

# Crypto currency Trends and Impact on The World Economy

Parth Sharma, UG student, Maharaja Surajmal Institute, GGSIPU, New Delhi, India,  
parthsh2001@gmail.com

**Abstract** Cryptocurrency has emerged as a new mode of investment as well as payment in recent times. It is being increasingly used instead of digital currencies and fiat money. This paper first explains the meaning of cryptocurrency and how it is different from digital wallets. It focuses on the total market capitalization of cryptocurrencies in the last few years which depicts an exponential rise in a small amount of time and the dominance of Bitcoin among all the cryptocurrencies. It demonstrates year wise market capitalization changes in cryptocurrency from the years 2017 to 2020. It depicts the rise of cryptocurrencies' value in the market and its growing popularity around the world. Then it elaborates on the pros and cons of this trade. It gives a picture of what impact this trade has had on the world economy and what we can expect in the years to come.

**Keywords** — Blockchain, Cryptocurrency, Bitcoin, Market Capitalization, Trading, Investment

## I. INTRODUCTION

A cryptocurrency is a digital asset designed to work as a medium of exchange wherein individual coin ownership records are stored in a ledger existing in a form of computerized database called blockchain using strong cryptography to secure transaction records, to control the creation of additional coins, and to verify the transfer of coin ownership.

In 2008, an unknown computer programmer or group of programmers by the name of Satoshi Nakamoto created a computer platform that would allow users to make valid transfers of digital representations of value. The system was called Bitcoin and is the first known cryptocurrency in the world.

The differences between cryptocurrencies and digital currencies are:

- Structure

Cryptocurrencies are decentralized, and the regulations inside the network are governed by the majority of the community. Digital currencies are centralized. The transactions within the network are regulated in a centralized location, like a bank. Its price is determined by the political and economic situation of the country.

- Transparency

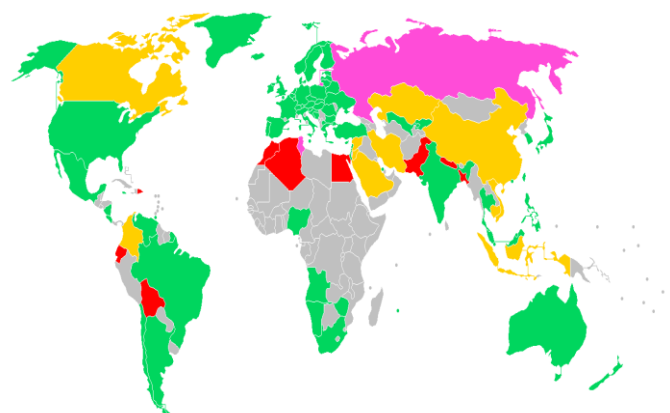
Digital currencies are not transparent. With digital currencies, you cannot choose the address of the wallet and see all the transactions since the beginning of time. This information is kept strictly confidential and private for every user. Cryptocurrencies are transparent. Anyone and everyone is able to see any and all the transactions that are made and received by any user in a public chain called the blockchain.

- Transaction manipulation

Digital currencies have a central authority that deals with any frauds or transaction issues. This central body can, for example, freeze or cancel transactions on the request of the participant or the authorities. Cryptocurrencies are regulated by their respective communities without any central authority.

- Legal aspects

Most countries have some legal framework surrounding digital currencies, for example, the EU's Directive 2009/110/EC; and the US' Article 4A of the Uniform Commercial Code. Right now, the same cannot be said about cryptocurrencies. In most countries, their official status is not defined. They are even banned in some countries.



- permissive (legal to use bitcoin)
- contentious (some legal restrictions on usage of bitcoin)
- contentious (interpretation of old laws, but bitcoin is not prohibited directly)
- hostile (full or partial prohibition)

no data

The map above shows the legality of bitcoin in various countries.

