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Cryptocurrency and its Impact

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ABSTRACT: Several activities are integrated online due to rapid growth in information and communication technologies. Due to the increase in growth of the online business, commercial activities like acquiring, trading, and selling of cryptocurrency have become popular. Cryptocurrencies have extensively been reflected as a tool to assist in the developmental process in emerging countries. This paper examines the impact of cryptocurrencies on individuals and businesses within developing countries. The intention is to show decision-makers the possibilities to use cryptocurrencies to decrease developmental barriers.

KEYWORDS: Cryptocurrency, Transaction, Market price, Security, Virtual Currency

I. INTRODUCTION

To provide a comprehensive overview of the opportunities of cryptocurrencies in developing countries, it is necessary to understand the general advantages and disadvantages cryptocurrencies provide for users compared to central bank-issued fiat currencies, like the Euro or the US dollar, and to discuss how they emerge from the underlying technology. For this purpose, the example of two cryptocurrencies is used in this paper. The underlying technology of most cryptocurrencies is blockchain technology. A blockchain is a decentralized database that is distributed in the network on a variety of computers. It is characterized by the fact that its entries are summarized and stored in blocks.
The first crypto currency discussed in this paper as an example is Bitcoin which is technically, “an algorithm that records an ongoing chain of transactions between members of a decentralized peer-to-peer network and broadcasts these records to all members of the network”. Bitcoin is the world’s biggest crypto currency with a market capitalization of more than $189 billion. It was invented by Satoshi Nakamoto in 2008 when he has published his white paper “Bitcoin: A Peer-to-Peer Electronic Cash System”.
Secondly, Ethereum is used as an example which is a blockchain-based, public, open-source, computing platform and operating system for smart contracts. This platform supports a modified version of Nakamoto’s consensus mechanism and was proposed in 2014 by Vitalik Buterin (Buterin Vitalik, 2014; Rizzo et al., 2016). The underlying cryptocurrency is called “Ether”. It is the second biggest cryptocurrency in the market with a capitalization of over $18 billion.

II. INDIA AND CRYPTOCURRENCY

The population of India is approximately 1 billion and it has been on some economic revival in the last few years. With the country’s growth expansions, it is now being called the fastest-growing emerging economy. In today's India, more than 40% of the citizens have access to telecoms and web services. India is not only infused in mystery, history, and culture but also in technological advancement. Cryptocurrencies like Bitcoins have been wielding within the country for several years now. Minor cryptocurrency deals had already begun to take place inside India since 2012. However, only the crypto hobbyists were interested in Bitcoin during the time of development of Bitcoin. But by 2013, popularity of bitcoin started spreading fast across many countries. In the following year bitcoin started to get accepted as a mode of payment by few businesses. A vintage-era pizza shop called Kolonial in the Worli area of Mumbai became the first restaurant service in India to accept Bitcoin payments.

In a short span of time, the cryptocurrency exchange had begun to leap up in the country. The cryptocurrency exchange and trading services in India were put forward by developers like BtcxIndia, Unocoin, and Coinsecure. As the years passed, other developers like Zebpay, Koinex, and Bitcoin-India were also providing services of cryptocurrency exchange. The rise of crypto market in India happened due to the expansion of crypto market. There are also many online exchanges that provides crypto shops in the country like over-the-counter shops [1].

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III. POPULARITY OF CRYPTOCURRENCY

Cryptocurrencies appeal to their supporters for a variety of reasons. Here are some of the most popular. Supporters see cryptocurrencies such as Bitcoin as the currency of the future and are racing to buy them now, presumably before they become more valuable. Some supporters like the fact that cryptocurrency removes central banks from managing the money supply, since over time these banks tend to reduce the value of money via inflation. Other supporters like the technology behind cryptocurrencies, the blockchain, because it's a decentralized processing and recording system and can be more secure than traditional payment systems. Some speculators like cryptocurrencies because they're going up in value and have no interest in the currencies' long-term acceptance as a way to move money [2].

