

Analysis of Big Data Sharing Economy under Blockchain Technology

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Abstract: With the continuous development of big data technology, people have new development and pursuit in the fields of production, distribution, exchange, consumption and so on. During this period, the sharing economy came into being. The big data sharing economy refers to: relying on the support of big data, institutions or individuals with idle resources will pay others to use their own resources, and sharers create value by sharing their idle resources. With the support of blockchain technology, the big data sharing economy has been further developed, providing a new development idea and model for people's consumption. It has become a strong support for promoting the new development of the sharing economy and improving the business model of the sharing economy.

Keywords: Blockchain technology; Big data; Sharing economy; Preliminary discussion.

1. Introduction

With the rapid development of "Internet +", "cloud technology", "big data economy" and other technologies, the sharing economy has gradually appeared in people's field of vision, and has played an increasingly important role, profoundly affecting contemporary people's way of life [1]. However, because the sharing economy not only involves various fields of daily life, but also involves many aspects such as finance and leasing. Some unstable factors in information security and regulatory guarantee have also become an important factor restricting the healthy development of the sharing economy. With the support of blockchain technology, the security of the sharing economy can be effectively improved in order to achieve sustainable development of the sharing economy.

2. Conceptual Analysis of Blockchain Technology

To put it simply, blockchain technology is a term in the field of information technology. In essence, it is a shared database, and the data or information stored in it has the characteristics of "unforgeable", "full traces", "traceable", "open and transparent" and "collective maintenance". Based on these characteristics, blockchain technology has laid a solid "trust" foundation, created a reliable "cooperation" mechanism, and has broad application prospects. The concept of blockchain technology originated in 2008, but it received clear attention in the "Regulations on the Management of Blockchain Information Services" issued by the State Internet Information Office in 2019. It can be said that blockchain technology has a relatively short development time in my country, and the application of big data sharing economy is still in a relatively primary development stage. In the big data sharing economy, there are indeed some problems that need to be solved urgently in terms of digital information security [2].

3. Some Problems Existing in the Current Development of Big Data Sharing Economy

With the rapid development of the Internet, the big data sharing economy has brought great convenience to our production and life. It not only saves resources and energy effectively, but also realizes part of the economic benefits, so as to maximize the use of economic and social value. It can be said that this is a new type of economic business. However, the big data sharing economy involves many fields. It is undeniable that this will bring some problems that endanger our personal and property safety at all times.

3.1. There Are Hidden Dangers in Information Security, and There Is A Risk of Leakage of Personal Information at Any Time

In the era of big data, the sharing economy has been given a new definition, making life simpler and more convenient, and effectively improving our quality of life. This allows consumers to obtain limited use rights of goods, but does not have full use rights and ownership. The ownership of goods is in the hands of the sharer, and consumers in the big data sharing economy can also use it within the scope of the agreement [3]. However, because its development is under the big data technology, all the execution content is also carried out under the vision of big data. If users want to participate in the big data sharing economy, they must bind relevant information. This will not only involve the user's identity information, address information, etc., but also involve the user's economic information, such as bank card accounts, online banking binding mobile phone accounts and other private core content, which will enter the scope of big data statistics. Judging from the actual development of the current big data sharing economy, there may be personal information leakage, which seriously affects the development of information security. In addition, in the big data sharing economy, there will be a lot of additional shared information, so a large amount of user information will be mastered by back-end operators. Moreover, this information is likely to be

used for big data analysis to conduct market transactions, so it is very prone to information theft [4].

3.2. The Construction of Informatization Is Not Perfect, and There Is A Lack of Information Data

Massive data is the basis and core of the big data technology. Therefore, if the big data sharing economy wants to achieve the strategic goal of sustainable development and achieve rapid construction in the ever-changing market environment, it must be supported by a perfect information database. This is also the most solid guarantee for the big data sharing economy. However, due to information barriers, information collection difficulties and other practical situations, the information databases established by different industries in the market are different, and there are also large differences in the integrity. Different industries lead to different degrees of informatization. In addition, due to the differences in information and standardization among different industries, the collected data need to be processed and unified before being used, which requires a lot of time and energy. There may be a certain lack of accuracy, which directly leads to the lack of information data [5].

3.3. The Application of Technology Is Single, and There Is No Effective Linkage with Traditional Industries

Big data sharing economy as a new industry, it brings new opportunities and challenges to the market. In its development process, data model is established first, then user data is collected, and finally big data analysis is carried out. Through the comprehensive collection of the customer's various dimensions, so as to explore the change of user needs and the future development direction of the market. However, as the development of big data sharing economy is still in the initial stage, there are some deficiencies in the dimension and depth of actual user data research. It is inevitable that there will be some deviations in the process of determining the research results of market changes based on user data, which cannot accurately grasp the market trends. Moreover, the security and maturity of technology need to be further improved. Without scientific and effective industrial linkage with traditional industries, the two cannot achieve win-win cooperation. The need for new technologies and the new positioning of traditional industries are extremely urgent [6].

4. Research on the Advantages of Incorporating Blockchain Technology Into Big Data Sharing Economy

Blockchain technology is the derivation and development of big data technology, it has provided a lot of impetus to the development of big data sharing economy, and is an indispensable and important factor in the current development of big data sharing economy. Recognizing the practical advantages of incorporating blockchain technology into big data sharing economy is of great significance for the sustainable and healthy development of sharing economy in the future.

