



MARKET DYNAMICS OF CRYPTOCURRENCIES: A STUDY WITH RESPECT TO INDIA

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ABSTRACT:

Whoever said, "Necessity is the mother of invention" is right. As time passes, necessity and innovations both go to an advanced level. And these two are the basic key to the betterment and advancement, of an economy. Payment practice in the world has witnessed advanced changes from bartering to bank transfer/ NEFTs/ RTGS system. A new payment practice has been seen in the crypto currency trend in the last few years. Many countries have accepted it and some are still struggling with how malpractices frauds and scams could be prevented while using crypto currencies. As it has no central regulatory authority it is quite possible that it would lead to many unethical practices. But it followed block chain technology which can completely change the scenario. Many problems/hindrances can be resolved. India hasn't any legal framework but hasn't denied that it has vast scope and opportunities. Probably the Supreme Court of India lifted the ban in 2020 on crypto currencies. This empirical study is carried out to explore the enlargement of crypto currencies in India. Different crypto currencies have been discovered until July 2022 i.e. around 21,555 as per coinmarketcap.com. This study shows details about the market trend and size of these crypto currencies. It will help in learning the new aspects and versions of this payment practice and will see new dynamics. This paper will help the public to understand the government's view towards the crypto platform and in what direction it's going on.

KEYWORDS:

CRYPTO CURRENCY, TREND, GROWTH, BITCOIN, INDIA.

1. INTRODUCTION

In recent years, the cryptocurrency industry has evolved rapidly, as has its adoption (Saeed Alzahrani and Daim, 2019). The world has experienced a transformation in several areas, including finance, hotel management, education, hospitality and travel, and information technology, as a result of the COVID-19 pandemic event that developed in the year 2020. Digital currency, which had been trending, opulent, and volatile, overnight became an investment alternative for users. Suddenly volatile, luxurious and trending options like digital currency became a way of investment for users (Leenata et al, 2022). It represents valuable and intangible objects that are used electronically in different applications and networks such as online social networks, online social games, virtual worlds and peer-to-peer networks (Shailaki Jain, 2018). It is based on blockchain technology. Almost all cryptocurrencies are secured via blockchain networks which means their accuracy is constantly being verified by a huge amount of computing power.

Cryptocurrency is a peer-to-peer payment system that allows anyone, anywhere to send and receive payments without the need for banks to authenticate transactions. The term "cryptocurrency" refers to the use of encryption to verify transactions. This means that specialized coding is required to store and transport cryptocurrency data

between wallets and public ledgers. The objective behind encryption is to maintain safety and security¹. Cryptocurrencies are cheaper and faster money transfers, as well as have decentralized systems that do not fail at a single point. But somewhere cryptocurrencies are riskier as they have price volatility, high energy consumption for mining activities, and can be used in criminal activities². As in starting, there was no currency during the Stone Age era but later as time passed humans began to develop themselves & came up with a barter system in which they would just exchange stuff as a medium of currency. Further, humans came up with modes of currency like bronze & copper coins, gold coins, silver coins & presently stainless steel, alloy metals & paper currency, and bank transactions which might be Net banking services such as real-time gross settlement (RTGS), National electronic fund transfer

(NEFT), Immediate payment service (IMPS), Cheque's mode, cash. After this, a new virtual currency came into existence which is called cryptocurrency.

It came into existence in 2008 with Bitcoin being the first mode of the same. Since then, many modes of currencies developed over the years & the process is still ongoing. Slowly & Steadily as the value of Bitcoin started increasing, more countries legalized its use & thus by July 2022 most

of the developed countries have accepted cryptocurrency as one of the modes of transaction. Along with El Salvador, which was the first government in the world to adopt Bitcoin as legal tender, the Central African Republic is only the second country in the world to accept cryptocurrencies as payment methods³ (<https://coinmarketcap.com/>).

Other nations with favorable views on cryptocurrencies include Singapore, Portugal, Switzerland, Germany, the Netherlands, and Canada⁴.

However, it is not entirely legal to use throughout all of India. ⁵ (Manish Budhwani). In the direction of achieving the goal of becoming "Digital India", it can be an opportunity to adopt cryptocurrency. The increase in the trend of cryptocurrency and acceptance can be a way forward to adopt this change (Basavaraj Chandrashekar Reddy, Rajiv Tyagi, 2022 Opportunities and Challenges of Cryptocurrency as an Alternative Payment Option: Indian Construction Industry Perspective). This paper tries to analyze the growth pattern, of cryptocurrency in India. The size of different cryptocurrencies and the market trend will be the area to study. The legality of cryptocurrency in India is required to understand and this will try to unfold this mysterious question.

2. LITERATURE REVIEW:

The paper's literature review is carried out to achieve the goal of studying the trend pattern growth and size of cryptocurrencies in India. This study employs the descriptive review method. Various research papers were studied to accomplish this paper's purpose. Raymaekers & Wim (2015) concluded while bitcoin may not replace traditional and new payment methods to become a dominant alternative in the short term, banks should look at its underlying technology as a potential generic new way to transfer ownership of value in the longer term. In a study conducted in Bangladesh, Nisha, N. (2016) demonstrates that performance expectancy, effort expectancy, and facilitating conditions significantly influence customers' intention to use M-banking services. Jani & Shailak (2018) that cryptocurrency is very likely to be the next currency platform due to the large volume of cryptocurrencies that are following in the different systems. The future of cryptocurrencies is promising, revealing more opportunities to bring positive changes and progress to the e-business and E-payment sectors. Doshi & Saloni S. (2020) found that the future is very bright in India, cryptocurrency has more opportunities in E-commerce & E-business and payments. Whether it is a small investor or a big investor, everyone is exposing themselves to this latest and developing technology. Urban area investors are more positively inclined to the cryptocurrency sector than rural investors. Kurihara & Fukushima (2017) explained that it is not digital cash, which has prevailed all over the world. Unlike central bank- and government-issued currency, Bitcoin can be inflated at will, the supply of Bitcoin is limited to a certain volume, which cannot be changed. James et al. (2018) researched that cryptocurrencies are becoming increasingly popular among investors who value privacy

and secure transactions. They believe that the future of cryptocurrency in India is bright, but there is no regulatory framework in place. The Indian government must take steps to regulate cryptocurrency so that it can have a positive and growing impact on the Indian economy. Dey et al. (2018) concluded that the future of cryptocurrency is promising in India. As Bitcoins are not issued by any bank or authority, people do not know the tax implications of their investments and due to the absence of a regulator, there is no legal support. Because of these shortcomings, some crypto start ups introduced the Digital Asset and Blockchain Foundation of India (DABFI). They are Unocoin, Zebpay, Coinsecure, and Search Trade which has conjointly launched DABFI (Vishal Gupta, "The Future of Bitcoin Industry in India", Business World, May 2017). Like the internet, crypto-currency has also witnessed exponential growth in India. There is a probability that in the future, banks could become virtual in India with the help of the Internet and Blockchain technology.

