

Construction of Credit Evaluation Index System for User Privacy Policy of online Trading Platform

Jing Chen, Kun Cheng*, Wanchen Ma

Beijing Normal University, Zhuhai, Guangdong, 519085, China

*Corresponding Author

Keywords: Online trading platform, Privacy policy, Index evaluation system

Abstract: Self-governance of online trading platform has become a common governance mode recognized by e-commerce industry and national authorities. However, the disclosure and abuse of users' information in the process of network transaction frequently occur, which seriously damages the legitimate rights and interests of network users. This paper investigates the privacy policy of online trading platform and the relevant laws and regulations on the personal information security of online trading platform in Europe and the United States, and comprehensively studies the relevant literature, and establishes the index evaluation system of privacy policy from the perspective of privacy policy content. It is also proposed that a third-party organization be the evaluator of network autonomy rules to urge the platform to improve its privacy policy, so as to protect the legitimate rights and interests of users.

1. The Raising of Questions

With the development of online trading platforms, more and more large trading platforms such as Alibaba and JD. Com have begun to lead the development of the whole industry. Self-governance of trading platform has become a governance mode recognized by the e-commerce industry and state organs. Online trading platforms have established their own autonomous rule system in various forms. State Administration for Industry and Commerce, Ministry of Commerce, State Administration for Market Regulation, Standardization Administration of China and other organizations have also issued corresponding laws, standards and administrative regulations to regulate the governance of online trading platforms. In 2014, The State Administration for Industry and Commerce issued the "Guidelines on Standard Terms of Contracts for Online Trading Platforms". On June 1st, 2017, the "Network Security Law of the People's Republic of China" began to be implemented; On May 1st, 2018, the "Information Security Technology - Personal Information Security Specification" was formally implemented and the latest revised draft was published on February 1st, 2019; On August 31, 2018, the Fifth session of the Standing Committee of the 13th National People's Congress voted to adopt the "E-commerce Law", which will come into force on January 1st, 2019. Obviously, the national administrative authorities have begun to pay great attention to the various problems in online transactions and regulate the industry according to law. However, through the empirical analysis of user privacy policies of online trading platforms, we found that problems such as user privacy data leakage, embezzlement, abuse, unequal rights between users and platforms, information asymmetry are still common, and users' privacy content of online trading platforms still need to be improved. Based on this, we studied on the following online retail and life service trading platforms, which mainly include: T-mall, Taobao, JD.COM, VIP.COM, Suning.com, Amazon China, Pinduoduo.com, Dangdang.com, Mogu.com, Xiaohongshu.com, Meituan.com, Dianping.com, Ctrip.com, Qunar.com, LY.com, Fliggy.com, Didi Travel, and China car rental(zuche.com) 36 typical common internet trading platforms for the user privacy policy. At present, most e-commerce platforms have formulated their own privacy policies, but there are still a few trading platforms whose privacy policies are not perfect, with meaningless contents and lack of operability. In addition, even most e-commerce platforms have developed relevant privacy policies to protect users' legitimate information, the implementation effect cannot be guaranteed due to the lack of corresponding supervision measures.

2. Literature Review

Foreign studies on e-commerce are relatively early and thorough. Zeng, F., Ye, Q., Yang, Z., Li, J., & Song, Y. A. indicated that personal credit system is particularly important in the context of e-commerce [1]. By analyzing individual credit evaluation systems in different countries, Luo provides new ideas for exploring the establishment of e-commerce credit system, especially personal credit system. Kaur J, Dara RA, Obimbo C, Song F, Menard K. believed that there are serious credit risks in the operation of e-commerce [2]. Therefore, based on TOPSIS and triangular fuzzy number, they proposed an extended method to evaluate the trust degree of e-commerce system. Lie D, Austin LM, Ping Sun PY, Qiu W. indicated that e-commerce should establish specialized reputation service agencies like traditional industries, and focus on online comments and other factors in the process of reputation evaluation [3]. Based on this, they proposed a technical framework for e-commerce reputation evaluation, and verified the reliability of algorithms and tools in the reputation evaluation model. Yu Y, Peng W, Lu J. explored the nature of e-commerce credit from the perspective of social capital [4]. He proposed to extract consumer capital variables from online trading platforms and online social networking systems to build a credit evaluation model, and verified the applicability of the model by analyzing the relationship between online credit and social credit [4]. In terms of legislation and regulations, governments or large organizations in various countries and regions have also launched corresponding guidance. As early as 1980, the Organization for Economic Cooperation and Development (OCED) published the Privacy Guidelines, which are dedicated to the protection of individual Privacy. In 2013, they were revised for the first time. The ASIA-PACIFIC Economic Cooperation (APEC) Guidelines on the Protection of Privacy and Trans-border Flows of Personal Data are based on OCED 1980 edition (OECD) Guidelines published the APEC Privacy Framework in December 2005, and published the 2015 revised version of the APEC Privacy Framework in 2017 after a new version was revised by OCED in 2013. On April 14, 2016, the European Union (EU) discussed and adopted the General Data Protection Regulation (GDPR), which will take effect on May 25, 2018 as a unified act of the EU. Accordingly, the International Standardization Organization (ISO) and the International Electrotechnical Commission (IEC) respectively promulgated the International Standard for Information Security Management Systems in 2005. A revised version was made in 2013. In addition, TRUSTe corporation, a subsidiary of Trust Arc, is the world's largest privacy seal company. It provides a series of privacy policy services and launches TRUSTe privacy authentication service for different organizations. So far, more than 3,500 organizations have participated in TRUSTe's privacy authentication service.

