



Cryptocurrencies and Reducing Government Intermediation

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Abstract

Cryptocurrencies are an emerging phenomenon in the Digital economy that is expanding day by day. Both in terms of the number of cryptocurrencies and the fact that cryptocurrency fans are increasing. Cryptocurrencies are based on blockchain technology and this has made financial transfers decentralized. This is against the current practice of governments and banks, which are based on centralization policy. Sometimes governments also play an intermediary role in financial matters. At the same time, in the case of the spread of cryptocurrencies, the policy of centralization and government mediation will decrease. Governments adopted different strategies to deal with the risk of decentralization in the digital economy. One of these solutions is the central bank digital currency design policy based on semi-centralized block chain technology. In fact, the overall goal of the semi-centralized block chain is to make maximum use of the important advantages of the block chain technology with a degree of controlled centralization.

Keywords: *Cryptocurrency; Government; Block Chain; Digital Economy; Central Bank Digital Currency (CBDC)*

Introduction

In 2008, Satoshi Nakamoto introduced the cryptocurrency to the global economy for the first time by publishing the Bitcoin White Paper. After years, these cryptocurrencies expanded beyond Bitcoin (Hardle, Harvey, & Reule, 2019). For example, cryptocurrency like Ethereum was developed after Bitcoin. Cryptocurrencies, which are based on digital technology, have revolutionized the economy and business. In fact, cryptocurrencies eliminate the intermediation of governments and banks, bringing transaction fees to the lowest possible level. The speed of transferring cryptocurrencies is high, and people's wallets on the Internet or smartphones are like banks or treasury (Ibid, 2019).

Cryptocurrencies are based on computer encryption, and accordingly, the possibility of fraud is low or unlikely. Cryptocurrencies, which are based on blockchain technology, have a decentralized structure and are therefore not managed by a central authority, which prevents governments from interfering in cryptocurrencies (Ghasemi, 2021).

Throughout history, we have seen the presence of the government in the economy. Government intervention in the economy is possible in two ways. Or the government owns the businesses, and in this case, the role and influence of the government in the economy is extremely high. In another case, the government is the policy maker of economic issues. The government pays attention to issues such as income distribution, reducing inflation and unemployment, etc. (Sadeghi Sahedani, Nadri, & Ghalich, 2009). Milton Friedman considers the main duties of the government to defend the freedom of citizens, maintain law and order, and promote competitive markets (Friedman, 2000). According to Friedman, the government's role in the economy is minimal. This opinion is accepted by neoliberalism. In the theory of neoliberalism, the role of the government is to maintain the integrity of money and defend private property (Sadeghi Broojeni, 2011).

Cryptocurrencies, due to their decentralized nature, prevent the government from interfering in the control of financial transactions based on cryptocurrencies, and based on this, it can be said that it can practically fulfill the theory of people who advocate small government.

Research Methods

The research method of this article is library method. For this paper, related articles and books have been studied and reviewed.

Concepts

Cryptocurrency

Cryptocurrency is a combination of the two words crypto, which means code and currency, which means money. The meaning of this word is money that is based on cryptographic science and uses mathematics to create encrypted codes so that information remains hidden and no one can cause problems in the production process and its distribution (Khademan, Koosha, & Nouri 2021). Accordingly, the concepts of cryptocurrency and digital currency are different. Digital currencies are currencies that are stored and transferred electronically. Digital currency can be traditional money or cryptocurrency (Ibid, 2021).

Blockchain

“Blockchain technology is also known as distributed ledger technology. It allows participants to secure the settlement of transactions, achieve the transaction, and transfer of assets at a low-cost. A sample flow of cryptocurrency blockchain transaction can be seen as follows. User A initiates a transaction to User B via a peer-to-peer blockchain network. A cryptographic proof of identity (a pair of public key and private) is used to the network to identify user A and user B uniquely. The transaction will then be broadcasted to the memory pool of the blockchain network waiting for transaction verification & validation. The new block is generated by obtaining a certain number of approved nodes; this is called reaching consensus. After reaching consensus, new “block” on the entire blockchain network is formed, and each node updates its respective copy of the blockchain ledger. This block contains all the transactions that occurred during this time. It is “linked” to the original block in the network through the digital signature” (Chen et al, 2018).

Digital Economy

The term "digital economy" was first mentioned in the research of Western scientists - Professor D. Tapscott (Tapscott, 1996), researcher R. Bukht and Professor R. Heeks (Bukht & Heeks, 2018). However, their works do not reveal this concept, but rather describe its characteristics. In particular, D.

Tapscott examines the evolution of economic models, the impact of digital technologies on business and management, and gives forecasts of future changes in the economy. In the works of R. Bukht and R. Heeks, the digital economy is considered at three levels: the digital sector, the digital economy itself, and the digitalized economy (Puzina, et al, 2021)

Taking into account the coverage of all spheres of the economy, we will use the world Bank's definition in this work: "the Digital economy is a new way of economy based on knowledge and digital technologies, within which new digital skills and opportunities are formed for society, business and the state " (What is the digital economy? (2019).

Central Bank Digital Currency (CBDC)

CBDC is not a well-defined term. It is used to refer to a number of concepts. However, it is envisioned by most to be a new form of central bank money. That is, a central bank liability, denominated in an existing unit of account, which serves both as a medium of exchange and a store of value. This would be an innovation for general purpose users but not for wholesale entities. Central banks already provide digital money in the form of reserves or settlement account balances held by commercial banks and certain other financial institutions at the central bank. This mix of new and already existing forms of central bank money makes it challenging to precisely define what a CBDC is. In fact, for purposes of analysing what may change, it is easier to define a CBDC by highlighting what it is not: a CBDC is a digital form of central bank money that is different from balances in traditional reserve or settlement accounts. To get greater clarity, it is useful to put CBDC in the context of other types of money. (Central bank digital currencies,2018)

Government

The concept of government in one of the political dictionaries has been defined as "the government is a structure of power that dominates the people in a country. From the internal point of view, it is the guardian of order and from the external point of view; it protects the interests of the nation and its citizens. The government is divided into administrative, political, judicial, and military organizations (Ashouri, 2013).

