

# Research on Model Innovation of Shared Economy under the Background of Block Chain

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**Abstract:** As an important product of the Internet era, the essence of shared economy is to reuse the idle resources of society by means of Internet technology. Block chain technology is a new internet architecture composed of various technologies and communication protocols, which is naturally compatible with the development of shared economy. The application of block chain in shared economy needs joint promotion of scientific research institutes, government departments and enterprises. Only by strengthening the technology development of institute, policy guidance of government and application landing of enterprise can we realize the leaping development of shared economy under the background of block chain.

## 1. Introduction

Block chain technology, as the underlying technology of digital currency, has created a unique new internet model by relying on encryption algorithms, intelligent contracts and other technologies [1]. At present, the global enthusiasm about the block chain is unabated, and may even be with big data, mobile Internet, cloud computing and other new technologies to promote the new industrial revolution in human history. Block chain technology has the characteristics of decentralization, intelligent contract and complete trust mechanism, which makes it become the core key technology to construct the future network space. It has many applications in online transactions, payment and settlement. At the same time, there will be disruptive technological changes in the future in terms of economic and business models. Block chain technology can be applied to finance, Internet of Things, intelligent equipment, agriculture, medical, education and other industries and fields to innovate. Regardless of the block chain technology itself, or the business model changes it drives, it is a destructive and subversive innovation for the global economy. At present, this technology has been highly valued by governments of many countries and regions around the world, and they are competing to seek opportunities for the development of block chain technology. Shared economy is a new economic model that uses shared social idle resources to create value. For example, the concept of shared economy is applied to taxi platforms. Shared Economy provides a new supply mode and trading relationship for the society by sharing and leasing products and services, transferring and circulating second-hand products, and collaborative sharing of knowledge and information such as assets and skills. The emergence of bitcoin and block chain technology has greatly extended the application scope of computing services. Based on block chain technology, idle computing and micro payment are the technical prerequisites for sharing the economy. Therefore, the development and application of block chaining technology will greatly broaden the breadth and depth of the shared economy [2].

## 2. Applications of Blockchain Technology in Shared Economy

### 2.1 Development Obstacles of Shared Economy at Current Stage.

With the development of science and technology, China has established an alliance of online credit service enterprises, which aims to ensure the accuracy of credit data by sharing data within the

alliance [3]. However, with the huge amount of data in the shared data system, the over-centralized data is easy to be embezzled or lost. More and more customer information data are mastered by other people. As the owner of information, the customer does not know where his information data will be used and where to go after being collected. In addition, all kinds of social resources in the era of shared economy are efficiently utilized through various combinations and distributions, and data information and commodity use rights are enjoyed by many people at the same time. For example, the use of shared bicycles requires users to sweep code or fill in personal information through social software to unlock the use, and due to lack of supervision, sharing economic data cannot guarantee personal information security, the risk of customer privacy leakage increases dramatically. The key to the development of shared economy lies in the accuracy of collecting and analyzing credit data. The basic data under the traditional shared economy model are mostly monopolized by market oligarchs. The real-time dispatching and controlling ability of enterprises to the data needs to be strengthened. Even if some small enterprises have new or innovative sharing economic model, it is difficult to achieve. Therefore, the lack and deficiency of credit data has become an important reason for hindering the development of financial institutions. In addition to the different degree in different industries, the lack of basic data and other serious problems, due to the various industries of large data sharing mechanism and dissemination mechanism is not clear, there is no uniform standard of data information between industries, resulting in the collection of data cannot be used directly, need further processing or translation, resulting in the original data. Lack of accuracy. Block chain technology can make data a social public resource, as well as water and electricity in people's daily life become an infrastructure.

## **2.2 Relationship of Shared Economy and Block Chain Technology.**

The traditional sharing economic model is mainly through different industry platforms to achieve the sharing of information and resources, thereby reducing costs and achieving a win-win situation for suppliers and consumers. However, there is a serious drawback in the traditional shared economy model, that is, the lack of interoperability between different network platforms and the fragmentation of services between different platforms. If the supplier needs to start from scratch after changing a platform, the good reputation before cannot be transferred, increasing the risk of failure and operating costs. At the same time, information cannot be shared in the whole network, making it easy for consumers to be deceived. If the block chain technology is used to share the whole network information technology, the loss of users can be effectively avoided, the fraudsters cannot take advantage of it, and it is conducive to reducing the supplier's troubles, costs and risks. The traditional shared economy model is a centralized system of shared economy, which mainly uses the platform provided by the government or commercial organizations to share information and exchange resources. Block chain technology based on Internet communication and cryptography technology has a more natural fit for the shared economy. Under the decentralized system, the shared economy will be extended to a wider range. Specifically, to achieve shared economy, we must have two basic conditions: Internet and trust. The Internet provides a technological platform for economic sharing, and trust is the inherent driving force for the smooth progress of the shared economy. Only trustworthy relationships can long-term cooperation be maintained on the Internet platform. Block chain technology is not only an important innovation of Internet technology, but also solves all trust problems, providing a natural platform and technical support for sharing economic applications. Therefore, de-centralization is the core feature of block chain technology, but actually another explanation for de-centralization is sharing. The revolutionary changes in the Internet and credit based on block chain technology have revolutionized the technological foundation of the shared economy, thus facilitating the optimal matching of resources and achieving zero marginal cost [4].

