

CRYPTOCURRENCY: BOTH SIDES OF COIN

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ABSTRACT

Present era is a digital era. The digital revolution has shown its impact on almost everything which has changed the economy as a whole. Cryptocurrency which is purely a digital currency has emerged as an important financial software system. It is also a medium of exchange just like other currencies. Just like gold, cryptocurrency has turned out to be a new avenue of investment instrument. But unlike traditional currency it is independent of any control by any central authority as crypto currency was designed as peer-to-peer system. The functioning of cryptocurrency is possible using a technique which is known as cryptography. Cryptography is that technique in which readable information is transformed into coding language. These codes are not easy to crack. That is why cryptocurrency is the secure mode of making any transaction. This paper focuses on understanding what cryptocurrency is all about and its impact on the Indian economy.

Keywords: *cryptocurrency, bitcoin, digital, virtual payment, exchange, cryptography*

INTRODUCTION-

Long back barter system used to prevail in our country in which commodity was exchanged for commodity. Nowadays coins and paper notes are the major currencies. Apart from this, we have one more currency that is completely virtual or digital. It is known as cryptocurrency. The term cryptocurrency has been made from two Latin words i.e. cryptography meaning hidden and currentia meaning money. So the term means hidden or digital money. In general terms, cryptocurrency is a type of digital currency that one can keep with themselves but cannot touch it. One cannot keep cryptocurrency in their pocket like coins or notes. Thus, cryptocurrency is a form of virtual payment or electronic currency through which exchange of goods and services take place. This currency is neither funded by the government nor supported by the central bank. In general, a virtual currency, a digital currency and a cryptocurrency are used interchangeably but actually they are not the same. These terms have different meanings.

- A virtual currency is that which is unregulated and is controlled by its developers.
- A digital currency is just like a traditional currency but its characteristics are somewhat different. It is created and stored electronically. A digital currency is centralized.

A cryptocurrency is a kind of digital currency. The attribute that makes it different from others is that it uses cryptography. Cryptography is a coding language through which one can make secure transactions. All crypto currencies are digital but all digital currencies are not crypto.

OBJECTIVES-

Few years back, cryptocurrency has been just a subject of discussion among large masses but now in the world of technological advancement, investors are more comfortable with using it. People are showing interest in buying cryptocurrencies. On the other hand there are a greater population which is confused with regards to the overall performance of cryptocurrency. Cryptocurrency has become popular in India like other nations as the volume of Indian rupee being traded in cryptocurrency have been at the highest post demonetisation. In this paper, the objectives of the study are as follows-

- To study the concept of cryptocurrency.
- To analyze the advantages and disadvantages of using it.

LITERATURE REVIEW-

There are several studies of cryptocurrency phenomena that enrich the literature in this study.

- Chris Rose (2015), in their paper 'The Evolution of Digital Currencies: Bitcoin, A Cryptocurrency Causing a Monetary Revolution' analyzed that bitcoin was not the only attempt in the world of digital currency yet it has been the most successful one. Rose also differentiated the three kinds of currencies i.e. virtual currency, digital currency and cryptocurrency.