Hassan and T. Sayed (2018) demonstrated that monetary factors, risk factors, operational factors, and legal aspects all play an important role in raising awareness of cryptocurrencies as an investment option. Yilmazet et al. (2018) attempted to identify the factors that influence investors' decisions to invest in cryptocurrency platforms. Profitability, convenience, anonymity, security, and bookkeeping, according to the researchers, are factors that influence investors. Hassan, S.T. (2018) illustrates that monetary factors, risk factors, operational factors and legal aspects play a vital role in creating an awareness level about cryptocurrency as an investment intention. Mehrotra et al. (2018) concluded that the government needs to take into consideration that the citizens are still unaware of the fact that something like this even exists. The younger generation is always good at adopting new technologies but it's the older generation that faces problems. They believed that cryptocurrencies might be a great new idea and will surely help India. The Government first needs to make sure people use digital payments and then move to digital currencies. It might take a couple of years before India will be fully prepared for the adoption of digital currencies. Giudici et al. (2019) drew attention to the microstructure of cryptocurrency, deriving the cryptocurrencies 'fundamental value, the societal role of cryptocurrencies and their regulation. They explained how cryptocurrency technologies may affect the fiat currency issued by central banks.

While conducting a systematic review of the literature to synthesize past research on the adoption of cryptocurrencies by considering 25 research publications published on the subject from 2014 to 2017 to ascertain the current research stage and outstanding topics for future studies in bitcoin adoption Al-Amri et al. (2019) found that cryptocurrency adoption research has grown significantly throughout this time and has remained an exciting area for academic study. The analysis showed that the literature on Bitcoin adoption may be split into three fundamental categories: qualitative research, quantitative

research, and others. The SLR findings reveal a paucity of studies on the factors that significantly influence the uptake of cryptocurrencies. Park et al. (2020) identified that most traders make their investment decisions on sentiments rather than the available information. An investor who owns privileged information obtains excess profits. It was also identified that investors' sentiments and economic policy uncertainty influence cryptocurrency prices.

Angela et al. (2020) concluded in their research that EUR/USD affects the Ethereum price. Neither gold doesn't have any impact on it nor Ripple, Stellar doesn't also. They conducted their research to identify the factors impacting Ethereum by applying the Autoregressive Distributed Lag Model with Bitcoin, Stellar, Litecoin, Monero, and Ripple. They found that Ethereum price is affected by three tokens Bitcoin, Litecoin, and Monero. Rajan et al. (2021) concluded that in India, the popularity of cryptocurrencies such as Dogecoin, Bitcoin, Litecoin, Coronado, Ethereum, and Tether has grown. The author discovered that Ethereum is superior to Bitcoin for economic growth and investment. It might contribute to an increase in the country's sectors' profits. India's economy, as well as those of other nations, could benefit from Bitcoin. According to reviews of numerous study papers, it was determined that India can enhance its currency by 2030. Mnif et al. (2020) examined the cryptocurrency market's performance during COVID-19. They discovered that Bitcoin, the most popular and first cryptocurrency, was the most efficient before COVID-19, but after the outbreak of the pandemic, it became less efficient, whereas other cryptocurrencies were discovered to be more efficient after the pandemic. This disease affected this sector as well as others.

Sun et al. (2020) analyzed the behavioral factors, which persuade individual investors to switch from traditional investment to the cryptocurrency market. They concluded that those who are highly innovative, high-risk sensitive, knowledgeable, and risk-takers gain more from the cryptocurrency market. Investors are not only attracted by profits and returns but also by relevant knowledge and risk disclosed by cryptocurrency market regulators and distributors matters. Cryptocurrency is not a safe method to invest due to fluctuations but it can be used as a method of hedging, speculations, and longer holdings. By constructing a proper portfolio with unrelated assets investors can reduce the risk.

García-Corral et al. (2022) discovered more publications throughout the previous three years. Their study shows how the blockchain technology of Bitcoin has advanced. The examination of the period they had chosen suggested that the historical component of cryptocurrencies might be coming to an end, opening the current topic to its numerous applications. Kar, M (2022) argued that because they currently do not fully satisfy all of the characteristics and objectives of money, cryptocurrencies cannot be classed as money. The values of cryptocurrencies are driven by supply and demand conditions, but other elements like security, legality, volume and speculative and

manipulative actions also play a significant role. Cryptocurrencies' legal status is still not widely acknowledged on a worldwide level. Security and volatility stand out as the two biggest advantages and disadvantages, respectively, of the various advantages and drawbacks of cryptocurrencies. Cryptocurrencies will work everywhere that money does, plus more.

Shukla, et al. (2022) examined that in India the path traveled by cryptocurrencies has not been researched very far. Watching how Indian investors react to cryptocurrencies (implemented on February 1, 2022, with the application of a 30% tax) will be extremely interesting. It will be vital to watch the release and features of the RBI's impending digital currency. Investors began to assert that India was emulating China by giving the RBI exclusive power over the introduction and promotion of digital currencies after the union budget for 2022–2023 was released. Despite all the data and projections, it is obvious that cryptocurrencies and blockchain technology will be popular subjects in the years to come. Sharma, K. (2022) found the rapid rate of acceptance of cryptocurrencies worldwide out of which 20 million active bitcoin users are in India. The author found grew up in the cryptocurrency market by 640% between July 2020 and June 2021. During the pandemic, India transacted more than \$10 billion worth of bitcoin, accounting for 42% of all investments made in Southern Asia which showed the establishment of cryptocurrency in India. The author found in the comparison of cryptocurrencies and conventional investment methods that Indian investors still favor traditional investment options such as bonds, shares, equities, precious metals, mutual funds, etc. since they are more informative than cryptocurrencies as market volatility for cryptocurrencies is very high. The primary obstacles to the growth of the cryptocurrency market in India are the explosion of ads, a lack of knowledge, and a lack of security.

