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THE COVID 19 CRISIS AND THE FUTURE OF BITCOIN IN E-COMMERCE

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ABSTRACT

The spread of the coronavirus has devalued stock indices, lowered commodity prices such as oil, and chaos in financial markets around the world. Fiat currencies have plummeted as central banks injected too much money into affected economies, and an unprecedented recession has hit the world that central banks and financial institutions are unable to cope with. Bitcoin is a virtual currency whose production is the result of a time-consuming computational activity called exploration. This international currency is not managed by any bank and can be used to buy goods from anywhere in the world, it can also be traded like stocks or coins. The main purpose of this article is to address the pandemic crisis - COVID 19 and Bitcoin as a virtual currency from the perspective of a user, in addition to goals such as familiarity with Bitcoin for strangers, attracting talented people, and showcasing the capabilities of Bitcoin. It is also covered in the virtual world and e-commerce. This article takes a fresh look at the most known digital currency and, by advancing its goals from the legal and economic perspective of Bitcoin, with a view to the e-commerce COVID 19 pandemic crisis in 2019. This money is a new currency with lower transaction costs than traditional currency markets and operates in a decentralized manner without the presence of intermediaries and regulatory bodies such as the government, banks, and financial institutions, unlike traditional currencies issued by governments.

Keywords: Pandemic crisis - COVID 19, The future of Bitcoin, Decentralized money, Digital money and its role in e-commerce.

INTRODUCTION

In the last days of 2019, the news of the coronavirus appeared in China and since then, its widespread outbreak has caused the emergence of the COVID-19 pandemic. It has caused the death of many people around the world and many disorders in people's lives. This pandemic has reduced Gross domestic product increased unemployment of people, etc., and this has spread the prosperity of e-commerce and e-money. The purpose of writing this article is to examine the issue of coronavirus outbreak and the impact of corona on business. As we know, with the spread of this virus in the world, many people are forced to stay at home and do all their work, including shopping and business and even studying at home. This is one of the effects of Corona on business. Because it has almost completely damaged traditional businesses. Therefore, one of the best choices to provide the necessities of life is online shopping. In fact, with the spread of the Coronavirus, online shopping is no longer a choice but a necessity. Hence, since people have to

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shop online to meet their living needs, online businesses have taken new steps to help people in these critical situations. The issue of corona and business is one of the most common issues in the world. Now, if you want to know the effect of Coronavirus on business, you can follow us to the end of this article. Working at a time, one of the methods defined in the electronic payment systems scenario is the method of cash and the use of electronic coins. In the design of electronic coins, depending on the type of application, several features can be considered (Shamsai, 2004). E-commerce was first introduced in the 1960s through an electronic data exchange (EDI) on value-added networks (VANs) and grew with the rise of Internet access and the rise of popular online retailers in the 1990s and early 2000s. The Amazon website, for example, started in 1995 in Jeff Bezos' garage as a book shipping business. Or the eBay website, which allows consumers to buy and sell online, introduced online auctions to the world in 1995, and in 1997 became very popular with the popularity of Beanie Babies dolls. As the number of Internet users increases, many believe that e-commerce will soon become the main way of doing business. E-commerce, like any digital technology or consumer-centric shopping market, has evolved over the years. As mobile devices become more popular, the mobile phone business has also found its market. With the advent of sites like Facebook and Pinterest, social media has become an important driver for e-commerce. For example, according to Pay mill, since 2014, sales on the Shopify e-commerce platform, which was due to ads on social media, in 85% of cases, buyers have been guided to this platform using ads on Facebook (McCoy *et al.*, 2019).

To facilitate finance and monetization without the presence of intermediaries, banks and financial institutions introduced the concept of digital currency, meaning cryptocurrency, first introduced in 1998. A new idea of money was introduced that uses computer encryption to control money production and transactions without intermediaries and central reference. But until 2009, the idea was just a theory. This year, at the same time as the recession, a virtual currency called Bitcoin was introduced to the world along with its mathematical algorithm, based on which an article was presented and implemented. Virtual money has no central server or financial institution to control transfers; because everything was built on peer-to-peer communication, governments could not manipulate it, and banks could not underestimate its value (Hodson, 2014).