- Wonglimpiyarat(2016) highlights that there are obstacles of lawless tender where Bitcoin wants the government's legislation to boost the permissibility of this new currency. Bitcoin currency may transform the future of banking in developing countries but it is hard to substitute a cash-based society.
- the results of the Misnik study in 2017 (Drozd, Lazur&Serbin, 2017) conclude that the recognition of digital currencies is highly dependent on the level of development of the country, where countries with weak economies are not ready to enforce cryptocurrency payment systems, but countries who have advanced trying to regulate electronic payments by controlling and inviting them.
- Krishna Kumar Thakur and Dr. G. G. Banik (2018) in a paper 'Cryptocurrency: Its Risks and Gains and the Way Ahead' discussed the evolution of cryptocurrency. They analyzed the status of cryptocurrency worldwide and also in India. They also analyzed the benefits and drawbacks of using it.
- Flamur Bunjaku., Olivera, Gjorgieva-Trajkouska and Emilia, Miteva-Kacarski. in their paper elaborated different aspects of cryptocurrency, challenges and risks associated with it and the functions of cryptocurrency. According to them, the future of cryptocurrency cannot be predicted easily and a lot can be done in the field of regulations.
- Dr.Arvind Kumar Singh and Karan Veer Singh (2018) in their paper discussed about the scope and legalization of Bitcoin in India. They compared bitcoin with other investments and predicted that the regulation of bitcoin will be done in different stages.
- Dr.Hariharan Narayanan (2020) in his paper 'Is Future a Rule of Digital Currency??' discussed about the concept of digital currency and its various forms. He also analyzed its emergence and growth, adoptability and the impact of cryptocurrency at global level.
- In November 2021, The Library of Congress conducted a periodic review of countries in which it identified 103 countries where the regulatory agencies were directed by the government to develop regulations on cryptocurrency and their use. As per the Library of Congress, there are many countries where the use of cryptocurrency is allowed. The U.S., Canada, The European Union, Australia, Denmark, France, Germany, Iceland, Japan, Mexico, Spain and U.K. are such countries.

EVOLUTION OF CRYPTOCURRENCY-

Satoshi Nakamoto first started crypto currency in 2008 and thereafter Bitcoin was created in the year 2009. After it, several other crypto currencies were also introduced by other parties. Ethereum, Litecoin, Monero, Ripple, Cardano, Namecoin, NEO, USD Coin, Steem, Icon, Dogecoin, Stellar, Dash, Polkadot, Peercoin, Zcash, Tether, Siacoin etc. are the major cryptocurrencies and more cryptocurrencies are listed. Now, the government has also legalised cryptocurrency and they are now accepted as a legit form of currency by many organisations, banks and firms. Polygon, previously known as Matic Network, is a cryptocurrency made by Indian engineers.

Cryptocurrency cannot be seen physically as it is purely a virtual currency, only balances are kept on a public ledger. The transactions are recorded in a distributed ledger which is known as blockchain. This coin ledger is protected from any fraudulent activity. These coins can be inflated at will; the supply of Bitcoin is limited to a certain volume, which cannot be changed.

HOW CRYPTOCURRENCY WORKS?

Under cryptocurrency, the transactions are made from one owner to another forming a chain. The user is free to use any number of addresses. The activity of one set of address is not affected by another. When any transaction is made by someone, the confirmation of the transaction is the most complicated thing. The transaction using a cryptocurrency is all about confirmation. The working of cryptocurrency initiates when someone requests a transaction. The information of the requested transaction is received by the entire network. Once the transaction is received, it is verified and its validity is checked by the network. After the transaction is confirmed, it cannot be reversed or refunded. The party that plays a major role under cryptocurrency are the miners. Miners are the ones whose role is to receive the transactions, check its legality and spread them in the entire network.

Figure-1

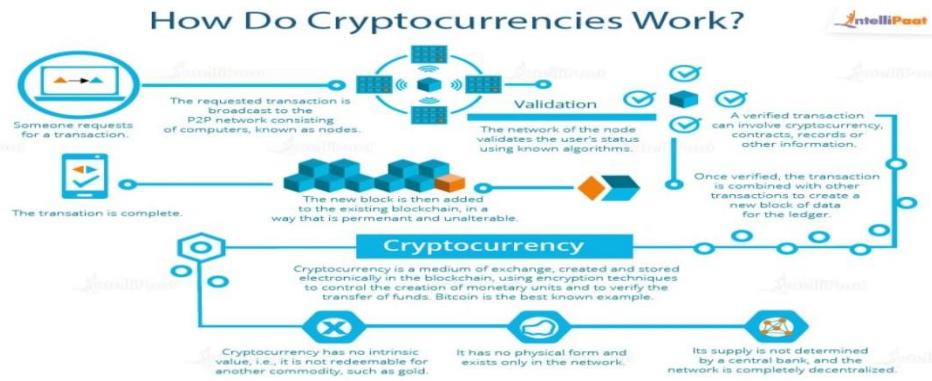


Image source- intellipaat.com

CATEGORISATION OF CRYPTOCURRENCY-

A crypto currency is categorized into two different kinds. One is a crypto coin and the other one is known as a crypto token. Although these two terms are used interchangeably by the people yet they are not alike. While making any transaction, the user is not aware about whether he is buying a crypto token or a crypto coin. The attribute that make a difference between the two is utility. A crypto coin is just a virtual currency that operates on its own block chain. It can be used for making payments only. On the other hand, a crypto token is used for making digital contracts or agreements. It does not have its own block chain. It is issued for a specific project only.

