

How Bhutan Formed a Crypto Reserve and Strategic Lessons for India

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Abstract

This article explores the unconventional yet well-designed economic strategy of the Kingdom of Bhutan. This has allowed it to emerge as a global leader in state-sponsored cryptocurrency mining. Other nations approached digital assets through retail adoption or strict prohibition, often resorting to a conservative approach. Bhutan took up this opportunity and, through its sovereign investment arm Druk Holding and Investments (DHI), has integrated Bitcoin mining into its national macro-economic framework. By leveraging abundant renewable sources, mainly hydroelectric power, Bhutan has stocked a significant crypto reserve that serves as a major asset which helps it hedge against economic volatility. In contrast, India has maintained a cautious and primarily conservative stance toward virtual digital assets, focusing on high taxation and excessive regulatory oversight. This article analyzes the technical and strategic mechanisms of Bhutan's crypto accumulation and identifies key insights that India can use.

Introduction

In the global landscape of sovereign finance, the Kingdom of Bhutan has long focused on the concept of "Gross National Happiness" rather than high-tech financial speculation. Bhutan therefore views crypto as a sovereign asset (Druk Holding and Investments, 2023). This strategy has allowed Bhutan to accumulate a crypto reserve that, relative to its GDP, is among the largest in the world.

Bhutan's DHI Model:

Bhutan's entry into the world of digital assets was not driven by retail speculation, but rather by state-level strategic planning. The primary organization for this endeavor is Druk Holding and Investments (DHI), the commercial arm of the Bhutanese government. Unlike most sovereign wealth funds that invest in foreign stocks or real estate, DHI identified Bitcoin mining and used Bhutan's most abundant natural resource: hydroelectric power. Further, the hydropower dams were made by Indian grants, which made the bitcoin mining significantly cheaper.

Bhutan began mining Bitcoin when the asset's price was significantly lower, approximately \$5,000 (Druk Holding and Investments, 2023). By utilizing "green" energy from its vast river systems,

the country mitigated the primary criticism of crypto mining—its environmental impact. In 2023, DHI partnered with Bitdeer, a Nasdaq-listed Singaporean firm, to raise \$500 million which was used to finance a carbon-neutral mining hub (Bitdeer, 2024). This partnership allowed Bhutan to scale its operations without depleting its scarce foreign exchange reserve, while ensuring that the environment was not compromised.

Further, The Bhutanese model gave importance to "vertical integration", where the state, through DHI, owns the power generation, the land, and the mining hardware. This ensures that the profits from mining the Bitcoin reserve stay within the state's treasury to be used for national development, such as funding education and healthcare, since they are completely free for all citizens. (Carreras, 2024). By treating Bitcoin as a commodity produced through energy conversion rather than its typical status as a speculative currency, Bhutan overcame major administrative hurdles and allowed for efficient operations.

Strategic Advantages: Hydropower and Sovereign Wealth

The success of Bhutan's crypto reserve has been linked to its strategic energy policy. Bhutan produces a surplus of hydroelectricity, especially during the monsoon season. Traditionally, this surplus was exported to India. However, energy export prices are often subject to bilateral negotiations and infrastructure limitations. Therefore, Bitcoin mining provided Bhutan the ability to arrange for clean energy and generate higher returns, instead of exporting it to India (Druk Holding and Investments, 2023).

By converting excess electrons into Bitcoin, Bhutan effectively turned a perishable commodity (electricity) into a digital, liquid asset that appreciates over time. This process is known as "energy arbitrage." This suggests that for nations with stranded energy sources or surplus renewable energy, Bitcoin mining can act as a financial battery, helping them generate higher returns and making efficient use of their resources (Priyadarshi & Goel, 2026)

Furthermore, Bhutan's reserve provides a cushion against the fluctuations of the US dollar and other fiat currencies. As a small, landlocked nation, Bhutan is highly susceptible to external economic shocks, especially currency devaluation. Storing a decentralized asset like Bitcoin, which is not tied to and influenced by the monetary policy of any single nation, could be used as a last resort to cover essential imports (Chainalysis, 2023).