According to Bhatt et al. (2022), bitcoin is still in a very immature form, but its developers are constantly working to make it less vulnerable. The biggest dangers are its mining process's fragility, its transactional style, and the lack of security when storing currency on online pools. Although efforts are being made to lessen the hazards, democratic and developing nations like India are concerned for their population and are therefore looking for solutions to protect the hard-earned public funds. According to the most recent Indian budget, the finance minister suggested classifying cryptocurrencies as "digital assets" and recommending a tax rate. Parab et al. (2022) analyzed the evolution of cryptocurrency in India based on social and technological aspects. They discussed how cryptocurrencies work, their pros & cons, the various factors that influence the evolution of Indian cryptocurrencies, and the stages of cryptocurrency investment. They explored a literature review based on social media, websites, online blogs and newspapers to provide insight into the growth and adoption of cryptocurrencies in the Indian market and the impact of

the Indian mindset.

3. RESEARCH METHODOLOGY:

The study's approach to research is theoretical and descriptive in character. Research information is gathered from a number of websites, journals, research papers, and government websites, and then examined to draw conclusions.

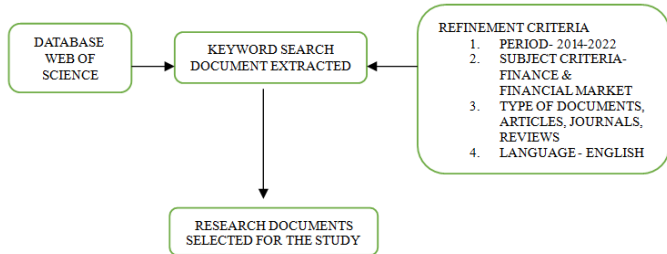


FIGURE - 1

After finding and choosing the appropriate keywords derived from the research topic, the data required for this study was retrieved from the Web of Science. Data extraction within the parameters of inclusion and exclusion is followed by analysis using statistical and mathematical tools. Data is first descriptively analyzed using sources, authors, journal citations, etc., before being reduced using reduction techniques like principle component analysis and multiple analysis approaches.

3.1 TECHNIQUES FOR DATA ANALYSIS:

For data analysis tabulation, graphs and the statistics method are applied to conclude.

3.2 OBJECTIVES OF THE STUDY:

1. To study the trend and size of cryptocurrencies in India.
2. To study the growth pattern of cryptocurrencies in India.

3.2.1 CRYPTOCURRENCY SCENARIO IN INDIA:

Cryptocurrency has been a burning industry in India. RBI never granted his approval on cryptocurrency till 2013. The Reserve Bank of India (RBI) 2018 imposed a ban on the use of cryptocurrency in the country citing reasons for dealing with heavy risks in transacting with cryptocurrency.

Finally, in 2020 this ban was lifted by the Supreme Court of India with Indian residents welcoming this decision. But, RBI continuously has been warning its citizens of the risks involved with the use of cryptocurrency & only deals with it by taking precautionary measures. But now, in 2022 in its budget, the Government of India announced the decision on cryptocurrency which shows that the Government of India is trying its core strength to figure out its new dimensions, and perspectives probably and has imposed taxes on its earnings and is planning to bring a regulatory framework for its regulation.

CRYPTOCURRENCY AWARENESS AND IMPACT:

The country had little experience with cryptocurrencies up

to 2019, and it wasn't until the beginning of January 2020 that they started to have an impact on the Indian economy. However, with a growth rate of over 500% over the last two years, cryptocurrencies have indeed reached new heights in India. In a study, it was shown that, in contrast to the situation in January 2020, when there were only about 50 new users per day, today at least 1200 new users are trading in cryptocurrencies every day⁶.

CURRENT LEGALITY OF INDIA ON CRYPTOCURRENCY:

RBI has always been against cryptocurrencies, but now that the government has lifted the prohibition, it's the first time that the government has shown some signs of support. While presenting the union budget session for 2022 on February 2, Nirmala Sitharaman, the Indian Finance Minister, imposed a tax of 30% on income from cryptocurrencies and other digital assets. The tax regulation went into effect on April 1st. In India, cryptocurrencies are known as crypto assets, and it is not prohibited to buy or sell them, according to T.V. Somanathan, the Indian Finance Secretary, on March 26, 2022. To enable taxation of the full value of transactions, the government is attempting to classify cryptocurrencies under the GST statute as either goods or services⁷. Gander Coin, India's first and most important cryptocurrency, entered the market on May 30, 2022. The three main Indian cryptocurrency trading sites Coin CRED, COINLORD, and iNDOEX all list Gander Coin at the moment⁸. Union Finance Minister Nirmala Sitharaman asked the International Monetary Fund (IMF) to take the initiative in creating a globally coordinated strategy for the regulation of cryptocurrencies on September 11, 2022. The Indian government has consistently emphasized the need for a worldwide regulatory framework to oversee the cryptocurrency and blockchain sector. Nirmala Sitharaman, the minister of finance, wants international cooperation in crypto regulation. On 4th November 2022 Nirmala Sitharaman, the current holder of the G20 presidency (preceding in 2023), stated that crypto regulation is a "Working priority." which shows that the government of India has encouraged movement for the cryptocurrency sector.

CRYPTOCURRENCIES IN INDIA:

After the creation of Bitcoin, the number of new cryptocurrencies expanded quite rapidly. In January 2009, Bitcoin was created by pseudonymous developer Satoshi Nakamoto. It used SHA-256, a cryptographic hash function, in its proof-of-work scheme. In April 2011, Namecoin was created as an attempt to form a decentralized DNS. In October 2011, Litecoin was released which used script as its hash function instead of SHA-256. Peercoin, created in August 2012, used a hybrid of proof-of-work and proof-of-stake. On 6 August 2014, the UK announced its Treasury had commissioned a study of cryptocurrencies, and what role, if any, they could play in the UK economy. The study was also to report on whether regulation should be considered. Its final report was published in 2018, and it issued a consultation on crypto assets and stablecoins in January 2021. In June 2021, El Salvador became the first

country to accept Bitcoin as legal tender, after the Legislative Assembly had voted 62–22 to pass a bill submitted by President Nayib Bukele classifying the cryptocurrency as such.

