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Crypto Currency

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Abstract: *Recently, our Finance Minister Mrs. Nirmala Sitharaman announced that there will be a tax of 30% on income from crypto currencies. For the taxation purpose, crypto currencies have now been included in the definition of Virtual Digital Asset. By choosing this topic we will analysis how this currency will impact economy of India and world if it is recognized by most of the nation of the world or whether this currency is suitable for a large and diverse country like India. Today, crypto currency, led by Bit coin, Lit coin, Ether, etc. are taking the financial world by storm as more people invest and buy these currencies. Despite its growing popularity governments are cracking down on the digital currency because it is decentralized, meaning it has no central authority in the way the Indian government holds authority over the Rupee or Dollar. Therefore, some experts believe crypto poses a threat to central banks and national security.*

Keywords: Crypto Currency, Encryption, Decentralized, Bit Coin, Block Chain, Currencies

I. INTRODUCTION

A crypto currency is a digital asset designed to work as a medium of exchange wherein individual coin ownership records are stored in a ledger existing in a form of a computerized database. It uses strong cryptography to secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership. It typically does not exist in physical form (like paper money) and is typically not issued by a central authority. Crypto currencies typically use decentralized control as opposed to centralized digital currency and central banking systems.

1.1 Need of Crypto Currency

- Funds transfer between two parties will be easy without the need of third party like credit/debit cards or banks
- It is a cheaper alternative compared to other online transactions
- Payments are safe and secured and offer an unprecedented level of anonymity
- Modern cryptocurrency systems come with a user "wallet" or account address which is accessible only by a public key and pirate key. The private key is only know to the owner of the wallet
- Funds transfer are completed with minimal processing fees.

1.2 Why is it in Demand?

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4. The private key is only known to the owner of the wallet.

1.3 History of Crypto Currency

Crypto currency existed as a theoretical construct long before the first digital alternative currencies debuted. Early crypto currency proponents shared the goal of applying cutting-edge mathematical and computer science principles to solve what they perceived as practical and political shortcomings of "traditional" fiat currencies.

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1.4 Before Bit Coin

Crypto currency's technical foundations date back to the early 1980s when an American cryptographer named David Chaum invented a "blinding" algorithm that remains central to modern web-based encryption. The algorithm allowed for secure, unalterable information exchanges between parties, laying the groundwork for future electronic currency transfers. About 15 years later, an accomplished software engineer named Wei Dai published a white paper on b-money, a virtual currency architecture that included many of the basic components of modern crypto currencies, such as complex anonymity protections and decentralization. However, b-money was never deployed as a means of exchange.

The late 1990s and early 2000s saw the rise of more conventional digital finance intermediaries. Chief among them was PayPal, which made Tesla founder and noted crypto currency advocate Elon Musk's first fortune and proved to be a harbinger today's Mobile payment technologies that have exploded in popularity over the past 10 years.

But no true crypto currency emerged until the late 2000s when Bit coin came onto the scene.

Bit coin and the Modern Crypto currency Boom

Bit coin is widely regarded as the first modern crypto currency — the first publicly used means of exchange to combine decentralized control, user anonymity, record-keeping via a block chain, and built-in scarcity.

It was first outlined in a 2008 white paper published by Satoshi Nakamoto, a pseudonymous person or group.

In early 2009, Nakamoto released Bit coin to the public, and a group of enthusiastic supporters began exchanging and mining the currency.

By late 2010, the first of what would eventually be dozens of similar crypto currencies — including popular alternatives like Lit coin — began appearing. The first public Bit coin exchanges appeared around this time as well.

In late 2012, Word Press became the first major merchant to accept payment in Bit coin. Others, including online electronics retailer Newegg.com, Expedia, Microsoft, and Tesla followed. Countless merchants now view the world's most popular crypto currency as a legitimate payment method.

And new crypto currency applications take root with impressive frequency — Cryptomaniaks has a great look at the fast-growing world of crypto currency sports betting sites as just one example.

Although few crypto currencies other than Bit coin are widely accepted for merchant payments, increasingly active exchanges allow holders to exchange them for Bit coin or fiat currencies — providing critical liquidity and flexibility. Since the late 2010s, big business and institutional investors have closely watched what they call the "crypto space".

