

ROLE OF BLOCKCHAIN-BASED PROCESS MANAGEMENT IN THE BUSINESS ENVIRONMENT

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ABSTRACT

The following paper is about the role of the blockchain-based management process in the working of various businesses and its impact on the business environment. The paper will be a secondary study of the existing papers and documents that have both the advantages as well as disadvantages of the blockchain-based process that has been used in the management process for the running of the business. It will also discuss how one can integrate the blockchain-based process into their business and how it will affect the business in various aspects. Also, there will be data analysis of the reports that will show the usage of the blockchain-based process. This analysis, though will be based on the existing data, but it will also reflect the future of the business that keeps using blockchain-based processing in their business planning. We will also mention how the same affects the environment of the business and the success of the same. The documents and the findings that will be available will give us an idea of how blockchain-based processing in management has proved itself functional and successful.

INTRODUCTION

Business has evolved over some time and it has evolved for the better future of it. Not only ideas and innovation have, but businesses have also enhanced their technologies. Blockchain-based processing is one such betterment in technology (Nofer, Gomber, Hinz, & Schiereck, 2017). Blockchain can be seen as a distributed public ledger that is generally used to keep the record of the transactions that have been having in a business or organization in the computers so no one can tamper with the

transactional data (Belotti,Božić, Pujolle, &Secci,2019). This technology and the integration of the same have led to the success of many businesses all across the world. The work of blockchain is not only to keep in check the transactional data of the business, but it also helps it to work and move operatively and efficiently.

In the following paper, we will discuss the roles of blockchain-based processing in the management of the business environment. The discussion will include the advantages as well as disadvantages of the integration of blockchain in the world of business (Zheng, *et al*, 2018). Not only that, in the course of the study we will also answer the research questions that have been listed below. These research questions will give us clarity as well as describe the function of the blockchain (George, *et al*, 2019). The primary goal of the study will be to focus on the working as well as the functioning of blockchain when it comes to management and business. Relevant examples will also be provided so the topic becomes more clear and has greater understanding.

RESEARCH AIMS AND OBJECTIVES

This is secondary research with the aim to identify and define the role of blockchain-based processing in the management of the business environment.

The objective of the study will be -

- To evaluate the advantages as well as the disadvantages of Blockchain-based processing.
- To analyse how does Blockchain-based processing help businesses from operating?
- To determine how Blockchain can be used in the business environment?

RATIONAL OF THE STUDY

The significance of the study is that it will give us a better understanding of the working of blockchain in business and the world that is in connection with the same. The functioning of blockchain in the business environment will give us a detailed view of how the blockchain will help the business to run operatively and efficiently (Ching, *et al*, 2020). Not only that, but the study will also be providing proof of the impact of the use of blockchain technology in the business and the management of the same.

LITERATURE REVIEW

Blockchain can be defined as a decentralized, distributed, and public digital ledger that is made with the motive to keep a record of the transactions and also verify and facilitate the transactions that are being carried out for different purposes. Blockchain is a technology that has been in use for decades now, and it has become a part of various sectors of industries because of its efficiency and the results that it provides to its users. Not only it keeps in check the transactional information but it also helps in data processing. All kinds of data can easily be processed with the help of blockchain. Blockchain processing keeps in check that no one can tamper with the data that is present on the computer. This helps to protect the information regarding the transaction data as well as the data that is important to the organization.