The global economic crisis that has just begun is quite different from what the world experienced in 2008 or 1929. In the previous two crises, each time a financial crisis led to an economic crisis. But today, the mechanism of this crisis is different. It is a health crisis, the epidemic of the coronavirus, which has caused an economic crisis and in turn, could trigger a financial crisis.

In this economic crisis, what is unprecedented is the speed of events. Except for periods of war and conflict between nations, the world has never seen such an economic downturn, which is expected to reduce the GDP of the world's largest economies by 5 to 10 units this year. Fortunately, Bitcoin was created as a result of the previous economic crisis in 2008. For several years now, Bitcoin has proven to safe haven in times of crisis. The advantage of Bitcoin over gold is that it can be purchased in very small quantities and is very easy to store. In addition, bitcoin is much rarer than gold. Even if Bitcoin is not yet ready to replace Fiat currencies such as the US dollar for everyday consumption, this digital currency is now a viable solution as a store of value. By exchanging Fiat currencies with bitcoins, you can control what you have. As long as you securely store bitcoins in your hardware wallet, no intrusion will be possible on your assets.



Thus, Bitcoin not only acts as a cover against currency devaluation thanks to its unique monetary policy but also allows you to live your way. Bitcoin is a precious asset and a combination of different benefits. Bitcoin does not exist physically and there are only accounts containing public and private passwords. Account information, along with transactions between accounts, is recorded in a general ledger, which requires a large amount of computer computing power to verify and record this information across networked computers around the world (Hodson, 2014). Bitcoin is a decentralized currency that is managed with peer-to-peer technology. All activities such as bitcoin issuance, transaction processing, and validation are done by the network and there is no intermediary or central authority to defy or interfere in the process, unlike traditional money used by a country's central bank to commit to controlling its policies. Money is published. Bitcoin is electronic and Bitcoin is designed to be electronic money, while traditional money is basically physical, and bank accounts can be quickly cashed out if desired (Sohrabi, 2008).

In 2008, the Bitcoin database domain was registered on the Internet, and it is still unknown who registered this domain. In October 2008, Satoshi Nakamoto said in an encrypted newsletter called metzdowd, "I'm working on a new electronic monetary system that will be unique and without the involvement of a third party". The growth of fraud patterns as well as the costs of fraud can constantly threaten the company, so a strong fraud detection management system must have different methods to detect fraud and what is important is the presence of experienced experts and professionals in this field who must directly be supported by regulatory bodies. and the board of directors because they are the origin of many violations from within the organizations (AyboĞA & Ganji, 2021).

The mentioned scientific article is the source of this virtual currency, i.e. bitcoin, and is known as the white article entitled (Bitcoin: the electronic monetary system is unique). In January 2009, block 0 of bitcoin in the Internet world was extracted, which contained only a message to start the system, and the reward was 50 bitcoins for Satoshi. A few days later, the first version of the bitcoin software was presented in open source, and the next day a block of bitcoins was extracted, and a bitcoin transaction was made between the initial users. The value of bitcoin had no backing and depended entirely on supply and demand (Hodson, 2014).

Introduction of Coronavirus and economic crisis in the global dimension:

With nearly a billion people quarantined in their homes around the world and the current state of emergency, everyone has resorted to electronic services and new tools such as electronic money, money that is ticked off in the other party's account.

Use bitcoin to prevent coronary heart disease:

Touch and physical contact are the most common ways of transmitting coronary heart disease. To prevent the virus from entering the host body, it is highly emphasized that you do not touch contaminated objects and avoid being in crowded places where physical contact is more likely. Wash your hands frequently with soap and water and use disinfectant sprays or gels. However, in the current situation, physical contact should be kept to a minimum to prevent the spread of new COVID-19 diseases. Money is one of the most important factors in transmitting pollution. This precious and lovely paper remittance contains a collection of diseases. It is widely believed that banknotes and coins are among the most contaminated objects, but recent studies by New York University biologists show that the issue is even more complex. The DNA proteins of many