Table-1

Crypto Coin	Crypto Token
Bitcoin	Tron
Ethereum	Bytom
Ripple	Vechain
Tether	Augur
Cardano	Omiseego
Litecoin	Ox

Table-2: Topmost crypto currencies

Cryptocurrency	Market value (in dollars)
Bitcoin	815 billion
Ether	344 billion
Cardano	45 billion
Ripple	36 billion
Dogecoin	31 billion
Polkadot	19 billion
Bitcoin cash	10.4 billion

*Source: business insider. in

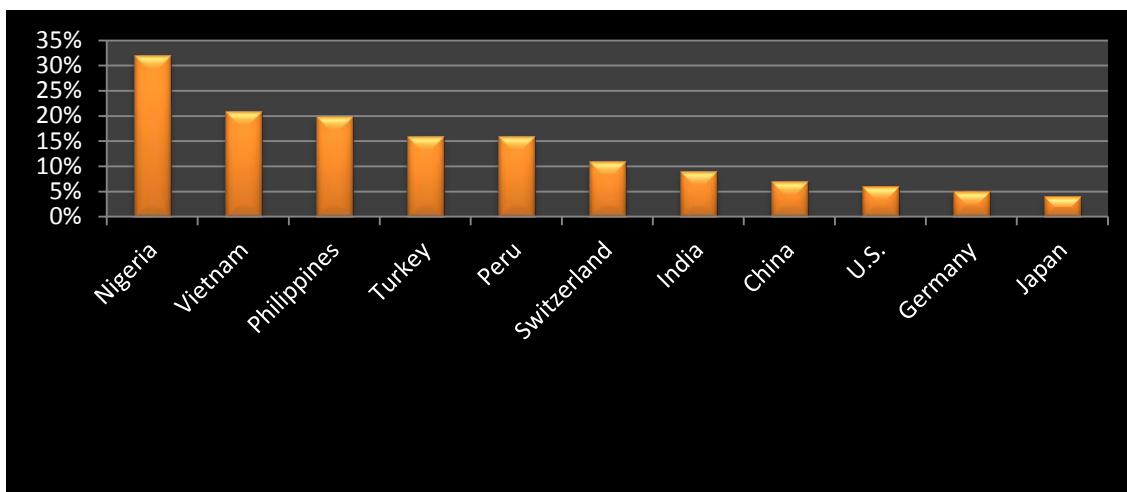
COUNTRIES WHERE CRYPTOCURRENCY (BITCOIN) IS LEGALIZED-

El Salvador in June 2021 became the first and the only country where Bitcoin is accepted as a legal tender and it has purchased a total of 400 Bitcoins. In September, 2021, it became the first country where consumers are allowed to use crypto in all kinds of transactions. Although there are many countries where the use of crypto currency is legal now but still many countries are there where its use is banned. Georgia, Maldives, Zimbabwe, Vietnam, Macao, Libya, Kuwait, Burundi and Bahrain are the countries with implicit ban. In November 2021, there were nine countries with absolute ban on crypto currency as recognized by the Library of Congress with Algeria, Bangladesh, China, Egypt, Iraq, Morocco, Nepal, Qatar and Tunisia.

The impact is of crypto currencies on the Indian economy is clearly depicted as the prices of crypto currency market are now falling down Finance Minister Nirmala Sitaraman in the Union Budget speech 2022-23 announced 30 per cent tax to be charged on income resulting from transfer of virtual digital assets or crypto currency. This resulted in the introduction of crypto tax regime in India. Highlights on crypto currency from the Budget are-

- Losses from transfer of digital assets cannot be set off against any other income.
- Gift of virtual assets will be taxed in the hands of the recipient.
- All crypto transactions will be taxed 1 per cent at source.

