

Research on the personal information security problems under the network virtual trading platform

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Abstract: With the continuous development and progress of the information age, the forms and types of online virtual transactions have become diversified, and the rise of virtual transactions is accompanied by the birth of the network virtual trading platform. Through the network virtual transactions, we can obtain convenience in daily life to a certain extent. However, due to the instability of big data and the certain risks of the network virtual trading platform, the security of users' personal information suffers from serious leakage hazards.

Keywords: network virtual trading platform, personal information security

1. Introduction

With the rapid development of the network information era, people are more inclined to the fast-paced and convenient life, and the network virtual transactions also rise. However, while the network virtual trading platform brings convenience to people, and the personal information security has also suffered a serious threat. This paper discusses the security of personal information and the protection countermeasures under the background of the network virtual trading platform[1].

2. Investigation and research on the personal information security issues under the network virtual trading platform

The research objects of this questionnaire survey were mainly students and office workers. 212 people were investigated and analyzed in the form of random online questionnaire links, and 201 valid questionnaires were recovered, with a success rate of 94.81%.

2.1 Respondents' use of the online virtual trading platform

A preliminary analysis was conducted on the frequency of the respondents using the online virtual trading platforms, which platforms they often use, and the types of items they bought. Half of the respondents tended to use the online virtual trading platforms frequently, and there were almost no people who had never used them, as shown in Figure 1.

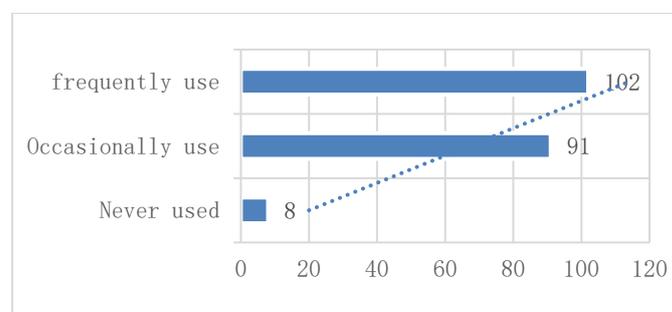


Figure 1: Use of the trading platform situation diagram

At the same time, Taobao almost occupies an absolute advantage in the platforms often used, with 96.52%, followed by the frequent use of Huabei, and the use of virtual transactions in major games also accounts for 72.14%, occupying a large weight, as shown in Table 1.

Table 1: Table of frequently used network virtual trading platforms

trading platform	number of people	The proportion of (%)
taobao	194	96.52
Pay in the palm	37	18.41
Ant Check Later	179	89.05
5173	21	10.45
Cloud network	42	20.90
All kinds of games	145	72.14

Unit: person, %

2.2 Respondents' understanding of their personal information security

At the present stage, although the lifestyle is simple and fast, it is also accompanied by many hidden dangers of personal information security[2]. Through the survey, most people think that the contact information, ID card number and basic personal information are the most important, as shown in Figure 2.

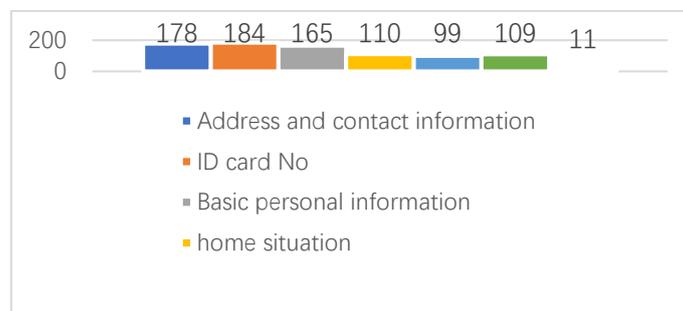


Figure 2: Statistical map of important personal information

2.3 Respondents' attitude towards personal information disclosure

According to the data collected through the survey, a total of 84.08% of the people have encountered personal information leakage by themselves or the people around them, and the most common reasons for the leakage are the weak awareness of personal security system, followed by the popularization of network information and the lack of rigorous law. Among the respondents, 171 believed that weak personal security awareness was the most important reason for information leakage, 166 believed that the popularity of online information was also one of the important reasons, and 159 thought that the lack of law was also one of the important reasons for the leakage of personal information. As shown in Table 2.

