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BENEFITS AND CHALLENGES OF CRYPTOCURRENCY IN INDIAN ECONOMY

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Abstract:In modern days of information and communication technologies(ICT), many activities in our daily life have been merged online and they become more flexible and more effective. A tremendous growth in online users has activated virtual world concepts and created a new business phenomenon. Cryptocurrency(CC) has become highly influencing factor which has revolutionized the business to facilitate the financial activities such as buying, selling and trading. Cryptocurrency represent valuable and intangible objects which are used electronically in different applications and networks. The use of virtual currency has become essential ingredient in many different systems in recent years. This paper investigates the benefits and challenges of cryptocurrency in Indian economy.

Keywords: Crypto Currency, ICT, Bitcoin, Buying, Selling, Trading, Virtual Currency.

1.1. Introduction

An information and communication technology (ICT) has created many golden opportunities in the financial and business sector. A growing number of online users has activated virtual world concepts and created new business phenomena. Thus, new types of trading, transactions and currencies have been arising. One of the remarkable financial forms that have been emerged in the last few years is Cryptocurrency(CC). A cryptocurrency is a digital currency that can be used to buy goods and services, but uses an online ledger with strong cryptography to secure online transactions. Much of the interest in these unregulated currencies is to trade for profit, with speculators at times driving prices skyward. Cryptocurrency is a form of payment that can be exchanged online for goods and services. Many companies have issued their own currencies, often called tokens, and these can be traded specifically for the good or service that the company provides. Think of them as you would arcade tokens or casino chips. You'll need to exchange real currency for the cryptocurrency to access the good or service.

Cryptocurrencies work using a technology called blockchain. Blockchain is a decentralized technology spread across many computers that manages and records transactions. Part of the appeal of this technology is its security. The paper explores many aspects of Cryptocurrency platforms attempting to answer the main questions like, are virtual currency platform safe enough to be used? This paper investigates different Cryptocurrency platforms in order to provide deep insight about mechanisms of implementing, controlling, issuing, spending and exchanging Cryptocurrencies which provides a useful and an organized CC classification. The paper also analyses current Cryptocurrency systems and platforms in order to extract concerns, problems, issues and challenges that are exist. This paper also provides a scientific content that create opportunities for further research. The paper also focuses on global Cryptocurrency Market, Indian Cryptocurrency Market, Benefits and challenges of it.

1.2. Global Cryptocurrency Market

The global cryptocurrency market size is expected to grow from USD 1.6 billion in 2021 to USD 2.2 billion by 2026, at a CAGR of 7.1%. Transparency or distributed ledger technology and growth in venture capital investments are the key factors driving the growth of the cryptocurrency market. The beginning of 2021 gave a lot of all-time-high maximums for a number of cryptocurrencies, that in turn led to a series of positive forecasts for 2021. So, for example:

Citi analysts predict the price of Bitcoin at the level of \$300,000 at the end of 2021. Although JPMorgan does not give exact numbers, it confirms that Bitcoin has the potential for further growth, as it competes with gold as an alternative means for storing capital. Mike Novogratz (manager of cryptocurrency hedge fund) specifies at \$65,000 as a realistic level, according to the Stock-to-Flow (S2F), a Bitcoin price prediction system, BTC/USD will reach \$100,000 by December 2021. Analyst Mike McGlone from Bloomberg sets a goal of \$50K in 2021 and \$170K for 1 BTC in 2022.

To make a forecast for cryptocurrencies for at least a few months ahead, it is necessary to consider this extremely volatile market at the moment from 2 points of view:

- Emotional (behavioral economics);

- From the point of view of the analysis of trading volumes in interaction with the price.
The future of the cryptocurrency market looks promising with opportunities in the peer-to-peer payment, remittance, e-commerce and retail, and media & entertainment industries. The global cryptocurrency market is expected to grow with a CAGR of 32% from 2019 to 2024. The major growth drivers for this market are transparency and immutability of the distributed ledger technology, growing remittance in developing countries, fluctuating monetary regulations, and a significant increase in venture capital investments.



