

## A Study on Emergence of Cryptocurrency in the Modern World

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### ABSTRACT

21<sup>st</sup> century is a digital world, where new and improved tech is introduced on a daily basis, in short, it is an ever evolving world, Cryptocurrency latest inclusion of this trend, which was launched in 2009. In this paper you read about the emergence of Cryptocurrency, how it's created and some of the major cons of it. Cryptocurrencies usually run on private blockchains- which are digitally distributed decentralized ledger that exist across a network and in this blockchains, every transaction is recorded and it also controls and oversees the transactions and maintains an updated data of existing users and their Crypto related digital portfolios, when ever a new unit of Crypto is created, blockchains store their unique code to avoid duplicates. Many experts believe Cryptocurrency will be a flagship currency of the digital world and because it doesn't use any third parties in transaction its considered to be a game changer and if the predictions of Analyst do come true then many investors, brads, businesses, may also join the trend due to the growing popularity and benefits.

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## INTRODUCTION

We live in a digital world where there are many products, both tangible and intangible that attracts different segmented customers and are attracted to different aspects of the products, some because of their awe-inspiring designs and some because of their addictive nature which at times may also be intangible products. But in a world where assets mean everything to an individual, digital assets are a thing now and they are the big dogs of this sector.

- 1) Emergence of Cryptocurrency and how they work.
- 2) How Cryptocurrency is mined.
- 3) Some popular Cryptocurrency.
- 4) Potential of cryptocurrency.
- 5) Major cons of Cryptocurrency.

Insights of how Cryptocurrency was introduced to the world and how exactly they work. Cryptocurrencies are created using energy intensive process called mining. Names and the market values of some of the popular Cryptocurrencies. Cryptocurrency is considered to be the next big thing in the economical markets and its attracting more and more customers with each passing day. Every coin has two sides, even Cryptocurrencies have a dark side which is directly affecting the nature.

## LITERATURE REVIEW

### *Emergence of Cryptocurrency*

Cryptocurrency was created and launched in 2009 by a group of anonymous people called Satoshi Nakamoto, the exact details and whereabouts of this group is still unknown, and the same group is credited for creation of blockchain. Cryptocurrencies are basically digital assets, which are designed to work as a medium of exchange through a network that uses decentralization method of transactions, which essentially means that no central authority is involved. The main motto for creating Cryptocurrencies was to give a person freedom of owning a decentralized currency, which would have same value in any part of the world.

### *So, How Exactly does Crypto Work?*

Cryptocurrencies usually run on private blockchains- which are digitally distributed decentralized ledger that exist across a network and in this blockchains, every transaction is recorded and it also controls and oversees the transactions and maintains an updated data of existing users and their Crypto related digital portfolios, when ever a new unit of Crypto is created, blockchains store their unique code to avoid duplicates.

Units of Cryptocurrencies are created through a process called mining, which involves solving complicated mathematical problems using computers to generate the coins or new units.

*How are New Units of Cryptocurrencies are Generated or Mined?*

Mining in Cryptocurrencies is a process, in which new units or coins enter the circulation and their unique code is stored in blockchain, so that the users won't be using the same for multiple transactions or duplicate the existing coins. The word 'Mining' is a metaphor for the computational work that is done by the users to generate new coins. Mining is an energy intensive process, which consumes a lot of electricity and it is performed using sophisticated hardware, these complex hardware systems are used to solve extremely complex digital mathematical problems. The first user to crack the code gets the next problem or block and this is a continuous process. Users who solve these problems or crack the codes receive incentives, which generally motivates the users to become Miners.

*Some of the Popular Cryptocurrencies and their Highest and Present Day Market Cap (As Of 19<sup>th</sup> March)*

1. Bitcoin- currently bitcoin has over 81 million user wallets, current day value of 1 bitcoin is at 31,93,632.58 INR and its highest ever market cap was at whooping 49,21,342.92 INR.
2. Ethereum- ethereum has 5,27,158 active users and its present day market value is 2,25,482.60 INR and its highest market value stood at 3,65,455.28 INR.
3. Dogecoin- dogecoin currently has over 4 million users and its present day market value is just 9.45 INR and its highest is 52.32 INR.
4. Litecoin- another popular Cryptocurrency, which most of the times is overlooked by the users, its present day value is 8,610.07 INR and 23,257.39 INR was its highest market value.