IV. WORKING PRINCIPLE OF CRYPTOCURRENCY

Cryptocurrencies use decentralized technology to let users make secure payments and store money without the need to use their name or go through a bank. They run on a distributed public ledger called blockchain, which is a record of all transactions updated and held by currency holders. Units of cryptocurrency are created through a process called mining, which involves using computer power to solve complicated mathematics problems that generate coins. Users can also buy the currencies from brokers, then store and spend them using cryptographic wallets. Cryptocurrencies and applications of blockchain technology are still nascent in financial terms and more uses should be expected. Transactions including bonds, stocks and other financial assets could eventually be traded using the technology [3].

V. LEGALITY OF CRYPTOCURRENCY

With the exponential development and unprecedented advancements in the field of technology in India, especially with the emergence of COVID-19, the fintech sector has been on a path of constant rise. With the gaining popularity and awareness amongst the people of India with respect to cryptocurrency such as Bitcoin, Ripple, Dogecoin, etc., many have started investing most part of their time and money in these virtual currencies, to ride amongst many others the present global wave in anticipation of profits. In India, the apex financial authority i.e., the Reserve Bank of India, has understood cryptocurrency as a form of digital/ virtual currency generated through a series of written computer codes that rely on cryptography which is encryption and is thus independent of any central issuing authority per se. It is facilitated through blockchain technology and has emerged as a person-to-person issuance and transaction system that uses private and public keys that enable authentication and encryption for secure transactions.

Being an untapped, unregulated market with a capability of over a trillion dollars, India also saw a massive surge of cryptocurrency exchanges. Witnessing the massive popularity of the crypto market, its usage within a year, and potential revenue loss the Government of India, the regulators and authorities began to take notice and as a consequence, in 2013 the Reserve Bank of India ("RBI") issued a press release, cautioning the public against dealing in virtual currencies including Bitcoin. In November 2017 the Government of India constituted a high-level Inter-Ministerial Committee to report on various issues pertaining to the use of virtual currency and subsequently, in July 2019, this Committee submitted its report recommending a blanket ban on private cryptocurrencies in India [4].

Despite the fact that report from the Inter-Ministerial Committee was pending, at the beginning of April 2018, the RBI issued a circular preventing all commercial and co-operative banks, small finance banks, payment banks and NBFC from not only from dealing in virtual currencies themselves but also directing them to stop providing services to all entities which deal with virtual currencies [1]. This essentially broke down the crypto industry as exchanges needed the banking services for sending and receiving the money necessary for converting it into cryptocurrency and for paying salaries, vendors, office space etc. However, the circumstances prevailing around cryptocurrencies and their usage completely changed on 4th March 2020, when the Apex court of India in a well-conceived judgment passed a decision quashing the earlier ban imposed by the RBI [2]. The Hon'ble Supreme Court of India predominantly examined the matter from the perspective of Article 19(1)(g) of the Indian Constitution, which specifies the freedom to practice any profession or to carry on any occupation, trade or business, and the doctrine of proportionality. With the exponential development and unprecedented advancements in the field of technology in India, especially with the emergence of COVID-19, the fintech sector has been on a path of constant rise. With the gaining popularity and awareness amongst the people of India with

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VI. ADVANTAGES OF CRYPTOCURRENCY

Cryptocurrency is the alternative to cash and credit card. It is taking the digital world by storm. Many companies are accepting the payments through cryptocurrency these days. On the other hand, cryptocurrency has become a home for many hackers. With the rise in the bitcoin value, many people are showing interest in investing in bitcoins. The cryptocurrency is backed by the blockchain technology that is having a positive impact on wallets [6].
Here are a few advantages of cryptocurrency

Easy transactions

When you are doing business or dealing with brokers or legal representatives, there is a lot of transaction fees that you must pay for every transaction. On top of it, there is a lot of paperwork, brokerage fee, commission and other things to be met. When you use cryptocurrency, it removes the need of the middle man. The transaction would take place one to one on the secure network. The transactions would be transparent, and it becomes easier for you to establish the audit trails. There would be no more confusion on who is going to pay whom. The parties who are involved in the transaction would know each other well.