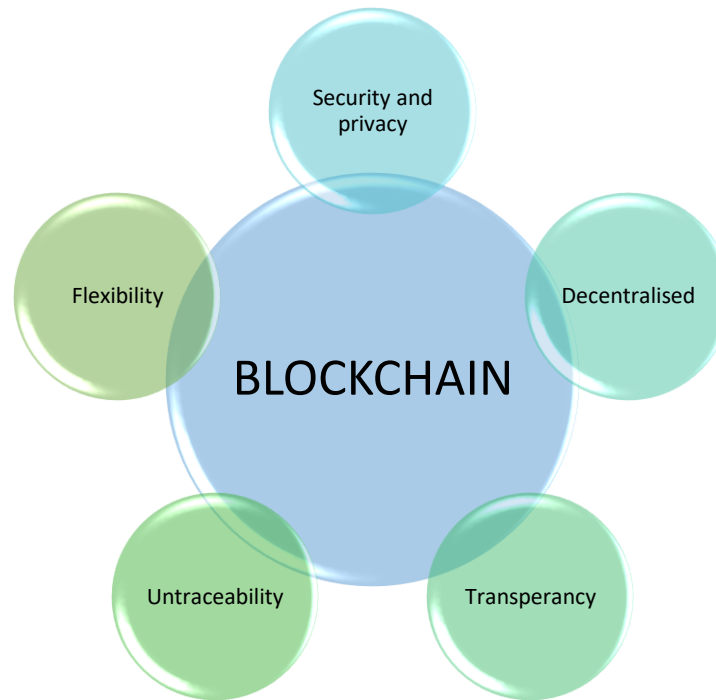


Figure 1 Characteristics of Blockchain

The following figure shows the characteristics of blockchain that are integrated wherever blockchain technology is used. These are some of the basic characteristics that can also be seen as the advantages of blockchain.

Generally, it is the centralized authority that is responsible for all the transactions as well as the data associated with it. It can be seen as the traditional method of doing things. These authorities were either the bank or the government (Viriyasitavat, W., Da Xu, & Sapsomboon, 2020). But the algorithm that the blockchain uses eliminates the need for these authorities. Blockchain technology uses different kinds of graphics and values to record and keep transactions protected (Dierksmeier, & Seele, 2020). One of the ways that this technology uses is will group some similar transactions and then add them to another block that has similar characteristics and hence form a chain doing so. This is one of the general and easiest ways of using or understanding blockchain processing.

Blockchain-based processing in management for the business environment refers to the use of blockchain to record and protect transactional data. Usually, the application of blockchain technology streamlines and enhances the aspects that are related to business operations. Not only that, if the integration or addition of blockchains is done properly it shows results with a lot better efficiency than before.

Table 1: INVESTMENT IN BLOCKCHAIN TECHNOLOGY FORM YEAR 2014 -2019

YEARS	INCREASE IN INVESTMENTS IN BLOCKCHAIN TECHNOLOGY (\$M)
2014	30
2015	70
2016	130
2017	210
2018	315
2019	400

ADVANTAGES OF BLOCKCHAIN

One of the main and most important advantages of blockchain is the transparency and audibility it provides. As the data or the record of the transactions is available to all the participants that are involved, it becomes very much difficult for someone to alter or make changes in the record sheet. Some other advantages of blockchain technology are:

- 1) **DECENTRALIZED**- As the blockchain distributes the ledger to multiple participants, one way or the other eliminates the need for a central authority, making it way more transparent and also people-friendly.
- 2) **SECURITY**- The algorithm that the blockchain uses is the cryptographic algorithm that helps to protect and secure the transactions and all the data that is associated with them. This is a very useful method to secure the data because anyone with basic knowledge of computers and so won't be able to change the data ((Niranjanamurthy,Nithya,& Jagannatha, 2019).
- 3) **ENHANCED DATA INTEGRITY**- Once the data has been added to the computer with the help of blockchain technology, it becomes almost impossible for someone to change the data without permission from the required access.

These are some of the advantages of blockchain that are generally very beneficial when it comes to the integration of the same in the working group or industry (Milani,García-Bañuelos, & Dumas, 2016).

ADVANTAGES OF BLOCKCHAIN-BASED PROCESSING IN THE MANAGEMENT OF THE BUSINESS ENVIRONMENT

One of the major disadvantages of blockchain integration in the business world is that it is very much incapable to handle transactions on a large scale. This one drawback is the very reason why many organizations all across the world have doubts regarding the integration of technology.

