

Cryptocurrency in India: Success or Fail

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As we move forward with introducing new technologies into our daily lives, India being a developing nation, has always coped up with the emerging technologies. People and organizations are increasingly turning to digital transactions as the internet becomes more accessible and convenient. Digital payment systems are more efficient, faster, and less expensive. As a result, it's no surprise that novel types of digital payment systems are being introduced at a quick pace. When it comes to comparisons, no other approach even comes close to the colossus that is cryptocurrencies. Cryptocurrencies such as Bitcoin and Ethereum are among the most widely used methods of electronic payment. Cryptocurrencies may become more prevalent in India as a viable digital currency alternative, but they have both opportunities and obstacles of their own.

Index Terms—Cryptocurrency, Bitcoin, Ethereum, Decentralization, Blockchain.

I. INTRODUCTION

There is no denying that the information and communication technology age has ushered in a plethora of golden chances in various fields. The financial and commercial sectors are one of the domains that profit from these technology and internet connections. Virtual world concepts have been triggered by increasing internet users, resulting in a new commercial phenomenon. As a result, new forms of commerce, transactions, and currencies have emerged. Cryptocurrency is one of the most extraordinary financial forms to emerge in recent years. The study looks at a variety of characteristics of cryptocurrency platforms to address the research's significant questions, which are "Will cryptocurrency be the next currency platform?" and "Will cryptocurrency be the next currency platform?" "Are virtual currency systems secure to use?" you might wonder. It examines various Cryptocurrency platforms to offer a comprehensive understanding of the methods for implementing, regulating, issuing, spending, and trading Cryptocurrencies, resulting in a valuable and well-organized cryptocurrency categorization. The study also examines current Cryptocurrency systems and platforms to identify any existing concerns, faults, or obstacles.

The findings highlight the significance of regulating cryptocurrency use for all parties involved in and impacted by cryptocurrency platforms. to issue and implement strong regulations, policies, and laws to regulate virtual currency systems. Furthermore, this work has scientific information that opens up possibilities for further investigation.

II. RELATED WORKS

A. Hileman, Garrick Rauchs, Michel. (2017)

Alternative payment mechanisms and digital assets were the topics of their Global Cryptocurrency Benchmarking Study. It looked at the rapidly growing cryptocurrency business and its essential components, including exchanges, wallets, payments,

and mining. The team collected data from bitcoin enterprises and organizations in 38 nations and five geographical regions. The study's findings are both eye-catching and thought-provoking. First, consumer adoption of multiple cryptocurrencies has exploded, with billions in market capitalization and millions of active wallets projected in 2016. Second, the cryptocurrency sector is both global and local, with cross-border exchange operations and spatially grouped mining operations. Third, the market is getting more fluid as the borders between exchanges and wallets become increasingly blurred, and a developing ecosystem now supports a variety of cryptocurrencies, not just bitcoin, that perform a variety of activities. Fourth, concerns about security and regulatory compliance are likely to persist for some time.

B. Dourado, Eli Brito, Jerry. (2014)

In their essay "Cryptocurrency," they address the issues that have hampered digital cash in the past, along with the technological advancements that have enabled cryptocurrency. It addresses the twofold payment dilemma as well as the Byzantine Generals Problem. Cryptocurrency is a tremendous technical success, but it is still a monetary experiment, according to the research. Yli-Huumo J, Ko D, Choi S, Park S, Smolander K (2016)

"Where Is Current Blockchain Technology Research?" they ask in their report. From a technological standpoint, a Systematic Review examines the difficulties and prospects of Blockchain technology. The findings suggest that over 80% of the articles focus on the Bitcoin system, with fewer than 20% dealing with other Blockchain applications such as smart contracts and licensing. The bulk of research focuses on uncovering and correcting Blockchain's privacy and security flaws, although many proposed remedies lack tangible evidence of their success. Many other aspects of Blockchain scalability, such as throughput and latency, have gone unexplored.

C. Chan, Stephen; Chu, Jeffrey, Nadarajah, Saralees and Osterrieder, Joerg (2017)

In their paper "A Statistical Analysis of Cryptocurrencies," they looked at the statistical features of the most popular digital currencies. Bitcoin is the most well-known cryptocurrency (as measured by market capitalization). The study compares cryptocurrency exchange rates to those of the US dollar. They can studied satisfactorily. The generalized hyperbolic distribution provides the most excellent match for the most significant currencies, such as Bitcoin and Litecoin, while the standard inverse Gaussian distribution, generalized t distribution, and Laplace distribution provide good fits for lesser cryptocurrencies. The findings are crucial for investing and risk management.

III. TYPES OF CURRENCIES

A. Digital Currency

The digital equivalent of a country's real money is known as a digital currency. Transactions and other services ordinarily are carried out with real cash may now be a digital currency. They are controlled by the government and may be paid for using debit/credit cards or through internet transactions.

