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Blockchain and The Advancement of Cryptocurrency : Its Impacts and Role of Government in India

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ABSTRACT

The growing demand and developments of communication and information technologies, most of the activities in our day to day life have been merged online and have become more effective and flexible. A huge number of internet users has activated a virtual world concept to facilitate the financial activities such as trading, buying and selling. This concept of digital currency is called Cryptocurrency. It is a one of the latest business phenomenon. The digital currency is becoming a widespread in many different systems. These are intangible and very valuable objects which are used electronically in different types of systems i.e. online social networks and games and peer to peer networks. This paper investigates the growth of cryptocurrency in India. It also explores the measures and laws introduced by government of India.

Keywords: Cryptocurrency, Challenges and impacts in cryptocurrency, growth of digital currency in India , opinions and laws of government of India on cryptocurrency , regulations , bitcoin.

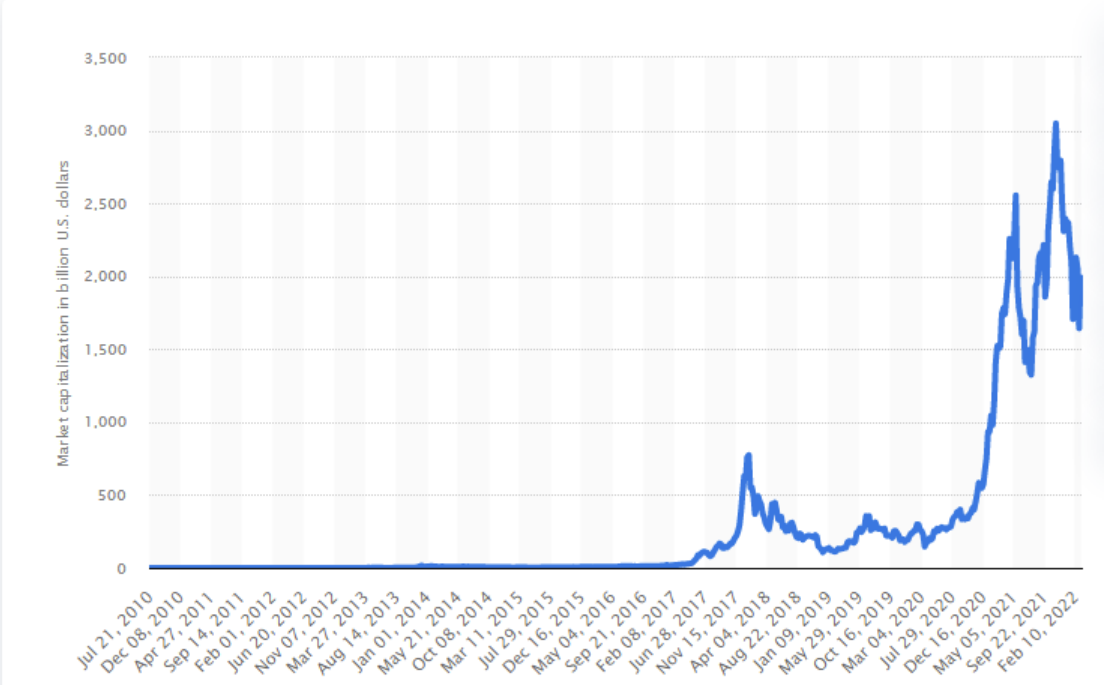
INTRODUCTION

The Digital Currency is playing a very important role in the field of research of management of money and operational research areas of financial markets. It is believed by many people's that in upcoming years, Cryptocurrency will replace the capabilities of Physical money in many areas. The difference between Digital money and Digital currency is that Digital is the form of digitalized physical money which is stored in one's bank account. One can withdraw or deposit the physical money into digital money. Digital currency or Cryptocurrency is one which is not regulated by any government or reserved banks. We cannot withdraw or deposit any kind of physical money into digital currency. Digital Currency works with the help of technology called Blockchain. The economic growth is limited encountered after the financial crisis and which is successively the Covid-19 Pandemic which has created new challenges for economic growth and development. The recent war between the two countries Russia and Ukraine has also posed new trends and challenges for the Cryptocurrency and financial markets. The use of Cryptocurrency have many advantages over the physical money as it is more consistent, less expensive, and is permanent and is not controlled by any government. But, as "with great powers comes great responsibilities" so as with many advantages comes many drawbacks. As discussed below are some advantages and drawbacks and impacts of cryptocurrency in India and the laws imposed and opinions by government of India.

METHODOLOGY

The first decentralized cryptocurrency was created by presumably pseudonymous developer, the Satoshi Nakamoto in 2009, called Bitcoin. Namecoin, another cryptocurrency was created in April 2011 as an attempt at forming a decentralized DNS, which would make censorship of internet very difficult. Soon after, Litecoin was released in October 2011. As of March 2022, with almost 1600 Cryptocurrencies available and traded in about more than 9500 exchanges. The market capitalization of all the cryptocurrencies is $1,829,118,073,793 & 24-hour volume was $83,734,575,118.