In August 2021, Cuba followed Resolution 215 to recognize and regulate cryptocurrencies such as Bitcoin. In September 2021, the government of China, the single largest market for cryptocurrency, declared all cryptocurrency transactions illegal. This completed a crackdown on cryptocurrency that had previously banned the operation of intermediaries and miners within China. Despite uncertainty about the future of cryptocurrencies in India, investments in unregulated digital assets, especially Bitcoin, have skyrocketed since 2020. Data from domestic cryptocurrency exchanges suggests that more than 1.5-2 crore Indians have invested in the asset class, reaching \$10 billion in November 2022. Cryptocurrency adoption is rising in a country that invests more in gold and other safe assets. The virtual asset's journey before the much-anticipated Cryptocurrency and Regulation of Official Digital Currency

Bill.

Cryptocurrency began with Satoshi Nakamoto's 2008 paper "Bitcoin: A Peer-to-Peer Electronic Cash System." The digital asset gained popularity after Litecoin, Namecoin, and Swiftcoin emerged. As crypto investments increased in India and exchanges like Zebpay, Pocket Bits, Coinsecure, Koinex, and Unocoin opened, the Reserve Bank of India (RBI) issued a circular in 2013 warning users of the security risks of using virtual currencies. In March

2018, the Central Board of Digital Tax (CBDT) submitted a draft scheme to the finance ministry to ban virtual currencies. A month later, the RBI issued a circular prohibiting banks, NBFCs, and payment system providers from dealing with virtual currencies and providing services to virtual currency exchanges. Crypto exchanges filed a writ petition in the Supreme Court to overturn the RBI circular's ban.

Thus, cryptocurrency exchanges revived and the SC ruling coincided with the crypto boom. On January 29, 2021, the Indian government announced that it would introduce a bill to create a sovereign digital currency and ban private cryptocurrencies. In November 2021, the Standing Committee on Finance met with the Blockchain and Crypto Assets Council (BACC) and other cryptocurrency representatives and concluded that cryptocurrencies should be regulated, not banned. Cryptocurrencies will be regulated in India, according to current signs. It's unclear which regulatory body will handle the issue. Crypto would probably be treated as an asset class by the government. Crypto trading platforms will be more transparent and accountable with regulations, according to experts. Fraud prevention and cross-border transaction monitoring may require checks and balances. India is the biggest investor in cryptocurrency, despite uncertainty about its future¹³. Since 2009, many cryptocurrencies have become active and inactive.

Below is the list of some active and inactive cryptocurrencies in India as of June 2022.

ACTIVE CURRENCIES BY DATE OF INTRODUCTION

Year of introduction	Currency	Symbol	Founder(s)	Hash algorithm	Programming language of Implementation	Consensus Mechanism	Notes
2009	Bitcoin	BTC XB T, ₿	Satoshi Nakamoto	SHA-256d	C++	PoW	The first and most widely used decentralized ledger currency, with the highest market capitalization as of 2018.
2011	Litecoin	LTC, Ł	Charlie Lee	Scrypt	C++[9]	PoW	One of the first cryptocurrencies to use scrypt as a hashing algorithm.
2011	Namecoin	NMC	Vincent Durham	SHA-256d	C++	PoW	Also acts as an alternative, decentralized DNS.
2012	Peercoin	PPC	Sunny King (pseudonym)	SHA-256d	C++	PoW & PoS	The first cryptocurrency to use both PoW and PoS functions.

2013	Dogecoin	DOGE, XDG, Ð	Jackson Palmer & Billy Markus	Script	C++	PoW	Based on the Doge internet meme.
2013	Gridcoin	GRC	Rob Hälford	Script	C++	Decentralized PoS	Linked to citizen science through the Berkeley Open Infrastructure for Network computing.
2013	Primecoin	XPM	Sunny King (pseudonym)	1CC/2CC/TWN	TypeScript, C++	PoW	Uses the finding of prime chains composed of Cunningham chains and bi-twin chains for proof-ofwork.
2013	Ripple	XRP	Chris Larsen & Jed McCaleb	ECDSA	C++	"Consensus"	Designed for peer-to-peer debt transfer. Not based on bitcoin.
2013	Nxt	NXT	BCNext (pseudonym)	SHA-256d	Java	PoS	Specifically designed as a flexible platform to build applications and financial services around its protocol.
2014	Auroracoin	AUR	Baldur Odinson (pseudonym)	Script	C++	PoW	Created as an Alternative currency for Iceland, intended to replace the Icelandic króna.
2014	Dash	DASH	Evan Duffield & Kyle Hagan	X11	C++	PoW & Proof of Service	A bitcoin-based currency featuring instant transactions, decentralised governance and budgeting, and private transactions.
2014	NEO	NEO	Da Hongfei & Erik Zhang	SHA-256 & RIPMD160	C#	dBFT	China based cryptocurrency, formerly ANT Shares and ANT Coins. The names were changed in 2017 to NEO and GAS.

2014	MazaCoin	MZC	BTC Oyate Initiative	SHA-256d	C++	PoW	The underlying software is derived from that of another cryptocurrency.
2014	Monero	XMR	Monero Core Team	RandomX	C++	PoW	Privacy-centric coin based on the Crypto Note protocol with improvements for scalability and decentralization.
2014	Bitcoin	BIT	Edward Mansfield & Richard Allen	SHA-256d	TypeScript, C++	PoW	The first cryptocurrency to be nominated for a major adult industry award.
2014	Verge	XVG	Sunerok	Scrypt, x17, groestl, blake2s, and lyra2rev2	C, C++	PoW	Features anonymous transactions using Tor.
2014	Stellar	XLM	Jed McCaleb	Stellar Consensus Protocol (SCP)	C, C++	Stellar Consensus Protocol (SCP)	Open-source, decentralized global financial network.
2014	Vertcoin	VTC	David Muller	Verthash	C++	PoW	Aims to be ASIC resistant.
2015	Ethereum	ETH, E	Vitalik Buterin	Ethash	C++, Go	PoW, PoS	Supports Turing complete smart contracts.
2015	Ethereum Classic	ETC		EtcHash/Thanos		PoW	An alternative version of Ethereum whose blockchain does not include the DAO hard fork. Supports Turing complete smart contracts.
2016	Zcash	ZEC	Zooko Wilcox	Equihash	C++	PoW	The first open, permissionless financial system employing zero knowledge security.