- Anonymity

Digital currencies require user identification. You'll need to upload a photo of yourself and some legal documents for identification. On the other hand, buying, investing and any other processes with cryptocurrencies do not need require any of that but all transactions are tracked. The addresses don't contain any confidential information such as name, residential address, etc., each transaction is registered, the senders and the receivers are publicly known.

Since 2008 when the first cryptocurrency was made, cryptocurrencies have gone from little-known technological curiosities to increasingly used financial instruments that are the topic of intense public interest. At one time, very few people thought cryptocurrencies would ever make a serious impact in the world. Most people viewed it as more of a hobby or just a dream rather than a real investment opportunity. Today, as we know the story is quite different. Media outreach of cryptocurrencies has been widespread,

and various experts have characterized cryptocurrencies as either the future of monetary and payment systems which will displace government-backed currencies or a fad with little real value.

## II. Objective

The purpose of this report is to: -

- Assess the trends in trade volume of cryptocurrency over the years.
- To analyse the impact of crypto trading on the world economy.

## III. Research methodology

This research is based upon secondary data; therefore, information collected could include both present and historical information from various credible sources like articles, cryptocurrency exchanges, websites and case studies. Relevant graphs and tables have been used to represent data. Figures from this representation have been collected and interpreted to derive the results.

## IV. The Global Landscape

There are approximately 5,392 cryptocurrencies being traded as on April 22, 2020. The market capitalization of all the cryptocurrencies as on 6 December, 2020 is \$563,891,172,075 i.e., \$566 Billion and 24-hour volume is \$114,950,504,375 i.e., \$114 Billion. Graph 1 shows the total market capitalization of all cryptocurrencies from April 29,2013 to December 6, 2020.

Total Market Capitalization



GRAPH 1

The market capitalization of all cryptocurrencies apart from Bitcoin is \$212,600,511,947 i.e., \$212 Billion and 24-hour volume is \$88,492,908,307 i.e., \$88 billion as on December 6,2020. Graph 2 shows the total market capitalization of cryptocurrencies excluding bitcoin from April 29,2013 to December 6,2020.

