



# Crypto Currency a Need after Demonetization in India

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## Abstract:

This research will help in understanding how legal tender of a country is stripped to introduce new currency unit. Demonetization is an act of removing a currency unit of its status as national currency. It is done to retire old currency unit and replace with new currency unit. Crypto currency is a form of digital asset which helps in exchange of currency and this transaction is secured using cryptography. National currency is in the form of coins and banknotes and in digital form. Demonetization is required when a new currency is to be introduced either to combat inflation or to discourage a cash system or to combat corruption. This process involves either introducing new banknotes or coins of the same currency or completely replacing old currency with new currency.

**Keywords:** Demonetization, Legal tender, Crypto currency, digital asset, cryptography, national currency, inflation.

## I. INTRODUCTION

Crypto currency is a form of asset which exists in digital form that is in binary format and it comes with the right to use. In this context digital asset is being referred to national currency which is used as a medium of exchange. This transaction is secured using cryptography. Crypto currency is the form of digital currency. Digital currency exhibits similar properties as that of physical currency but the previous one exists in digital form which helps in transaction across boundaries without much physical effort. Crypto currency acts as digital token that uses cryptography for exchanging digital signatures of token transfer, peer-to-peer networking and decentralization. Some of the popular crypto currencies available for trade in online market are Bitcoin, Namecoin, Litecoin, Peercoin, etc. Crypto currency plays a very important role in demonetization, where the form of currency is being replaced from physical to digital. Demonetization concentrates on ruling out a form of currency and introducing new form of nation currency, this is done to overcome certain issues related to corruption or to introduce a new form of currency. The introduction of new national currency helps in combating inflation and corruption due to cash exchange. The process of initiating demonetization in India and its effect on the people as well as nation economy will be explained. The research paper will further help in understanding the pros and cons of digital money and how it can be made more secured.

### A. Literature Survey

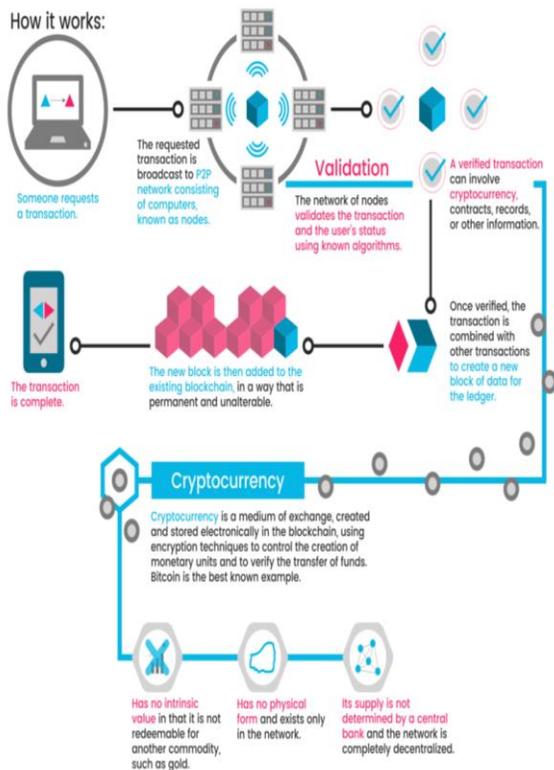
Under The Coinage Act of 1873 silver was demonetized as the legal tender of the United States, gold standard was adopted fully. Several discontinued coins included two-cent piece, three-cent piece, and half dime. The withdrawal of silver from the economy resulted in a shrinking of the money supply, which was followed by a five-year economic depression throughout the country. The Bland-Allison Act remonetised silver as legal tender in 1878 due to the terrible situation and pressure from farmers and silver miners.

In 1946, the currency note of Rs 1,000 and Rs 10,000 were removed from circulation in India. The ban did not have much impact, as the currency of such higher denomination was not used by the common people. However, both of these notes were reintroduced in 1954 with an additional introduction of Rs 5,000 currency. Rs 500 and Rs 1000 notes were introduced in 1934 and after four years in 1938, Rs 10,000 notes were reintroduced. Once again in 1978, the then Prime Minister of India Morarji Desai announced the ban on circulation of Rs 1000, Rs 5000 and Rs 10,000 notes. The only reason behind this action was to curb generation of black money in the country. In 1982, to monitor