EI Salvador became the first country in the world to allow the use of bit coin as a legal tender, pegged alongside the US Dollar.

II. TYPES OF CRYPTO CURRENCY

Pseudonym "Satoshi Nakamoto". As of March 2021, there were over 18.6 million bit coins in circulation with a total market cap of around $927 billion. The competing crypto currencies that were created as a result of Bit Coin's success are known as altcoins. Some of the well known altcoins are as follows:

1. Lite coin
2. Peer coin
3. Name coin
4. Ethereum
5. Cardana

2.1 Lite Coin

It was created in 2011 by Charlie Lee, a graduate from MIT and an engineer at Google. It was one of the first few cryptocurrencies that followed the same technology as Bitcoin. Despite being modeled on Bitcoin, Litecoin generates blocks at a faster rate, and, hence, offers a faster transaction time. It is currently priced at 13,631.

2.2 Peer Coin

Peercoin, also known as PP Coin or PPC, is a peer-to-peer cryptocurrency utilizing both proof-of-stake and proof-of-work systems. Peercoin is based on an August 2012 paper which listed the authors as Scott Nadal and Sunny King. King, who also created Primecoin, is a pseudonym.

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2.3 Name Coin

Namecoin is an experimental open-source technology which improves decentralization, security, censorship resistance, privacy, and speed of certain components of the Internet infrastructure such as DNS and identities.(For the technically minded, Namecoin is a key/value pair registration and transfer system based on the Bitcoin technology.)Bitcoin frees money – Namecoin frees DNS, identities, and other technologies.

2.4 Ethereum

Ethereum is a cryptocurrency network that uses blockchain technology to facilitate smart contracts. It is a decentralised software that allows smart contracts to be built on its network and run on it without any control or fear of fraud by a third party. Ether is the token used to enable transactions on the Ethereum network. Ethereum is currently priced at roughly 2.46 lakhs.

2.5 Cardana

Cardano was created through a research-based approach by a team of mathematicians, engineers, and cryptographers. In the ecosystem of cryptocurrencies, Cardano claims to be a more sustainable and balanced coin when compared to the other cryptocurrencies. It is currently priced at 210.78.

III. Significance of Crypto Currencies

Corruption Check: As blocks run on a peer-to-peer network, it helps keep corruption in check by tracking the flow of funds and transactions.

1. Time Effective: Crypto currencies can help save money and substantial time for the remitter and the receiver, as it is conducted entirely on the Internet, runs on a mechanism that involves very less transaction fees and is almost instantaneous.
2. Cost Effective: Intermediaries such as banks, credit card and payment gateways draw almost 3% from the total global economic output of over $100 trillion, as fees for their services.
3. Integrating block chain into these sectors could result in hundreds of billions of dollars in savings.

IV. Concerns

Sovereign guarantee: Crypto currencies pose risks to consumers. They do not have any sovereign guarantee and hence are not legal tender.

1. Market volatility: Their speculative nature also makes them highly volatile. For instance, the value of Bit coin fell from USD 20,000 in December 2017 to USD 3,800 in November 2018.
2. Risk in security: A user loses access to their crypto currency if they lose their private key (unlike traditional digital banking accounts, this password cannot be reset).
3. Malware threats: In some cases, these private keys are stored by technical service providers (crypto currency exchanges or wallets), which are prone to malware or hacking.
4. Money laundering: Crypto currencies are more vulnerable to criminal activity and money laundering. They provide greater anonymity than other payment methods since the public keys engaging in a transaction cannot be directly linked to an individual.
5. Regulatory bypass: A central bank cannot regulate the supply of cryptocurrencies in the economy. This could pose a risk to the financial stability of the country if their use becomes widespread.
6. Power consumption: Since validating transactions is energy-intensive, it may have adverse consequences for the country's energy security (the total electricity use of bit coin mining, in 2018, was equivalent to that of mid-sized economies such as Switzerland).

V. Crypto Currency In India

1. In 2018, The RBI issued a circular preventing all banks from dealing in crypto currencies. This circular was declared unconstitutional by the Supreme Court in May 2020. Recently, the government has announced to

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introduce a bill; Crypto currency and Regulation of Official Digital Currency Bill, 2021, to create a sovereign digital currency and simultaneously ban all private crypto currencies.