Figure- 2: How common is Cryptocurrency?



*Source- Statista Global Consumer survey, 2020

On X-axis we have taken different countries using crypto currency and on Y-axis, their percentage share in using them. As per Statista Global Consumer survey 2020, the use of crypto currency is most common in Nigeria i.e. 32 percent. It is 21 percent in Vietnam, 20 percent in Phillipines, 16 percent in Turkey and 11 percent in Switzerland. In India, 9 percent of population uses crypto currency. Its use is least in Japan which is 4 percent.

ADVANTAGES AND DISADVANTAGES OF CRYPTOCURRENCY-

Advantages-

There are several many advantages of using a virtual currency. There is no limit of making transactions using a crypto currency. Any number of transactions can be made by anyone from anywhere in the world. Each of the wallet holders can make transfer. So the transaction cannot be controlled. It is easy to make payment through it. General public have easy access to this digital currency. While making any transaction, transferring of funds between the parties is simple and smooth. A very minimal fee is required for transferring funds using crypto since there is no involvement of any intermediary. There is complete decentralization of network which means that there is absence of any central authority. Unlike banks, one needs not to rely on any third party for making transactions. No power is given to any central authority to impose any rules and regulations on the owner of crypto currency. One has the monopoly power of his own money. So, inter-country transaction is very easy using a crypto currency. It is a virtual kind of currency and it cannot be counterfeited or replicated since this network widely distributed across large number of computers. So, the sender needs not to face such problems as in case of credit cards. For instance, while making any payment using a credit card you give access to your full credit card to the merchant even for small transactions.

Disadvantages-

Although there are many advantages of using a crypto currency but investing in it does not mean that it is free from all the risks. Crypto currencies are new in the market. There is lack of knowledge among the people. They do not know about how to use them. With very vague understanding people invest in digital currency. As a result they end up experiencing great losses. Crypto currency is completely different from our traditional banking system. In case of banks, there are certain higher authorities that regulate and keep monitoring their working. But in crypto there is no involvement of any central authority. While using banking transactions if someone is faced with any fraudulent activity, then banks completely look into the matter through proper investigation and help their customers. There is no such privilege in using crypto currency that will get back your funds. Thus it is a very risky asset. No regulatory body is there to look after the transaction of crypto currency. This has led to increased chances of fraud. If someone mistakenly makes payment to the other person using crypto then there is no such way to get the money refunded.

Another drawback of using crypto currency is that it is not widely accepted. Since not much people are aware of it so payments using a crypto currency is not accepted everywhere. There are certain companies and even websites that do not accept it.

Crypto market is highly volatile. Its value changes widely in a short period. Hence investing in it is a risky venture. Not all the crypto currencies may fetch good returns for a crypto currency investor. The price is purely decided upon the demand supply of the crypto currency. People might face huge losses. If an investor makes a capital gain from the investments of crypto currencies, it invites tax liability. The value of crypto currency is not approved by any higher authority, it is not trustworthy.

Various data, reports, and information have shown that crypto currency crime has led to an extraordinary crime. Cipher Trace (2019) reports that the use of crypto currency by terrorists is not new, in fact, terrorists have developed new, more sophisticated ways to obscure the flow of funds.

CONCLUSION

The weakness of the traditional currency payment system, which is high transaction costs with a long settlement period, has led people to alternative currencies. Crypto currency has been in the highlights from the last few years. We found that crypto currency has a tremendous growth potential. Crypto currency is supported due to the many key benefits of it , including borderless currency, low transfer costs, simplicity and flexibility while maintaining transparency and confidentiality, independent of the banking operating system and fewer bureaucratic obstacles .Crypto currency has also become a very common platform for hackers, terror finance, drug transaction, and money laundering. This brings lesser security and lack of reliability. There are several challenges faced by the government such as decentralization and anonymity that acts as an obstacle in order to assign a legal status to it. Different countries are scrutinizing different ways so that it can be regulated.

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