

**BLOCKCHAIN TECHNOLOGY AS A MEANS OF  
IMPROVING ENTERPRISE EFFICIENCY**

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**Abstract.** This research found that the relationship between applications and entrepreneurial opportunities is covered by blockchain technology. The conducted research contribute to eliminating the identified knowledge gap between the potential areas of application of the blockchain and the necessary configuration of resources

**Keywords:** blockchain technology, enterprise efficiency, resources, production capabilities.

Blockchain is a distributed ledger technology that acts as a shared database, keeping all copies synchronized and verified. Blockchain innovation is still in its infancy, but its characteristics have the potential to eliminate the need for third parties to act as a level of trust in data sharing - called transactions. This is one of the roots of much evidence that technology can significantly impact business models in industries. However, numerous predictions about the potential of this new technology have found a flaw in the theory regarding what blockchain value technology can bring to the enterprise and its users from an entrepreneurial perspective.

The research shows how and why blockchain is used to solve problems by enterprises, and the basic processes of choosing blockchain as the technology best suited to address a specific problem of improving enterprise performance. This is also a strategic consideration for blockchain technology from a strategic point of view for enterprises interested in using this technology.

The [1] shows that it is important to note that the blockchain technologies underlying Bitcoin do not need to store currency information. Any type of information that requires a third party intermediary to verify can theoretically be stored in the blockchain to make it independent of that intermediary (ibid.). At the same time, [2] shows that blockchain is defined more broadly as a "value exchange network" that has the potential for decentralized storage and transmission of information.

The [3] shows characteristics of the blockchain in analyzing blockchain applications in Chinese equity crowd funding market in the 2017 Financial Innovations magazine.

The hype and low level of understanding of blockchain technology are the main reasons when it is introduced to many problems that are not well suited [4]. Thus, in [5] it is reported that the blockchain is close to the peak of the hype cycle for new technologies.

The literature review conducted prior to this research provides insight into the concept of blockchain technology, how applications are covered in the literature, and the distribution of publications in specific topics. The survey shows that the following topics are not in-depth coverage; blockchain as management technology, smart contracts, business models, business opportunities and challenges, and blockchain as general-purpose technology.

Cases that are not covered are specific examples of researches by enterprises that use publications to explore the value of technology. Thus, it has been found that blockchain literature is usually predictive, where technology potentials are widely covered, but there is still a lack of discussion on how papers can contribute to improving the enterprise efficiency. The focus is on what can happen if the blockchain is accepted by mass, and main potential use cases without resorting to the blockchain processes value. The research shows the choice of blockchain technology to solve the problem and the value that technology adds to the enterprise that uses it.

Through the data we collect, we can better understand the competitiveness of this fairly recent innovation and what factors influence an enterprise in its choice of technology use.

Knowing more about the prerequisites and processes for businesses that innovate this new technology can give entrepreneurs in other businesses a better understanding of important factors to consider before choosing something to build on the blockchain platform. This will allow better appreciating the potential impact or needing of using blockchain technology for a specific purpose

Note that intangible resources tend to be more strategic than tangible ones. However, blockchain is generally open source and thus equally accessible to competitors, which makes it doubtful whether it is a strategic resource in isolation. Some authors have pointed out that blockchain is noisy and question the ability of technology to be disruptive.

An interesting topic is whether the deception around technology creates a disparity between the estimated value and the actual value created by bandwidth of blockchain enterprises. On the other hand, other researchers disagree with the blockchain's classification as a hype, and emphasize that blockchain could potentially disrupt any centralized system that coordinates information

Obviously, although blockchain itself is a resource, there are both internal and external factors to make it a valuable resource for an enterprise. Important internal factors are visionary leaders and know-how of employees. Community building is an external factor that allows blockchain to be a valuable resource.

Blockchain technology is a source for an enterprise that wins trust of customers and users, as it is usually open source and untrue in nature. However,

in order to use blockchain as a resource and with a high level of technology-related uncertainty, enterprises need to be well aware of the capabilities of blockchain technology.

The researches have shown that the founder is an important resource that can navigate the uncertainty of what blockchain technology allows. Since everyone has access to technology through open source blockchain protocols, it is essential to have predictability leadership to stand out and claim a higher position in the market.

