

Research on the Construction of Information Privacy Supervision Mechanism in E-commerce Logistics

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Abstract: The advent of e-commerce era has brought unprecedented opportunities and challenges to the logistics industry. Fully seizes the opportunity of e-commerce and takes advantage of the efficiency and boundlessness of the network, global logistics has realized the informationization, automation and efficiency of e-commerce logistics. Since the traditional privacy protection system is insufficient to protect users' privacy in virtual environment, China is required, on the basis of gradually implementing e-commerce logistics, to draw lessons from oversea systems of network privacy protection and supervision. China needs to establish a pluralistic supervision mechanism including network supervision, enterprise autonomy and social supervision from the national, enterprise and social levels, so as to strengthen the supervision system of e-commerce logistics information privacy in China.

1. Introduction

E-commerce is a new trade mode providing a convenient and fast trading platform for buyers and sellers on the Internet. However, in this platform it's hard for the buyers and sellers to keep in equal because the two parties never really meet each other.[1] The buyers can not touch the commodity directly until the logistics sends the goods to them.[2] What's more, it's very convenient to return or replace the commodity and sometimes, the buyers even have to reveal their private information to realize trading activities.[3] Therefore, the buyers, or consumers are always at a disadvantage in the trading process, and it is difficult to protect their rights and interests. In China's judicial practice, consumer lawsuits for infringement of privacy are quite common. [4] Yet China's legislation in this field is not perfect enough, and legal loopholes are frequent, even affecting the economic order of some regions and industries. [5] In the future several years, it's essential to strengthen legislation in the field of e-commerce so as to perfect the existing legal system as well as construct a new legal protection system so as to thoroughly solve the problem of network privacy protection and effectively protect consumers' privacy rights.[6] This is a new challenge for China's legislative and judicial organs.

2. Potential Users' Information Leakage Risk in E-commerce Logistics

With the flourishing of e-commerce, in order to alleviate the potential risk of information leakage brought about by paper-based express bill and improve the efficiency of logistics transportation, the logistics industry seizes the opportunity to combine virtual network with logistics business, thus inspiring and nurturing a new logistics mode - e-commerce logistics. [7] It is undeniable that the high popularity of e-commerce mode makes users' life more convenient and efficient. However, compared with the traditional mode of logistics transportation, e-commerce logistics that fully uses the vitality of network environment, doesn't take away the risk of infringement of users' privacy. Instead, it puts people in a state of anxiety while enjoying the convenience.

It can be found that the leakage reasons of network privacy can be divided into subjective and objective during the process of sorting out and excerpting the events of network information leakage. [8] Subjective reasons refer to the internal staff management problems, the to-be-improved network technology, the lack of data encryption protection measures and other reasons. Objective reasons refer to hacker attacks, malicious third-party tampering of websites and so on. Network

environment now has become a disaster area where users' privacy are leaked.

3. Problems of Consumer Privacy Protection in E-commerce Logistics

3.1. Lack of effective supervision on self-discipline measures in industry

As the official executive agency, the Internet Society of China (ISC) has always been passive in receiving complaints from network users and has not managed the whole industry. On one hand, it is limited by its functions; on the other hand, it lacks a supervisory organization. The ISC has neither authorized industry associations to actively supervise, nor established effective government supervision and social supervision, which makes the network supervision and management to be ungoverned. Under such a circumstance, driven by interests, the businesses will not take network users' benefits into account and conduct a series of torts.

3.2. Lack of uniform industry regulations

The Convention formulated by ISC only apply to Internet industry practitioners who apply to join the association, and are not binding on other Internet industry practitioners. There is a large number of practitioners in China's Internet industry, but few of them have joined ISC and voluntarily been bound by the Convention. The advantage of industry self-discipline has not been brought into full play. Therefore, a unified industry regulation established by administrative organs and industry association, implemented by industry association, and supervised by administrative organs, industry association or third-party organizations is extremely essential.

4. Construction of Information Privacy Supervision Mechanism in E-commerce Logistics

4.1. Implementing and Perfecting Network Supervision

Compared with entity supervision, supervision in virtual environment needs more protection.

4.1.1. Establishing Network Special Logistics Supervisory Department

It's necessary to make full use of the advantages of e-commerce and set up a special network logistics supervision department to keep abreast of the dynamics of users' information processing in the logistics field under the virtual environment in real-time. Once it is found that the employees of logistics companies abuse their private rights to disclose users' personal information, the logistics enterprises need to report to national cyberspace administration timely and make interventions so as to truly realize the protection of users' information privacy. At the same time, the establishment of special network logistics supervision department will increase the introduction of talents in logistics field, which means that we need to strengthen the publicity and education of professional knowledge of logistics, pay attention to training talents, and better serve the special network logistics supervision department, so as to lay a good foundation for the protection of users' information privacy.

4.1.2. Making Information Security Plan and Emergency Plan

In order to solve the problem of information security in China's e-commerce, corresponding information security plans needs to be formed on the basis of supervision by the network special logistics supervision department. The department should specify in detail how to prevent external risks and make emergency plans for information leakage, and then supervise and implement the plans. The information security plan should show the contingency plans and reporting system in case of external risks such as hacker attacks and computer viruses, and designate corresponding special technicians. Once emergencies happen, the department should immediately report to national cyberspace administration. Meanwhile, the department should go deep into the field of logistics, regularly assess the information situation, ensure the security of users' information and do some precautions.