2017	Bitcoin Cash	BCH		SHA-256d		PoW	Hard fork from bitcoin, increased maximum block size from 1MB to 8MB (as of 2018, 32MB)
2017	EOS.IO	EOS	Dan Larimer		WebAssembly, Rust, C, C++	delegated PoS	Feeless Smart contract platform for decentralized applications and decentralized autonomous corporations with a block time of 500 ms.
2017	Cardano	ADA, A	Charles Hoskinson	Ouroboros PoS Algorithm	Haskell	PoS	A proof-of-stake blockchain platform: developed through evidence-based methods and peerreviewed research.
2017	TRON	TRX	Justin Sun		Java, Solidity		
2018	AmbaCoin						Official cryptocurrency of the Cameroonian separatist entity of Ambazonia
2018	Nervos Network	CKB	Kevin Wang, Daniel Lv, Terry Tai	Eaglesong	Rust, JavaScript, C	PoW	Multi-layered blockchain smart contract platform
2019	Algorand	ALGO	Silvio Micali		Go	PoS	Uses a verifiable random function to randomly select groups of users to certify blocks.
2020	Avalanche	AVAX	Emin Gün Sirer, Kevin Sekniqi, Maofan "Ted" Yin			PoS	
2020	Shiba Inu	SHIB	Ryoshi			PoS	
2020	Polkadot	DOT	Gavin Wood		Rust	PoS	

2021	DeSo	DESO	Nader al-Naji (akadiamondhands)	Go	PoW	Also a social media platform, resembling Twitter Known as Bit Clout until September 2021.
2021	SafeMoon	SAFEMOON	SafeMoon LLC	Solidity	PoW	

INACTIVE CURRENCIES

Release	Currency	Symbol	Founder(s)	Hash algorithm	Programming language of Implementation	Crypto currency blockchain (PoS, PoW, or other)	Notes
2014	Coinye	KOI, COYE		Scrypt		PoW	Used American hip hop artist Kanye West as its mascot, abandoned after he filed a trademark lawsuit.
2015 or before	OneCoin		Ruja Ignatova and Stephen Greenwood				A Ponzi scheme promoted as a cryptocurrency.
2017	BitConnect	BCC					BitConnect was described as an open source, all-in-one bitcoin and crypto community platform but was later discovered to be a Ponzi scheme.
2018	KodakCoin		Kodak and WENN Digital	Ethash			Kodak Coin is a "photo graphercentric" blockchain cryptocurrency used for payments for licensing photographs.
2018	Petro		Venezuelan Government	onixCoin	C++		Stated by Nicolás Maduro to be backed

TABLE-1

Sources: https://en.wikipedia.org/wiki/List_of_cryptocurrencies

However, there are a large number of cryptocurrencies available; however, only a small percentage of these are

capable of capturing their respective market sizes. There are some cryptocurrencies that are unable to do so. A wide variety of cryptocurrencies and digital assets are currently available on the market, including Bitcoin, Tether, BNB, XRP, Dogecoin, USD Coin, Ethereum, CARDANO, and Binance. There are many different cryptocurrencies, such as USD, Solana, Polkadot, Dai, TRON, Shiba Inu, Avalanche, Cosmos, Uniswap, Monero, Toncoin, Bitcoin Cash, ApeCoin, OKB, Filecoin, and Tezos; however, the three major cryptocurrencies that account for the majority of the total market capitalization are Bitcoin, Ethereum, and Binance. USD, Tether, Polygon, Polkaot, Dodgecoin, XRP, and a number of other cryptocurrencies. ever there are many cryptocurrencies in the market but there are very few cryptocurrencies who is able to capture their market size. It is not possible for all cryptocurrencies. Here are many cryptoassets in the market such as Bitcoin, Tether, BNB, XRP, Dogecoin, USD Coin, Ethereum, CARDANO, Binance USD, Solana, Polkadot, Dai, TRON, Shiba Inu, Avalanche, Cosmos, Uniswap, Monero, Toncoin, Bitcoin Cash, ApeCoin, OKB, Filecoin, Tezos etc. but major crypto assets who are having the major percentage of total market capitalization are Bitcoin, Ethereum, Binance. USD, Tether, Polygon, Polkaot, Dodgecoin, XRP etc.

Major Cryptoassets By Percentage of Total Market Capitalization (Bitcoin Dominance Chart)



FIGURE-3

Sources: Data is retrieved from the Coin Market Capitalization website coinmarketcap.com

Figure 3 indicates that in Jan 2017, the market capitalization of Bitcoin represented 85.58% & Ethereum represented 5.34% of the overall market share. At the time, there were rarely more than four or five cryptocurrencies. Out of the overall market capitalization, XRP held a 1.42% market share, Dogecoin a 0.15% market share, and others 7.42%.

Major Cryptoassets By Percentage of Total Market Capitalization (Bitcoin Dominance Chart)



FIGURE-2

Sources: Data is retrieved from the Coin Market Capitalization website coinmarketcap.com

As shown in figure 2, demand for bitcoin has been constant since its inception. After 2014, a number of new cryptocurrencies emerged, including Ethereum, Cardano, Binance USD, Dogecoin, Tether, USD coin, BNB, XRP, and Polygon. The figure 2 shown bitcoin chart from 2014 to 2022.

Major Cryptoassets By Percentage of Total Market Capitalization (Bitcoin Dominance Chart)



FIGURE-4

Sources: Data is retrieved from the Coin Market Capitalization website coinmarketcap.com

The cryptocurrency market experienced a surge as the market began to grow. As of December 2022, there was a decline in the market share of bitcoin, although other varieties of cryptocurrencies were also discovered. The market value of Ethereum has climbed to 18.43%. Ethereum has the largest market share among cryptocurrencies, second only to bitcoin. 19.42% of the market capitalization is divided among Tether 8.33%, BNB 4.94%, Binance USD 2.10%, XRP 2.16%, Cardano 1.06%, Polygon 0.83%, and other cryptocurrencies. A slight increase of .99% is seen in dogecoin.

