Consumer Rights Protection and Legal Application in the Intelligent Era

Xinhui Lan

Heilongjiang Polytechnic (Heilongjiang Institute of Economic Management Cadres), Harbin, 150080, Heilongjiang Province, China

30702078@qq.com

Abstract: With the advent of the intelligent era, while enjoying convenience, consumers are also facing rights infringement issues such as personal information leakage, false advertising and online fraud. This paper aims to explore the current status of consumer rights protection and legal application issues in the context of intelligence. First, this paper systematically reviews the literature to sort out the relevant laws and regulations on consumer rights protection at home and abroad, and identify their shortcomings in the intelligent environment; secondly, this paper selects typical cases in the past five years and conducts in-depth case analysis, paying special attention to consumer rights cases caused by smart products, and analyzing the relationship between the judgment results and the application of the law; again, this paper adopts the comparative law method to study the successful experiences of different countries and regions in the field of consumer rights protection and extract legal suggestions suitable for China's national conditions. The survey found that China's legal framework was 70% complete and 65% covered overall, suggesting there may be deficiencies in enforcement or consumer awareness. The paper suggests establishing a consumer rights protection mechanism that adapts to the development of intelligence, strengthening the applicability and enforceability of the law, and enhancing consumer trust.

1. Introduction

With the rapid development of the intelligent era, consumers' lifestyles and consumption habits have undergone profound changes. Smart products and services have penetrated into every aspect of daily life, and consumers have enjoyed unprecedented convenience. However, this process is also accompanied by many rights infringement issues, such as personal information leakage, false advertising and online fraud, which pose a serious threat to the legitimate rights and interests of consumers. In this context, the current status of consumer rights protection urgently needs to be re-examined, especially the applicability and effectiveness of existing laws and regulations in the intelligent environment, which needs to be discussed in depth.

This paper adopts a variety of research methods such as systematic literature review, case analysis and comparative law research to ensure a comprehensive understanding of consumer rights protection. Through literature review, we identify the deficiencies of relevant domestic and international laws and regulations and provide a theoretical basis for subsequent case analysis. Representative smart product-related cases from the past five years are selected, and the relationship between the judgment results and the application of the law is analyzed in depth to reveal the problems in the actual implementation of the law. At the same time, through comparative law research, we examine the successful experiences of different countries and regions in consumer rights protection to provide reference for the application of China's laws.

2. Related Work

Consumer rights protection faces new challenges, Zhou et al. [1] used the data of private listed companies on the A-share market from 2009 to 2019, took the 2014 revision of the Consumer Protection Law as the starting point, and used the double difference method to empirically test the

relationship between strengthening consumer rights protection and enterprise service-orientedness. Wu [2] analyzed the concept of "killing the familiar" by big data on e-commerce platforms to understand its essential connotation. Secondly, he analyzed the causes of "killing the familiar" by big data on e-commerce platforms. Finally, based on the relevant causes of "killing the familiar" by big data, he proposed solutions to strengthen the protection of consumer rights and interests and allow consumers to enjoy an equal, honest and fair market trading atmosphere. Cao [3] believes that in recent years, there have been many cases of some companies using big data technology to commit price fraud against their customers. In order to better use big data technology in a reasonable way and bring better benefits to consumers, it is very necessary to analyze and discuss this "big data killing old customers" behavior. Yang [4] sorted out three ways to obtain financial algorithm data sources, and divided algorithm discrimination of large Internet platforms into three types: subjective discrimination by designers, subjective discrimination by machine learning, and objective system algorithm discrimination. He summarized the current status and existing problems of legal regulation under algorithm discrimination at home and abroad, and finally put forward relevant policy recommendations on the protection of financial consumer rights under algorithm discrimination of large Internet platforms. In order to improve the efficiency of the audit investigation work on the protection of financial consumer rights, Wang and Sun [5] developed a "Financial Consumer Complaint Audit Analysis Assistant" program using "Java+SQLite" that is system-compatible, model-practical, and easy to operate. They also put it into practical use in pilot audits and achieved good results, improving both audit efficiency and effectiveness. Chawla and Kumar [6] analyzed the current Indian legal framework for protecting online consumer interests. Farronato et al. [7] found that stricter requirements were associated with reduced competition, higher prices, and no increase in demand or consumer satisfaction. These studies not only reveal the many problems currently facing consumer rights protection, but also provide a theoretical basis for the revision and improvement of laws, and promote policy innovation and practical progress in the field of consumer rights protection in various countries.