4.2. Strengthening the Management Mechanism of Enterprise Internal Data

4.2.1. Making clear the Obligations of E-commerce Logistics Information Platform

Enterprises are obliged to make signs and investigations for the users on the information platform of e-commerce logistics. First, when users are making deliveries on enterprises' own platform, enterprises should remind users to read the *Privacy Policy* by showing important words in bold, capitalized forms or special characters and other obvious ways. The users should be reminded that once they use the service, private data such as personal information may be used for logistics-related transactions or necessary sharing. Second, as the providers of information platform, enterprises should set up data encryption measures and other information technologies in the initial stage of users' information collection so as to continuously improve technologies and restoration measures and eliminate network security vulnerabilities. For the subsequent transmission, usage, sharing and other links, establish encryption mechanisms respectively so that every link of data flow has encryption guarantee. This can help to build multiple defenses for users' information, discover and prevent hackers and virus attacks in time, and finally promote the two-dimensional protection of enterprise autonomy and state supervision, and better protect users' privacy and personal rights.

4.2.2. Investigation Mechanism of Employees' Backgrounds in Logistics Enterprise

With so many personal information leakage incidents happening in China's logistics field due to some employees in logistics enterprises, on the one hand, it's needed to speed up China's legislation, strengthen the background investigation of employees in logistics field and build a good social credit system. And on the other hand, for e-commerce logistics services such as door-to-door pick-up, the logistics platform can set up a specialized suggestion and evaluation window for each transport employee, and use the way of post-service evaluation to evaluate the employee. According to different evaluations, corresponding reward and punishment mechanism need to be formed. If there are multiple low ratings and any possibility of user information leakage, the related employee will be reported to the police for investigation by the logistics platform.

4.3. Encouraging and Strengthening Social Supervision

The function of social supervision needs to be emphasized in facing virtual environment. Third-party intermediaries should be introduced to strengthen the review and evaluation of users' personal information security. As a third-party, intermediaries can provide related data support for the network security departments of police. It is suggested that logistics enterprises should set up a reporting and complaint channel of personal information network on the enterprise platform, as shown in Figure 1, and perform together with the network security department of police. Users are encouraged to report to the network security department through the channel to safeguard their rights when they find personal information leaking. Users are also encouraged to report malicious illegal acts committed by employees of logistics enterprises. While the network security departments take the initiative to enforce the law, users should also actively cooperate and strengthen social supervision.

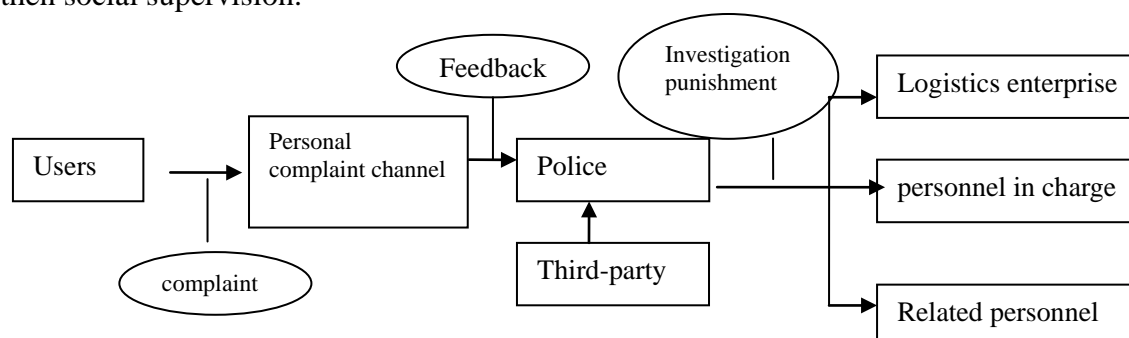


Figure 1. Flowchart of reporting and complaint channel of personal information network

5. Conclusion

The network environment provides a new development space for the logistics industry and realizes the informationization, automation and efficiency of logistics, but also makes users' personal information leakage possible. Due to the virtuality of network environment, the traditional regulatory model is no longer applicable. The rapid development of e-commerce logistics has posed unprecedented challenges to the new protection mode of network privacy in China. This paper proposes that China should improve the traditional regulatory model and advocate the integration and linkage of network regulation, enterprise autonomy and social regulation. It is necessary to establish a special network logistics supervision department to implement unified supervision; to emphasize the active law-enforcement and multi-link supervision by the network security department of police; to introduce third-party intermediaries to encourage network users to report information leakage or other illegal acts to relevant departments, and to strengthen social supervision. Meanwhile, it is needed to emphasize enterprise autonomy and improve staff's quality of logistics enterprises so as to gradually strengthen and consolidate internal data management mechanism and improve data protection technology and emphasizing corporate social responsibility, thus breaking through the limitations of the existing regulatory model in China. It is needed to strengthen the implementation of the "Network Security Law", further protect privacy rights in e-commerce logistics and better promote the progress and development of e-commerce logistics.

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