3.2.2 GROWTH OF CRYPTOCURRENCY:

When Satoshi Nakamoto published a paper on a novel form of currency called Bitcoins, the world first learned about cryptocurrencies (Nakamoto, 2008). Numerous cryptocurrency start-ups and exchanges have been founded. Because there will never be more than a set number of bitcoins produced, its scarcity will be preserved. Since the public launch of the first anarchic cryptocurrency, Bitcoin, in January 2009, there have been 20,268 cryptocurrencies in use as of July 2022. Not all cryptocurrencies, nevertheless, are traded or valued. In India, Bitcoin is the most widely used cryptocurrency⁹. This is likely a result of it having the highest value and the longest lifespan among cryptocurrencies, paired with a limited supply currency like gold. Even Bitcoin's supporters refer to it as the "gold standard of cryptocurrencies." Although the cryptocurrency market is currently bearish, according to PricewaterhouseCoopers' fourth annual global crypto hedge fund report, published in June, 35% of fund managers surveyed predicted that bitcoin will trade over \$50,000 by the end of 2022 and another 42% predicted that it will trade between \$75,000 and 100,000 by the end of the year¹⁰.

As shown in Fig. 1, bitcoin has recently developed tremendously and at an exponential rate. Since 2014, cryptocurrencies have experienced a remarkable boom. Over time, more currencies are created. But as the figure indicates, it spread widely after January 2020.



FIGURE-5

Sources: Data is retrieved from the Coin Market

Capitalization website coinmarketcap.com

Figure 5's worldwide cryptocurrency chart makes it obvious that the years 2020 to 2021 were the best for the market to grow. People were at home due to the lockdown and in the mood to learn about new ways to make money from home, so they were drawn to cryptocurrencies and thought they were a very obvious method to make money.

Global Cryptocurrency Charts

Total Cryptocurrency Market Cap



FIGURE-6

Sources: Data is retrieved from the Coin Market Capitalization website coinmarketcap.com

In Jan 2017, the cryptocurrency market cap was \$17,079,999,808 USD, and it will be \$7,99,04,81,44,874 in December 2022. Figures 6 and 7 both depict the clearly comprehensible growth path of cryptocurrency. They are presenting a fresh perspective on cryptocurrency.

Global Cryptocurrency Charts

Total Cryptocurrency Market Cap



FIGURE-7

Sources: Data is retrieved from the Coin Market

Capitalization website coinmarketcap.com

Cryptocurrencies were developed in COVID-19 at a binary rate in 2020.

The graph demonstrated how cryptocurrencies are evolving over time to provide investors new opportunities.

TOP 10 CRYPTOCURRENCIES ACCORDING TO THE MARKET CAPITALIZATION AS ON DEC 2022

SNO	CRYPTO	MARKET CAP	Rise in crypto since 2017
1	Bitcoin (BTC)	\$344.4 billion	3,481% increase
2	Ethereum (ETH)	\$163.9 billion	12,073% increment
3	Tether (USDT)	\$65.8 billion	Stable coin
4	Binance Coin (BNB)	\$44.8 billion	279,900% increase
5	U.S. Dollar Coin (USDC)	\$42.6 billion	Stable coin backed by U.S. dollars
6	Binance USD (BUSD)	\$21.85 billion	Paxos and Binance's stable coin backed by the U.S. dollar
7	XRP (XRP)	\$19.8 billion	6,400% increase
8	Dogecoin (DOGE)	\$12.46 billion	44,900% increment
9	Cardano (ADA)	\$10.9 billion	1,500% enhancement
10	Polygon (MATIC)	\$8.2 billion	35,641% increase

FIGURE: 8

SOURCES: THESE ARE THE TOP 10 CRYPTOCURRENCIES BASED ON THEIR MARKET CAPITALIZATION OR THE TOTAL VALUE OF ALL THE COINS CURRENTLY IN CIRCULATION. AS ON DEC 2022, THERE ARE 22,023 CRYPTOCURRENCY PROJECTS OUT THERE THAT REPRESENT THE ENTIRE \$878 BILLION CRYPTO MARKET. MARKET CAPS AND PRICING SOURCED FROM COINMARKETCAP.COM, CURRENT AS OF 2:31 P.M. UTC ON DEC. 13, 2022. [HTTPS://WWW.NASDAQ.COM/ARTICLES/TOP-10CRYPTOCURRENCIES-OF-2022](https://www.nasdaq.com/articles/top-10-cryptocurrencies-of-2022)

As Bitcoin has grown in popularity, its value has skyrocketed. In May 2016, the price of one Bitcoin was around \$500. A single Bitcoin was worth around \$17,906 on December 13, 2022. That's a 3,481% increase. Ethereum has also seen explosive growth. From April 2016 to the end of December 2022, its price increased by 12,073%, from around \$11 to around \$1,339.

Tether (USDT) is a stable coin backed by fiat currencies like the US dollar and the Euro. This means that Tether's value is expected to be more consistent than that of other cryptocurrencies, and it is preferred by investors who are wary of other coins' extreme volatility. Like Tether, USD Coin (USDC) is a stable coin backed by U.S. dollars. USDC is powered by Ethereum, and you can use USD Coin to make international payments. Binance USD (BUSD) is Paxos and Binance's stable coin backed by the U.S. dollar. Paxos holds an amount of US dollars equal to the total supply of BUSD to maintain this value. BUSD, like other stable coins, allows traders and crypto users to conduct transactions with other crypto assets while minimizing the risk of volatility.

In 2017, the price of BNB was only \$0.10. By late December 2022, its value had risen to around \$280, a 279,900% increase. The price of XRP at the start of 2017 was \$0.006. Its price reached \$0.39 on December 13, 2022, representing a 6,400% increase. In 2017, the price of Dogecoin was \$0.0002. By December 2022, its price had risen 44,900% to \$0.09. Cardano's ADA token has grown slowly in comparison to other major crypto coins. In 2017,

the price of ADA was \$0.02. Its current value was \$0.32 as of December 13, 2022. This is a 1,500% increase. Polygon has also seen tremendous growth since its inception. MATIC's initial price when it was released was \$0.00263. MATIC is now trading at \$0.94, a 35,641% increase.