You C., a Domestic scholar, introduced the multi-agent modeling technology into the e-commerce enterprise credit system measurement model and constructed an e-commerce credit system model based on dynamic parameters [5]. The model comprehensively considered the evolutionary relationship between controllable and uncontrollable factors during the measurement of credit subjects. You C. then studied the privacy policies of 90 mobile terminal apps in 29 categories and analyzed them into 7 variable dimensions including policy representation, information collection, information storage, information sharing, information protection, user power and executive feedback, suggesting that a third-party privacy authentication mechanism could be established on this basis [5]. From the perspective of existing studies, although academic and social circles have paid more and more attention to privacy policy and index evaluation system in recent years, we find that the protection of user privacy policy in China is still imperfect, and there are still some loopholes in relevant norms and supervision. Therefore, we suggested a set of complete and effective network trading platform user privacy policy index evaluation system, and through the third party for the corresponding rating, can not only solve the platform and the unequal status of information between users, promote the healthy and rapid development of network transactions, but also actively exert the power of the social market, save resources and government spending.

3. Construction of Index Evaluation System for User Privacy Policy of online Trading Platform

3.1 Design Principles

In the design of the index evaluation system, we mainly refer to the principles of representativeness, equivalence, stability, legitimacy and consistency. Representativeness principle means that the selected indicators can accurately represent the corresponding contents of the privacy policy. In the process of designing, we mainly selected indexes with strong relevance to the evaluation object and high validity, that is, indexes with high ability to explain privacy policy and widespread social recognition, and adopted more accurate expression methods to generalize the naming. The second principle is the principle of equality. The platform and users are the two parties to establish privacy policies. In practice, issues such as information asymmetry and the use of blind spots of the other party often lead to disputes between the two parties [6]. Therefore, in the design process, we try to find a reasonable balance between the different situations of both parties based on the platform and users, so as to maximize the rights, obligations and interests of both parties. The third principle is the principle of stability. We hope that the index system designed can adapt to the needs of all parties and adapt to and deal with various uncertainties in the process of social development and future uncertainty, so that it can obtain relatively stable evaluation results in the changing trend [7]. The fourth principle is the principle of legality. In the design process, we refer to “E-commerce Law”, “Network Security Law”, “Consumer Rights and Interests Protection Law”, “Contract Law”, “General Principles of the Civil Law” and other laws. Management regulations, such as “Guidelines on Standard Format Terms of Online Trading Platforms”, “Administrative Measures on Trading Rules of Online Retail Third-party Platforms”, “Regulations on The Protection of Personal Information of Telecom and Internet Users”, and national standards on “Information Security Technology - Personal Information Security Specifications”, as well as the laws and regulations of ISO, OCED, GDPR, APEC, EU, US and other countries or international and regional organizations, and strive to be accurate in compliance with the relevant provisions. The fifth principle is the principle of consistency. In the design process, we also refer to 36 platforms of five types in China: online shopping, self-owned websites of digital brands, travel booking, second-hand trading and online car rental (e.g., Taobao, JD.COM, Ctrip.com, Huawei Mall, Guazi Used Car Trading Platform, Didi Travel and etc.) aim to find consistent contents in the privacy policies of different platforms and make certain adjustments to the indicators.