The maximum dominance in the cryptocurrency market with around 40% of market share and market capitalization is of Bitcoin alone. As of 18 March 2022, the market price of bitcoin is $40,648 i.e. 30, 91,991 (Indian Rupee).
Below given, the chart is the global market capitalization chart of cryptocurrency in U.S. dollars from the period of July 2010 to February 2022. Below the chart is the table with some of the most popular cryptocurrencies and with their recent prices.
These cryptocurrencies acquires the 75% of total cryptocurrency market capitalization or we can say, the total of the market share. The individual market capitalization of each cryptocurrency is also provided for better understandability.



(Chart 1)

NAME	PRICE	MARKET CAP.
BITCOIN	$39,198	$744 billion
ETHEREUM	$2,599	$312 billion
TETHER	$1.00	$80 billion
BINANCE COIN	$369.63	$61 billion
USD COIN	$1.00	$52 billion

(Table 1)

THE RISE OF CRYPTOCURRENCY IN INDIA

Estimated population of India is about 1.4 billion strong which has been on something of an economic renaissance in the recent years. The IMF has called the extent of the country's growth as the fastest growing and emerging economy. About 40 percent of the country's population has access to the internet and telecom services. India is a country which is steeped in culture, history and mystery. When it comes to technological advancement, it is not one to fall behind. Bitcoin and many other cryptocurrencies have been operating in India for a number of years now.

In 2012, smallscale Bitcoin transactions took place in the country. These were still early days in the development of the Bitcoin when only crypto hobbyists were interested in cryptocurrency.

The popularity of Bitcoin was beginning to increase by 2013, and was spreading across many countries.

Few businesses also began to accept the payment in Bitcoin. The first service to accept the Bitcoin payments in India was a restaurant in the Worli area of Mumbai. It was a vintage era pizza shop called 'Kolonial'.

In a short period of time, cryptocurrency exchanges began to spring up within the country. Pioneers like Unocoin, BtcxIndia and coinsecure offered cryptocurrency exchanges and trades in India. Over time many other applications were added in the list like Coinswitch and wazirX which started gaining the interests of Tech Savvy.

ROLE OF GOVERNMENT OF INDIA

On November 8, 2016, Mr. Narendra Modi , the Prime Minister of India announced the commencement of a policy of demonetization in the country.

The move of demonetization by the government of India led to demonetize approximately 86 percent of the country's paper currency. The result of this, which sent shockwaves not only in the India but all across the world. People of India having large holdings in cash required a new means of holding such cash without sundry government scrutiny and incurring significant tax burdens. It became a common practice for many people to buy large orders of Bitcoins and cryptocurrencies and then sell them at a later date. This meant that Indians were effectively circumventing what would have been considerable taxes if they had tried to circulate their cash through the banking systems. It is estimated that about 40% of Indians who had access to internet began to take up Bitcoin and other cryptocurrency investments.

The demonetization policy of 2016 may have spurred the adoption of many cryptocurrencies among a considerable portion of the population but when realities began to emerge, It have stifled the growth of the market in India. Despite its large population, India contributes only 2 percent of the total global cryptocurrency market capitalization. The small role being played by such a large economy can be attributed to the the RBI-led government crackdown and high cryptocurrency prices. The general level of prices of digital currencies in India is mostly on the high side. Market rates are relatively high by as much as 7 to 12 percent compared to the global average. This means that people of India can only get involved in peripheral participation in cryptocurrency trading as far as international crypto exchange platforms are concerned. Facilities.Strict government restrictions on international money flow and Lack of large-scale mining make it significantly difficult for Indians to transact with many of the large foreign crypto exchange platforms. The (RBI) Reserve Bank of India has been consistent in warning citizens of India of the risk associated with cryptocurrencies. While the government of the India hasn't banned any digital currency,they haven't exactly been endorsing it. In Budget Winter-Session held in February 2022, Honorable Mrs. Nirmala Sitharaman, The finance minister of India proposed imposing *a tax of 30 per cent* on virtual assets, effectively legitimising trading of private digital currencies(cryptocurrencies) and non-fungible tokens(NFTs). This proposed plan is neither in favor of friendly nor of non-friendly relation with cryptocurrency users. The India is following a neutral relationship with Cryptocurrency users till now.

MODELING AND ANALYSIS

BLOCKCHAIN

WHAT IS BLOCKCHAIN?