The Comparison: India's Current Crypto Landscape

In contrast to Bhutan's proactive crypto accumulation, India has been following "strategic skepticism." The Indian government and the Reserve Bank of India (RBI) have frequently highlighted the "macro-financial risks" posed by digital assets, particularly the use of crypto for money laundering. (Reserve Bank of India, 2022).

In 2022, India introduced a stringent tax regime for Virtual Digital Assets (VDAs), which included a 30% tax on gains and a 1% Tax Deducted at Source (TDS) on every transaction. While this brought in some degree of legality to the sector, it significantly restricted domestic trading volumes and led to a "brain drain" of talent, with many shifting to more favorable jurisdictions like Dubai and Singapore (NASSCOM, 2023).

India's focus has remained squarely on the Central Bank Digital Currency (CBDC), i.e. the e-Rupee. While, the e-Rupee is a digital representation of the national currency, Bhutan's reserve is a non-correlated asset held for long-term capital appreciation and strategic hedging (Das, 2023).

What India Can Learn: Policy and Economic Shifts

1. Leveraging Renewable Energy Surplus

India is currently undergoing one of the world's fastest and most efficient transitions to green energy, with massive investments in the form of green bonds being invested in solar and wind power. However, the issue of "curtailment" could occur, which refers to when excess power goes to waste. India could adopt the Bhutanese model by setting up "Special Economic Zones" for green mining near large-scale solar parks in Rajasthan or wind farms in Tamil Nadu (Ministry of New and Renewable Energy, 2023). This would not only provide a revenue stream for power producers during off-peak hours but would also improve the financial viability of green projects and encourage crypto mining.

2. Moving Beyond Prohibitive Taxation

The current 1% TDS in India has been criticized by experts for stifling the liquidity of the domestic crypto ecosystem. If India were to incentivize mining and institutional custody, it could generate significant tax revenue from the corporate profits of mining firms and the appreciation of the assets, which would exceed the lost revenue from the current tax structure.

3. Digital Infrastructure

Bhutan's collaboration with Bitdeer demonstrates the importance of public-private partnership (PPP)s. India has a robust IT sector that is transitioning rapidly and requires digital asset custody. By creating a regulatory sandbox that allows for "sovereign-approved" digital asset management, India could retain its talent while leading the global discourse on how democratic nations handle decentralized finance (DeFi).

Challenges and Risks: A Balanced Perspective

The most prominent risk Bhutan faces is the extreme volatility of cryptocurrency prices. In 2022, the "crypto winter" saw the value of Bitcoin drop by over 60%, which would have significantly impacted the valuation of Bhutan's reserves (Chainalysis, 2023). For a large economy like India, this would be a significant loss that could have political aftereffects.

Furthermore, there is a major "opportunity cost" as the capital invested in mining hardware and infrastructure could, in theory, be spent on traditional sectors like manufacturing or agriculture. Since, Bhutan has a smaller population and unique energy surplus, this trade-off is worth it and easier to manage, but the same would be difficult for India as competition for capital is very intense.

Finally, the international regulatory pressure cannot be ignored. Organizations like the Financial Action Task Force (FATF) maintain strict guidelines on the movement of digital assets. India, as a prominent member of the G20, must ensure that any state-level crypto reserve is fully transparent and compliant with Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT) standards (FATF, 2023). Bhutan has managed this by keeping its operations under the umbrella of DHI, which operates with institutional-grade compliance.

Conclusion

The Kingdom of Bhutan has demonstrated that cryptocurrency is not merely a tool under speculation but in moderation it can be a strategic pillar of national economic policy. Further, by utilizing its natural resources to mine Bitcoin, Bhutan has successfully built a "Green mining approach", which is both future-proof and offers path towards a sovereignty.

For India, the lessons are clear. The current policy of high taxation and cautious observation has protected the economy from immediate volatility but also excluded India from the potential benefits of the digital asset revolution. By adopting a "resource-based" crypto strategy similar to Bhutan's, India could solve its energy curtailment issues, diversify its national reserves, and position itself as a leader in the global digital economy.

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