Asset transfers

The cryptocurrencies can be used to transfer the ownership of assets on one name to another name by paying the seller through bitcoin. It all happens in the blockchain ecosystem. It facilitates you to carry out the transactions safely and securely. The cryptocurrencies would be designed to add third-party approvals and can be completed on the future date. If you are the person who holds the cryptocurrency and has authority on the account, you can reduce the time and expenses involved in the transaction of assets.

Confidential transactions

When you use cash or credit, the transaction history would be recorded, and this record will be available for the banks. Whenever you do the transaction, the bank records it. However, you can check the balance that is in the account whenever you want. When you are carrying out complicated business transactions, there would be a lot of financial history checks.

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The best part of using cryptocurrency is that every transaction you carry out with the recipient would be unique. You can get into terms negotiation in every deal. The information is exchanged based on the push concept. You can only share the information that you want to disclose to the recipient. The financial history will have ample privacy, and your identity would be protected. When you are making transactions using the wallet, make sure to check the bitcoin trader updated version.

Low transaction fee

When you check the bank statement, you would be cribbing on the transaction fee charged for every transaction you are carrying out. If you are performing a lot of transactions every month, then the fee would be whopping. The data miners would receive their compensation from the cryptocurrency network, so there would be no charge or very less charge on the transaction fee. If you are entrusting the responsibility of maintaining your crypto wallet to the third party, you must pay for the service. However, the transaction fees charged by cryptocurrency transactions would be lesser compared to the traditional financial system.

Give access to credit

Internet is allowing people to transfer cryptocurrencies with ease and securely. The cryptocurrency service can be used by anyone who has access to the internet. They must also know the cryptocurrency network. Though people have access to the internet, not many use banks or exchanges. It becomes easier to carry out transactions and asset transfers using the cryptocurrency ecosystem for interested customers.

Hold ownership

In the traditional banking system, when the person dies, the amount would go to the nominee. There are chances of the account getting closed when you infringe on the terms of service. The best part of cryptocurrency is that you will be the sole owner of private and public encryption keys. It becomes easier for you to identity the cryptocurrency network.

Strong security

When you perform the transaction in cryptocurrency, you cannot reverse it. There will be a reliable encryption technique used throughout the cryptocurrency transaction process to protect from hackers and tampering the information.

Decentralization

The blockchain technology will manage the database that has the bitcoin transaction records. The decentralization would involve only two parties in the transaction, i.e., the sender and receiver. You no more have to deal with any third party. There is no one to monitor what you are doing.

VII. DISADVANTAGES OF CRYPTOCURRENCY

Scalability

One of the biggest concerns you'll find with cryptocurrencies is the scaling issues. Despite the rapid increase in digital coins and adoption, many more transactions are processed daily by the payment giant VISA than by digital coins. In addition, the speed of a transaction is another critical point at which cryptocurrencies cannot compete with players like Mastercard and VISA unless the infrastructure providing these technologies gets massively scaled. Such a transition is

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complex, difficult, and definitely not seamless. Experts have proposed diverse solutions (such as lighting networks, starking, and sharding), and these are likely to deal with scalability issues over time.

Cyber Security Issues

Cryptocurrencies are digital technologies, which means they are prone to hacker attacks. According to Bitcoin Rush, Several ICOs have been hacked this summer, causing investors to lose many dollars. (One attack led to the loss of $473 million.) Managing this threat will require constant maintenance of security infrastructure.

The Volatility of Prices and Lack of Inherent Value

Price volatility is a significant issue, and Buffet specifically alluded to it a few weeks ago when he described the cryptocurrency ecosystem as a bubble. Consumer confidence should also rise as adoption increases.