## Total Market Capitalization (Excluding Bitcoin)

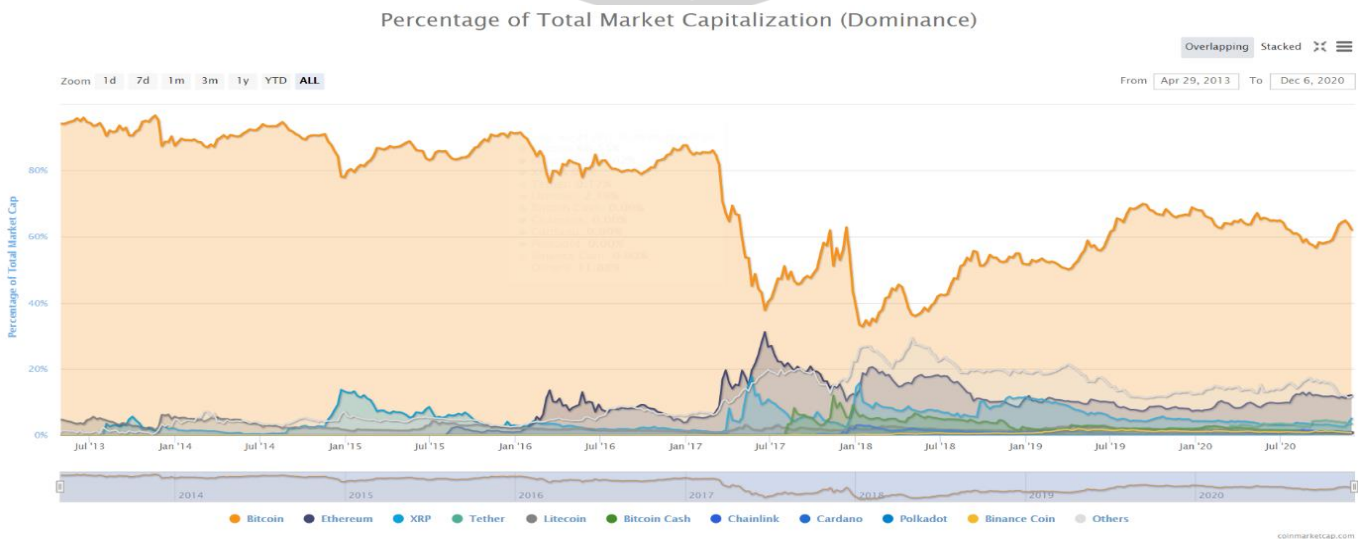


GRAPH 2

This shows that there is a huge demand for cryptocurrencies especially Bitcoin which dominates the market with a share of 37.58% as on 6 December,2020. Table 1 shows the top 10 cryptocurrencies by market capitalization as on 6 December,2020. This further shows the dominance of the top 10 cryptocurrencies among all the existing cryptocurrencies in the market as they occupy most of the total share.

NAME	MARKET CAPITALISATION
BITCOIN	\$354,973,992,639
ETHEREUM	\$67,559,454,655
XRP	\$27,448,100,294
TETHER	\$19,680,148,411
LITECOIN	\$5,425,380,662
BITCOIN CASH	\$5,276,882,896
CHAINLINK	\$5,252,457,217
CARDANO	\$4,881,546,330
POLKADOT	\$4,491,965,027
BINANCE COIN	\$4,231,521,439

TABLE 1 Graph 3 shows the market capitalization of these top 10 cryptocurrencies shown in table 1 from 29 April, 2013 to December 6, 2020.



GRAPH 3

These peaks show that crypto trade is at one of its all-time highs all over the world right now and this number keeps growing every passing day. Further focus has been laid on year wise changes in trade volumes from the years 2017 to 2020.

1<sup>st</sup> January 2017 – 31<sup>st</sup> December 2017

As on 1<sup>st</sup> January 2017 the market capitalization was \$18 billion and at the end of the year the amount reached \$559 billion with an exponential increase of 3005.55%. This can be clearly seen in graph 4. A single Bitcoin holder—called a “whale” in cryptocurrency parlance—likely manipulated the market and helped fuel the big rise in Bitcoin’s price in 2017, according to researchers. That year, Bitcoin’s price jumped from under \$1,000 in January to more than \$19,000 in December. This was the highest jump ever in a single year in the history of Bitcoin. It greatly increased the popularity of Bitcoin and generated a lot of buzz in the market.

### Total Market Capitalization



GRAPH 4

1<sup>st</sup> January 2018 to 31<sup>st</sup> December 2018

In the subsequent year i.e., 2018, there was a dip in market capitalization and the year ended at \$129 billion with a decrease of 76.92%. This can be seen clearly in graph 5. This was called cryptocurrency bubble.

### Total Market Capitalization



GRAPH 5

There were several factors that contributed to this downfall. They have been listed below: -

- On January 12, 2018, there were rumours that South Korea could be preparing to ban trading in cryptocurrency which led to a 12 percent depreciation in Bitcoin price.
- On January 26, 2018, Coincheck, Japan's largest cryptocurrency OTC market, was hacked and 530 million US dollars of the NEM were stolen which caused Coincheck to indefinitely suspend trading. This loss was the largest ever incident of theft.
- Additional negative news for the cryptocurrency market continued in the first quarter of 2018.

- On March 7, 2018, compromised Binance API keys were used to execute irregular trades.
- Late in March 2018, Facebook, Google, and Twitter banned advertisements for initial coin offerings (ICO) and token sales.

On November 15, 2018, bitcoin's market capitalization fell below \$100 billion for the first time since October 2017 and the price of bitcoin fell to \$5,500. This massive drop raised huge questions regarding the future of cryptocurrencies.

1<sup>st</sup> January 2019 – 31<sup>st</sup> December 2019

In this duration the market capitalization remained fairly constant with \$61 billion at the beginning of the year as well the end of the year and with a dip of about \$170 million. This can be seen in graph 6. For the first time there was some consistency in the prices of cryptocurrencies after a major downfall in the previous year. The road to recovery was all set.