Figure 1.1. Cryptocurrency Banking Market – Global Industry Trends

1.2.1. Bitcoin and cryptocurrency

The advent of Bitcoin marked the birth of cryptocurrency. Developed in 2008 and launched in 2009, Bitcoin was the first cryptocurrency creating a class of its own. It revolutionized money in that prior to Bitcoin, digital currency free from mediation from any financial institution, (i.e., free from centralization), existed only in theory. Although the concept of digital money existed prior to Bitcoin, the idea was never fully developed. Attempts at a digital currency system were in the works as early as the 1980s, but every effort to evolve the concept any further would ultimately fizzle out before it had gotten a chance to come to fruition. Bitcoin however, has become a breakthrough in digital money, giving rise and credence to cryptocurrency, the newest form of alternative currency. Cryptocurrency is not merely money that exists in the digital space; it relies on a decentralized form of control, meaning that it is not regulated by banks, governments or any intermediating entity with a higher power. Instead, ownership, security and verification is based on a system of cryptography, which works as the medium of storing the currency and processing it.

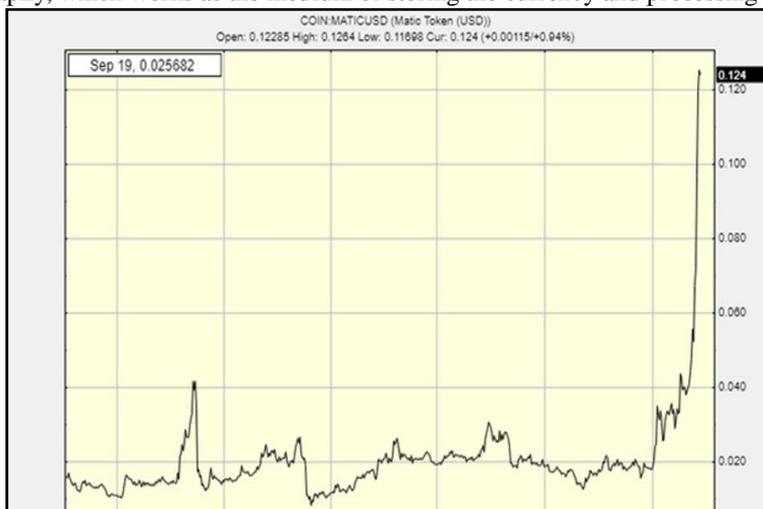


Figure 1.2. Bitcoin price prediction: 2021



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1.3. Indian Cryptocurrency Market

A cryptocurrency is a fully decentralized, secure, digital currency whose creation is controlled by cryptography. Cryptocurrencies are not issued by central banks and their value does not depend on bank policies. Unlike regular currencies where new money can be introduced in the money supply through Quantitative Easing (QE), cryptocurrency prices are purely based on supply and demand. Bitcoin, created in 2009, was the first cryptocurrency. There currently are over 800 alternative cryptocurrencies, called Altcoins, such as Ethereum, Ripple and Litecoin.

Bitcoin and popular altcoins can be found on TradingView, through the free, real-time data of 25 exchanges. Cryptocurrencies are somewhat similar to precious metals, in that their creation is controlled and most have a cap on the amount of units, just like precious metals, which have limited minable amounts. One of our most popular chats is the Cryptocurrencies chat where traders talk in real-time about where the Cryptocurrency market is going.

CRYPTOCURRENCY RUSH

Top 10 cryptocurrencies by market cap
No of cryptocurrencies: 1,500

Table with 3 columns: Name, Price (\$), Market Cap (\$/Bln). Rows include Bitcoin, Ethereum, Ripple, Bitcoin Cash, Cardano, NEO, Stellar, Litecoin, EOS, NEM, and Total M-Cap.