3.2 Design Ideas

At present, scholars from all walks of life focus on information collection methods, information content, information storage, information protection, information sharing and user power in the research on privacy policy and related index evaluation, that is, they pay attention to what aspects are involved in privacy policy. Implemented on January 1st, 2019 of the “Electronic Commerce Law of the People's Republic of China” stated the e-commerce operators to collect and use its user's personal information, to protect the user query, correct, delete and cancel the right of personal information, platform shows the location of the service agreement and link reminder, personalized display of related laws and regulations. National standard “Information Security Technology - Personal Information Security Regulations” in the privacy policy is especially on the platform in the process of making the collection of personal information, personal information storage, use of personal information, personal information entrusted processing, sharing, transfer, publicly disclose, personal information security incident disposal and management requirements of organizations, That is, how the platform should develop a user privacy policy that meets this standard. In addition, all countries and international regional organizations have roughly the same framework for the formulation of privacy policies, and Trust Arc, an internationally famous privacy seal company, also has a set of clear standards for helping companies to update and manage privacy. In the design process, we referred to the above-mentioned experts and scholars, laws and regulations as well as the provisions and indicators adopted by each standard. At the same time, we are based on actual explore more aspects of the evaluation standard, a set of complete privacy policy, involving not only the law and

the specific rules and regulations, more important is agreement on both sides of the platform and users, whether the evaluation index can take care of the interests of the platform and user rights, whether the design is user friendly, hints and feedback before and after the agreement is in place, all these are worthy for our evaluation. Therefore, the content evaluation of privacy policy aims to use detailed indicators to evaluate whether the content of privacy policy is comprehensive, whether it conforms to norms, and whether the details of privacy policy are in place.

3.3 Design Process

In order to design a comprehensive, reasonable and effective index evaluation system of privacy policy, we adopted a variety of research methods for comprehensive analysis. First, we adopted literature research, read a lot of platform self-made rules, internet trading platform, privacy policy, online trading platform privacy policy evaluation and thesis and the research of establishing evaluation index system, at the same time, in reference to our country's "Electronic Commerce Law", "The Network Safety", "Consumer Rights and Interests Protection Law" and other laws, on the basis of comparison with the relevant laws and regulations of the United States, the European Union, APEC, OCED and ISO [8, 9]. In addition, we mainly followed the latest revised draft of "Information Security Technology - Personal Information Security Specification" published by National Information Security Standardization Technical Committee on February 1st, 2019 and "Enterprise Privacy & Data Governance Practices Certification Assessment Criteria" of the US Trust Arc, complete the content evaluation of privacy policy. Secondly, we also adopted questionnaire survey with different genders, ages, occupations and regions to investigate the public's attitude towards third-party evaluation on privacy policy protection. In addition, we also used the Delphi expert consultation method, consulted from civil, electronic commerce, the experts and practitioners in the field of economics and management, and formed a committee of experts, the index system modification suggestions are put forward and the optimization scheme, abandon some meaning is not obvious indicators, finally formed the index evaluation system. The index evaluation system of privacy policy is divided into three levels: the first-level is the content evaluation of privacy policy; The second-level indicators include the collection, application, management and user rights of personal information, and the third-level indicators sum up with a total of 48 indicators (please refer to Table 1). The first level index is the content evaluation of privacy policy, which mainly refers to the core of privacy policy evaluation and can best reflecting the integrity, rationality and legitimacy of a privacy policy, thus affecting both users and online trading platforms. The second-level indicators adopt the suggestions of the vast majority of experts and scholars and are divided into four aspects: collection, use, management and user rights of personal information.

Table 1 Privacy policy evaluation index system of online trading platform

First-Level Indicators	Second-Level Indicators	Third-Level Indicators
	Gathering Personal Information	<ul style="list-style-type: none"> - Identify the types of personal information to be collected - Clarify the purpose for which each type of personal information is collected - A description of the purpose for which each type of personal information is to be used and the relevance for which it is to be collected - A declaration of the source and use of indirectly obtained personal information - Data anonymization and de-identification - Instructions not to compel the collection of users' personal information - Description of data collection and source legality - Allows users to choose the extent to which their personal information is disclosed and used - Allows users to choose the use and disclosure of sensitive personal information