drug-resistant microbes, including anthrax and diphtheria, are carried by money. Banknotes, coins, and banknotes that are constantly exchanged between people contain 3,000 types of bacteria, some of which can carry the disease for a long time, the report example, new studies have shown that the flu virus (the Coronavirus is also from the same family) can survive on banknotes for up to 17 days and can be transmitted. The disease is transmitted to humans through paper money. From municipal sweepers to hospital staff, freelancers, and government employees, especially those working on bank counters and ticket offices, everyone is dealing with big and small money. Transactions and cash payments by all of these people can transmit many diseases from one person to another. With all these interpretations, is it possible to live without using cash and exchanging it with others? Today, transferring money and doing business are inevitable for people. It is enough to review your day-to-day work from morning to night to see that it will be almost impossible not to use banknotes, but the high power of transmitting pollution and diseases by this paper money is also very scary and worrying. One way to prevent the spread of germs by money is to change the materials used to make it, which is on the agenda of many countries, including Canada. It is said that the country's currency will probably be printed on flexible sheets of polymer film. Changing the ingredients is just one way to help prevent further disease outbreaks. Another way that experts, especially cryptocurrency communities, are paying attention to these days is to trade on the Chinese blockchain platform; a sophisticated technology that has created bitcoins and other cryptocurrencies. Behind the financial transactions on the blockchain platform, although there may be many complexities, in appearance, almost everything is simple and clear. There is now a software called Bitcoin Wallet in various forms that by creating an account on them, you can easily transfer your bitcoin or from a person by entering your ID and password. Liang *et al.* (2017).

On the other hand, special shop POS machines can also be used for transactions and the transfer of passwords. These devices, like current POS devices, can transfer any amount of money, but the transfer of money in them is based on the bitcoin unit. Interestingly, due to the digital currency mechanism, all transactions are publicly displayed, but some Quinn wallets also issue receipts for their users' transactions for a better effect. Currently, the use of bitcoin as a cash alternative has been discussed by many analysts and experts in the field. They believe that due to the special structure of cryptocurrencies on the one hand and the high rate of coronary heart disease on the other hand, even by touching objects, this issue can be considered more serious. They believe that the restriction of bills transition prevents many diseases.

Some of the Best Jobs in the Current Situation

Many jobs can be used and monetized according to the current economic conditions of the world and the crisis (epidemic or epidemic) of the Coronavirus, some of which work during the corona. Three important steps for customer service during COVID 19 are shown in **Figure 1**:





Figure 1. Key steps to provide customer service during COVID 19

Other developments in this area include the increased use of chatbots (online chatbots) to support and respond to requests.

Online businesses went from the peak of profitability and credit to the brink of bankruptcy and closure. It may not be easy to find a solution for these businesses to get through situations like Corona, but what is clear are the successful and credible examples that such businesses can build by relying on their brand and corporate logistics as well as striving for innovation. Public Oversight Authority (KGK) (2017).

Corona has transformed the online business environment. In a way that Corona can be considered as an online revolution in the Iranian business environment, a leap forward in the growth of the audience community, now it is the turn of online business owners and its makers to take this opportunity into account. It has come to change the tastes of people to change traditional businesses to online businesses and change the atmosphere of the business format in Iran.

(Digital Gold) is one of the strongest narratives, which explains the "value of bitcoin" well. The limited supply and anti-inflation model of Bitcoin evoke the physical properties of gold. Gold has historically served as a source of value and protection against market shocks and fluctuations. While economies have faltered under pressure from COVID-19 and traditional markets have begun to crumble, many proponents of the digital gold narrative have sought to validate their claims. Bitcoin is moving in the same direction as assets such as gold, which are mostly bought during high-risk periods, and in the opposite direction with stocks and bonds. This is the credit that Bitcoin fans were looking for. The meaning of e-commerce is to reduce all borders to zero, especially everything is done with one click and reducing risks and entering a new era is done with this process. However, the purpose of e-commerce is not limited to the automation of e-commerce transactions and the elimination of paper transactions, this technology is expected to improve the way institutions and companies work, especially in accounting systems. Considering the importance of the Venice issue, the measures taken to ensure e-commerce conditions in different sectors in Turkey and the accounting systems of business units are a part of and somehow affected by the business unit. discuss its impact on systems (AyboğA *et al.*, 2021).

