

Research on Consumer Privacy in E-commerce

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Abstract

With the widespread use of precision marketing and personalized services, businesses are paying more and more attention to understanding consumer preferences. Online consumers are unaware or unwilling to adopt various technical means to obtain and use their information, which violates consumers' right to privacy. Although consumers enjoy more convenient and personalized products and services, the protection of personal privacy is also increasingly concerned. This article provides an overview of consumers' privacy rights in E-commerce, analyzes the performance of consumers' privacy rights being violated, and summarizes the necessity of protecting consumer privacy, and finally reviews the countermeasures for online consumer privacy protection.

Keywords

E-commerce; Consumer Privacy; Privacy Protection.

1. Introduction

With the continuous development of Internet technology and the popularization of E-commerce, while bringing convenience to people's production and life, consumer information security and privacy issues also follow. When consumers conduct online transactions or online shopping, they provide personal information such as name, contact number, and address when registering an account. When enjoying the happiness brought by the Internet, the privacy of consumers is exposed to the Internet environment. In the era of big data, by collecting consumer daily online behavior data, data analysis and processing, mining consumer preferences [1]. Data mining technology has been widely used in E-commerce, and the protection of personal privacy has brought more severe challenges.

2. Infringement of Consumer Privacy

In recent years, online shopping has continued to boost the booming consumer market. According to the 45th "Statistical Report on China's Internet Development Status", as of March 2020, the number of online shopping users in my country has reached 710 million. As of June 2020, the number of online shopping users in my country has reached 749 million, an increase of 39.12 million from March 2020, continuing to maintain steady growth. As shown in Figure 1. Consumer information is an essential element for realizing online transactions. In the process of E-commerce operations, operators collect user information. For online businesses, user information has important potential value [2]. Through the development and utilization of information, network operators can find potential customers in a timely and accurate manner, meet the multi-level needs of different customers, and provide targeted personalized services, thereby increasing transaction volume. But this behavior poses a great threat to consumers' personal privacy. Because some collection behaviors are conducted through proper channels and informed to consumers, and some collection behaviors are carried out using improper means without the knowledge of consumers [3].

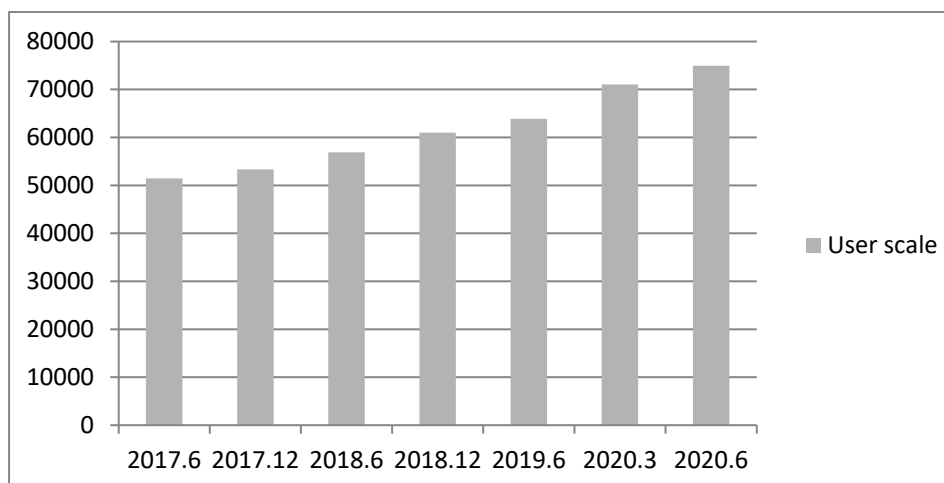


Figure 1. China's online shopping user scale utilization rate

2.1. Illegal Collection of E-commerce Consumer Information

In order to achieve precise marketing, businesses use various forms to collect user information. Take advantage of the trust of consumers to directly request personal information from consumers. Some Internet companies use browser cookie tools to browse and track the websites used by customers to obtain useful information, thereby establishing a consumer database, which seriously violates consumer privacy [4].

