

# Research on the Problems and Governance of Live E-commerce Based on Blockchain Technology

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**Abstract:** With the advent of the digital age, new e-commerce formats emerge one after another. As a new mode of e-commerce, live e-commerce plays an important role in helping economic development and increasing social welfare. Based on the current research situation of live broadcast e-commerce, this paper analyzes the problems of irregular behavior and ineffective supervision in the operation of live broadcast e-commerce, and puts forward that the government should strengthen the legislation of live broadcast e-commerce and rationally use blockchain to provide technical support to the government and regulatory agencies, aiming at standardizing the behavior of live broadcast e-commerce and promoting the sound development of live broadcast e-commerce.

**Key words:** Blockchain technology; Live e-commerce; Standard

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## 1 Introduction

In recent years, as a new e-commerce format, live e-commerce has developed rapidly with the digitalization process. According to statistics, in the first half of 2020, the transaction volume of live broadcast e-commerce in China reached 327.4 billion yuan, an increase of 62.5% year-on-year, which made great contributions to fighting the epidemic and promoting economic development. At the same time, a series of problems such as fake goods flooding, live broadcast rollover, and consumers' difficulty in defending their rights frequently occurred. Strengthening the management of live e-commerce and standardizing the behavior of live e-commerce have also become a hot topic in academic research.

In 2018, the state promulgated the Electronic Commerce Law to regulate the e-commerce market. Although the promulgation of e-commerce law can regulate some market operation order, it is not perfect. With the development of the times, a new form of e-commerce has emerged: live e-commerce, which also brings new challenges. Legal loopholes, such as overturned goods with live broadcast, big data killing, and no way for consumers to complain, all plague the government regulatory authorities and impact the traditional e-commerce law. The e-commerce

law urgently needs to be further improved.

In the process of perfecting the e-commerce law, we should not only understand the development of domestic e-commerce law, but also innovate according to the previous research on live e-commerce, so as to ensure that the legal repair conforms to the practical application. This paper focuses on the development of live broadcast e-commerce, and analyzes the problems in the development process combined with the development model of live broadcast e-commerce, as well as the ineffectiveness of the current e-commerce law for the supervision of live broadcast e-commerce. In the part of policy recommendations, this paper attempts to improve the efficiency of supervision by combining e-commerce law with blockchain technology, and provide reference for the legislative adjustment of e-commerce.

## 2 China's live e-commerce research status

Live e-commerce, that is, online celebrity or stars publicize products through the Internet and major e-commerce platforms, highlighting the value of goods and giving certain discounts to attract consumers, is an industry marketing innovation that deeply integrates e-commerce and live broadcast.

As a new thing, scholars have relatively diversified

research directions for live e-commerce, Wang Zhihe (2020) turned to live e-commerce to boost rural revitalization; Guo Quanzhong (2020) studied the development motivation, current situation and trend of live broadcast e-commerce respectively; At the same time as the live e-commerce prospered and developed, chaos began to appear, facing the chaotic live e-commerce; Yao Linqing and Yu Haixia (2020) analyzed the causes of the outbreak of live delivery and pointed out the problems arising from the business model of live e-commerce<sup>[1-3]</sup>. Li Qihong (2020) thinks that the live broadcast e-commerce needs to face the reality and correct the existing drawbacks if it wants to keep the popularity<sup>[4]</sup>. Zhong Tao (2020), based on the development status of live e-commerce, analyzes the development factors and development momentum of live e-commerce, and predicts the future growth sustainability of live e-commerce; With the live broadcast of various star network reds, Zhou Kai and Guo Shiping (2020) studied the value of leading cadres' "live broadcast with goods" for poverty alleviation and the hidden worries at the same time; Pei Xueliang and Deng Huimei (2020) conducted an empirical test on the co-creation behavior of e-commerce value by building a structural equation model<sup>[5-7]</sup>. Li Xian, Cui Bojun (2020) combined with double circulation, pointed out that e-commerce live broadcast can be a means to stimulate medium and low demand and promote internal circulation<sup>[8]</sup>.