B. Virtual Currency

The government does not issue virtual money, and the government does not control it. Virtual currencies are produced by developers and may be used to make purchases in applications and games. They have no intrinsic worth and can only be used digitally; they cannot be exchanged for fiat cash (digital or physical form). Although the terms "virtual currency" and "digital currency" are frequently used interchangeably, the distinction between the two is evident from the preceding facts.

C. Cryptocurrency

Cryptocurrencies are a decentralized kind of currency that any government does not regulate. They are made with cryptography, which makes them much safer because double spending is avoided. Furthermore, because there are no intermediaries, they may be sent straight to the recipient's digital wallet.

IV. WORK PROCESS OF CRYPTOCURRENCY

Cryptocurrencies encrypt sensitive data transfers using cryptographic protocols or very sophisticated coding systems to safeguard their exchange units. Cryptocurrency developers create these protocols using complex mathematics and computer engineering concepts, making them hard to breach and counterfeit. This system also hides bitcoin users' identities, making it harder to link transactions and funds to specific people or organizations. The source codes and technological controls that enable and safeguard cryptocurrencies are intricate to understand. On the other hand, ordinary individuals are more than capable of grasping the fundamental principles and becoming knowledgeable bitcoin users. Most cryptocurrencies are functional variants of Bitcoin, the first widely utilized cryptocurrency.

V. STRENGTH OF CRYPTOCURRENCY

Cryptocurrencies are considered to be a beneficial long-term investment. They have bright prospects due to their numerous benefits. The following are some of the advantages:

- 1) **Easy availability:** Because cryptocurrencies are not under any government or entity, they are available to everybody. Investing in cryptocurrency may be done quickly and easily through the internet.
- 2) **No involvement of any mediator:** Cryptocurrencies are not linked to any bank or financial organization, allowing for trading without the use of a middleman.
- 3) **Fast payments:** One of the most significant advantages is the ease of transfer. Inter-country transactions and payments are simple.
- 4) **Low transaction fees:** Dealing with cryptocurrencies is far more cost-effective than using credit or debit cards. The buyer is responsible for paying very minimal transaction costs.
- 5) **Information remains private:** Personal information about all transactions is confidential, ensuring that the individual dealing with it remains anonymous.
- 6) **No Identity Theft:** Merchants and bitcoin traders set a proxy id to safeguard their personal information from being abused.

VI. WEAKNESSES OF CRYPTOCURRENCY

Even though cryptography is a safer technology, security breaches have occurred on Bitcoin exchanges and participants on several occasions. One such breach occurred in August 2016, when the exchange Bitfinex suffered a loss of around USD 72 million. As a result, data and cryptocurrency security has become a huge worry. Another current disadvantage of any cryptocurrency is a lack of understanding of operating and trading in bitcoin. Innocent individuals become more exposed to hackers as a result of this.

The potential of cryptocurrencies to be exchanged like commodities might also be a disadvantage. Commodity-based markets have a lot of value volatility due to numerous market occurrences. Investor confidence in commodities is at risk as a result of this value volatility. An unanticipated catastrophe might cause a large sum of money to be lost, eroding investor confidence.

VII. RBI: ABOUT CRYPTOCURRENCY

In April, the Reserve Bank of India (RBI) said that all RBI-regulated bodies must immediately cease doing business with firms dealing in virtual currency. As a result, it can be stated that Banks and lenders in India would no longer trade or assist transactions with the United States. Earlier, firms or individuals that deal in cryptocurrency were fined.

Virtual currencies, according to the RBI, "may substantially

weaken the AML (anti-money laundering) and FATF (Financial Action Task Force) framework, adversely damage market integrity and capital control, and threaten financial stability if they develop beyond a critical level". Even if the legal status of cryptocurrencies in India is unclear, the nation may apply a Goods and Services Tax on the bitcoin trade. The Central Board of Indirect Taxes and Customs has suggested an 18 percent GST on bitcoin transactions.

VIII. TRANSACTIONS OF CRYPTOCURRENCY IN INDIA

Despite the restriction on cryptocurrencies and the declaration of cryptocurrency in India, the country remains a significant market for such transactions. Cryptocurrency dealers have employed legal experts and chartered accountants to assist them in finding new ways to acquire and sell bitcoins. The attempt to deprive the market of liquidity appears to have failed, as the Blockchain Foundation of India (BFI), a lobby of 45 cryptocurrency exchanges, claims that over 30 new exchanges have registered for membership in the last two months. Experts also believe that the restriction will encourage illicit operations such as hawala — and unlawful transmission of cash popular in South Asia and elsewhere — and hence contribute to the development of black money.

IX. CONCLUSION

Cryptocurrency appears to have passed the early acceptance stage that many new technologies go through. Even automobiles were affected by this occurrence. Bitcoin has begun to carve out a specialized market for itself, which may help cryptocurrencies become more popular or be the primary reason for their failure. Cryptocurrencies are still in their infancy, and it is hard to say if they will ever become prevalent in global markets.

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