Block chain Technology:Concept of Digital Economics

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24 August 2017

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Abstract

The purpose of the study is to explain about blockchain technology and how to use of blockchain technology for modern economics practices. We focused on this paper to put the light on blockchain usage in some other areas of economy such as, governance and political decision making, public finance, financial institution & stock market trading, global trading and other economic activities. The literature showed that blockchain is rapidly growing at globally and increasing digital money for transactions through peer to peer network. The opinion is given in this research to implement blockchain technology on behind the every single sector of economy to prevent from corruption, fraudulent/ fake funding on infrastructure and human capital.

Keywords: Blockchain Technology, Digital Economics, Cryptocurrency

1 Introduction

Blockchain is the decentralized network and has no single point of failure. It is incorruptible, undeniably resourceful invention in digital era. There are several main advantages to use this technology. Such as any nodes face the failure others are will continue to operate in a manner. Secondly, it is entirely encrypted and digitalized form of data. Third main advantage is the all transaction visible to all participants in blockchain.

The purpose of this research is the creation of digital economy by using of blockchain technology and shaping the monetization system of economies. The concept of digital economics is comprising under the rule of block chain technology which is entirely based on algorithm program.

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In addition, this program is computed by solving the complex mathematical problems on back end interface. Recently, the financial industry have been experiencing a continuous development in service delivery since decades. The only reason behind to enhancement in flow of information and fast communication in transactions expanded connectivity. A block chain is a public distributed ledger of cryptocurrency transactions. The procedure of bitcoin transaction does not only rely on central authority but also the hash of the previously accepted block in the blockchain. These blocks are interlinked each other and peer network with storing transactions in each block. It cannot be deleted or replicate. It is worldwide constantly increasing to completed blocks of digital list of recording data. According to Investopedia:

"A *blockchain* is a public ledger of all cryptocurrency transactions that have ever been executed. It is constantly growing as 'completed' blocks are added to it with a new set of recordings. The blocks are added to the blockchain in a linear, chronological order. Each node (computer connected to the Bitcoin network using a client that performs the task of validating and relaying transactions) gets a copy of the blockchain, which gets downloaded automatically upon joining the Bitcoin network. The blockchain has complete information about the addresses and their balances right from the genesis block to the most recently completed block." (Investopedia, 2017)

2 Background of the study

The concept of blockchain technology is developed by Pseudonyms Satoshi Nakamoto in 2008 (Nakamoto, 2008). The reason of using this technology to form a digital money or cryptocurrency currently known as Bitcoin as a concept of peer to peer electronic cash system. According to *Coindesk* reports that blockchain is a distributed transaction database where different computers interlinked called nodes. It is sequence of bits are stored and encrypted in a single block or unit and chained together. It is further mention in report that Bitcoin is a form of digital cryptocurrency created first and infamous application of the blockchain technology. The real inventor is still uncover. (Coindesk, 2015) Further studies explained about Bitcoin as a cryptocurrency in literature (Beer & Weber, 2014) Bitcoin is not governed by any government and intermediaries where validation of transactions rely on centralize procedure. It has no transaction fee for payments. In addition, the responsibility of controlling bitcoin standardization and protection monitored by Bitcoin foundation but they do not have bitcoin issuance rights.

This is first ever cryptocurrency created which is decentralized. Conclusively, it has no centralized databased handling yet. It is a shared public ledger program on which the Bitcoin network take place. According to Melanie Swan explained in her book that "decentralized network will be the next huge wave in technology." (Swan, 2015) This blockchain is growing rapidly and works as distributed digital information ledger but not copied. This technology brought up with algorithm based system which functions behind this concept. There are further practitioners said about blockchain that:

"The blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not just financial transactions but virtually everything of value. (Tapscott & Tapscott, 2016)

Since its evolution of blockchain came into financial industry for transferring digital money, it is the purpose of only created for new type of internet for digital currency. In this research study, the focus of blockchain technology have further potential usage for digitalized the modern economic activities instead only focus on digital currency. The basic use of blockchain is to utilize the strong algorithm program for other economic activities such as stock market, public finance and budgeting, intellectual property rights, land & property transferring, and governance.

3 Research Objectives

The following research objectives aim to further enhancement in using blockchain technology to become digital economy.

1. Utilize blockchain technology to maintain profile of national database system
2. Governance and electoral system should be controlled under blockchain technology to maintain transparency.
3. Implement entire concept in civic activities such as, utility bills payments, transferring property & land ownership.
4. Implement in stock market to buy and sell the equity shares against digital currency.
5. Apply blockchain for global trading and industrial productions.
6. Blockchain should be use for infrastructure funding and project investments.

The problem of block chain technology is decentralized server and can use for illegal purpose. Every blockchain user has its own rights to control their account administratively and publically.

Mostly organizations still do not believe on this system due to absence of centralized network databased where only administrative rights applicable on centralized server. This research study will encourage to implement the concept of blockchain technology to growing further enhancement in modern economics practices.

4 Literature Review

The literature of blockchain explained that it is increasingly rapidly and solution of systematic digital records itself in a form of blocks which has contain transaction data of digital money. By this literature (Levy, 2014) discussed that blockchain has cryptographic and public keys peer to peer linked to create irremovable record of digital transactions known as digital cash or ledger. It maintain the privacy and transparency at public ledger.

Further explained about blockchain is a storage mechanism could offer unchallenged data space from accessible records. Blockchain validates and create sets of records of data which is incorruptible. Further explained that every transaction record in blockchain cannot be erased or modified by any centralized authority such as, government, third parties and competitors. Decentralization is the feature which distinguishes using the blockchain from other authentication and timestamp. This technology has potential offers to society where group of society to keep their records with assurance and protective about endurance and inviolability. (Findlay, 2015)

5 Conclusion

The study concluded the blockchain technology operates without central body of network like central banks or government. It cannot be corrupted and hack. Block chain is a public ledger contain transaction records of digital money. But this paper focused on further usage of blockchain technology in other economic practices. Such as governance & management, financial institution, stock market and trading, and electoral voting system. By this technology, the transparency and fraudulent activities can be prevent efficiently at public domain.

6 Future Research

The future research created further studies to explore the potential usage of blockchain technology in efficient manner. The research is going on to expand the blockchain in further economic areas.

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