2023). Gazette Notification extending PMLA to Virtual Digital Assets. March 7, 2023.

- b. **Enforceability Challenges:** The dilemma arises in enforcement. If a smart contract executes a flawed outcome due to a coding error (a "bug"), identifying the liable party on a permissionless, pseudonymous blockchain is legally complex. Traditional contract law relies on subjective intent and human courts; smart contracts rely on objective, immutable code ("Code is Law")⁸

B. THE IMMUTABILITY PARADOX: BLOCKCHAIN VS. THE DPDP ACT, 2023

The Digital Personal Data Protection (DPDP) Act, 2023 introduces stringent rights for data principals, prominently including the **Right to Erasure** (Right to be Forgotten).⁹ Blockchain technology is inherently append-only and immutable; once data is recorded on-chain, it cannot be deleted. If personal data is stored on a public blockchain, achieving compliance with the DPDP Act becomes technologically contradictory. Resolving this requires architectural shifts, such as storing personal data off-chain and only storing cryptographic hashes on-chain.

C. JURISDICTIONAL AMBIGUITY AND REGULATORY ARBITRAGE

Public blockchains operate globally, transcending sovereign borders. If a decentralized autonomous organization (DAO) suffers a hack affecting Indian citizens, determining the applicable jurisdiction and regulatory authority (SEBI for securities, RBI for currency, or the Ministry of Electronics and Information Technology) remains highly ambiguous.

V. THE SOVEREIGN RESPONSE: CENTRAL BANK DIGITAL CURRENCY (CBDC)

To counter the rise of private decentralized currencies while harnessing the efficiency of distributed ledger technology, the RBI launched the pilot for the digital Rupee (e₹) in late 2022¹⁰. The CBDC represents centralized blockchain application—it offers the settlement speed and programmability of crypto but retains the sovereign backing,

⁸ Werbach, K., & Cornell, N. (2017). "Contracts Ex Machina". Duke Law Journal, 67, 313. Discusses the intersection of traditional contract law and smart contracts.

⁹ Ministry of Law and Justice, Government of India. (2023). The Digital Personal Data Protection Act, 2023.

¹⁰ Reserve Bank of India. (2022). Concept Note on Central Bank Digital Currency. FinTech Department, RBI.

stability, and centralized control of traditional fiat currency. The e₹ is the Indian state's definitive answer to the decentralized dilemma.

VI. RECOMMENDATIONS FOR A COMPREHENSIVE FRAMEWORK

To foster innovation while protecting consumers, India must transition from a reactive to a proactive regulatory framework.

- a. **Taxonomic Classification:** India must legally classify blockchain tokens by utility (e.g., payment tokens, utility tokens, security tokens) rather than lumping them all under the broad VDA umbrella. SEBI should regulate security tokens, while utility tokens require a distinct framework.
- b. **Regulatory Sandboxes:** Expand the RBI and SEBI regulatory sandboxes specifically for DeFi protocols and smart contract audits.
- c. **Global Harmonization:** Given the borderless nature of blockchain, India must continue to leverage its position in forums such as the G20 to build a globally synchronized regulatory framework for crypto-assets to prevent regulatory arbitrage.

VII. CONCLUSION

The "Decentralized Dilemma" in India is far from resolved. The current landscape is a patchwork of taxation laws, AML directives, and judicial precedents rather than a cohesive legislative vision. While the government has successfully curtailed macroeconomic risks through heavy taxation and strict FIU compliance, the lack of clarity regarding smart contract liability, data privacy conflicts, and token classification continues to stifle domestic Web3 innovation. For India to harness the full potential of blockchain technology, it must enact a comprehensive, technology-agnostic framework that moves beyond viewing decentralization merely as a threat, and recognizes it as the foundational infrastructure of the next-generation digital economy.