3. Methods

3.1 Literature Review

This article starts with domestic and foreign laws and regulations to comprehensively review the current status and shortcomings of consumer rights protection. Domestically, relevant laws such as the Consumer Rights Protection Law and the Electronic Commerce Law provide certain legal protections for consumers. However, in the context of the popularization of smart products, these laws and regulations are insufficient in terms of applicability and flexibility. Internationally, Europe and the United States are relatively mature in terms of consumer rights protection. In particular, the EU's GDPR regulations have set strict standards for data protection. However, when applied to smart products, they still face problems such as rapid technological updates and lagging supervision[8].

3.2 Typical Cases

This paper selects several representative cases for in-depth analysis to reveal the relationship between consumer rights protection issues caused by smart products and the applicable laws. First, a well-known smart home device manufacturer was sued by consumers for false advertising. The customers discovered that, after their purchases, the actual PRODUCT functions deviated from the advertised ones, which resulted in their not really experiencing the desired SMART experience. During the trial, the court emphasized certain provisions in the Consumer Protection Law on the disclosure of true information and finally held that the company had to compensate consumers for the economic loss and to withdraw its false advertising. It was settled that in the smart product marketing, companies must give correct and true descriptions of the functions of the products; otherwise, they will be liable to face corresponding criminal liabilities[9].

In the second case, a smartphone personal data breach had a consumer shocked to learn through

a popular smart phone that third-party applications routinely accessed and took user information without a user ever knowing. This action violated the provisions of the Personal Information Protection Law and required compensation for losses and deletion of the collected information. The court ruled that a company must communicate the purpose of data collection and get the consent of the users. Therefore, the consumer's request for a hearing was well founded and the company got forced to redo the privacy policy[10]. This case thus exemplifies the need for designing and operating data protection or facing legal liability.

3.3 Analysis Framework of Judgment Results and Applicable Law

When analyzing the relationship between judgment results and applicable law, the following formula framework is used:

$$J = A * Q * D \tag{1}$$

J is the judgment result, A is the applicable law, Q is the quality of evidence, and D is the judge's discretion[11]. Comparative law analysis emphasizes the successful experience of different countries and regions in consumer rights protection[12]. Table 1 is a table comparing key indicators of different countries in consumer rights protection:

Table 1: Indicator data

Country/Region	Legal Framework Completeness	Consumer Satisfaction (%)	Penalty Severity	Information Protection Level
EU	90	85	High	High
USA	75	78	Medium	Medium
Japan	80	80	Medium	Medium
China	70	65	Low	Medium
Australia	85	82	High	High

4. Results and Discussion

4.1 Consumer Rights Protection Legal Coverage

Surveys were conducted in several countries including China to collect information on the completeness of their legal frameworks and the coverage of consumer rights protection fees. The completeness of the legal framework was calculated as:

$$C = \frac{\sum_{i=1}^{n}(W_i * S_i)}{\sum_{i=1}^{n} W_i} \tag{2}$$

n is the number of indicators evaluated, W_i is the weight of the i-th indicator, reflecting its importance in the overall evaluation, and S_i is the score of the i-th indicator. The data survey results are shown in Figure 1.

In terms of legal framework completeness, the EU stands out with a high score of 90% and a coverage rate of 88%. China's legal framework completeness is 70% and coverage is 65%. The situation in the United States is similar, with completeness of 75% and coverage of 73%. Japan and Australia are also around 80% completeness and coverage. The UK and Canada have an overall commitment to consumer rights of 75-76%. Singapore shows very promising results in terms of consumer protection, with completeness of 82% and coverage of 80%.
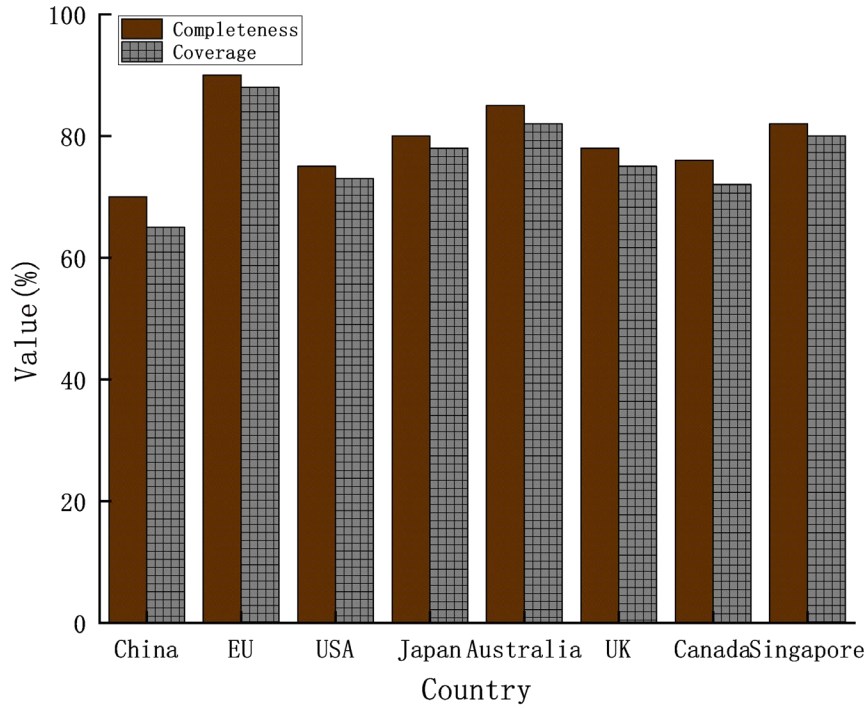
Figure 1: Completeness and coverage