Privacy Policy Content Evaluation		<ul style="list-style-type: none"> - Instructions requiring guardian's consent for use by minors - Provide ways and means of revoking consent
	Use and Processing of Personal Information	<ul style="list-style-type: none"> - Description of data collection, purpose of use, and limitations - Description of legalization of data use and processing - Sharing and transfer of information with third parties - Users express consent to share information with third parties <ul style="list-style-type: none"> - Provide details of third-party organizations - A description of the purpose of sharing or transferring information to third parties - Description of the scope of information to be shared with a third party - Key tips for sharing and transferring sensitive personal information and instructions for informing users of the data security capabilities of third parties - Description of third-party data usage and user rights - Description of data processing upon termination of contractual relationship - Explanation of liability for damage caused by sharing or transfer - Description of transnational transmission protection - Security and legality of sharing and transferring personal information
	Retention of Personal Information	<ul style="list-style-type: none"> - Instructions for minimizing the amount of personal information collected - Description of the minimum frequency of collecting personal information - Restrictions on data retention for long periods of time and a retention period - Notification of where personal information is stored - Description of data integrity and quality assurance <ul style="list-style-type: none"> - Data operation security - Description of event monitoring - Security crisis assessment and plan - Identify responsible departments and personnel management <ul style="list-style-type: none"> - Data security capability assessment - Records of personal information processing activities <ul style="list-style-type: none"> - Supervision and guarantee measures - Personal information handling instructions for acquisition, merger and reorganization - Personal information handling instructions in case of bankruptcy/termination of platform services
	User Rights	<ul style="list-style-type: none"> - Users' right to access and obtain personal information - Users' right to obtain copies of personal information or deleted or modified copies of data <ul style="list-style-type: none"> - Data modification rights - Data deletion rights - Personalize display of opt-out rights - The right to withdraw the consent authorization to collect and use their personal information - Withdraw the right to use relevant business functions <ul style="list-style-type: none"> - The right to restrict data manipulation - Data migration rights - The right to cancel an account

The establishment of online trading platform index system of the user privacy policy aims to

electric business platform for the setting of privacy policy, terms of the content, the implementation of the empirical analysis, found that the electric business platform in the privacy policy set and the main problems of implementation, and through the establishment of privacy policy credit evaluation model to evaluate the existing privacy policy.

4. Conclusion

And refer to some of the countries and regions related laws regulations and standards, combined with the present status of the research in this field, set up a trading platform for network users' privacy policy index evaluation system, hope to the third party's point of view, to evaluate platform, improve the privacy of social consciousness, promote a healthy environment for the network trading platform to sustainable development. Effectively supervise and guide the privacy policies of e-commerce platforms through credit evaluation or privacy policy level certification of third-party credit evaluation agencies, so as to ultimately ensure the security of platform users' personal information in the context of big data. The article proposes that third-party institutions as the evaluation party of the network autonomy rules, through the scientific and rigorous evaluation index system to make a score on the autonomy rules of the online e-commerce platform business, urge the platform to improve its autonomy rules, thereby protecting the legitimate rights and interests of users.

Acknowledgement

This paper is funded by the Project of Zhuhai Federation of Social Sciences “Study on the digital construction path of Zhuhai's legal and business environment” 2021YBC105.

References

- [1] Zeng, F., Ye, Q., Yang, Z., Li, J., & Song, Y. A. Which Privacy Policy Works, Privacy Assurance or Personalization Declaration? An Investigation of Privacy Policies and Privacy Concerns. *Journal of Business Ethics*, 022, 176(4), 781–798.
- [2] Kaur J, Dara RA, Obimbo C, Song F, Menard K. (2018) Comprehensive keyword analysis of online privacy policies. *Information Security Journal: A Global Perspective*. 7(5/6):260-275.
- [3] Lie D, Austin LM, Ping Sun PY, Qiu W. (2022) Automating accountability? Privacy policies, data transparency, and the third-party problem. *University of Toronto Law Journal*. 72(2):155-188.
- [4] Yu Y, Peng W, Lu J. (2022) Wireless network security game based on conditional privacy policy. *Computer Communications*. 184: 96-106.
- [5] You C. (2020) Law and policy of platform economy in China. *Computer Law & Security Review*. 39: 105493.
- [6] Zimmer M. (2008) Privacy Protection in the Network Society: “Trading Up” or a “Race to the Bottom”? *Information Society*. 24(1): 65-67.
- [7] Soma JT, Rynerson SD, Beall-Eder BD. (2004) Analysis of the Use of Bilateral Agreements Between Transnational Trading Groups: The U.S./EU E-Commerce Privacy Safe Harbor. *Texas International Law Journal*. 39(2):171-214. Accessed June 16, 2022.
- [8] Enterprise Privacy & Data Governance Practices (2018) Certification Assessment Criteria. TRUSTe LLC.
- [9] APEC Privacy Framework. CTI Sub-Fora & Industry (2005) Dialogues Groups, Electronic Commerce Steering Group (ECSG).