### Total Market Capitalization



GRAPH 6

1<sup>st</sup> January 2020 - 6 December 2020

2020 saw a major spike in market valuation again starting the year at \$191 billion and as on December 6 at \$568 billion with an increase of 197%. This can be clearly seen in graph 7. Inflation and the lowering purchasing power amidst massive stimulus spending is driving people to store-of-value assets, including Bitcoin. Bitcoin's mining reward halving mechanism further proves its scarcity and merit as a store-of-value asset. Institutional adoption as both an investment and as a service they can provide shows strong confidence in the future of Bitcoin and cryptocurrency. The infrastructure built around cryptocurrency and Bitcoin has shown immense maturity over recent years making it easier and far safer to invest than ever before. These factors made cryptocurrency emerge as a major winner in 2020.

### Total Market Capitalization



GRAPH 7

This analysis shows that there has been a sudden rapid increase in cryptocurrency investments as well as prices of cryptocurrencies in the last 4 years excluding 2018 and this trend is expected to continue in the near future. This makes cryptocurrencies a favorable asset for investments and trade if one is looking for immediate profits though there is higher risk factor involved as well.

## V. IMPACT ON WORLD ECONOMY

The story of cryptocurrency is indeed just getting started, but it's already transforming the global economy. In this matter, it becomes crucial to know how it will shape the global economy and market in the near future. Here are some visible impacts of cryptocurrency on the worldwide economy.

- Shifts in Global Investments

Many investors and traders are now adding cryptocurrencies into their portfolios. This can be seen from the increasing amount of total market capitalization of cryptocurrency in the graphs shown above. This is most likely because of the high volatility which can lead to huge profits in a short duration of time. On the other hand, this is also a cause of concern as a collapse in the cryptocurrency prices can lead to a global financial crisis. A small allocation significantly boosts the cumulative return so most investors see cryptocurrencies as a hedge against inflation.

- Separates Transactions from the Dollar

Today, more than 61% of all foreign bank reserves are denominated in U.S. dollars, according to the International Monetary Fund (IMF). Also, approximately 40% of the world's debt is denominated in dollars. The U.S. dollar acts as the reserve currency for the global economy, and mainstream financial transactions that take place around the world have their basis in the dollar. Cryptocurrency transactions, on the other hand, don't need to have any connection to U.S. government-sponsored currency. The involved parties of a financial transaction are given another avenue to participate in the global economy. Cryptocurrencies hold the high ground with most of the transactions, and the US dollar is losing in this battle. Through the years, there have been several attempts to de-dollarize the global economy. Countries and governments wanted to end the reign of the USD. Every attempt ended in failure until the cryptocurrencies were born. Cryptocurrencies seem to manage the de-dollarization process, thus, changing the global economy.

- Eliminates the Need for Middlemen

Bitcoin as a whole is inherently designed to allow peer-to-peer electronic transactions between counterparties without the intervention of any third party. It does not require an intermediary, or a go-between, unlike the traditional currency. Transactions are validated in a decentralized fashion. This eliminates the need for services of banking institutions. What's more, transacting through cryptocurrencies is much quicker as it doesn't have to pass through multiple hands. Rather than a bank or other central institution validating transactions, all users of the currency

verify it in a decentralized fashion. It also has caused concern because it's become harder to regulate financial activity without any central regulating authority which has especially interesting implications on the international level. It could lead to illegal transactions.

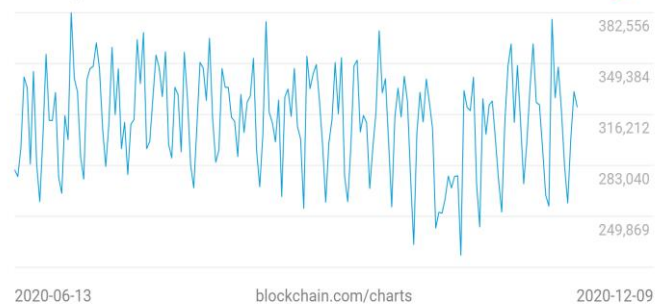
- Encourages More Overseas Transactions

Globally, only 69 percent of adults – 3.8 billion people – now have an account at a bank or mobile money provider. In many countries around the world, businesses still cannot accept credit card payments. Since lots of people living in countries around the world with poorer economies still don't have access to a bank account, cryptocurrency comes in handy to engage them with the global internet economy.