2.2. Wanton Infringement of Consumer Data through Exemption Clauses

Disclaimer clauses are clauses formulated by merchants to exempt them from possible liability in the future. When network users install software or browse the web, they will find that they must check and agree to sign the exemption clause before proceeding to the next step. The merchant's exemption clause ignores the rights of consumers, treats it as a kind of legal shield, and even proposes conditions that allow third parties to share information. Consumers' sense of self-protection is generally insufficient. Some consumers, based on the psychology of conformity, rely excessively on businesses, causing the leakage of their personal data and private information.

2.3. Illegal Buying and Selling of E-commerce Consumer Information

Many companies or individuals are driven by profit and do not abide by the information protection policy, illegally buying and selling consumer personal data in secret. Many E-commerce companies filter and analyze the collected data and then resell them to third-party companies or institutions to obtain benefits. There will be a market if there is demand. If businesses do not abide by the rules, consumers' privacy and security will not be effectively protected.

3. The Need to Protect Consumer Privacy

Many consumers worry about personal privacy and have lost confidence in E-commerce and are unwilling to participate in E-commerce transactions. Because of personal privacy and security, consumers and Internet users stay away from E-commerce, which seriously affects the smooth development of E-commerce. It can be seen that consumer privacy issues greatly affect users' consumption choices and hinder the development of E-commerce. Therefore, protecting consumer privacy has become urgent.

3.1. The Right to Privacy is a Basic Right of Personality

The right to privacy is one of the personal rights that Chinese citizens should enjoy, and the right to privacy means respect for others. In the process of E-commerce transactions, buyers and sellers are equal. Consumers provide personal information to sellers. Sellers have the responsibility and obligation to protect consumers' privacy.

3.2. Key Steps for the Prosperity and Development of E-commerce

With the increase in public education and awareness of rights protection, consumers are generally dissatisfied with the disclosure of personal privacy, which greatly affects consumers' experience and choices. This is one of the bottlenecks in the development of E-commerce, so protect Consumer privacy is a critical step for the prosperity and development of E-commerce.

3.3. Prerequisites for Mutual Benefit and Win-Win

Online businesses increase their investment in privacy protection technology to create an environment that allows consumers to be at ease. Consumers are more willing to share their own information. Only then can companies continue to grow and achieve mutual benefit and Win-Win results. Otherwise, both parties will suffer.

4. Countermeasures to Solve the Problem of Consumer Privacy in E-commerce

At present, E-commerce is in a stage of rapid development. In the era of E-commerce, the rapid development of big data continues to bring convenience, but also has more security risks. Technical research on current E-commerce information security and privacy information protection issues, as shown in Figure 2.