CRYPTO CHART SHOWING THE HIGHEST RETURN PERCENTAGE IN 2022.



FIGURE-9

Source:<https://www.cryptocurrencychart.com/top-return-on-investment/year>

The line in the chart that is coloured purple and represents

Metronome crypto indicates the highest return percentage possible on an investment in the year 2022.

Investors on the Metronome cryptocurrency made the most profit in the previous year, 2022. There was a significant increase in Metronome cryptocurrency during April. At the end of the year 2022, it was determined that the returns had increased by 228.50%.

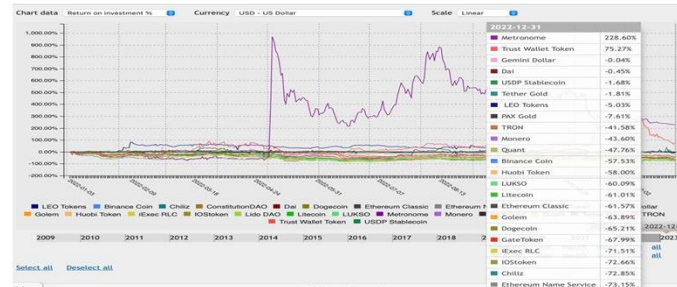


FIGURE-10

Source: <https://www.cryptocurrencychart.com/top-return-on-investment/year>

INDIA STANDS FOURTH IN GLOBAL CRYPTO ADOPTION INDEX 2022

The Singapore-based Chain-analysis 2022 (September 2022) Global Crypto Adoption Index revealed that for the second consecutive year, Vietnam is ranked first in cryptocurrency adoption with an overall index ranking of 1.000, and India stood at 4th with an index score of 0.663.

Interestingly, the report cited that overall crypto adoption has slowed down worldwide in the bear market, but remains above pre-bull market levels. "Our data shows that global adoption has levelled off in the last year after growing consistently since mid-2019," says Chain-analysis in a blog post.

Country	Overall index ranking	Overall index score	Centralized service value received ranking	Retail centralized service value received ranking	P2P exchange trade volume ranking	DeFi value received ranking
Vietnam	1	1.000	5	5	2	7
Philippines	2	0.753	4	4	66	13
Ukraine	3	0.694	6	6	39	10
India	4	0.663	1	1	82	1
United States	5	0.653	3	3	111	3
Pakistan	6	0.609	10	10	50	22
Brazil	7	0.562	7	7	113	8
Thailand	8	0.560	12	12	61	5
Russia	9	0.541	8	8	109	11
China	10	0.535	2	2	144	6
Nigeria	11	0.521	18	18	17	20
Turkey	12	0.519	9	9	121	19

FIGURE-11

Sources: Photo credit: Chain-analysis 2022 Global Crypto Adoption Index. <https://www.indiatoday.in/cryptocurrency/story/india-stands-fourth-in-global-crypto-adoption-index-2022-despite-ban-china-remains-active-in-space-2000444-2022-09-15>

4. FINDINGS AND SUGGESTIONS:

During my research, it was found that the cryptocurrency's future is bright on Global and in India too. Lots of cryptocurrencies have grown and However, Bitcoin was as usual on the top of the list which has the highest market capitalization as on December 2022. Many cryptocurrencies gave their benefits to investors but Metronome gave the highest returns to investors in 2022. Cryptocurrency is growing with many stoppages and boundaries. In India, it faced many hurdles, ban but in spite of all these, no one couldn't stop it. And now the Government of India has agreed to many aspects and benefits of cryptocurrency. No doubt there is a promising future for cryptocurrency in India along with the world. But of course, there are some dark sides also which need to be prevented by strong and invulnerable regulations on it. Profitability, convenience, anonymity, security, and bookkeeping are investors' influence factors. Monetary factors, risk factors, operational factors and legal aspects play a vital role in creating an awareness level about cryptocurrency as an investment intention. It can escalate the Mbanking, E-business, and E-payment sectors. India got 4th rank in Singapore-based Chain-analysis 2022 (September 2022) Global Crypto Adoption Index. This research paper includes studying cryptocurrencies from Indian perspective. It can be studied on a global level by including various perspectives such as price parameters, laws and regulations, different cryptocurrencies and their exchanges etc.

5. CONCLUSION:

There is currently no international legal framework in place for cryptocurrencies. yet our research analysis revealed that about 20 million Indians trade cryptocurrencies¹¹.

(<https://www.drishtiiias.com/blog/the%20future%20of%20cryptocurrency%20in%20india>). The digital economy in India will benefit from it. These are crucial because they could completely alter the way we communicate and engage with the internet. Additionally, it will result in a less expensive and more effective currency management system. Cross-border payments will benefit as a result of the transaction costs and processing time reductions. It is advantageous for peer-to-peer lending, international trading, and remittance payments. India is one of the marketplaces for cryptocurrencies that is expanding the fastest. The market for cryptocurrencies will triple in size by 2030, and the Indian government is already pushing to have cryptocurrency become a worldwide standard, indicating that India has a bright future for cryptocurrencies. It will eventually acquire its personality and place in the world.