This enables people who live in typically less developed countries to connect with the internet economy by using just a digital wallet to make transactions anywhere in the world. The transaction it's quite fast, transparent, confidential, and secure. Also, the transaction fees may be much more affordable than in conventional payment systems (credit or debit cards). It could be especially helpful in overseas transactions. Currently, a fees that is equal to 9 percent on an average has to be paid to transfer the money through international financial institutions. If cryptocurrency is used then it can be done for practically free.

Confirmed Transactions Per Day

321,079



The graph above shows an average of 321,079 confirmed transactions per day for last 180 days. This shows an increasing number of people shifting to using cryptocurrency for money transfer as well as investment.

- Reduces High Reliance on Fiat Money

As a decentralized currency, Bitcoin does not have a regulator and is free from any economic and political issues that often can affect traditional currencies. That's where Bitcoin is designed to be a digital currency that can be an alternative for authorized or fiat money.

Today, customers in many countries have become more reliant on digital transfer (as it's convenient in the sense of transaction speed) as a handy means to pay for products and

services. Using cryptocurrency as a payment method can reduce the high reliance on traditional or authorized money.

- Removes Barriers to Entry and Emerges New Market

Cryptocurrency established a global decentralized transaction network that eliminates the necessity of any centralized institutions like banks for currency issuance and settlement. In this case, it has opened the door for a new kind of market and opportunities where no authority or individual controls the money market. So, rather than persuade the venture capitalists, banks, and other financial institutions for their prospective project, they can bypass the regulations and authority through Initial Coin Offerings (ICO). With ICO, start-ups and small businesses around the world can sell some of their coins to get their business off the ground.

- Opens Access to a Credit System

Cryptocurrency enables unbridled access to a reliable credit system since it's a type of unregulated digital currency that's based completely on data. If the price remains stable for an extended period, it'll enable people who are isolated from global merchants to use cryptocurrency for this purpose. Thus, it will open new markets as well as new opportunities that can contribute to sustainable and inclusive growth in the global economy. Cryptocurrency does not require any pricey fees for transactions, which makes it much more appealing for its users— and people who are considering using it.

- Starts New Era of Crowdfunding

An ICO is a new method of crowdfunding that allows companies or organizations to raise capital in the form of cryptocurrencies. It is equivalent to an initial public offering (IPO) in the cryptocurrency world. A company looking to raise money to create a new coin, app or service launches an ICO as a way to raise funds. Interested investors can buy

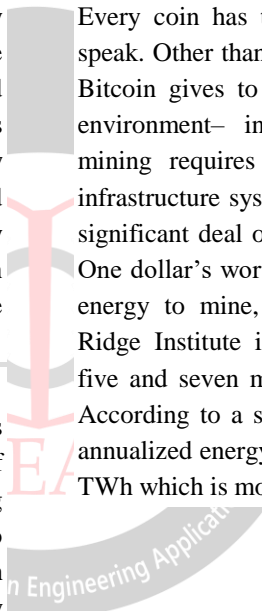
into the offering and receive a new cryptocurrency token issued by the company. This token may have some utility in using the product or service the company is offering, or it may just represent a stake in the company or project.

- Changes on the International Remittances Industry

Overseas remittance drives economic growth in emerging economies. That way, many people around the world work overseas and regularly send money to their families and loved ones in their home country. At present, this money has to be managed by intermediaries, including banks or other money transfer services that charge high costs for transaction fees. Also, the transaction process is so slow and takes several days before the receiving party can access the funds. In this matter, cryptocurrency comes as a game-changer. Cryptocurrency can instantly be transferred across the globe securely. It makes the overseas remittance process a lot easier, cheaper, and more secure.