4.1. Reduce Transaction Costs and Achieve Optimal Configuration

With the continuous development of the big data sharing economic model, enterprises are gradually joining in and playing an increasingly important role. In general, this is the basic support of the big data sharing economy system. The integration of blockchain technology into the big data sharing economy can effectively reduce transaction costs and optimize resource allocation, which brings great benefits to both users and operators. Taking online car-hailing as an example, in the process of actually dispatching orders, if only relying on big data to provide support, it is easy to happen that the driver is far away from the passenger but is dispatched by the APP. In this way, not only do drivers need a long time to receive the order, but passengers also need to pay extra fees for the extra distance, which is not conducive to the healthy development of big data sharing economy [7]. Incorporating blockchain technology can perfectly circumvent this problem. The APP can make more intelligent and scientific choices when sending orders. While avoiding resource waste, the efficiency of using shared resources can be improved to escort the healthy development of big data sharing economy.

4.2. Improve the Credit System to Ensure the Security of Users' Personal Information

In this era of information explosion, massive data floods our lives, and the complex information content can easily dazzle us and make us make wrong judgments. If personal information is leaked into the hands of criminals, it will seriously affect the platform, users and transactions between users under the big data sharing economy. Integrating blockchain technology into the big data sharing economy can effectively improve the security of the credit system and make data more open and transparent. While ensuring the security of users' personal information, it also provides protection for transaction behavior, making the form of the contract binding. In this way, both parties of the transaction can be restrained from withdrawing at will, so as to avoid economic losses in the process of transaction, and the big data sharing economy can operate under normal circumstances [8].

4.3. Promote Global Economic Information Sharing and Help Industries Achieve Benign Integration

The application of blockchain technology is not only applicable to a certain region, but also has a profound impact on global data resources, which makes global information sharing possible. The integration of blockchain technology into the big data sharing economy can effectively break down the information barriers arising from time and space factors. This will make the information content more transparent and efficient, so that the monopolistic behavior of enterprises will be further curbed. The big data sharing economy in various industries can achieve a benign integration trend with the support of blockchain technology, which has played a strong role in promoting the development of economic globalization.

5. Countermeasures for the Development of Big Data Sharing Economy under Blockchain Technology

The development of big data sharing economy under the

blockchain technology is a difficult problem in the current economic development process. It is not enough to rely on the strength of the enterprise alone in the exploration process. Only through a high degree of cooperation between industry, university and research institutes, and under the support and supervision of the government, can the big data sharing economy move to a new level.

5.1. Enterprises Should Strengthen the Importance of Blockchain Technology and Promote the Integration of "Big Data + Blockchain"

Both platform enterprises and traditional enterprises have played a fundamental role in the big data sharing economy model. If enterprises want to occupy a dominant position in the big data sharing economy, enterprises must strengthen the importance of blockchain technology and promote the process of "big data + blockchain" integration. Let the big data sharing economy develop better with the assistance of blockchain technology, bring users a more convenient and convenient operating experience, and make the big data sharing economy play a greater role. Enterprises should strengthen the training of relevant professionals, introduce blockchain technology professionals, and strengthen training within the enterprise. Try to let everyone participate in the learning of big data and blockchain technology to improve the team strength of the enterprise team [9]. At the same time, enterprises should also innovate traditional equipment and facilities. Through industrial upgrading and other means, pilot operation of the new development model of "big data + blockchain" will be carried out. Find the problems existing in the current integration process and carry out active debugging and transformation, so as to better play the functions of the enterprise. Finally, enterprises can strengthen cooperation with universities and scientific research institutions, continuously develop and improve blockchain technology, and provide more concrete theoretical materials for research institutions. Through first-hand information, the integration ability of blockchain technology and big data sharing economy is continuously improved, and the healthy development of the new economic situation is realized.

5.2. Research Institutions Should Strengthen the Research and Development of Blockchain Technology and Provide "Big Data + Blockchain" Technical Support

As a new economic situation, the development of big data sharing economy under blockchain technology requires a lot of research and development, which has high requirements for relevant research institutions. In the process of development, scientific research institutions must strengthen the research and development of blockchain technology and provide technical support for "big data + blockchain". First of all, scientific research institutions should develop program interfaces that integrate big data and blockchain technology to ensure that blockchain technology can be smoothly embedded in big data programs. Secondly, blockchain technology should be used to improve the transparency and security of relevant data, so that the data content in the big data sharing economy is more intuitive and true, and it truly provides help to platform users. Finally, scientific research institutions should also actively build a big data information sharing platform to store the data information in the

blockchain system to ensure that the blockchain technology can truly be integrated into the big data sharing economy [10].

5.3. Governance Should Establish Sound Rules and Regulations to Promote the Standardized Development of the "Big Data + Blockchain" Model

As an important guide and supervisor, the government must play its own role in the big data sharing economy under the blockchain technology. First of all, the government should continuously improve the awareness of economic transformation and development, and support the big data sharing economy and related policies. Secondly, the government should carry out targeted encouragement and support work according to the development status of relevant enterprises. Raise its importance to the height of national development and promote the integration of blockchain technology and big data sharing economy. Finally, the government should establish perfect rules and regulations, and promote the standardized development of the "big data + blockchain" model through perfect laws and regulations, and create a good development environment for the big data sharing economy.

6. Conclusion

In summary, this paper mainly conducts a series of explorations on the big data sharing economy under the blockchain technology. In the context of the rapid development of the Internet, the big data sharing economy has entered thousands of households, and has had a profound impact on people's production and life. However, in the actual operation process, it is not difficult to find that the current big data sharing economy does still have core problems such as redundant data, lack of credit, and poor information security, which brings haze to the healthy development of the big data sharing economy. In order to ensure a better development of the big data sharing economy and break through the development bottleneck of the big data sharing economy, it is necessary to effectively combine the blockchain technology with the big data sharing economy. Through technological innovation, model innovation, and assurance, we will improve information management capabilities and contribute to the healthy development of the big data sharing economy.

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