To sum up, domestic scholars have made researches on live broadcast e-commerce from various aspects, pointing out that the behavior of live broadcast e-commerce is irregular, but they have not put forward effective concrete solutions. Based on blockchain technology, this paper puts forward specific suggestions on standardizing the behavior of live broadcast e-commerce, providing suggestions for the adjustment of e-commerce law and creating a good business environment.

### **3 The development model and existing problems of live e-commerce**

At present, the development model of live e-commerce has begun to take shape, which is mainly divided into three types: First, the live broadcast platform connects with commodity links, and the development of live e-commerce is in full swing. As a live broadcast platform, it is closely followed, and the live broadcast is directly connected with commodity links., thus indirectly associated with the e-commerce platform; Second, the traditional e-commerce platform opens the live broadcast function. The traditional

e-commerce platform directly opens the live broadcast function based on the platform, and uses the platform's own traffic to drive the live broadcast development. After the live broadcast platform has a certain traffic, it drives the development of the e-commerce platform and forms a closed loop; Third, the content e-commerce based on live broadcast usually attracts the traffic by sharing the content about wearing, beauty and so on, and turns the traffic into actual purchasing power.

As a new shopping form, live delivery is getting more and more popular, but it still can't get rid of some problems in the traditional shopping mode, such as false propaganda and fake sales. At the same time, the live broadcast has its own problems: single-mailing, fake live broadcast data, unsafe payment and piracy, etc. Faced with various chaos such as information asymmetry, false propaganda and sales counterfeiting in live e-commerce, the government and regulatory agencies have successively issued corresponding policies to regulate the behavior of live e-commerce. The National Network Information Office issued the "Internet Live Marketing Information Content Service Management Regulations (Draft for Comment)". It is proposed to prohibit illegal activities such as live data traffic fraud and false information; Shanghai Municipal Supervision Bureau put forward to urge platform operators to establish and improve platform rules by administrative means, but most of them have little effect. In November, 2020, China Consumers Association named the live broadcast data of the stars to falsify, and the "rollover" of the live broadcast of the stars frequently occurred.

Compared with the traditional e-commerce platform, after-sales service is a big shortcoming of live delivery. Traditional e-commerce platform is relatively mature in after-sales service, which can effectively protect consumers' rights and interests. According to the Online Survey Report on Consumer Satisfaction of Live E-commerce Shopping released by China Consumers Association, in traditional E-commerce shopping, when there are quality problems in goods, when consumers defend their rights by giving evidence, the procedures are relatively clear, and the problems can be basically solved. However, the same problem appears in the live broadcast e-commerce, but the results are quite different. Due to the difficulty of proof and the complicated process, less than 40% of the respondents who encounter problems defend their rights.

The outbreak of the epidemic in 2020 made the live

delivery of goods more common, How to define the behavior of live delivery of goods has become a major problem, The interim measure is to include live e-commerce in the management under the rules of the Advertising Law, but in fact, in terms of monitoring technology and law enforcement resources, It is not feasible to include live e-commerce including "live delivery of goods" in the supervision of the Advertising Law, and to measure new industries with "lagging" legal provisions will inevitably lead to adequate cutting.

Although there are a large number of laws on e-commerce in China, e-commerce is booming as a new trading mode, and the e-commerce law that protects the business environment of e-commerce is also in the initial exploration stage, and its defects are inevitable. With regard to many legal issues involved in live e-commerce, under the digital economy, the government and regulatory authorities should not only strengthen legislation, improve laws and regulations of the live broadcast industry, but also improve regulatory means, and combine administrative means with AI, blockchain and other technical means to improve regulatory efficiency, solve the problem of irregular behavior of live broadcast e-commerce from the root cause, and promote the healthy and orderly development of the Internet live broadcast e-commerce industry.

#### **4 The countermeasures and suggestions for standardizing the development of live e-commerce**

In view of the irregular behavior of live broadcast e-commerce, blockchain technology can be introduced to assist government supervision, accurately solve the pain point of live broadcast e-commerce, and achieve convenient supervision.