ADVANTAGES OF BLOCKCHAIN-BASED PROCESSING IN THE MANAGEMENT OF THE BUSINESS ENVIRONMENT

1. Building trust

Blockchain encourages trust between entities where trust is either lacking or unproven. As a result, these entities are willing to engage in business transactions or data sharing that they would not have done otherwise or that would have required the involvement of an intermediary.

2. Improving security and privacy

The algorithm that the blockchain uses is the cryptographic algorithm that helps to protect and secure the transactions and all the data that is associated with them. This is a very useful method to secure the data because anyone with basic knowledge of computers and so won't be able to change the data (De Aguiar, *et al*, 2020).

3. Improving speed and efficiency

. Walmart used a food traceability system based on Hyperledger Fabric to trace the origin of mangoes sold in the U.S. stored in 2.2 seconds, a process that previously took seven days. This is an example of how the blockchain improves the speed and efficiency with which the business works after it is added to the business management plan.

4. Bringing innovation

Executives from various industries are investigating and implementing blockchain-based systems to solve complex problems and improve long-standing inefficient practices. The use of blockchain to verify the information on job applicants' resumes is one example of such innovation.

METHODOLOGIES

The methodology that is being used is the qualitative method. The qualitative method here that is used is the evidence and the information that was present in the case studies. These case studies helped to support the information that the integration of blockchain in the business world has been very much beneficial. The disadvantages are also gathered and understood with the help of these studies itself. Also, record keeping was another method that was very much advantageous. These studies and records have made it easier to come up with ideas and also innovations that helped one to come up with research issues and topics and that have also helped one to answer the research questions related to the same.

SAMPLING

Sampling is the process of selecting a population of interest and then coming up with observations and conclusions that help the research. For this study, purposive sampling has been used. We have selected various specific studies and research papers that are related to blockchain and the integration and implementation of blockchain in the world of business (García-Bañuelos, L., Ponomarev, Dumas, & Weber, 2017). As we used this kind of sampling, it has helped up to gain information about the topic as well as it has also defined the objective of the research. The sampling helped us to explain what roles blockchain-based processing plays in management for the business environment.

For the same, we have selected some specific studies from the various studies that were remotely based on our research objective. After selecting the studies, specific information was carved out so that it becomes easier the understanding the aim and the objective of the research.

DISCUSSION/ FINDINGS

After the collection of the data and the observation of the same, it has been found that blockchain, for some time now, has become an integral and important part of the business world. It has given businesses new opportunities, as well as another, means to enter the competition with a fair chance of winning. We came to know the advantages that blockchain provides to the businesses like transparency and efficiency in conducting or doing any work that might prove to be beneficial for the business.

Also, it protects that data which is very much essential in the digital as well as the technological world where any mishap can happen at any point in time. Also, some examples of businesses like Walmart have been provided to explain how the blockchain works for a business or how it can be used by businesses if they want the technology to be a success. Though the disadvantage of blockchain is a very big drawback, one can always cut it down with proper management of the same.

As mentioned, traditionally, it was the centralized authority is responsible for all the transactions as well as the data associated with it. It can be seen as the traditional method of doing things. These authorities were either the bank or the government. But the algorithm that the blockchain uses eliminates the need for these authorities. Not only that, it does not allow anyone else to alter or tamper with the data that is present without the required permission that is supposed to be granted to the individual. This way it keeps the company or the business from any fraud that might happen to them, by securing and protecting the data that has been stored in the blockchain processing system. The examples that have been provided give proof of the same and this is why many sectors of industries, as well as businesses, are investing in using blockchain processing.