4.2 Investigation of Cases Accepted and Complaint Rate

In the investigation of completeness and coverage, it was found that the data of China and USA were weak. Therefore, for these two countries, data of 12 months in a certain year were selected to continue the investigation, and the number of cases accepted and the complaint rate were counted. Figure 2 shows the number of cases accepted, and Figure 3 shows the complaint rate:
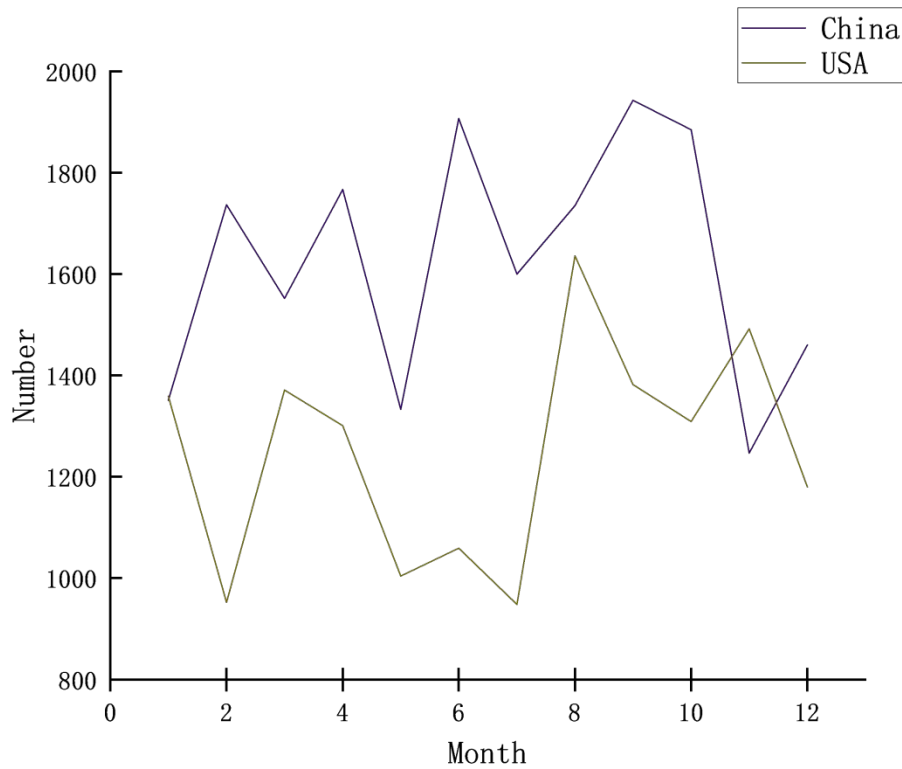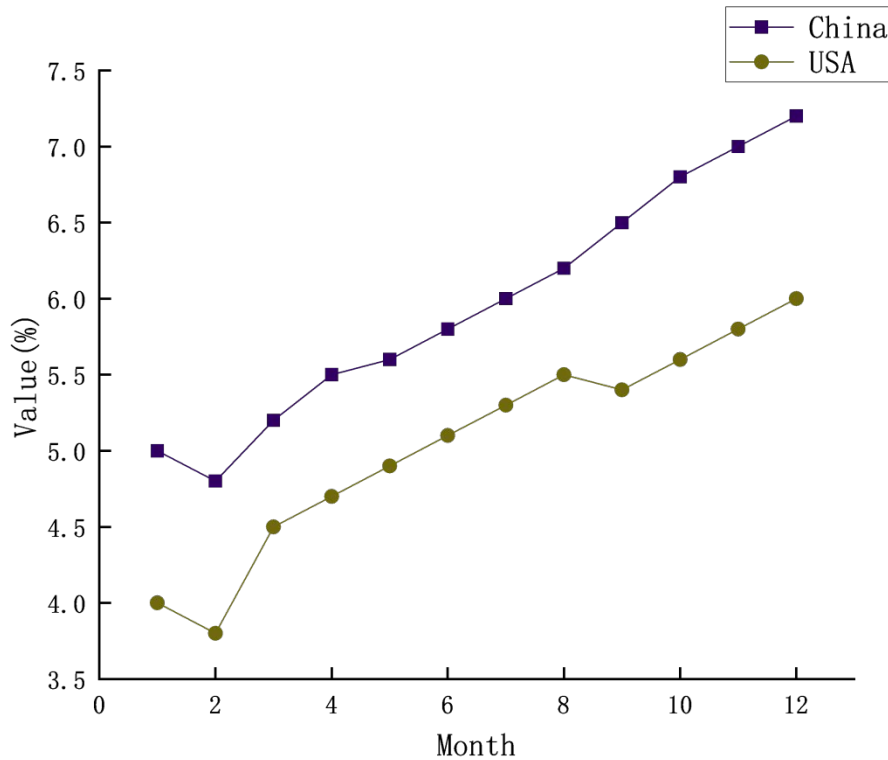

