

Blockchain and Big Data

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ABSTRACT

Blockchain technology is one of the technologies that has gained a reputable position in the market. It revolutionizes how businesses engage in business operations, depending on the goals and objectives to attain a competitive advantage. Big data is also an emerging technology that ensures that organizations have effective data analysis framework. It is easy to ensure a strategic decision-making process and support business sustainability through effective data analysis. Government and policies are also critical factors that influence how businesses engage in a competitive environment. It is an avenue to ensure an effective decision-making process to control the market forces and create fair competition. It is important to analyze the interaction of Blockchain technology, big data, and the involvement of government in business operations.

Components and Impact of Blockchain on Global Economy

Blockchain technology has gained a reputation in the market due to increased business efficiency. One of the key components involved in Blockchain is a node representing the user of the computer in the Blockchain. A node involves the computer system updating the blocks during any transaction. The second component is a transaction, which represents the smallest building block in the processing system. A transaction helps build the blocks, which represents a single unit used in the exchange. For example, Yasaweerasinghelage et al. (2017) acknowledged that Application Programming Interface (API) represents an operation referred to as Blockchain transaction. It is the foundation to build the blocks and formulate a transaction to engage in the exchange.

A block is the third component of Blockchain technology, including structured data used to store the set of transactions distributed in the nodes. Blocks are essential in tracking different transactions distributed in the network during any Blockchain transaction. The fourth component is the chain, which represents a sequence of blocks following a specific pattern. The chain analyses the block in a specific order, establishing a relationship between the blocks.

Miners are also important in Blockchain technology, which represents specific nodes performing the block verification process. Research by Su et al. (2018) indicated that miners take an important responsibility for updating information in the Blockchain. It is easy to monitor different

advancements and changes by updating the ledger. The last component is a consensus, which represents the rules and arrangements to facilitate a Blockchain transaction. The blocks in consensus have to verify all the transactions before updating the system (Su et al., 2018). The component works in harmony to stipulate the procedures and processes to facilitate a successful Blockchain transaction.

Blockchain technology has facilitated the global economy by facilitating a distributed framework to engage in international business operations. Blockchain technology relies on a distributed ledger that supports business transactions over the internet regardless of geographical locations. It is a strategic way to revolutionize the global business transaction by creating an opportunity to enhance their business efficiency. It is easy for buyers and sellers to interact on digital platforms without worrying about geographical locations. After agreeing on a transaction, it is easy to liquidate the assets through tokenization during the transaction. Thus, it makes it easier for individuals in global markets to interact with all geographical locations' limitations.

Blockchain technology has also increased security in digital platforms during the exchange of different goods and services. Cheng et al. (2018) discussed the application of smart contracts in Blockchain technology, which effectively promotes transparency during transactions. A transaction is only successful if all the agreements between buyers and the sellers in the smart contracts are met. It is an

effective way to promote global business transactions by eliminating fraudulent activities during the exchange. Updating the smart contract information is an opportunity to promote business sustainability since buyers and sellers can agree on the terms before settling for a transaction.

From the analysis, it is clear that Blockchain technology is laying a strong foundation to promote successful global business operations. The increased advancement in Blockchain technology will promote the decentralization of business transactions, eliminating intermediaries. It will be easy to track different business transactions and promote efficiency in the global market. The advancement in Blockchain technology will be a driving factor to open up businesses to opportunities in the international market.

Big Data Advancement and Global Economy

From my understanding, big data describes a large volume of data inclusive of both structured and unstructured, which accumulates in day-to-day business operations. Not all data in an organization is important, and it is essential to develop effective strategies to ensure effective data analysis. Thus, big data is a strategic way to analyze the large volume of data and extract relevant and credible data to engage in the decision-making process. It is easy to analyze and systematically extract relevant information from large data sets. Increasing data volume has resulted in organizations looking for opportunities to enhance business efficiency. Lee (2017) indicated the data is gradually increasing in variety, volume, and velocity, which needs effective data analysis. An organization has to ensure a comprehensive data analysis by incorporating big data to promote sustainable business operations.