2. In India, the funds that have gone into the Indian block chain start-ups account for less than 0.2% of the amount raised by the sector globally. The current approach towards crypto currencies makes it near-impossible for block chain entrepreneurs and investors to acquire much economic benefit.

VI. Issues Associated with Banning Decentralized Crypto currencies

1. Blanket Ban: The intended ban is the essence of the Cryptocurrency and Regulation of Official Digital Currency Bill, 2021. It seeks to prohibit all private crypto currencies in India.
2. However, categorizing the crypto currencies as public (government-backed) or private (owned by an individual) is inaccurate as the crypto currencies are decentralized but not private.
3. Decentralized crypto currencies such as bit coin aren't or rather, can't be controlled by any entity, private or public.
4. Brain-Drain: Ban of crypto currencies is most likely to result in an exodus of both talent and business from India, similar to what happened after the RBI's 2018 ban.
5. Back then, block chain experts moved to countries where crypto was regulated, such as Switzerland, Singapore, Estonia and the US. With a blanket ban, block chain innovation, which has uses in governance, data economy and energy, will come to a halt in India.
6. Deprivation of Transformative Technology: A ban will deprive India, its entrepreneurs and citizens of a transformative technology that is being rapidly adopted across the world, including by some of the largest enterprises such as Tesla and MasterCard.
7. An Unproductive Effort: Banning as opposed to regulating will only create a parallel economy, encouraging illegitimate use, defeating the very purpose of the ban.
8. A ban is infeasible as any person can purchase crypto currency over the internet.
   Contradictory Policies: Banning crypto currency is inconsistent with the Draft National Strategy on Block chain, 2021 of the Ministry of Electronics and IT (MeitY), which hailed block chain technology as transparent, secure and efficient technology that puts a layer of trust over the internet.

A. Supreme Court of India ruling on Crypto currencies like Bit coin

The RBI ban on crypto currencies was challenged in the Supreme Court by the Internet and Mobile Association of India and few other stakeholders. In a significant judgment (March 03, 2020), the Supreme Court on lifted the curbs on exchanges in crypto currency imposed by the Reserve Bank of India. The Court held that the RBI's circular preventing bans from dealing in transaction involving crypto currency was disproportionate.

VII. Challenges

The almost hidden nature of cryptocurrency transactions makes them easy to be the focus of illegal activities such as money laundering, tax-evasion and possibly even terror-financingPayments are not irreversible. Cryptocurrencies are not accepted everywhere and have limited value elsewhere

There is concern that cryptocurrencies like Bitcoin are not rooted in any material goods. Some research, however, has identified that the cost of producing a Bitcoin, which requires an increasingly large amount of energy, is directly related to its market price.

VIII. Methodology

IN this research the main focused approaches are as given follows:

- What is Crypto currency
- History of Crytocurrency
- Types of Crypto currency.
- Significance of Crypto currency
- Concerns of Crypto currency

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IX. Result

1. Regulation is the Solution: Regulation is needed to prevent serious problems, to ensure that crypto currencies are not misused, and to protect unsuspecting investors from excessive market volatility and possible scams. The regulation needs to be clear, transparent, coherent and animated by a vision of what it seeks to achieve.
2. Clarity on Crypto-currency definition: A legal and regulatory framework must first define crypto-currencies as securities or other financial instruments under the relevant national laws and identify the regulatory authority in charge
3. Strong KYC Norms: Instead of a complete prohibition on cryptocurrencies, the government shall rather regulate the trading of crypto currencies by including stringent KYC norms, reporting and taxability.
4. Ensuring Transparency: Record keeping, inspections, independent audits, investor grievance redressal and dispute resolution may also be considered to address concerns around transparency, information availability and consumer protection.
5. Igniting the Entrepreneurial Wave: Crypto currencies and Block chain technology can reignite the entrepreneurial wave in India's start up ecosystem and create job opportunities across different levels, from block chain developers to designers, project managers, business analysts, promoters and marketers.

X. Conclusion

India is currently on the cusp of the next phase of digital revolution and has the potential to channel its human capital, expertise and resources into this revolution, and emerge as one of the winners of this wave. All that is needed to do is to get the policymaking right. Block chain and crypto assets will be an integral part of the Fourth Industrial Revolution; Indians shouldn't be made to simply bypass it.

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