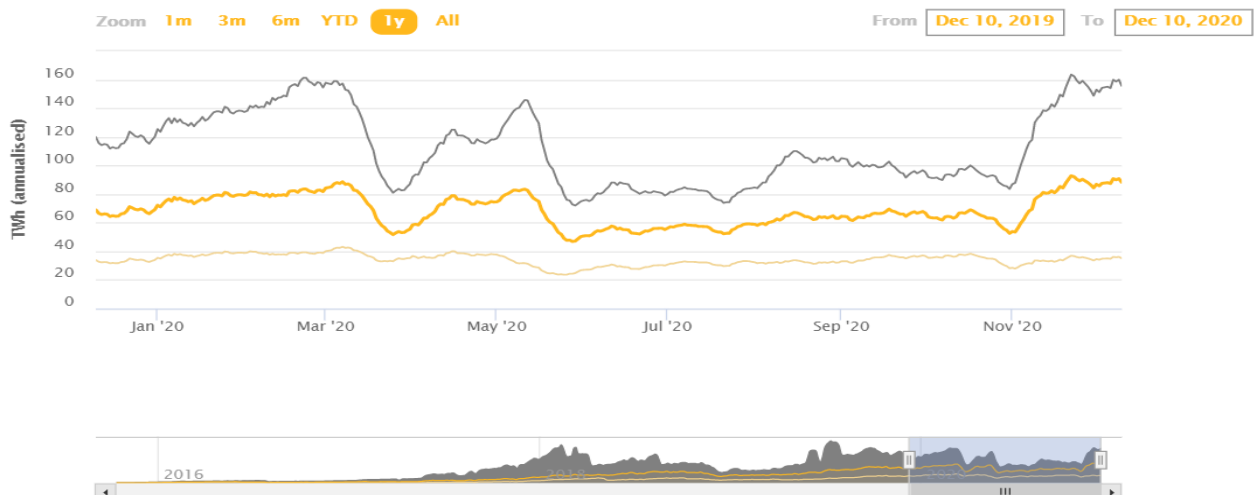
- Environmentalism

Every coin has two sides, so does cryptocurrency, so to speak. Other than the direct and straightforward impact that Bitcoin gives to the global economy, it also impacts the environment— in a not-too-subtle way. Cryptocurrency mining requires a sophisticated software and hardware infrastructure system, and it reportedly accounts for a more significant deal of energy than the entire world uses today. One dollar's worth of bitcoin takes about 17 megajoules of energy to mine, according to researchers from the Oak Ridge Institute in Cincinnati, Ohio, compared with four, five and seven megajoules for copper, gold and platinum. According to a study by the University of Cambridge, the annualized energy consumption for mining Bitcoins is 88.31 TWh which is more than that of some countries.



Bitcoin electricity consumption, TWh (annualised)

Select an area by dragging across the lower chart



With more and more people dabbling in the Bitcoin network and trying to mine it, this insane amount of energy will still have the potential to increase. In such cases, environmental law and regulatory framework will have to be created to address energy consumption related to bitcoin mining.

## VI. CONCLUSION

Cryptocurrency has a bright and promising future as a mode of payment as well as investment. It has come a long way and has become a multibillion-dollar industry in just a few years. It has a lot of merits. It is free from any centralized institutions which makes it a great way to transfer money at no extra cost to any part of the world. It is a more secure payment method and can reduce frauds. It also opens new markets and new methods for crowdfunding as well as credit. Just like every coin has two sides it also has some demerits. Its high volatility as seen over the years has been a major cause of concern. It is hard to predict the price changes for a normal person. So, it is a make-or-break investment. Also, the high amount of energy required to mine cryptocurrencies is another major issue as we head towards the idea of sustainable development. So, if there are some environmental regulations or there is some limiting to the amount that is mined, it could surely transform the way we make payments and lead to a decentralized single digital mode of payment all over the world. As revealed in the study its use as a currency is increasing every passing day but it has not reached its full potential and there is still a long way to go. A major boom is expected in the coming years.

