

Block Chain Used in B2C Electronic Business Logistics

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Abstract

With the development of the Internet, e-commerce booming, the lack of true and false questions make electronic business platform market surveillance of products, cargo tracking, customer information leaks and other problems frequently occur. The block chain mature technology development provides a real possibility to solve this problem in the field of logistics. This article will block chain to interpret potential applications in the B2C electronic business logistics, to some extent, the rich research and awareness for the block chain revolves around the status quo of today's logistics.

Keywords

Electricity supplier, the block chain, logistics.

1. Introduction

China Internet Network Information Center (CNNIC) released data show that as of December 2019, China's online shopping users reached 639 million, annual growth rate of 14.75%, Internet users use rate was 74.8%. After years of rapid development, the network gradually entered the consumer market and quality and upgrade stage of development, both ends of the supply and demand "double upgrade" is becoming a new driving force of industry growth. However, with the popularity of the Internet and mobile smart portable devices, development of electronic business platform like gangbusters, but in the absence of appropriate regulatory environment and the presence of numerous market competition, will inevitably produce related issues. Exactly how so that the majority of both groups of consumers enjoy safe and convenient services, and buy inexpensive goods, it is to win customers in the electronic business platform, the Nuggets before the market must face the problem.

2. Electricity Supplier Status Quo Analysis

In the study of the problem among electricity providers, true and false questions product, freight tracking, customer information leaks and other problems particularly prominent, the platform does not regulate the market regulation is lax, and many other issues to provide a flood of fake spread hotbed. By expanding the survey on the "true and false questions electric products business platform" for electronic business platform and seller online shopping users, and to the question "online shopping product supply true and false questions," such as trust survey, which we can interpret the current domestic electronic business platform facing the problem to be solved genuine supply and consumer confidence issues. 70% of which consumers may think it is necessary to examine the logistics chain query fake limiting its spread, cut off its "circulation" approach. Eighty percent of consumers for user information security of China's electricity is generally not self-confidence, skeptical.

The reason China electricity supplier has made a huge key to success are the following two points, China electricity providers and express mutual achievements. 2019 According to the State Post Bureau data show that Chinese e-commerce transactions and delivery of nearly 11 years of income showing a significant positive correlation between electricity supplier courier

for sale plays a vital role; In the electricity business is still in its credit system the model innovation. Chinese electricity supplier platform and settled by means of Alipay, private courier successfully established a sales model innovation. Alipay first to establish a call to business credit system, acting as a third-party credit intermediary between the seller and the seller. With respect to the pay line, online payment by reducing transaction costs. Free platform settled credit assessment makes lowering the threshold and reduce costs. Private courier positioned in accordance with customer demand to provide a single power, the message of the first to drive industrialization, and take the form of characteristic join the business model, to provide the most cost-effective courier services that compete for capital private courier market. So I think there is genuine and fake products to solve problems in today's electricity supplier, the logistics need to be analyzed from the innovation credit system.

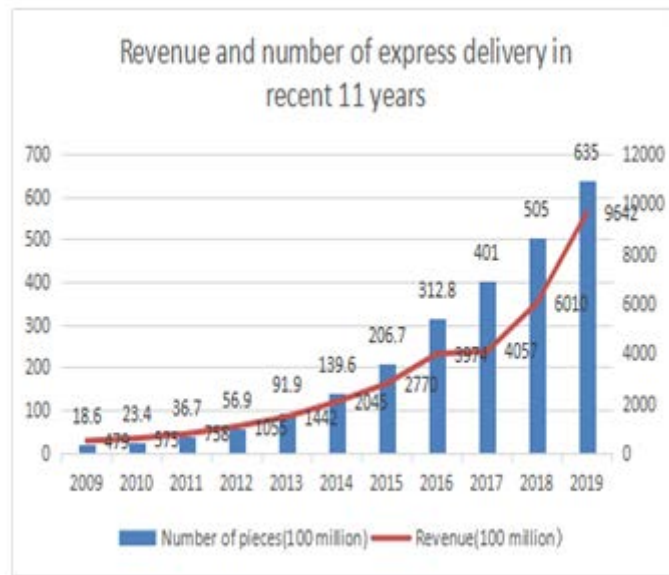


Figure 1. Revenue and number of express delivery in recent 11 years



Figure 2. Statistics of e-commerce transactions in 2009-2019

3. Logistics Status Analysis

3.1. China's Logistics Model

China Express mostly taken "Direct + join" model, formed by a shipping customer, embrace parts outlets, the starting field of transport, transport to reach the field, embrace parts outlets, and finally to harvest the customer's operational chain. This "Direct + join" platform model concession by giving the franchisee area, take the initiative to reduce the corporate boundaries to transform internal management issues market trading, although abandoned the consistency of service, but to solve the flexibility and capacity to adapt to the localization , assessment management and control three major problems. This community has a good credit mechanisms, early reduced transaction costs. But because each franchisee is relatively independent franchisee is responsible for the operation and management, it is difficult to ensure service standards and quality of the courier terminal, lack of supervision will hurt consumer service experience. And with the accelerated development of the Internet industry growth, appear more franchisees, distribution is more concentrated, resulting in deterioration of the competitive courier terminal, and ultimately affect the results Express chain. This competition will also carry into franchisees from operating activities, custody management chaos will cause confusion between the franchisee and the courier company. So how to establish credit and build low-cost high credit business model is very important.

