**BLOCKCHAIN ACCOUNTING FOR CRYPTOCURRENCY**

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**Abstract**

The scope of blockchain technology, initially associated with the cryptocurrency Bitcoin, is greater due to the multiple applications in various disciplines. Its use in accounting lies mainly in the fact that it reduces risks and the eventuality of fraud, eliminates human error, promotes efficiency and increases transparency and reliability. The aim is current topics and emerging research lines at a global level on blockchain technology for secure accounting management. Crypto is an alternative medium of exchange. Cryptocurrencies are used with security, transparency and cost-effectiveness in mind. Regarding the characteristics of money, cryptocurrencies are acceptable, but from an economic perspective, cryptocurrencies do not fully meet the characteristics of currencies due to high price volatility. The study about blockchain accounting for cryptocurrency. The implication of this paper is that cryptocurrency is the nature of money and not as a speculative instrument.

**Keywords**: blockchain technology; accounting; management; security Cryptocurrencies; Cryptographic Techniques;

**INTRODUCTION**

In recent years global and multidisciplinary interest in Blockchain (BC) technology has grown exponentially since the Bitcoin cryptocurrency adopted it in 2008 (Jalan et al., 2023). In effect, BC refers to chained blocks of information, that is, pages of a book accounting system digitally signed in the internet environment that supports digital payment transactions made with cryptocurrencies. In its most primary context, BC refers to an open information and accounting system, which allows the control and validation of payment transactions with the particularity of being decentralized, avoiding duplication or digital multiplication of currencies. It has a great potential for diffusion and adaptation, its costs are low and its easy accessibility and high security are revolutionizing the way of recording private transactions. Cryptographic techniques with encryption protocols for identification and verification of transactions (Kaal & Calcaterra, 2017) provide a transparent cryptocurrency transaction details and the identity of the user remains anonymous. Determination The price on this transaction is based on supply and demand. The unique characteristics have made cryptocurrency is becoming popular among the wider community. Indonesia's monetary policy has not given permission to use a medium of exchange other than fiat currency approved in trading and payments, cryptocurrency is no exception (Handayani et al, 2023).Cryptocurrencies can be invested as subject commodities on the Futures Exchange by using permissible cryptocurrency technology called distributed ledger technology (a decentralized system for maintain the integrity of the ledger according to the protocol), (Handayani et al, 2023). Negative publicity, speculative issues and other risks that may arise with cryptocurrencies, in particular bitcoin, is considered an investment rather than a currency (Haykir & Yagli et al., 2022).

# METHODS

The method that we used in this paper is a literature study from any kind of relevant source of information, such as books, journals, and articles from a validated site. Like google scholars, emerald publishing, researchgate, and etc. Thereason choose literature study as our method of researching this paper is because in this paper to look for the digital culture to unlocking finance transformation intitution that just by doing reading we can come up with a solid conclusion that not only believeable but also validateable.

**RESULTS AND DISCUSSION**

**Blockchain**

In 2005, researcher Ian Grigg developed what can be considered the first application of BC in accounting. In this study, he proposes triple-entry accounting based on distributed ledger technology (DLT), that is, it incorporates value units (tokens) in a third information entry that is registered on the network through the encrypted BC. These tokens can represent cryptocurrencies or with any accounting fact, good, right or obligation. In this way, if accounting can be implemented using BC technology, the accounting model can be extended to a greater scope of information, faster access to it, more security and for he public administration, it would be an instrument towards transparency. The registration in distributed, irrevocable, and verified databases on the network, with a cryptographic digital signature, makes the BC allow the authenticity of the facts and the accounting information more reliable and transparent. This circumstance has notable importance in the audit of the annual accounts since the execution of smart contracts allows automating processes. In the digitization of accounting, BC and artificial intelligence represent a transformative impulse in accounting processes and in aspects of control and verification. The accounting system is based on control mechanisms carried out manually at times, which requires duplicate efforts, such as reconciliation. In short, with the distributed ledger, control and reconciliation actions between the companies are eliminated and, in addition, with the elimination of intermediaries, the results translate into a reduction in time and costs, with an improvement in the efficiency of the system. The main thematic axes that have been developed and detect emerging ones in the research of BC technology for secure accounting management. Accordingly, the main objective is to examine the current and emerging lines of research at an international level on BC technology for secure accounting management between 2016 and 2020, that is, from the publication of the first article (2016) until the last full year (2020). To infer adequate judgments and conclusions, mathematical and statistical techniques were applied to a sample composed of 1130 articles selected from Elsevier’s Scopus database. The importance of these mathematical methods and statistical analysis is since these make it possible to obtain reliable indicators, associated with quality. It involves obtaining information from the documents published by the driving agents, that is, with greater scientific productivity of a certain research topic. The contribution of this work to the field of knowledge on BC technology for secure accounting management consists in that the findings achieved are useful for the actors working on this research topic, since they require an analysis of past research and an approach to the emerging, such as academics, researchers, research institutions, universities, investment planners, or BC developers.