There are obvious reasons for an enterprise to have positive effects from a strong community; more reach, more engaged users, and a better user experience through more bandwidth for products or services on the platform.

However, our research suggests that in addition to these positive effects, there is another layer of effects specific to blockchain enterprises, which reinforces the importance of community building to make blockchain a valuable resource. The number of users directly affects the product or platform due to efficiency and security of the protocol, which allows each user to check for other transactions. The value proposition of the technology, not just the perceived value, is directly influenced by the number of users or the community size.

The community can also contribute to an open source product, stimulated by the tokens issued by the protocol to which they contribute. This makes community building an important resource, and it is vital in resources configuration to use blockchain as a resource and gain a competitive edge over competitors with access to the exact same technology.

An enterprise also needs to have a certain level of know-how for employees not only to be competitive, but to use blockchain technology as a resource. Know-how in the nascent blockchain domain is a scarce resource nowadays and therefore valuable to enterprises. As everyone has access to basic blockchain technology, the requirements for know-how and knowledge are increased to enable them to leverage their enterprise performance.

Another gap in the literature revealed in the literature review was the lack of articles describing business challenges about how to make compelling use cases for the described opportunities provided by the blockchain technology.

Concerning entrepreneurial problems, the authors found that there were no case researches on the blockchain enterprises examining the problems associated with identifying opportunities in the blockchain domain and the processes among blockchain enterprises.

As noted, it is important to have extensive prior knowledge and experience with blockchain to enhance opportunity recognition, but it may be paradoxical that technology is still emerging and it can be argued that no one understands this technology from a long-term perspective. It has been shown that tacit knowledge with competitive advantage takes time to build, and those with good knowledge today will have an edge over those who start today.

Another entrepreneurial challenge that emerges is that the technology is under construction. It is said that it is difficult to stand out from the crowd as a serious actor when there are so many blockchain projects. Take the example of businesses that claim that their motivation for a project is to learn, not make a

profit. These researches help to increase knowledge of processes and their impact on competitiveness in blockchain enterprises, but further research is needed to identify other processes and further reflect the implications for improving enterprise efficiency.

There are both internal and external factors that affect the efficiency of an enterprise, and much more than what was investigated in this research. The research is evidence of important resource configurations for competitive advantage.

This research helps to close the identified knowledge gap between the potential applications of the blockchain and necessary configuration of resources, which allows an enterprise to use the blockchain as a resource to increase its efficiency. In particular, we are expanding the enterprise's competitiveness research by using the blockchain, along with other resources, and defining the basic blockchain selection process as a solution.

Applying the framework to analyze how businesses use blockchain with other resources to improve efficiency, the relevance of resource configurations has been demonstrated. In our opinion, this is the first research that clearly explores the resource configuration for competitive advantage for blockchain businesses.

### **Conclusions and prospects for further research**

Through this research of the blockchain technology and the analysis of different businesses, it is considered to be a link between the value of the solution that enterprises provide and what characteristics of the blockchain technology the solutions use. To be more precise, researchers believe that the blockchain technology, which is used in problems that are not primarily needed to solve blockchain, will lead to less competitive solutions than those that do not use blockchain.

Researchers believe that the blockchain should only be used when it is needed for the solution to work, that is, when no other technology makes the decision work, or when it would be very difficult to use other technologies, rather than this.

Another topic for further research is whether using blockchain technology in a startup attracts more investment and press than using other technologies to solve the same problem.

In order to better understand the various topics of blockchain, how it functions as a resource today, and to give meaning to today's solutions, it is recommended that you focus on blockchain publications and, rather, follow the technology of today.

By moving the focus from informative or predictive research and general descriptions of potential impact, to evaluative studies examining the implementation of blockchain technology and assessing its implications, we believe that opportunities and problems with applications are the entrepreneurial consequences will be better illustrated.

The blockchain innovation is still in its infancy, but among its features there is the potential to eliminate the need for third parties to act as a level of trust.

This approach illustrates this resource for exploring how blockchain, along with other resources, helps improve enterprise performance.

The presented results showed that blockchain technology is interconnected with the main resources of the enterprise. The research showed that competitiveness of blockchain as a resource is displayed through technology selection.

The researches' results also allow users to use the blockchain as a resource for this application area. Applying the research to analyze how feed acceptance uses blockchain along with other resources to increase efficiency; this demonstrates the relevance of the research.

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