Correlations

From 2010 to 2021, the S&P 500 has fallen 17 times, while bitcoin has risen seven times. In other words, bitcoin also declined in 10 of the 17 months the S&P 500 declined. There were four months in which bitcoin's price declined when the S&P 500 suffered a decline – this indicates that bitcoin has not been able to provide diversification benefits when needed most. A positive correlation exists between bitcoin returns and S&P500 returns, which is stronger than the correlation between gold and S&P500 returns.

Regulations

Speaking on the issue of regulations, Buffet has said: "It doesn't make sense. This thing is not regulated. It's not under control. It's not under the supervision [of] any United States Federal Reserve or any other central bank. I don't believe in this whole thing at all. I think it's going to implode." Although we can perfect the technology and solve all the problems mentioned above, investment in this technology will be riskier until federal governments regulate the technology. A further concern with the technology relates to logistics. Changes in protocols, for example, that are required when technology is being improved, can take so long a time and disrupt normal operations.

With all the obstacles to mass adoption, it's only logical that experienced investors such as Warren Buffet would take a cautious approach to this technology. The fact remains that cryptocurrencies (as well as blockchain technology) will thrive in the future. They offer several advantages consumers desire from a currency; transparency, decentralization, and flexibility being among the most popular. Extending the discussion to all the things blockchain can make possible throughout all industries further reinforces this point [7].

VIII. WORKING PRINCIPLE OF CRYPTOCURRENCY

Since market prices for cryptocurrencies are based on supply and demand, the rate at which a cryptocurrency can be exchanged for another currency can fluctuate widely, since the design of many cryptocurrencies ensures a high degree of scarcity.

Bitcoin has experienced some rapid surges and collapses in value, climbing as high as $17,738 per Bitcoin in Dec. 2017 before dropping to $7,575 in the following months, cryptocurrencies are thus considered by some economists to be a short-lived fad or speculative bubble.

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.

Cryptocurrency blockchains are highly secure, but other aspects of a cryptocurrency ecosystem, including exchanges and wallets, are not immune to the threat of hacking. In Bitcoin's the year history, several online exchanges have been the subject of hacking and theft, sometimes with millions of dollars' worth of "coins" stolen [8].

Several observers have identified potential advantages in cryptocurrencies, like the possibility of preserving value against inflation and facilitating exchange while being easier to transport and divide than precious metals and existing outside the influence of central banks and governments.

Prime Minister of India Narendra Modi on November 8th 2016, declared the commencement of a demonetization policy after hearing this news people with huge financial stability required latest means of possessing their riches by avoiding significant tax inconvenience and sundry government inspection. Thus, resulting as a common practice for these people to purchase huge stakes of various kinds of cryptocurrencies and resell them on a later date. Later, several Indian citizens, including the 40% group that had access to the web began investing in cryptocurrency especially

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bitcoins. India only contributes 2% of the total global cryptocurrency market capitalization despite being such vast in population [9].

The major drawback for Indians to carry trading of cryptocurrency is the lack of large-scale mining facilities and not so lenient government restrictions on the flow of money internationally which further makes it hard for the country's citizens to carry transaction with large international crypto exchange platforms globally.

IX. CONCLUSION

Cryptocurrencies' most recent and acceptable mode of payment approaches can boost both firm and businessman's gross sales. Several methodologies of payment are provided by cryptocurrencies that can effortlessly change customers from carrying out financial operations like acquiring, dealing, shifting, and trading. As crypto matures, we will achieve a lot of stability which will make it easily transferable, and a store of value that will make it more used by businesses, the government, and everyone as a part of everyday life. Cryptocurrency is still a lot in its early stages and some people are still sceptical about it but it is here to stay and has been adapted into our lives and will be a currency used by everyone which is only a matter of time. With the acceptance and how widely talked about it is, the future of crypto is sure to be bright.

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