Figure 2: Cases accepted

Figure 3: Complaint rate

In terms of the number of cases accepted, the highest number of cases accepted in China occurred in September (1,943 cases), while the lowest number was in November (1,247 cases). The number of cases in the United States was relatively stable, with the highest number in August (1,636 cases) and the lowest number in July (948 cases). In terms of the complaint rate, the rate of consumer rights protection complaints in China showed an upward trend, from 5% in January to 7.2% in December. In contrast, the rate of consumer rights protection complaints in the United States was relatively stable, rising slightly from 4% in January to 6% in June.

5. Conclusion

The study of legal application must focus on the impact of technological development on consumer behavior and timely revise and improve relevant laws and regulations to adapt to consumption patterns in an intelligent environment. Establishing and improving consumer protection mechanisms in the digital environment, strengthen the protection and transparency of personal information, and ensure that consumers' basic rights are not violated while enjoying convenience. In addition, enhancing consumers' legal awareness and ability to protect their rights, and encouraging them to file complaints and protect their rights in a timely manner when encountering infringements, is also an important part of protecting their rights and interests. Only through the coordinated development of law and technology can we achieve comprehensive protection of consumer rights and interests, promote the healthy and orderly development of the market, and bring a more fair consumption environment to the intelligent era.

References

[1] Zhou Zhou, Hu Xinyi, Qiu Yitian. Can consumer rights protection promote the transformation of enterprises into service-oriented enterprises? [J]. Journal of China University of Geosciences (Social Sciences), vol.24, no.6, pp.95-108, 2024.

[2] Wu Guangmei. Research on consumer rights protection based on big data "killing familiarity" on e-commerce platforms [J]. Electronic Commerce Review, vol.13, no.4, pp.2742-2746, 2024.

[3] Cao Tianxiang. Research on the phenomenon of "killing familiar customers" with big data from the perspective of consumer rights protection [J]. Rural Economy and Technology, vol.31, no.6, pp.101-101+119, 2020.

[4] Yang Jia. Research on the protection of financial consumer rights under algorithm discrimination of large Internet platforms [J]. Financial Technology Era, vol.29, no.12, pp.71-74, 2021.

[5] Wang Chunshan, Sun Xin. Design and implementation of financial consumer complaint audit assistant based on Java [J]. Financial Technology Era, vol.30, no.2, pp.68-73, 2022.

[6] Chawla N, Kumar B. E-commerce and consumer protection in India: the emerging trend[J]. Journal of Business Ethics, vol.180, no.2, pp.581-604, 2022.

[7] Farronato C, Fradkin A, Larsen B J, et al. Consumer protection in an online world: An analysis of occupational licensing[J]. American Economic Journal: Applied Economics, vol.16, no.3, pp.549-579, 2024.

[8] Matnuh H. Rectifying Consumer Protection Law and Establishing of a Consumer Court in Indonesia[J]. Journal of Consumer Policy, vol.44, no.3, pp.483-495, 2021.

[9] Raval D. Who is victimized by fraud? Evidence from consumer protection cases[J]. Journal of Consumer Policy, vol.44, no.1, pp.43-72, 2021.

[10] Bongomin G O C, Ntayi J M. Mobile money adoption and usage and financial inclusion: mediating effect of digital consumer protection[J]. Digital Policy, Regulation and Governance, vol.22, no.3, pp.157-176, 2020.

[11] Atikah I. Consumer protection and fintech companies in indonesia: innovations and challenges of the financial services authority[J]. Jurnal Hukum dan Peradilan, vol.9, no.1, pp.132-153, 2020. 2020, 9(1): 132-153.

[12]Galasintu S, Loveera C. The comparative study on consumer protection laws in ASEAN[J]. Kasetsart Journal of Social Sciences, vol.42, no.4, pp.804-809, 2021.