Government Approaches to the Economy

There are different opinions and approaches regarding the government's approaches to the economy and economic and commercial issues. But in general, it can be said that some are in favor of the approach of government intervention in the economy, and others support the approach of minimal government intervention in the economy.

Government Mediation in the Economy

In the contemporary era, the approach that defends government mediation in the economy is often based on Marxist or socialist assumptions. This influence can be direct or indirect. This approach is opposite to the liberal approach. Every society has an infrastructure and a superstructure, and the economy of the society is the foundation of the society. Economy and politics affect each other (Tafazoli, 2005).

According to the basis of this approach, the presence of the government in the economy is a widespread presence. Since the economy is of great importance to societies, it should be managed by the government .

Therefore, governments are allowed to be present in economic matters, because the economy and the government are not separate from each other.

The Approach of Minimal Government Intervention in the Economy

This approach is mostly adopted by liberals. In this approach, economic and commercial policies are established by the free market and the government does not interfere in it or sets a series of general policies. What is important in this approach is that the government must guarantee and defend economic freedom. In fact, the relationship between the government and the economy is that the government must defend economic freedoms.

The market is considered an independent institution and is a reaction against government controls based on the dominance of politics over the economy. Liberals paint a picture of a free market in which producers and consumers benefit, and exchanges in this market are optional and free, and there is no conflict in the market. Therefore, there is no need for government intervention in the market. Liberals extend this model to the international level and relations between governments (Mohammadi, 2013).

Cryptocurrencies and Its Effect on Reducing the Size of the Government

Cryptocurrencies, especially Bitcoin, as the first cryptocurrency, have many advantages. For example: 1. Freedom of payment, 2. Low fees, 3. Security, 4. Transparency and impartiality (Sayyad Maruf et al., 2014). Of course, it should be noted that disadvantages can also be stated for it. Among the disadvantages of Bitcoin and other cryptocurrencies are instability, price fluctuation, anonymity of users, being in development, and currency withdrawal. One of the main reasons why some governments oppose cryptocurrencies is this last case (Ibid, 2014).

The expansion of the use of electronic money from the previous cryptocurrencies has several effects. Its effects affect money supply, monetary policies, and the central bank (Ibid, 2014). In contrast, Bitcoin has freed people to transact on their own terms. Any individual can send or receive payments and can also participate in complex contracts (Ibid, 2014).

Bitcoin was invented as the first cryptocurrency in 2009 after the economic crisis of 2008. An unknown person or group with the pseudonym Satoshi Nakamoto invented this currency. This currency is private and does not require a supervisory, intermediary, or central institution. The main feature of Bitcoin and other cryptocurrencies is that no third party is involved in its mechanism. For example, the government or other entity cannot create money in this system, nor can it impose monetary policies. Some of the policies that governments put in place in monetary matters are detrimental to the people, and reduce the value of money (Nawabpour et al., 2018).

Cryptocurrency is also called decentralized convertible digital money. All its processes, including the registration and confirmation of transactions, instead of being done by a central institution, are done through individuals and with the mechanism of mathematical and cryptographic sciences. Securing the security of this monetary network is also not under institutional supervision (Ibid, 2018). In the proposed structure of Bitcoin, governments cannot monitor Bitcoin, and banks cannot raise or lower its value (Farani et al., 2020). Also, these types of currencies protect people's privacy (Ibid, 2020).

Based on what was said, it can be concluded that the mechanism of cryptocurrencies eliminates many intermediaries. Banks and governments cannot intervene in it as mediators and observers or make policies in it, and this causes the government to shrink. This incident agrees with the approach that advocated the smallness of the government. Of course, it should be stated that governments have also started producing and distributing CBDCs. Therefore, it can be said that Digital Economy have a flexible nature. Therefore, governments are adapting to it in order to maintain the concentration of their powers.

Conclusion

By examining the economic approaches of different governments, we see that each government has adopted a specific approach in the economy, but in general, two general approaches can be extracted and it can be claimed that the economic approach of the governments is close to one of these two approaches. One of the approaches is the approach of defending the intervention and mediation of the government in the economy and trade, and the other approach is the approach of non-interference of the government in the economy and trade. One of the issues related to the economy and government is money. Governments consider themselves to be in charge of printing and supplying money, and in all approaches, the government is responsible for supplying money and setting monetary policies. Even in the approach that opposes the maximum presence of the government in the economy, the government is responsible for setting monetary policies, and the government must also defend the value of the currency. With the development of cryptocurrencies on the blockchain, institutions are not involved in the control and supply of money and cannot monitor it. Based on this, it can be claimed that the mechanism of cryptocurrencies leads to the reduction of the size of the government and thus strengthens the approach against the presence of the government in the economy. Of course, governments have been able to exert influence in this area by distributing CBDC. So, cryptocurrencies have a flexible structure. They can shrink governments and all economic intermediaries, and Governments can reduce the decentralization risk of the digital economy by adopting the features of semi-centralized block chain technology and produce the central bank digital currency under their control. How to use the central bank digital currency as a monetary policy tool in digital economy governments can be the subject of future research.

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