Figure 1.2. Top 10 Cryptocurrencies by market cap

1.4. Benefits

- a. Protection from inflation: Inflation has caused many currencies to get their value declined with time. Almost every cryptocurrency, at the time of its launch, is released with a fixed amount. The source code specifies the amount of any coin; like, there are only 21 million Bitcoins released in the world. So, as the demand increases, its value will increase which will keep up with the market and, in the long run, prevent inflation.
b. Self-governed and managed: Governance and maintenance of any currency is a major factor for its development. The cryptocurrency transactions are stored by developers/miners on their hardware, and they get the transaction fee as a reward for doing so. Since the miners are getting paid for it, they keep transaction records accurate and up-to-date, keeping the integrity of the cryptocurrency and the records decentralized.
c. Secure and private: Privacy and security have always been a major concern for cryptocurrencies. The blockchain ledger is based on different mathematical puzzles, which are hard to decode. This makes a cryptocurrency more secure than ordinary electronic transactions. Cryptocurrencies, for better security and privacy, use pseudonyms that are unconnected to any user, account or stored data that could be linked to a profile.
d. Currency exchanges can be done easily: Cryptocurrency can be bought using many currencies like the US dollar, European euro, British pound, Indian rupee or Japanese yen. With the help of different cryptocurrency wallets and exchanges, one currency can be converted into the other by trading in cryptocurrency, across different wallets, and with minimal transaction fees.
e. Decentralized: A major pro of cryptocurrency is that they are mainly decentralized. A lot of cryptocurrencies are controlled by the developers using it and the people who have a significant amount of the coin, or by an organization to develop it before it is released into the market. The decentralization helps keep the currency monopoly free and in check so that no one organization can determine the flow and the value of the coin, which, in turn, will keep it stable and secure, unlike fiat currencies which are controlled by the government.
f. A fast way to transfer funds: Cryptocurrencies have always kept itself as an optimal solution for transactions. Transactions, whether international or domestic in cryptocurrencies, are lightning-fast. This is because the verification requires very little time to process as there are very few barriers to cross.



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1.5. Challenges

- a. **Can be used for illegal transactions:** Since the privacy and security of cryptocurrency transactions are high, it's hard for the government to track down any user by their wallet address or keep tabs on their data.
- b. **Data losses can cause financial losses:** The developers wanted to create virtually untraceable source code, strong hacking defenses, and impenetrable authentication protocols.
- c. **Decentralized but still operated by some organization:** The cryptocurrencies are known for its feature of being decentralized. But, the flow and amount of some currencies in the market are still controlled by their creators and some organizations. These holders can manipulate the coin for large swings in its price.
- d. **Some coins not available in other fiat currencies:** Some cryptocurrencies can only be traded in one or a few fiat currencies. This forces the user to convert these currencies into one of the major currencies, like Bitcoin or Ethereum first and then through other exchanges, to their desired currency.
- e. **Susceptible to hacks:** Although cryptocurrencies are very secure, exchanges are not that secure. Most exchanges store the wallet data of users to operate their user ID properly. This data can be stolen by hackers, giving them access to a lot of accounts. After getting access, these hackers can easily transfer funds from those accounts.
- f. **No refund or cancellation policy:** If there is a dispute between concerning parties, or if someone mistakenly sends funds to a wrong wallet address, the coin cannot be retrieved by the sender. This can be used by many people to cheat others out of their money. Since there are no refunds, one can easily be created for a transaction whose product or services they never received.

Conclusion

Cryptocurrency has the potential of transforming and revolutionizing compliance-free peer-to-peer and remittance transactions; however, end users have to overcome certain challenges related to security, privacy, and control to benefit from cryptocurrency. As cryptocurrency transactions are recorded in the distributed public ledger known as blockchain, hackers have a large attack surface to gain access to critical and sensitive information. If this public ledger is used to store confidential contract-related information or payment data, replicating the file could potentially make it easier for hackers to access it. If a key is compromised, it can be used to access the database in a hub-and-spoke model as well as in a distributed database. Bitcoin however, has become a breakthrough in digital money, giving rise and credence to cryptocurrency, the newest form of alternative currency. Cryptocurrency is not merely money that exists in the digital space; it relies on a decentralized form of control, meaning that it is not regulated by banks, governments or any intermediating entity with a higher power. Instead, ownership, security and verification are based on a system of cryptography, which works as the medium of storing the currency and processing it.

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