## **2.3 Application Cases of Block Chain Technology in Shared Economy.**

The core of the development of shared finance lies in the accuracy of the collection and analysis of credit data. The lack of credit data has become an important reason for hindering the development of financial institutions. Although with the development of large data technology, China has established

a credit service enterprise alliance for network loans, which aims to ensure the accuracy of credit data through the sharing of data within the alliance. But with the huge amount of data in the shared data system, its problems are constantly emerging. After adding block chain technology to the financial credit system, it can effectively solve the drawbacks of traditional large data credit sharing. Data storage is centralized and distributed, and the data is distributed among the nodes in the block, and the data cannot be stolen. Data sharing based on block technology is node synchronization. As long as the node data is stored, the nodes in the block chain system can query new data to ensure real-time data sharing. Data upload and query mode adopts point to point mode. Each node can set data query privileges, if the node data query, must have a key and address to access the required data. If block chain technology is applied to the audit industry, it will greatly improve the accuracy and fairness of audit services, and even realize the absolute reasonable guarantee of audit. The application of block chain in the audit field will also greatly improve the efficiency of audit. Because of the irreversibility and timestamp function of block chain technology, the audit cost will be greatly reduced and the audit results will be more transparent. Currently, it allows customers to create applications based on the block chain infrastructure, while the company's internal focus has been on automating audit processing through covert methods.

### **3. Suggestions of Promoting Shared Economy under the Background of Block Chain Technology**

#### **3.1 Strengthen Technology Development of Institute.**

The open, transparent and verifiable technical features of the block chain can be used to achieve the functions of certification, credit enhancement and authenticity verification. In fact, it plays a role of technical credit enhancement in the whole shared economic ecology. At the same time, another technology essence of the block chain is the decentralized network structure based on the point-to-point technology, which can change the participation rules of the centralized platform services, and will greatly change the business model of the shared economy. Block chain technology is a mature Internet technology, its essence is a distributed database technology, belonging to the underlying computer technology. The data information is stored in a separate block in the block chain system, and the individual block is formed into a chain form by encrypting signature verification. In block chain system, each individual block node has complete information of the system, and all information is traceable. Block chain technology will be another disruptive revolutionary technology after steam power, power and Internet technology. The advantage of block chain technology is that every information recording or reading needs to be checked. Because the actual transaction process requires many times of information recording and reading, the transaction in the block chain system must pass many tests to achieve the ultimate goal of trading. Therefore, it is easy to implement block chain technology in large data technology by taking large data technology as the carrier and incorporating it into large data technology. Using block chain technology as data collection technology of big data technology platform, breaking data island phenomenon. Under the existing computer technology capability, as long as a set of program and interface conforming to the block chain technology is developed on the large data platform, the block chain technology can be directly integrated with the large data platform and provide services for it, and the integration of the block chain technology and the large data technology can be realized directly.

#### **3.2 Strengthen Policy Guidance of Government.**

From the technical characteristics of the block chain, if the block chain technology is applied to the actual economy, it will have a lot of commercial value, such as linking up social economy, improving the efficiency of asset management, intelligent social assets, optimizing social structure and so on. Block chaining technology will create a more valuable network system than the current Internet. Block chain technology can optimize social structure and solve public decision-making problems with its characteristics of de-trust and openness. The decentralization and openness of block chain

technology can realize the self-control of social decentralization, that is, under a circulation standard system, social participants have the same rights and obligations. In public decision-making, traditional voting methods may lead to malpractices. But if voters vote on a fully trusted distributed book in a block-chain system, they can fully trust the results of the voting, thus optimizing the social structure. The transformation of the industry to cooperate, the development of industry data to the national strategic height, to promote the social sectors to carry out data reform. On the one hand, the governance of people and property will be fully integrated into the digital management system, on the other hand, to promote the government to overcome its own structural obstacles, to achieve the integration and democratization of national certification capabilities. The government establishes and improves the legal system adapted to large data and block chain technology to support the operation of self-organizing platform with a more rigid mechanism.

### **3.3 Strengthen Application Landing of Enterprise.**

Block chain technology can build a self-organizing transmission system without third party participation, and promote the transformation of the Internet into a channel for delivering trusted information. Block chain provides a new mechanism of technology self-confidence, which lays a new credit mechanism for the development of digital economy. Block chaining technology has been deployed in the world. Developed countries have realized that block chain technology has great application prospects in public service and social mechanism optimization, and have begun to design the development path of block chain. Block chain technology as a more advanced and advanced Internet technology than large data technology, not only retains the open, fair, interconnected characteristics of the Internet, but also more secure and accurate. Therefore, under the background of stagnation of shared economic development relying on the development of large data technology, the integration of block chain technology into shared economic fields, such as finance, health care and energy, will certainly enhance the pre-development of shared economic by optimizing, transforming and upgrading the internal mode of shared economic development and giving full play to the advantages of block chain technology. The scene. Enterprises should cooperate with universities and scientific research institutes to strengthen the training of Internet technical personnel, strengthen the research and development of block chain technology, realize the development of industry data as soon as possible, invite foreign Internet technical experts to explain the latest technology to enterprises, and provide technical assistance. At the same time, enterprises should also set up an independent department specializing in Internet technology research and development, management and operation to speed up the transformation of enterprise data. As the application center of block chain, industry can establish application centers of domain alliance in different application fields, and try to establish application cases of block chain. It can detect the technical advancement and deficiency brought by block chain technology in this business field, and further research and development cannot improve the application in the practical field.

## **4. Conclusion**

By virtue of the characteristics of de-trust, de-centralization and reliable data, block chain technology can not only solve the bottleneck of current large data technology, but also provide new methods and ideas for the development of shared economy, upgrade and share the economic development model, and promote the rapid development of shared economy.

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