## REFERNECES

- [1] <https://en.wikipedia.org/wiki/Cryptocurrency>
- [2] [https://finance.yahoo.com/news/top-10-cryptocurrencies-market-capitalisation-160046487.html?guccounter=1&guce\\_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLnNvbS8&guce\\_referrer\\_sig=AQAAAClkHa6tdNaBYBaf3jYuwZADAzOTDd1WFqQwG5E5Mk4Z\\_pjyJmZ-\\_Wp9ADnZ6IIRWN4snbCZEu0Pa9X8MWFao6pFCmrFunRWUcIK8yyB-2dvgMc4IdN\\_m4ByQwrZTdudou77tfN10b6UoywfGxEcXQ2ze86AgCtlOgP3P\\_0e-LS#:~:text=How%20many%20cryptocurrencies%20are%20there,of%20April%2022%2C%202020](https://finance.yahoo.com/news/top-10-cryptocurrencies-market-capitalisation-160046487.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLnNvbS8&guce_referrer_sig=AQAAAClkHa6tdNaBYBaf3jYuwZADAzOTDd1WFqQwG5E5Mk4Z_pjyJmZ-_Wp9ADnZ6IIRWN4snbCZEu0Pa9X8MWFao6pFCmrFunRWUcIK8yyB-2dvgMc4IdN_m4ByQwrZTdudou77tfN10b6UoywfGxEcXQ2ze86AgCtlOgP3P_0e-LS#:~:text=How%20many%20cryptocurrencies%20are%20there,of%20April%2022%2C%202020)
- [3] <https://coinmetro.com/blog/digital-currency-vs-cryptocurrency-whats-the-difference/#:~:text=Digital%20currencies%20are%20centralized%2C%20meaning,the%20majority%20of%20the%20community>
- [4] <https://coinmarketcap.com/charts/>
- [5] [https://en.wikipedia.org/wiki/Cryptocurrency\\_bubble](https://en.wikipedia.org/wiki/Cryptocurrency_bubble)
- [6] <https://www.technologyreview.com/2019/11/04/132066/one-bitcoin-whale-may-have-fueled-the-currencys-price-spike-in-2017/>
- [7] <https://id.pinterest.com/pin/297589487852359647/>
- [8] <https://blockgeeks.com/the-impact-of-bitcoin-on-the-global-economy/>
- [9] <https://www.investopedia.com/articles/forex-currencies/092316/how-us-dollar-became-worlds-reserve-currency.asp>
- [10] <https://www.technobuffalo.com/5-ways-bitcoin-affects-the-economy>
- [11] [https://blogs-images.forbes.com/niallmccarthy/files/2018/06/20180607\\_Bank\\_Accounts\\_FORBES.jpg](https://blogs-images.forbes.com/niallmccarthy/files/2018/06/20180607_Bank_Accounts_FORBES.jpg)
- [12] <https://www.theguardian.com/technology/2018/nov/05/energy-cost-of-mining-bitcoin-more-than-twice-that-of-copper-or-gold#:~:text=One%20dollar's%20worth%20of%20bitcoin%20takes%20about%2017%20megajoules%20of,for%20copper%2C%20gold%20and%20platinum>
- [13] <https://www.bbc.com/news/technology-48853230#:~:text=Currently%20the%20tool%20estimates%20that,nuclear%20power%20plants%20at%20once>
- [14] <https://www.investopedia.com/terms/i/initial-coin-offering-ico.asp>
- [15] [https://en.wikipedia.org/wiki/Legality\\_of\\_bitcoin\\_by\\_country\\_or\\_territory](https://en.wikipedia.org/wiki/Legality_of_bitcoin_by_country_or_territory)
- [16] <https://www.investopedia.com/why-does-bitcoin-keep-going-up-5092683>