##### **4.1 Blockchain traceability guarantees product quality and safety**

Blockchain has the characteristics of traceability, non-tampering, transparency of data disclosure and so on. The regulatory authorities make full use of blockchain technology reasonably, The traceability characteristics of blockchain ensure product formality, trace product sources and responsible subjects, etc, The immutability of blockchain ensures the authenticity of trading records and evaluation of the platform, and improves the regulatory efficiency. The regulatory authorities supervise and control the whole supply chain through blockchain technology, and record and archive all the circulation links of each product to ensure the

authenticity of the product, The whole process is open and transparent, and the goods can trace the whole circulation link, ensuring food safety and product quality, and greatly reducing the time cost of consumers in the authentic verification link.

##### **4.2 Blockchain identifies true and false traffic**

In view of the fraudulent behavior of live e-commerce anchor traffic, the government can reconstruct the user ecology in the live broadcast field through blockchain technology. Since it is difficult to determine whether the traffic is valid after distribution, the traffic data is combined with relevant identity information for information authentication, and the traceability is used to establish a credit evaluation system, so that every stage of converting the data traffic into actual purchase is placed on the blockchain, increasing the cost of data fraud and eliminating the possibility of data fraud from the root cause. The protection of consumers' personal information should be supervised by formulating reasonable laws. Linking the credit system with the information protection level of e-commerce platforms, adopting a blacklist system, giving a yellow card warning to platforms that sell privately and provide personal information to third parties, and lowering the credit level.

In addition, the e-commerce platform is prevented from over-collecting user information, resulting in big data killing behavior. The government can make rational use of blockchain to protect personal information. Blockchain technology can store data safely, and its security is much higher than that of traditional information protection because of its unchangeable and decentralized characteristics. With the decentralization of data, personal information will no longer be stored in large data centers and databases of monopoly platforms. Compared with all user data being controlled by a monopoly company, this will greatly reduce the possibility of personal data leakage.

##### **4.3 Blockchain solves the crisis of e-commerce trust**

For the after-sales service in live broadcast sales, it is necessary to reform the complaint supervision system from the platform point of view, Consumers' complaints must be dealt with within the specified time, so as to improve work efficiency, establish a self-inspection system for commodity circulation as soon as possible, and establish a unified compensation standard. For goods with quality problems, the platform should negotiate with consumers immediately and give a reply within the specified time based on the

principle of self-awareness. From the government's point of view,

For the consumer's rights protection problem, the supervision department should coordinate law enforcement besides clarifying the division of labor among various departments, so as to form a network supervision and avoid the supervision vacancy. The distributed characteristics of blockchain can keep complete information, ensure that consumers' commodity transaction records cannot be tampered with, improve the trustworthiness of e-commerce, and provide a strong guarantee for consumers' rights protection. Putting government regulators in the blockchain and forming supervision points at each level is conducive to real-time monitoring, improving supervision efficiency, strengthening the credit system construction of live broadcast e-commerce, making goods of high quality and good price, and really bringing benefits and convenience to consumers.

#### **4.4 Tracking the latest developments in e-commerce and improving legislative efficiency**

All laws have their own time limit, and the time limit of e-commerce is obviously shorter than that of other industries. Therefore, it is necessary to revise the e-commerce law to meet the new situation. The formulation and revision of traditional laws take a long time and the procedures are complicated, which is contrary to the rapid development of the Internet, resulting in a slow pace of e-commerce legislation. Therefore, it is necessary to strengthen legislation, improve legislative efficiency, encourage scholars to track the latest trends of e-commerce, put forward suggestions for new directions, make timely adjustments to e-commerce laws, and enhance the forward-looking nature of law formulation and revision.

Internet has opened up a new era of digitalization, produced new industrial e-commerce, and emphasized the timeliness of laws. Therefore, in order to keep pace with the times, e-commerce legislation should improve legislative efficiency. This requires that the legislature should establish the concept of efficiency, simplify it as appropriate, speed up the legislative process and achieve short-term efficiency. Only in this way can we establish an effective mechanism to maintain and restrict e-commerce and create a good competitive atmosphere.

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