

Cryptocurrency

[UPSC Notes]

What is Cryptocurrency?

Cryptocurrency, or digital currency, is used on the Internet and isn't connected to any centralized institution.

- Individual coin ownership records are stored in a digital ledger that relies on strong cryptography to keep the ownership of coins from being counterfeited.
- Cryptocurrencies are still relatively new, and the market for these digital currencies is very volatile.
- Cryptocurrency doesn't exist in physical form (like paper money) and it is not typically issued by a central authority.
- Instead, it typically uses decentralized control as opposed to a central bank digital currency (CBDC).
- Since cryptocurrencies don't need banks or any other third party to regulate them; they tend to be uninsured and are hard to convert into a form of tangible currency

Types of Cryptocurrency

The first kind of cryptocurrency, Bitcoin, remains to this day the most used, valuable, and popular cryptocurrency in the world. Along with Bitcoin, other alternative cryptocurrencies have been created with various degrees of functions and specifications. Some have been derivatives from Bitcoin, while others have been created from scratch.

- The bitcoin currency was started in 2009 by an anonymous figure or group, who went by the name of Satoshi Nakamoto.
- Altcoins are cryptocurrencies that were formed as a result of Bitcoin's popularity. Litecoin, Peercoin, Namecoin, Ethereum, Cardana, and Dogecoin are some of the more well-known cryptocurrencies.
- Ethereum - This cryptocurrency network uses decentralized software and builds intelligent contracts on the network. This contract helps to avoid any type of fraud if tried by a third party. The token that is used to enable the transaction on this network is Ether.
- Dogecoin - This cryptocurrency is named after the image of the Shiba Inu dog on the coin. This became a popular meme that resulted in super high prices as later Tesla owner, Elon Musk backed it. It has no upper limit on the no. of coins you want to mine.

- Cardano - It is a research-based approach conducted by a team of experts like engineers, mathematicians, or cryptographers. It is known as a more balanced and sustainable coin.
- Litecoin - Though it is similar to other coins, it is known for fast transaction time as it produces blocks at a quick rate. Charlie Lee created it in 2011 who was working as an engineer at Google.
- The following article contains a brief description of cryptocurrency, as well as its significance in the context of UPSC.

What is Blockchain?

Blockchain is a distributed ledger that is open and can record many transactions between two parties in an efficient and verifiable way permanently.

- The main piece of data within a block is the hash pointer, which serves as a link to the previous block, a timestamp, and transaction data. Because of this, blockchains are designed to be immutable.
- Blockchains can be managed by a peer-to-peer network for the purposes of verification and consensus.
- Once a block is recorded, the data within that block cannot be altered, unless every subsequent block is changed, which would take a vast majority of the network's computers to collaborate on.

Why Cryptocurrency is Described as Decentralized?

Rather than being created by a central bank or government, cryptocurrency units typically enter circulation through a decentralized technological process. That is why cryptocurrency is often described as decentralized. Cryptocurrencies are not usually controlled or operated by any single entity, country, or region. They require the work of volunteers across the world in order to validate and authenticate transactions.

Issues Associated With Banning Decentralised Cryptocurrencies

A decentralized system is based on blockchain technology where a digitally distributed public ledger exists across a network.

- The decentralized feature of various cryptocurrencies is a defining feature as they are outside the ambit of central authorities.
- This makes them immune to the manipulation and interference of central authorities of different government bodies.
- Many developed countries like China are strictly against decentralized cryptocurrencies because central authorities would not be able to regulate the money supply if these digital currencies exist in the economy.
- Various other problems also arise due to the existence of decentralized cryptocurrencies in an economy.

- The transactions pertaining to the cross-border transfers could affect the flow of money in a country and thus hurt its monetary policies.
- There have been various instances of criminal activities like drug trafficking, and the sale of illegal weapons that have been fueled because of decentralized cryptocurrencies.

Advantages of Cryptocurrency

The advantages of Cryptocurrency are:

- You can exchange money without a third party like credit or debit cards or banks
- It is cheaper than most other online transactions.
- It is safe and secure and offers an unprecedented level of anonymity.
- With modern cryptocurrency systems, there is a wallet or account address accessible only by a public key and private key. The private key is only known to the owner of the wallet.
- Minimal processing fees are charged for funds transfers.

Disadvantages of Cryptocurrency

The disadvantages of Cryptocurrency are:

- The almost anonymous nature of cryptocurrency transactions makes them ideal for carrying out illegal activities such as money laundering, tax evasion, and possibly even terrorism.
- Money transfers cannot be reversed.
- Cryptocurrencies are not accepted in all places and have a low worth outside of their limited use.
- It has been noted that Bitcoin is not rooted in any real-world commodities. However, some recent research suggests that the cost of producing a Bitcoin, which requires a larger and larger amount of energy, is directly linked to its price on the market.

Concerns Over Cryptocurrency

As of March 2022, we had a total of 18500 cryptocurrencies across the world. All cryptocurrencies are not valuable.

- There are many digital currencies like Dogecoin, Shiba Inu coin, etc that were made just for fun. These currencies have no intrinsic value. However, because of the hype in the crypto market, they have gained a lot of popularity.
- Since most of the currencies are decentralized, they cannot be regulated and monitored. Cases have come up where millions of investors have been the victim of fraud.
- If complications arise with ownership and transactions of cryptocurrencies, investors can be in great threat as these currencies have no backing from central authorities.
- The Cryptocurrency and Regulation of Official Digital Currency Bill were introduced in the winter session of the Lok Sabha. This bill aims to facilitate the smooth working of cryptocurrencies in India and to provide it with a legal framework.

- According to this bill, a digital currency will be launched and regulated by the RBI. Another important decision that has been taken under this bill is the prohibition of private cryptocurrencies.
- According to the former governor of RBI, Raghuram Rajan, cryptocurrencies have no intrinsic value and are very volatile in nature. Many economists feel that cryptocurrencies can harm the financial stability of the country.

The legality of Cryptocurrency in India

In the present day, India does not outlaw or condone cryptocurrency investments. In 2020, the Supreme Court of India lifted the ban on cryptocurrency, which was enforced by the Reserve Bank of India. Since then, investing in cryptocurrency is recognized as legitimate though the extent and details of how taxes will be paid and how it will be regulated are still unclear.

Status of Cryptocurrency in India

In recent times, numerous efforts have been taken by the Government of India to legalize cryptocurrencies.

- A flat tax rate of 30% has been announced for any income from the transfer of these digital assets.
- All the holders of cryptocurrencies will have to disclose the number of holdings and the details of their deposits.
- The RBI will also launch its digital currency in the coming days. The steps were taken by the Government of India clearly indicate that they have permitted investing and trading of cryptocurrencies in India.

Future of Cryptocurrency in India

In the Union Budget 2022- 23, the finance minister of India made two important announcements related to Cryptocurrencies. The government of India plans to Levy a 30% tax on the profit earned through crypto-assets. And in the fiscal year 2022-23, 'Digital Rupee' will be introduced.

From tier 2 and tier 3 cities, millennials are trying to familiarise themselves with Cryptocurrency. And recently a survey gives the report of increasing women's participation(grown over 1000%) in the field of Cryptocurrency. And there are 66% of people who invest in Cryptocurrency are below the age of 35 years. Thus, the youth of the country is actively participating in the slowly growing era of Cryptocurrency.

By the tech-savvy generation, P2P platforms are known to contribute to the substantial adoption of Cryptocurrency. The increasing mainstream acceptance of Cryptocurrency may also influence the other segments of the population. And such changes can contribute to making the economy of the country grow exponentially.