Introducing Bitcoin

The following are some of the terms used in the Bitcoin system (Nian & Chuen, 2015):

Bitcoin client system is free software that is installed on the computer to receive and send bitcoins.

Wallet



A file that stores the Bitcoin tokens and private keys needed to use them.

Block- Chain

A public directory or database of all transactions that have been made and sent so far. With this list, anyone can know which bitcoin belongs to whom.

Bitcoin Address

An identifier consisting of letters and numbers that indicate the destination of each payment, and, like an email, you need it when you want to send a bitcoin to someone.

Miner

Someone who helps create blocks and add them to the blockchain. Each probe that creates a valid block is rewarded with 25 bitcoins according to the Bitcoin protocol. All current bitcoins in the network have emerged through the same process (in the first four years the bonus amount was 50 bitcoins and in the second four years it was reduced to 25 bitcoins, and this downward trend continues every four years).

Private Key

A hidden and secret number is the address that each user needs to access their bitcoins and send them to the desired destination. If this key is lost, the bitcoins in your wallet will be gone forever.

Bitcoin protocol: This means that each node on the network must download a copy of each bitcoin transaction.

Bitcoin Protocol

This means that each node on the network must download a copy of each bitcoin transaction. A bitcoin network is a computer network in which bitcoin transactions are distributed. Blockchains are also stored on the same network. In the following, we will introduce financial systems by addressing the goals of Bitcoin users. **Figure 2** shows an overview of the components of the financial system.



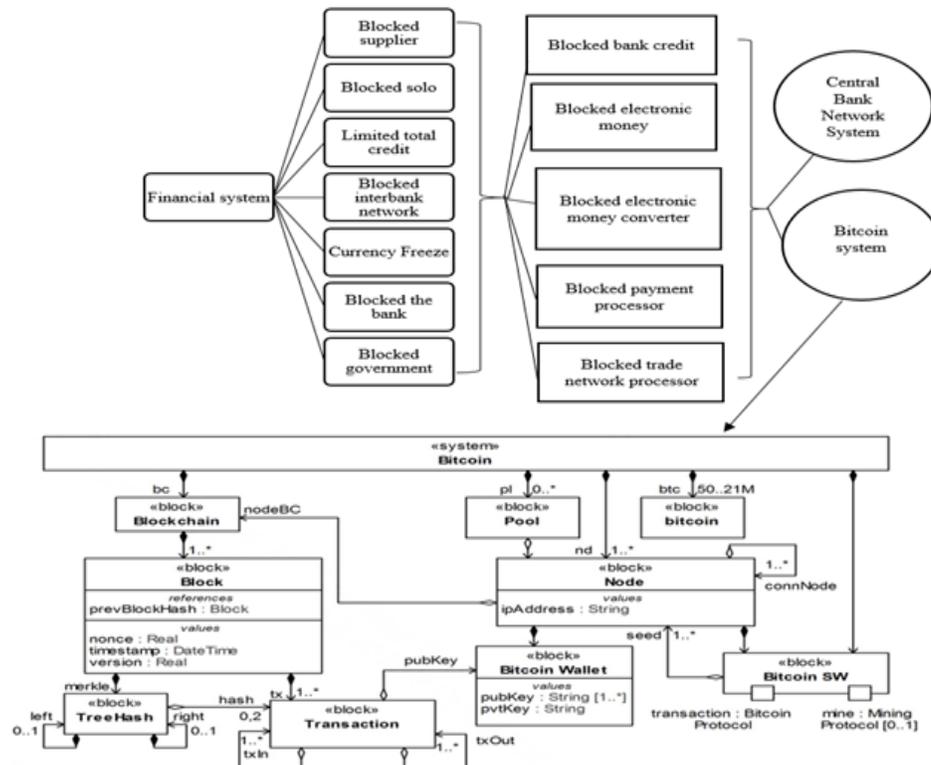


Figure 2. Components of the Bitcoin financial system



The cost of each transaction has increased significantly over time, and the value of bitcoins has increased in proportion to the number of transactions. Some see this point as an inherent inefficiency in Bitcoin, while others expect market forces to balance over time (Cheah & Fry, 2015).