Companies are using big data to ensure the strategic decision-making process and improve business operations. For example, organizations are collecting customers' information to engage in market analysis. The process creates a large data set that helps identify the customer's behavior and predict potential changes that can influence the marketing analysis. Understanding the market forces give the company's adequate information to engage in marketing strategies. It is easy to understand the customers and recommend the best advertisement frameworks to

increase the customer base. In relation to this, Cheng et al. (2016) discussed the engagement of customer analysis using big data frameworks to develop an advertisement architecture in real estate. The real estate industry can use big data to collect information and use a customer analysis framework to determine the customers' buying patterns. It makes it easy to recommend the best advertisement strategy to access more customers. It is a professional approach that ensures successful business operations by understanding market forces.

As big data advances and increases complexity, organizations are being forced to train employees to understand the best data management strategies. Organizations have to train their employees to ensure they have adequate skills and knowledge to deal with the complexity of big data. Companies are also gradually adopting cloud computing platforms to hold increasing data volume from big data analytics. A cloud computing platform establishes a framework to ensure effective data storage and dissemination while interacting in an organization. Yang et al. (2017) stipulated that integrating big data in cloud computing increases innovative capabilities to promote successful business operations. It is easy for businesses to survey the market forces and make strategic decisions about their business analysis. Thus, as big data gradually advances, companies are forced to incorporate new technologies to handle the increasing data volume.

Big data has a positive impact on the global economy due to the creation of flexible data set. Big data helps collect information from different sources, and the approach can support the strategic decision-making process. For example, the Healthcare industry relies on big data to engage in detailed market research to identify health-related problems (Kumar & Singh, 2018). It is an opportunity to explore the international market and make strategic decisions to enhance efficiency and successful operations in the Healthcare industry. Thus, big data creates a framework to collect information from different sources and support strategic decision-making.

Government and Policies in the Global Economy

Government plays an important role in the global economy by facilitating legal and social frameworks to maintain fair competition. The

government has to balance different business approaches in the global economy to eliminate illegal business transactions that can compromise business efficiency. The development of effective policies to control competition aid protect the internal industry against exploitation from international businesses. Consequently, the government protects customers from international businesses by maintaining quality goods and services.

One of the policies that control the global economy is non-disclosure agreements (NDA). It ensures that parties engaging in a contract agree not to disclose any information stipulated by the agreement. It is an effective way to protect trade secrets and ensure that both parties do not disclose any information which might have the other party. It is a government directive that controls the global economy by protecting businesses as they engage in different business operations.

Competition and Consumer Act 2010 is also a policy under government directive to protect the consumers and ensure healthy competition in the market (O'Bryan, 2019). The policy is effective for establishing a healthy competitive environment and ensuring quality service delivery to the customers. Companies in the global market may face unfair competition that might result in unfair contract terms affecting the quality of goods and services. Thus, it comes in handy to control the global and national markets and ensure that all the organizations follow acceptable competitive business approaches.

Global Antitrust and Fair Competition Policy is also an effective policy controlling the global market by ensuring that businesses engaged in acceptable business operations. It limits unfair competition, which balances the forces of the global market. The government can control the global markets by ensuring acceptable business transactions. Thus, it is easy to promote business sustainability and create a healthy competitive environment that increases the quality of goods and services.

The government should develop an effective framework to analyze internal and external factors that can affect business development. For example, increasing technological advancement can be a limiting factor, especially when it comes to trade secrets and infringing intellectual property. It is important to develop policies to cater to advancing technology and promote flexibility during business

innovation. It will also help manage conflict related to trade secret breaches and infringing intellectual property due to technological advancement.

To sum up, technological advancement is a major milestone that promotes business efficiency. The development of Blockchain technology is an advantage to business operations due to the creation of global opportunities. It is easy for businesses to explore global markets without geographical limitations. Big data has also increased successful business operations due to effective data analysis. It is easy for companies to use technology to understand customers and develop effective marketing strategies to promote business performance. To control the global business, government and policies regulate the business operations in the Global market. They develop various policies like Global Antitrust & Fair Competition Policy, which ensures businesses engage in healthy competition. Thus, technology is a major driver behind increased global business transactions.

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