corruption and money laundering Ghana rolled out the decision to demonetize their 50 cedi currency notes. The change was not accepted whole heartedly, creating chaos across the country and finally resulted in a moving back to physical assets and foreign currency. Nigeria's economy was collapsed after the 1984 demonetization move that did not go as planned. The military government of then President Muhammadu Buhari introduced different colored notes to discontinue their old currency in order to fight black money. Around 80% of Myanmar's currency was demonetized in 1987 by the military to combat black money, but the move resulted in a lot of chaos and the country witnessed several killings. Under the governance of Mikhail Gorbachev in 1991, the then Soviet Union demonetized the higher denominations of ruble bills, the 50s and 100s. Mikhail's leadership was taken over within eight months. Another example of demonetization for trade purposes was carried out when the nations of the European Union officially began to use the euro as their everyday currencies in 2002. When the physical euro bills and coins were introduced, the old national currencies, such as the German mark, the French franc and the Italian lira were where taken out of circulation. However, for smooth transition these varied currencies remained convertible into Euros at fixed exchange rates for a while. In North Korea demonetization of their currency occurred in 2010, which led to major economy breakdown and people were left to starve for basics. In 2015, to combat the country's hyperinflation the Zimbabwean government demonetized its dollar, which was recorded at 231,000,000%. The three-month process involved removing the Zimbabwean dollar from the country's financial system and introducing the U.S. dollar, the Botswana pula and the South African rand as the country's legal tender in a process to stabilize the economy.

## II. METHODOLOGY

Demonetization requires proper planning and implementation to reach the desired goal. Removing certain currency unit and introducing new currency or reintroducing the same unit in new form requires time, this affects the economy of the country. Demonetization done in India in Nov 2016 by retiring old Rs 500 and Rs 1000 notes and introducing Rs 2000 as new legal tender was done to combat corruption in the country. Also at the same time cashless transaction was promoted to reduce and prevent corruption in future. While moving towards cashless transaction it is very necessary to secure the whole process of transaction to prevent any threat to the citizen's bank account. To allow smooth transaction of money in digital form it is very important to secure the process, this can be done by encrypting the transaction process. Cryptography is one of the way of doing it.



**Figure. 1.0**

The transaction is known immediately by the whole network. But only after a specific amount of time it gets confirmed. Confirmation is a critical concept in cryptocurrencies. You could say that cryptocurrencies are all about confirmation. As long as a transaction is unconfirmed, it is pending and can be forged. When a transaction is confirmed, it is set in stone. It is no longer forgeable, it can't be reversed, it is part of an immutable record of historical transactions: of the so-called blockchain. Only miners can confirm transactions. This is their job in a cryptocurrency-network. They take transactions, stamp them as legit and spread them in the network. After a transaction is confirmed by a miner, every node has to add it to its database.

It has become part of the blockchain. For this job, the miners get rewarded with a token of the cryptocurrency, for example with Bitcoins. Since the miner's activity is the single most important part of cryptocurrency-system we should stay for a moment and take a deeper look on it.

### What miners do?

Principally everybody can be a miner. Since a decentralized network has no authority to delegate this task, a cryptocurrency needs some kind of mechanism to prevent one ruling party from abusing it. Imagine someone creates thousands of peers and spreads forged transactions. The system would break immediately. So, Satoshi set the rule that the miners need to invest some work of their computers to qualify for this task. In fact, they have to find a hash – a product of a cryptographic function – that connects the new block with its predecessor. This is called the Proof-of-Work. In Bitcoin, it is based on the SHA 256 Hash algorithm. After demonetization in India, cashless transaction has been promoted. But this cashless transaction need to be extra secure as the flow of money is in digital format. Crypto currency helps in securing this transaction by encrypting the digital money. Bitcoin is the form of digital currency which is created and held electronically. However, bitcoin's most important characteristic, and the thing that makes it different to conventional money, is that it is *decentralized*. No single institution controls the bitcoin network. This puts some people at ease, because it means that a large bank can't control their money. A software developer called Satoshi Nakamoto proposed bitcoin, which was an electronic payment system based on mathematical proof. The idea was to produce a currency independent of any central authority, transferable electronically, more or less instantly, with very low transaction fees. This currency isn't physically printed in the shadows by a central bank, unaccountable to the population, and making its own rules. Those banks can simply produce more money to cover the

national debt, thus devaluing their currency. Instead, bitcoin is created digitally, by a community of people that anyone can join. Bitcoins are 'mined', using computing power in a distributed network. This network also processes transactions made with the virtual currency, effectively making bitcoin its own payment network. The bitcoin protocol the rules that make bitcoin work say that only 21 million bitcoins can ever be created by miners. However, these coins can be divided into smaller parts (the smallest divisible amount is one hundred millionth of a bitcoin and is called a 'Satoshi', after the founder of bitcoin). Currently the bitcoin is used in following countries :