High-level objectives of a specific type of user are related to the inferred technical requirements. While there is an overlap in user needs, the general consumer has a different preference for each overhead, initially set with the concern of centralized users. Similarly, centralized users may be in a higher position of anonymity and their transaction costs may be higher than regular users (Roth, 2015).

Each bitcoin can be shredded up to eight digits, which is referred to as the smallest unit, Satoshi. Of course, based on the needs and agreement of the extractors, this unit can be made smaller. Bitcoin can be obtained in four ways:

1. Selling goods and services based on bitcoin
2. Buy bitcoins from bitcoin exchanges
3. Buy bitcoins from people who have bitcoins
4. Winning Bitcoin through the Competitive Bitcoin Mining Production Process (Hodson, 2014)

Advantages and Disadvantages of Using Bitcoin

Here are the pros and cons of using bitcoin:

Benefits of Bitcoin

- Freedom to pay: It is possible to send and receive any amount of Bitcoin immediately, 24 hours a day, anywhere in the world. There is no day off. There are no boundaries. No restrictions will be imposed. Bitcoin allows its users complete control over their money.
- Very low fees: At present, payment processing with Bitcoin is done without a fee or with a very low fee. Users can pay a fee to process their transactions faster, which will result in faster transaction confirmation from the network. In addition, some commercial processors help traders process transaction, convert bitcoins into an unsecured currency, and deposit funds directly and daily into their bank accounts. Because these transactions are bitcoin-based, they will be charged far less than credit card or PayPal network fees.
- Less risk for traders: Bitcoin transactions are secure and irreversible and do not contain personal or sensitive customer information. For this reason, it protects traders against losses due to fraud or counterfeit payments, and there is no need to follow PCI. Merchants can easily enter new markets where no credit card is available, or the fraud rate is unacceptably high. Its net benefits include lower fees, larger markets and lower management costs.
- Security and control: Bitcoin users have complete control over their transactions. It is impossible to force traders to pay unwanted or undeclared amounts, as is sometimes the case with other payment methods. Bitcoin payments are made without anyone's personal information being attached to the transaction. In this way, strict protection against identity theft is created. Bitcoin users can also protect their money by providing backup and encryption.
- Transparency and Impartiality: All information about the Bitcoin money supply is readily available on the blockchain and can be tested and used immediately. No person or organization can control or manipulate the Bitcoin protocol because it is encrypted, secure, and makes the Bitcoin core completely reliable in terms of transparency, complete neutrality, and predictability.

Disadvantages of Bitcoin

The concept of virtual currency as a whole is complex and abstract, and understanding how and why bitcoin works require an acceptable level of information technology knowledge, while traditional money is understandable to all human beings (Hodson, 2014). Here are some disadvantages of bitcoin:

- Acceptance rate: Many people are not yet aware of bitcoin. More and more businesses are accepting bitcoins because they want the benefits, but the list is still small and needs to grow to take advantage of the network.
- Volatility: The overall value of bitcoins in circulation and the number of businesses using bitcoins is still small compared to what they should be. Therefore, there are relatively few events, transactions, or business activities that can have a significant impact on the price of bitcoin. Theoretically, this instability will decrease as markets and bitcoin technology grow. The world has never seen such a nascent currency before, so it is difficult (and exciting) to imagine how Bitcoin will end up this way.
- Being in development: Bitcoin software is not yet a fixed version and has many incomplete features that are being actively developed. New tools, features, and services are being



developed to make Bitcoin more secure and accessible to the masses. Most bitcoin businesses are start-ups and are not yet covered by insurance. In general, the process of bitcoin maturation is still ongoing.