DATA ANALYSIS

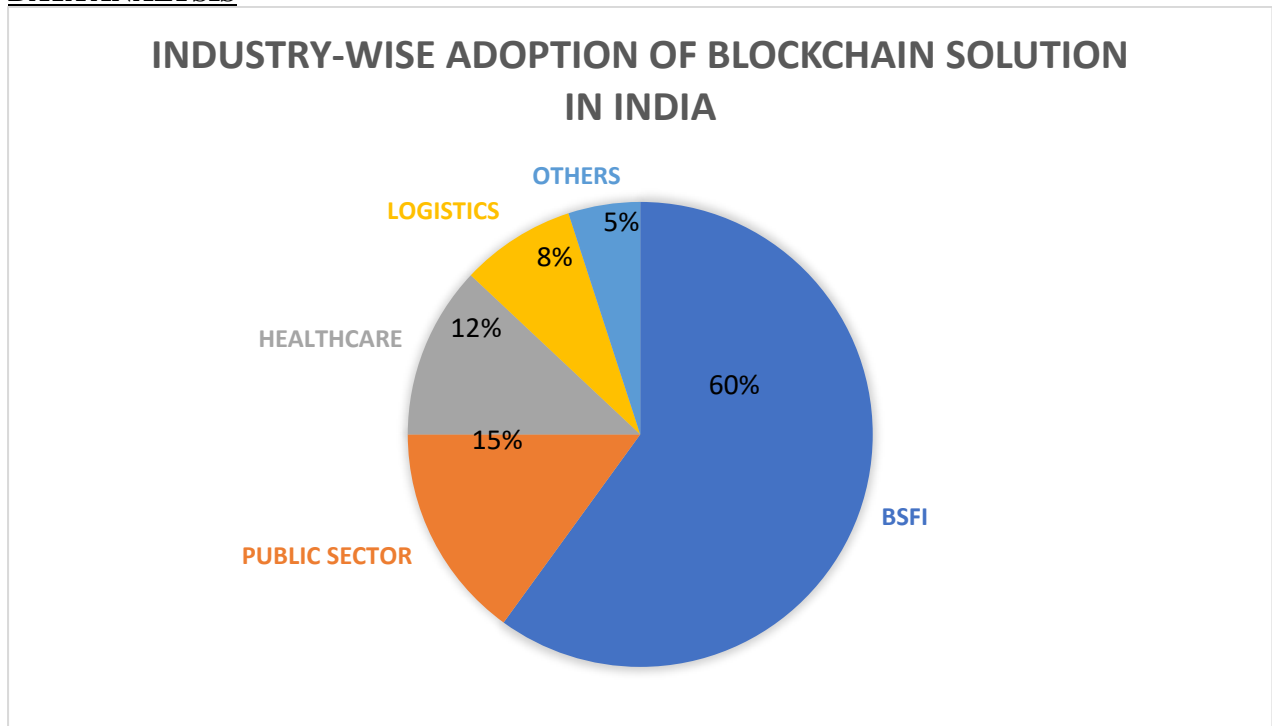


Figure 2:INDUSTRY-WISE ADOPTION OF BLOCKCHAIN SOLUTION IN INDIA

The above graph represents the use or integration of blockchain in various industries that are based in India. The data present allows us to conclude that blockchain has been beneficial to various sectors of industries as well as the businesses that are involved in such industries.

Table2 :INCREASE IN VARIOUS SECTORS ON A GLOBAL LEVEL

AREAS	GLOBAL INCREASE
Supply Chain Management	80.2 %
Finance And Payment	55%
Healthcare	63%
Real Estate	\$1.4 billion (2026)
Energy and utilities	\$3.5 billion (2025)

CONCLUSION

The following study is about the role of blockchain in the world of business. The paper is a secondary study of the existing papers and documents that have both the advantages as well as disadvantages of the blockchain-based process that has been used in the management process for the running of the business. It has also discussed how one can integrate the blockchain-based process into their business and how it will affect the business in various aspects. Blockchain can be seen as a distributed public ledger that is generally used to keep the record of the transactions that have been having in a business or organization in the computers so no one can tamper with the transactional data. To explain the role of blockchain in business, various data have been drawn out so that it becomes evident that blockchain is beneficial for the business. We have also discussed the advantages and disadvantages of the same in the paper.

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