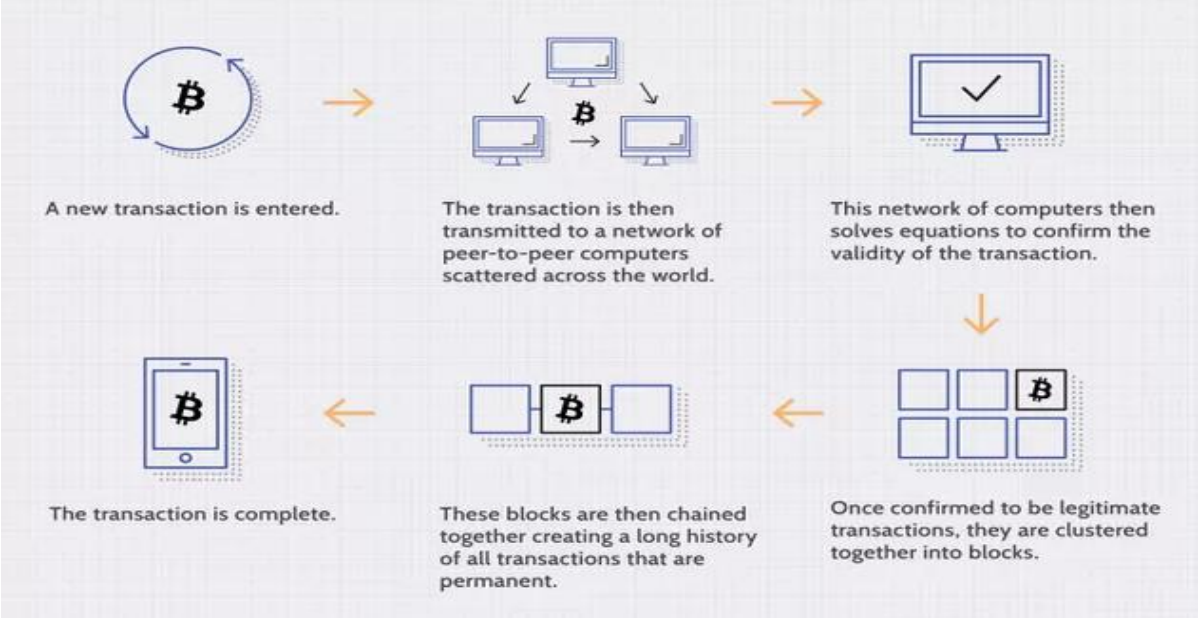
A blockchain is a data set that is divided between the hubs of a PC organization, we can refer it as decentralized. Blockchains are most popular for their pivotal job in cryptographic money frameworks, like Bitcoin, for keeping a protected and decentralized record of exchanges. As a database, blockchain stores data electronically in advanced design. The advancement with a blockchain is that it ensures the the quality of being faithful and dependable and security of record of information and produces trust without the requirement for a third party.

A blockchain gathers data together in groups, known as blocks that hold sets of data. Blocks have specific capacity limits and, when filled, are shut and connected to the recently filled block, establishing a chain of information known as the Blockchain. All new data that follows that newly added block is incorporated into a recently framed block that will then likewise be added to the chain once filled. This structure of data stored in blockchain is key difference between blockchain and a typical database.

HOW DOES A BLOCKCHAIN WORKS?

The aim of blockchain is to allow digital information to be distributed and recorded, but not changed. A blockchain is the foundation for records of transactions, or immutable ledgers that cannot be deleted, altered or destroyed. This is the reason why blockchains are also called as a distributed ledger technology (DLT).

It was first proposed in a research project in the year 1991; the concept of blockchain predated its first widespread application in use which is Bitcoin, in 2009. In the years since, the use of blockchains has exploded via the creation of various digital currencies, decentralized finance known as DeFi applications,, smart contracts and non-fungible tokens (NFTs).



(Figure 1)

RESULT AND DISCUSSION

Cryptocurrency offers a latest, attracted and effective model of payment methods that can boost operators and companies revenues. It also provide an alternative method of payment which can be done digitally, apart from real money, that enable users to make financial activities such as buying and selling, exchanging and transferring easily. Although digital currency platforms open vast channels for digital financial transactions and provide a latest form of currency with different methods and mechanisms, they are not controlled and regulated by the government as they deserved. The research analyzed cryptocurrency platforms have many concerns and challenges that put such financial system into the risk. The main concern in cryptocurrency systems is the lack of legislations.

CONCLUSION

The future of Cryptocurrency concept is revealing and promising more opportunities to bring positive changes and progress to e-Payment and e-Business sectors. With the improve of technology and the rapid progress, the progress of cryptocurrency will not stop. There are advanced steps towards expanding and improving the concept of cryptocurrency. Many people are now more aware of opportunities and potentials that Digital currency can offer. Many vendors have started accepting payment with different types of cryptocurrency. Recently, new forms of virtual currency have also been emerged and spread around the world.

M-Pesa as example, which is a form of Cryptocurrency that offer a secure payment, has been introduced in Kenya in 2007 and now, it has been expanded into many other countries in Asia including India Africa, and Europe . It is being a highly popular payment service. The Cryptocurrency field creates a lot of research opportunities and many studies need to be done in order to get scientific contents. The correlation between the legislative status of implementing cryptocurrency platform and the real financial laws needs to be studied further from various different prospectives. Moreover, the acceptance and adoption level also needs more analysis and more consideration with large samples. Confidence and trust are important factors that need to be investigated further in terms of trading and using the Cryptocurrency forms.

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