### India

- In India, entrepreneurs based in cities such as Mumbai and Bangalore, are accepting bitcoins at a rapid pace. In fact, India has a Bitcoin community of 50,000 in which around 30,000 people actually own bitcoins.
- However, after a warning issued by the Reserve Bank of India that called bitcoins volatile and risky, many Bitcoin operators shut down indefinitely.
- Nonetheless, there are still people in India who are sticking to bitcoins even after the warning because they know that its value is worth more than the risks.
- Recently bitcoin operations have resumed in India after the RBI made another announcement.

### Canada

- The Bitcoin Foundation Canada educates people on what Bitcoin really is. Community building events are held as a way to increase awareness of bitcoins.
- In addition, the very first Bitcoin ATM was installed in a coffee shop in Vancouver. This innovative ATM allows bitcoins to convert to Canadian dollars and vice-versa.
- Many more Bitcoin ATM's have opened up in Canada following the first.
- Quantum Properties, a real estate firm, has started accepting bitcoins as payment for properties.

### Australia

- The Bitcoin Association of Australia's goal is to "protect, standardize, and promote bitcoin." Many people, regardless of whether or not they wish to invest in this digital currency are interested in understanding what it entails. Having community events and organizations such as these helps educate the population on the concept of Bitcoin. In addition, it will also allow the public to become more aware of the increased popularity and potential growth this currency has. Moreover, having a good understanding will lead to better decisions.

### U.S.A

- Overstock.com, an online U.S retailer, has started accepting bitcoin as of January 9, 2014. However, the CEO of the site initially said that the company will accept bitcoins as payment in around June 2014. Regardless, this is the first major U.S e-tailer that will allow the customer to pay by virtual currency. Honestly, this could be a publicity stunt to call attention to the website, but it could also be a way to attract new customers.
- Either ways, the CEO's decision does increase support for the Bitcoin since this means that a huge online retailer is accepting digital currency. It also shows that the Bitcoin is slowly becoming main stream in a very short amount of time, and people are becoming more aware of the potential value it will have in the future.
- This retailer may be the first major one to accept Bitcoin payment, but it is highly likely that more will follow suit very soon.
- The Bank of America has stated that Bitcoin can potentially become a "major means of payment for eCommerce" and can also become competition to money transfer providers. It is rather interesting that a bank is expressing a positive opinion of Bitcoin and it shows that Bitcoin is gradually receiving wider support.

- However, the bank further stated that if Bitcoin gets too big, the government might have to do something about it. This is not necessarily a concern, but it is definitely something to think about.
- Sacramento Kings is the first U.S based sports team that is accepting Bitcoin. With this, the dynamic coin makes an entry into the sports world; we can imagine it's here to stay.
- Sean's Outpost, a homeless outreach program, accepts donations in Bitcoin.

#### **United Kingdom**

- Loudwater Estate Event Center, a wedding venue service in England, now allows payment in Bitcoin. Now you can even pay for your wedding in virtual money!
- eBay U.K is allowing customers to sell bitcoins and other digital currencies.

#### **Space Travel**

- A space company by the name of Virgin Galactic is actually accepting bitcoins for people to travel to space.
- One person has already purchased a ticket by using bitcoins and the company expects more to follow suit. This, I think, is very amazing because who would have thought a few years ago that one could use digital currency to go into space?
- Richard Branson calls Bitcoin futuristic and links it to forward thinking. This tactic is quite intelligent; allowing payment in Bitcoin will allow a new batch of consumers who do not have enough USD to instead use bitcoins to buy a ticket to space, and it will also raise bitcoins' value.

### **III.CONCLUSION**

Crypto currency would help in safe and secure transaction of digital money. Bitcoin provides a great platform for promoting digital transactions. This would minimize the threat of damage of hard cash currency and promotes safe transaction. Although every technology has limitations, this digital cryptography may be vulnerable to some digital hacks thus continuous improvement and adaption to technology would help in securing the transaction in future as well.

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