- Price Fluctuation: Because Bitcoin has no backing, the price of Bitcoin fluctuates sharply, which makes it difficult to assess its true value and this increases the risk of loss of investment in the virtual currency.
- Anonymity of users: Anonymity of Bitcoin users may lead to the use of Bitcoin in illegal activities such as tax evasion, arms exports, gambling, and circumvention of exchange control policies. Of course, it was stated that this system is more transparent than traditional money, but in recent years, many cases of illegal use have been reported (Chen *et al.*, 2011).
- Security: The fact that bitcoin only exists electronically leads to its easy loss and theft.
- Currency outflow: Bitcoin is not desirable for governments because in many cases it causes currency outflow.

Economic View from the Perspective of E-Commerce

Bitcoin has a maximum limit of 24 million: The maximum number of bitcoins that can be produced is 24 million. Bitcoin Mining Process Currently, 25 bitcoins are generated every 10 minutes (the production rate is halved every 4 years).

Over the past few years, many economists have studied the effects of the digital revolution on the banking and monetary system and the large economy. Although many articles on e-banking and e-money provide useful and important information about this technology, there is still a vague concept of bitcoin. Initially, the value of bitcoin was small compared to other currencies, but now its use and value have increased significantly. Gresham's law states that bad money causes abuse, or in other words, cheap money destroys expensive money. Of course, the definition of cheap and expensive depends on various factors, including the price of different types of money instead of goods and the cost of using each of these currencies (Nasiri Ahmadabadi, 2006).

In general, hybrid systems that include both abuse and malpractice detection methods in commercial systems have the best results in terms of performance. Therefore, by combining these two approaches, the implemented systems can additionally predict customer behavior with high accuracy and identify frauds caused by abnormal behavior (Apak & Ganji, 2020).

CONCLUSION

We have proposed a system for electronic transactions without relying on trust. We started with the usual framework of coins made from digital signatures, which provides strong control of ownership, but is incomplete without a way to prevent double spending. This article addresses issues related to Bitcoin as the most popular digital currency, and Corona changed the shopping culture around the world. The culture of trusting online space and online customer orientation may initially lead to online shopping, but the convenience and better quality of online shopping have quickly replaced traditional shopping, no longer having to leave home with a simple and Direct purchase, you have easy access to a wide range of products, and you will always be in the process of special discounts and sales. But it has a lot of positive effects. Side effects in the world of digital currencies. We leave out the complex economic explanations and focus on the fact that



"all currencies have value because people believe that these currencies are valuable." Bitcoin is no exception. Fans of the case have tried to make the real version of the statement available online. With its decentralized nature and the use of peer-to-peer technology, Bitcoin has been able to eliminate other digital currencies and consolidate its position. Bitcoin leaves people free to trade on their terms. Each user can send or receive payments like cash but can also participate in more complex contracts. COVID-19, because of all the hardships and deaths it brings, may eventually act as the biggest catalyst for bitcoin and e-commerce.

Suggestions for Future Research

With the outbreak of the COVID-19 pandemic and its epidemic, most countries in the world imposed global quarantines, both due to the closure of borders and the announcement of social distances, both demand and production declined, and the supply chain was disrupted. The economies of the countries of the world suffered great losses, and their economic growth and GDP declined sharply, and in some cases, entered a recession. E-commerce, meanwhile, emerged as an alternative to providing the usual daily human services. Online retail sales have grown at an unprecedented rate, with the World Health Organization announcing that contamination is less likely to be transmitted through online ordering packages. With the closure of entertainment centers, cinemas, theaters, and tourist centers, Internet TV, social networks, Internet calls, and social networks became the main alternatives for entertainment and people's entertainment. Training platforms and online conferences provided educational services around the world, and the field of e-commerce grew rapidly. Teleworking continued to operate in many companies, news agencies, and training centers. Companies have supported e-commerce platforms by innovating their activities and processes, and governments have implemented fiscal and legal policies to help expand the use of the e-commerce industry. By changing people's daily habits in social relations and economic behaviors, as well as expanding the field of digitalization and e-commerce, we can expect safer and more equations and economic platforms and the use of bitcoin or electronic money or non-contact money after the corona in the world. It will exist and the necessity of using it will make it easier and simpler for all businesses and human beings.

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