REFERENCES

1. Al-Amri, R., Zakaria, N. H., Habbal, A., & Hassan, S. (2019). Cryptocurrency adoption: current stage, opportunities, and open challenges. *International journal of advanced computer research*, 9(44), 293-307.
2. Angela, Olivia, and Yen Sun. "Factors affecting Cryptocurrency Prices: Evidence from Ethereum." *2020 International Conference on Information Management and Technology (ICIMTech)*. IEEE, (2020). 318-323
3. Bhatt, M., & Jokhi, D. (2022). MECHANICS AND TRENDS OF CRYPTOCURRENCY, 2. (ISSN – 2581-5830), 107-111
4. Chakravaram, V., Ratnakaram, S., Agasha, E., & Vihari, N. S. (2021). Cryptocurrency: Threat or Opportunity. In *ICCCE 2020*(pp. 747-754). Springer, Singapore.
5. Dey, S., Choudhury, P., & Guha, S. (2018) A study on Cryptocurrency potential in India. Vol. 6, Issue 12, 403-408
6. Doshi, Saloni S., and Sub Commerce. "A Study of Opinions on Future of Crypto Currency in India."(2020).59-62, Vol.8, Issue:11
7. Gupta, S., Gupta, S., Mathew, M., & Sama, H. R. (2020). Prioritizing intentions behind investment in cryptocurrency: a fuzzy analytical framework. *Journal of Economic Studies*.
8. García-Corral, F. J., Cordero-García, J. A., de Pablo-Valenciano, J., & Uribe-Toril, J. (2022). A bibliometric review of cryptocurrencies: how have they grown? *Financial Innovation*, 8(1), 1-31.
9. Hassan & T. Sayed. Factors affecting customers' awareness of Bitcoin as an investment among Indians. (2018). ISSN 2455-733-Vol III- Issue II
10. Inci, A. C., & Lagasse, R. (2019). Cryptocurrencies: applications and investment opportunities. *Journal of Capital Markets Studies*.
11. Jani, Shailak. "The Growth of Cryptocurrency in India: Its Challenges & Potential Impacts on Legislation." *Research gate publication* (2018).
12. Kaushik, P., & Kukrety, N. (2022). Cryptocurrency: A New Investment Avenue in India. In *Applications, Challenges, and Opportunities of Blockchain Technology in Banking and Insurance* (pp. 231-245). IGI Global.
13. Kar, M. (2022). Blockchain Technology and Cryptocurrency: Current Situation and Future Prospects. *Blockchain Technology*, 13-26.
14. Kurihara, Y. & Fukushima (2017). The Market Efficiency of Bitcoin: A weekly Anomaly Perspective. *Journal of Applied Finance & Banking*, 57- 64
15. Mnif, E., Jarboui, A., & Mouakhar, K. (2020). How the cryptocurrency market has performed during COVID-19? A multifractal analysis. *Finance research letters*, 36, 101647.
16. Mehrotra, A., & MR, V. (2018). A Study to Understand the Awareness about Bitcoins among the Youth Population in Bangalore. *International Journal of Engineering Technology Science and Research*, 5(3), 210-213
17. Nisha, Nabila. "Exploring the dimensions of mobile banking service quality: Implications for the banking sector." *International Journal of Business Analytics (IJBAN)* 3.3 (2016): 60- 76.
18. Park, M., & Chai, S. (2020, January). The effect of information asymmetry on investment behaviour in the cryptocurrency market. In *Proceedings of the 53rd Hawaii International Conference on System Sciences*.
19. Parab, L. J., & Nitnaware, P. P. Investigating Existence of Cryptocurrency Over Traditional Investment in India-A Comparative study, ISSN: 24556211 Volume 10, Issue 1, 1198-1205
20. Raymaekers, W. (2015). Cryptocurrency Bitcoin: Disruption, challenges and opportunities. *Journal of Payments Strategy & Systems*, 9(1), 30-46.
21. Rajan, A., Kaur, H., Singh, A. K., Sisodia, D. R., & Garg, A. K. A Critical Analysis of the Emergence and Development of Cryptocurrencies and How it impacts the current economic activities.
22. Sun, Wei, et al. "Switching intention to crypto-currency market: Factors predisposing some individuals to risky investment." *PloS one* 15.6 (2020): e0234155.1-16
23. Sun, Wei, et al. "Factors affecting institutional investors to add crypto-currency to asset portfolios." *The North American Journal of Economics and Finance* 58 (2021): 101499.
24. Shukla, V., Misra, M. K., & Chaturvedi, A. (2022). Journey of Cryptocurrency in India In View of Financial Budget 2022-23. *arXiv preprint arXiv:2203.12606*.
25. Sharma, K. (2022). Analysis of Cryptocurrency: An ethical conjecture with reference to Indian scenario. 1-7
26. Sun, Wei, et al. "Switching intention to crypto-currency market: Factors predisposing some individuals to risky investment." *PloS one* 15.6 (2020): e0234155.1-16

27. Sudhamathi, R. K. (2022). Predicting cryptocurrency movement using Arima modelling. *Asian Journal of Research in Social Sciences and Humanities*, 12(4), 64-71.

28. Yilmaz, N. K., & Hazar, H. B. (2018). DETERMINING THE FACTORS AFFECTING INVESTORS' DECISION- MAKING PROCESS IN CRYPTOCURRENCY INVESTMENTS. *PressAcademia Procedia*, 8(1), 5-8.

29. Zhu, P., Zhang, X., Wu, Y., Zheng, H., & Zhang, Y. (2021). Investor attention and cryptocurrency: Evidence from the Bitcoin market. *PLoS One*, 16(2), e0246331.

30. <https://www.kaspersky.com/resource-center/definitions/what-is-cryptocurrency>

31. <https://www.investopedia.com/terms/c/cryptocurrency.asp>

32. <https://coinmarketcap.com/>

33. <https://managementhelp.org/best-countries-for-cryptocurrency>

34. <https://vesim.ves.ac.in/vesimblog/student-blog/397-growth-of-cryptocurrency-in-india.html>

35. <https://explodingtopics.com/blog/number-of-cryptocurrencies#number-of-cryptocurrencies>

36. <https://www.livemint.com/economy/sitharaman-urges-imf-md-for-global-regulation-of-crypto-assets-11662558723257.html>

37. https://www.business-standard.com/content/press-releases-ani/cryptocurrency-gandercoinlaunched-as-india-s-first-digital-coin-122060101210_1.html

38. <https://explodingtopics.com/blog/number-of-cryptocurrencies#number-of-cryptocurrencies>

39. https://economictimes.indiatimes.com/tech/technology/indias-position-on-cryptocurrency-vindicated-by-global-trends/articleshow/92668864.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

40. <https://www.drishtias.com/blog/the-future-of-cryptocurrency-in-india>

41. https://en.wikipedia.org/wiki/List_of_cryptocurrencies

42. <https://www.moneycontrol.com/msite/wazirx-crypto-control-articles/the-journey-of-cryptocurrencies-in-india/>

43. <https://www.indiatoday.in/cryptocurrency/story/india-stands-fourth-in-global-crypto-adoption-index-2022-despite-ban-china-remains-active-in-space-2000444-2022-09-15>