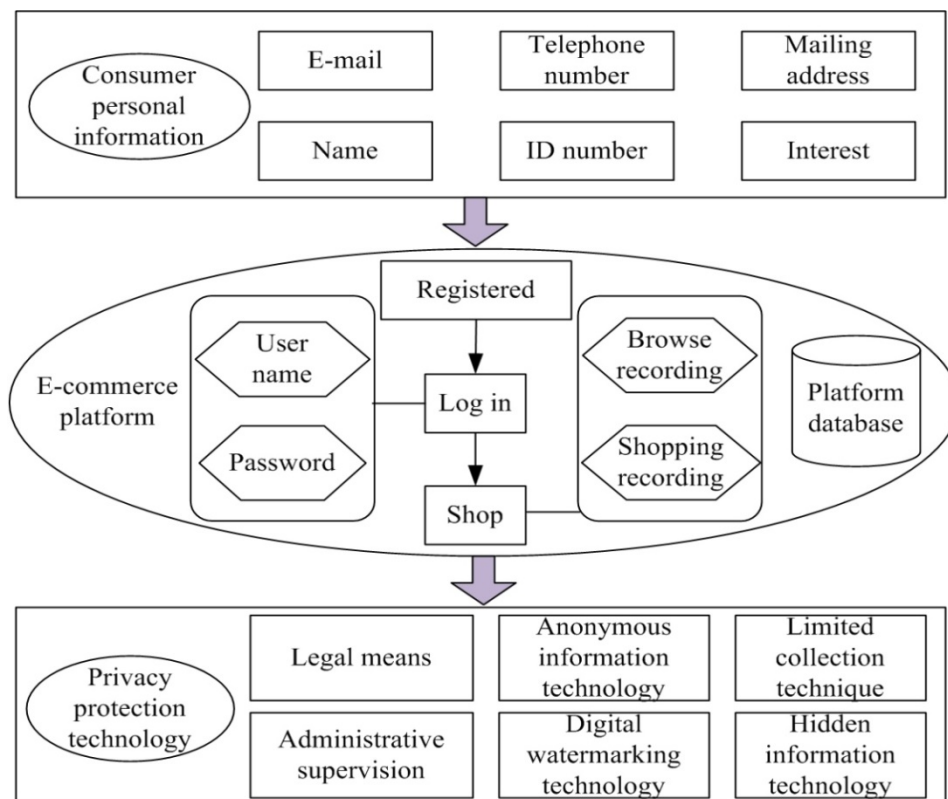


Figure 2. Technology for consumer privacy protection issues

4.1. Improve Relevant Legal Rules

Severely crack down on internal scalping of personal privacy, improve the information back-check mechanism, and crack down on the scalping of system data. Speed up the formulation and improvement of legal rules related to the protection of personal data and privacy rights. Clarify related responsibilities and obligations, infringement forms and remedies, etc., to protect personal data and privacy.

4.2. Strengthen Administrative Supervision of Merchants and Platforms

Give full play to the government's administrative methods, and the market supervision and management department will strengthen the supervision and inspection of merchants and platforms, and set up personal information leakage reports. E-commerce companies are required to publicly explain their customer information collection and use behavior, and post customer privacy protection measures and commitments in a prominent position on the website.

4.3. Collect According to the Principle of Appropriate Amount of Information

E-commerce companies can only collect information within a specified range, information needed to serve customers, and customer consumption characteristics. Except in special circumstances, companies should not collect information that is completely private, such as health conditions. When making online payments, E-commerce companies can require customers to provide bank account numbers, but cannot store card numbers.

4.4. Anonymous Information Technology

Anonymous information technology refers to the concealment of some personal information data including address, phone number, name[5]. In transactions between merchants, logistics and customers, please hide name, contact information, and addresses to protect consumers' privacy.

4.5. Digital Watermarking Technology

Digital watermarking technology embeds some specific representation information into the information in a way that is not noticed by people [6]. The form of the data determines how the watermark is added to the database. There are some accuracy gaps in the redundant information within the data information. At the same time, embedded watermark information can identify object information in a specific environment.

4.6. Promote Privacy Face Orders in Logistics

The core of the privacy sheet is the privacy protection technology of the face sheet, that is, the consumer's personal privacy information is encrypted on the electronic face sheet to hide the consumer's personal information. Compared with traditional express delivery bills, privacy bills no longer reveal important information such as consumers' personal names, phone numbers and addresses, and avoid information being stolen and resold offline during express delivery, thereby protecting personal privacy in the logistics process.

5. Conclusion

E-commerce has made great contributions to my country's economic development under the context of informatization. In E-commerce, personal privacy has become one of the issues that people are increasingly concerned about. Personal privacy security has become one of the biggest challenges facing E-commerce. The state, enterprises, and individuals work together to improve consumer privacy protection, and carry out legislative protection, cultivate consumer self-protection awareness, and adopt technical means to truly and effectively resolve the contradiction between the use of personal information in E-commerce and privacy protection.

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