**Blockchain In Education**

A Revolutionary EvolutionPublic blockchains and ledgers whose licenses can be applied successfully in many ways toeducation and learning. some of the advantages offered and compared to(DDBMS) Distributed Database Management System which has been the backboneprevious educational technology infrastructure. The thing that stands out the most from the differencebetween distributed ledgers and DDBMS is the inability of allowed ledger records. byensure the aspect that all the abilities that the ledger claims that students acquire frompublisher actually assigned to it. This means no middlemenrequired to verify the authenticity of the credentials after being notified. Existenceledgers and blockchain can transform education more globally and provide opportunitiesfor small badge providers to easily expand their digital expertise and thus compete withestablished educational institutions. Even these changes cannot revolutionize learning. Onalone, the underlying technology of licensed blockchain cannot guarantee progressof a high-quality educational content management system. The distributed ledger must havecommon language to describe their notes, more than just publishing and recording.

**Cryptocurrencies From an Economic Point of Views.**

**A. Cryptocurrency as a Currency?**

The value of a cryptocurrency is not an independent standard value, it takes the value of a fiat currency to determine its value crypto currency, cryptocurrency can still be used as a medium of exchange (Mushaddik et al 2023). Regarding the legal tender, the government makes something as a legal tender and must be issuedby the central authority (Santaolalla Montoya, 2023). Bitcoin is software that can be downloaded for free. This is not an inspired projectin the capitalist principle of maximizing profit, although of course many bitcoin holders whobuying it at a low initial price makes a lot of money (Kalinov & Voshmgir, 2017).No commercial legal entity created Bitcoin, neither its founder, Mr Nakamoto, norothers programmers or entrepreneurs claim ownership of the blockchain, limiting its use to only for those who make payments.

Bitcoin features a "token-based" monetary system in which cash is exchanged for goods,services, assets. This is in contrast to "credit-based" money which is structured around an asset-liability structure lying aroundbehind the individual accounts. For an asset to be called “money”, it must perform its function of: (i) average payments, (b) units of account and(c) store of value. (Weber & Staples, 2022).The role of Bitcoin as a means of payment. Digital money is far from replacing the dominance of fiat moneyas a means of payment enjoy a legal tender status. The bitcoin market still lacks density. Secure Distributed Cryptocurrency Transaction Model Through Personal Cold Wallet. Account unit functionbitcoin is hampered by the fact that its price is too high for retail transactions and costs a lot of moneysplit. Bitcoin as a unit of account The bitcoin price of retail goods often requires a large number of left-hand sideszero, which, in practice, makes it difficult for consumers to compare prices across different goods andservice. (Komalavalli et al, 2020). Regarding the value storage function, the high volatility in bitcoin price is also a barrier, forcurrent, for a stable storage value .

**B. Crypto Speculative**

The paradox in the introduction of Bitcoin is that an intrinsically worthless computer entry, its pricehas increased sharply in recent years. British economist John Maynard Keynes identified three main motivesin the demand for money: transactions, prevention and speculation. Thus the increase in demand and pricebitcoin is a “transaction motive” and speculative demand as an asset .The interpretation of price bubbles i.e., bubbles, is often surrounded by overestimated expectations optimistic and euphoric and can affect stocks, real estate, gold, art, land, foreign exchange, oil and metals (Bonaparte, et al., 2022). Price bubbles can arise in a variety of contexts: discovery of valuable natural resources,new export markets, new technologies or transportation. Distributed ledger technology is another major thinginnovation. In addition to the compelling financial curiosity, there are important real-world consequences ofemergence and subsequent collapse of bubbles: by inflating asset prices above fundamental valuesvalue, they invite overinvestment in activities with temporary highs.Bubbles often lead to misallocation of resources in the economy on the supply side andcreates a wealth effect (side demand) leading to high consumption and excess debt which canoccurs untenable over time. Crypto bubbles seem to be an examplethe latest of this dynamic.

**C. Cryptocurrency Risks and Opportunities**

Through cryptographic techniques and the use of distributed ledgers, cryptocurrency has become a mediumexchange that is popular because of its security, transparency, and cost-effectiveness (Hellwig, & Huchzermeier, 2022). Althoughthe main features cannot be separated from the activities of users who use cryptocurrencies for illegal transactions,this is because cryptocurrency passes through a central authority, and it is not considered legal. Here are some cryptocurrency opportunities and risks: Opportunity:a. can strengthen global financial efficiency, this happens by reducing transactions and costs byfacilitate peer-to-peer exchange; b. in the long term, the technology has the potential to deepen financial inclusionby offering secure and low-cost payment options; andc. the implications can affect the financial market infrastructure for security, transaction settlement processesaccurate and fast.Risk:a. may be misused for illegal activities; and risk to financial stability because it is not supportedwith any assets;b. lack of consumer protection because there is no central authority behind it .

**CONCLUSION**

Blockchain is a digital data storage system that contains records that are linked via cryptograpy.Blockchain technology is now used by various sectors, one of which is for online transactionscryptocurrencies like Bitcoin. Cryptocurrencies, especially bitcoin, which are used in this discussion can be accepted as money, when viewed from the nature of money. Cryptocurrencies have the same characteristics as fiat currencies that meet six out of sevencondition; both have no intrinsic value. The seven conditions for the nature of money are to have intrinsic value, run outdivided, homogeneous, durable, mobile, rare and stable value. Cryptocurrencies do not fully meet the three characteristics of a successful currency from an economic point of view, this is because of its high price volatility.Cryptocurrencies have not yet fully carried out their functions as a medium of exchange, unit of account, and storageMark. Future studies are expected to follow and bridge some of the conflicts foundand findings about negative publicity and use of cryptocurrencies in particular bitcoin, can be consideredbe the main thing on the agenda for the future. The examination of these studies provides a research agenda to ensureimportant contribution and can measure understanding of the conditions that occur.

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