3.2. China's Logistics Industry

China's logistics industry is mainly reflected in the questions, and exchange mechanism for global logistics network is weak, "rough-type" approach to development, low cost, logistics and other deep-rooted traditional values. But with the upgrading of China's industrial level, it is worth mentioning that the Chinese logistics industry the level of information has also been a certain degree of progress: the level of automation and logistics intensive and rapid progress, embodied in the Internet, big data, cloud computing, etc. technology to speed up the application of information network technology and logistics industry to further accelerate the integration block chain technology attention in logistics applications. It appears block chain technology, a new decision-making and prospects for solving the above problems.

4. Block Chain Innovation Electricity Supplier Logistics Suggestion

Block chain of trust because it is networked, decentralized, it is used in logistics management system, compared to other exchanges is being affected by the transfer ring to limit the impact of the trust, the trust center of the scale of the problem solved so that the transmission data is not longer rely on central network node, but to maintain multiple nodes to participate in the overall system to operate by consensus an open source license, technically solved the issue of trust. The block chain from the credit-based public and private key encryption algorithm to produce, can not tamper with the characteristics of the credit is generated by the system itself, it requires full information recording network node confirmation information repeatedly verified prevents changes. Transparent trading parties anonymity features make customer information was leaked difficult, effective protection of the interests of customers. Traceability features make it possible to check the authenticity of the source to curb fakes produced. The emergence of smart contract, to optimize customer services, including product transportation, warehousing and other content, including a series of analyzes, and can choose the best route for investors through cloud computing entity of goods multivariate analysis, increasing the transparency of information, improve transportation effectiveness. Block chain technology, optimize the entire logistics chain, making the operation of the entire node department can be trained to master their own product developments upstream and

downstream, to create a good environment for predictive and context of the entire logistics section.

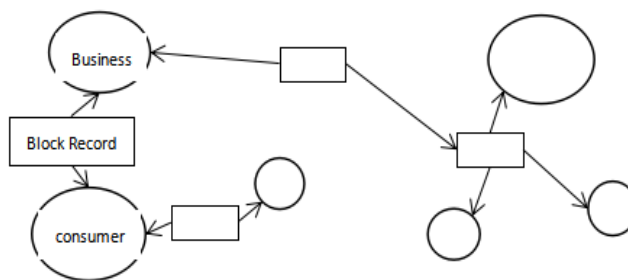


Figure 3. block chain trust

We propose initiatives and prospects block chain logistics using electricity supplier outlook based on the current status quo. Electricity supplier supply chain difficult to trace the source of goods shoddy, fake fish market issues, largely because information is changed, change records stolen, this behavior seriously affect consumer e-commerce shopping experience, making credit system is incomplete and asymmetric information. Block chain recommended strict quality control and refinement of all aspects of electronic commerce management stream, private key encryption for all aspects of the production of goods and circulation time and distributed by the existence of asymmetric encryption technology, and, having such characteristics can not be changed, recorded before and after the formation of the link. For all the information chain is complete, it is possible to link the whole logistics by comparing information, check out the information to prevent unauthorized changes to logistics and false records to ensure the authenticity and integrity of the records and information. Traced the source of the counterfeit merchandise chain of functional blocks to build its own database, the data may contain information production, transportation, packaging, customs clearance and third-party inspection and the whole process of import coast, transportation, etc., so that false information can not dodge by querying the database system can be found false information and its source, it is beneficial for the source of false steal for combat and investigate.

This database and sharing platform model can be applied to the process of electricity supplier logistics and distribution, the solution to the current false information, the disclosure of user data, the lack of a range of issues such as compensation mechanisms, the use of block chain will express parcel mailing, embrace parts, transport end distribution, receipt of data, the whole process chain, so that the data source contains a complete database on each chain, in order to ensure transparency flow wrapping process, the sender and recipient can query the system through the delivery of goods and information link. Block chain logistics with the key information and user information is encrypted to ensure data security and privacy of the recipient and mailing. Only empowerment visitors can access the system to obtain information, and you can not copy or steal information by other means. This database sharing platform mode block chain system due to save the mailing and recipient information, can be carried out when the courier delivery through real-name authentication system to avoid delivery errors by unauthorized persons posing receive and receive, help protect customers interests, making delivery more secure. And if an accident occurs in the course of the courier delivery, the user can block chain system by searching and retrieving parcels, thus confirming the transfer process leading to the accident causes and links as well as the person in charge, in order to carry out the right of recourse to protect consumers, help express further improve the quality of service delivery and transport.

Block chain in the electricity supplier logistics applications also exist in technical difficulties, it is difficult to break. In the implementation of electronic business platform block chain still need to market practice combined with theory, drawing on the development and application

of technologies such as the Internet, to accelerate the block chain electricity supplier logistics applications, pilot, debugging through cooperation between the Government and the Chinese logistics giant such as a series of attempts, improved risk that may arise in the simulation, to propose new development strategy and update the program. Application block chain logistics is mainly reflected in the improvement and protection of information, due to the limits of both the trading block chain makes more explicit the division, its function in relation to the existing Internet technology, more inclined to consumer protection. Since the development of traditional logistics insufficient, imperfect, consumers need to transmit more data, the individual is exposed under the surveillance of the Internet, its security can not be effectively protected; at the same time, the seller receives the information gaps within the unconscious caused by slow, the product through various channels forged, or its cover defective products, including the reduction in the quantity production and distribution process, like malicious transfer package. Second, the current logistics system of data, the new data at all times have access to the database, its huge throughput may lead to potential problems with the server crash. In addition, the high cost of traditional database storage, data can not be effectively integrated, calling, logistics information.

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