*Potential of Cryptocurrency and its Global Stardom*

Analysts estimate that the global Cryptocurrency market value will be more than triple by 2030 hitting a valuation of nearly 5 billion. Many experts believe Cryptocurrency will be a flagship currency of the digital world and because it doesn't use any third parties in transaction it is considered to be a game changer and if the predictions of Analysts do come true then many investors, brands, businesses, may also join the trend due to the growing popularity and benefits. The number of Crypto users are increasing with each day passing, thanks to its loyal customers who suggest and advise others to join the community and Elon Musk, the self-proclaimed techno king grabbed the attention when he invested 1.5 billion USD in Cryptocurrencies.

*The Dark Nature Behind the Beauty of the Cryptocurrency*

Every coin has two sides, so does Cryptocurrencies, though the popularity is increasing, there are larger number of people who are calling Cryptocurrencies to be banned because of its carbon strains on the Nature. The very nature of its foundational blockchain, includes usage of high-powered computers, which essentially means that the mining and transactions of Cryptocurrencies consumes large amount of Non-renewable energy. The latest reports suggest that almost 63.3% of global energy or electricity comes from

burning of fossil fuels, in which only 26.3% of fossil fuels are renewable, while the remaining 37% comes from Non-renewable fossil fuels. According to Digiconomist, Bitcoin mining generates about 96 million tons of carbon dioxide emissions and Ethereum produces more than 47 million tons of carbon dioxide emissions.

## **METHODOLOGY**

This study was proposed using secondary or Desk Research Methodology, in this methodology, existing research work and Articles are used to collect substantial information and prepare an article, this methodology does not involve in any kind of new Research or Experimentation on the given subject or topic.

## **RESULTS**

Cryptocurrency was predicted by many to change the landscape of economy and it has in some ways, Cryptos introduced blockchain and it can be considered as an asset and as a token for exchange. Bitcoin, the most popular Cryptocurrency has an active users of 81.93 million, on December 2019 Bitcoin had just 44.51 million active users though it was introduced in 2008 and the growth rate of users over that particular time frame was slow, but the pandemic changed everything and by the end of December 2020 Bitcoin had an active users of around 63.48 million users and 80.24 million users by December 2021, Covid-19 was an catalyst in the rise Cryptocurrencies and its sudden growth, and the pandemic introduced millions of people to Cryptocurrencies.

The sudden fall in the global economy stirred millions of people to investments, but many weren't interested in investing in stock markets as stocks were at an all time low before recording record profits in 2021, so people adamantly turned their heads towards Cryptocurrencies and have invested in it and another major observation was made, 79.9% of total Cryptocurrency holders are aged between 18 to 34, a testament that the younger generation invested their wealth in an unorthodoxic Digital currency instead of investing them in traditional Stock markets.

## **DISCUSSIONS**

After interacting with some crypto communities (a group of cryptocurrency holders), the one common thing about most holders was that, many of them joined the community through social media's which they did after interacting with the members of the community, which isn't surprising as 79.9% of Crypto holders are aged between 18 and 34 and this age group are also statistically the most active users of social media. Many members of Crypto communities think that Cryptocurrency has the potential to change the entire economical landscape but won't happen because of it's decentralized method of transaction, which might soon be banned by governments around the world because of its lack of central authority and also because many governments are creating their own digital currencies and intend to use them with a centralized method of transactions. Decentralization, a virtue and character of

cryptocurrency that makes it stand apart may also be the reason for its downfall.

## CONCLUSIONS AND RECOMMENDATIONS

Cryptocurrency still has the potential to change and overcome a lot of current economical barriers, but first it has to overcome its own drawbacks, which is carbon footprints, created by Mining and blockchain technology, using an alternative method for creation of coins and using eco friendly blockchains are the first steps, there are some eco-friendly Cryptocurrencies in the market already, like Cardano, Stellar, Nano, IOTA, Algorand and Solar coin.

Secondly, majority of Cryptocurrency processed is controlled by blockchains and transactions are through decentralized method, which is a risky procedure due to lack of central figure and it might be the right time to create a governing body to oversee the transactions and manually control the Cryptocurrency, though might go against the very reason it was created, which was having decentralized currency, but the world of today is not the world of yesterday, perhaps creating a physical governing body be created and it might even attract more investors because of a centralized authority governing it.

## FURTHER STUDY

Cryptocurrencies has the potential to change the economical landscape of the world and it is very much possible given the rise in users and number of firms that are accepting payments made using Cryptocurrencies, but carbon footprints created by these assets are impossible to erase and its taking its toll on nature, now more environmentalists are questioning if it's really worth it? Perhaps using another method of transactions and creation of the coins might convince people but that's easier said than done, only time will tell if all the hype for Cryptocurrency is deserved or not.

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