Table 2: Reasons for personal information leakage

Reasons for information leakage	number of people	The proportion of (%)
Personal safety awareness is weak	171	85.07
The law enforcement of stealing personal information is not strict	159	79.1
Social publicity is not strong enough	114	56.72
Information spreads very quickly	166	82.59
other	9	4.48

Unit: person, %

2.4 Respondents' ratings of their own personal information security awareness

According to the respondents' personal information security awareness score, most of the 201 respondents chose more than 50 points, among which 53 chose a score of 60-70, 50 chose a score of 80-90, and 36 chose a score of 90-100. This shows that people still hold a relatively good attitude towards their own information security awareness, but it may also lead to a low awareness of self-prevention, creating an environment for information leakage. As shown in Figure 3.

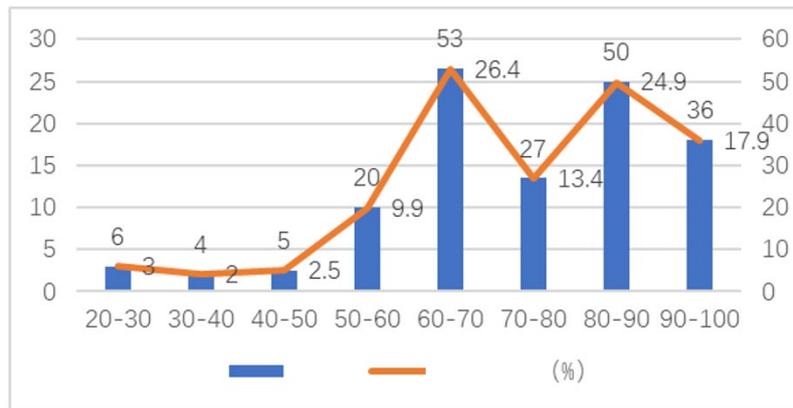


Figure 3: Personal information security score diagram

3. Problems existing in the security of personal information under the network virtual trading platform

3.1 Users' own personal information security issues in the platform

(1) Users' bad habits in the process of platform trading. According to the above questionnaire, the vast majority of users have used online virtual trading platforms, most of which are traded in Taobao, Huabei and major games. Compared with real transactions, people also prefer to trade in the online virtual trading platform. When using online virtual trading platforms, personal data is as easily intercepted as in other platforms. Now the ultra-high cloud function enables big data to deeply analyze personal data, and our personal data can be passively shared in the process of using the platform.

(2) Users' awareness of the protection of personal information security is not strong. Through the above questionnaire, we can find that most people give their personal information security awareness score of 60-70 points, and their personal awareness score is not very high. Specifically, in the use of the network virtual trading platform, casually click into the pop-up website, casually fill in the relevant information, some websites even require users to be accurate to the personal ID number and other privacy information. However, many users do not realize that the above behavior is the violation of personal information security.

(3) Users' awareness of rights protection and legal knowledge of personal information security is insufficient. Users are completely vulnerable groups from the perspective of rights protection. According to the above questionnaire analysis, most users do not understand the relevant legal protection, nor do they know how to protect their privacy and maintain their rights. However, the situation of information leakage will not become less because of people's ignorance. Many people often do not know how to deal with their personal information when it is leaked. Most of them find their family or friends to help solve it, and they do not know how to use legal means to protect their legitimate rights and interests. Even some investigators will have ignored the attitude, which will indirectly lead to increasing information leakage. However, the survey results show that more than 70% of the investigators do not know very much about the laws related to personal information security, and some people even do not know much about them completely, which also leads to the serious information leakage phenomenon.

3.2 Management of users' personal information by the network virtual trading platform

(1) The platform provides improper protection of users' personal information. In the process of network virtual transaction, the disadvantage position of users is further highlighted. Mainly manifested for the improper collection of personal data and the improper use of personal data. Users are often forced to fill in some personal information when conducting transactions. The operators of the network virtual trading platform use the personal information of the users to leak their personal information to others without the consent of the users.

(2) The platform leaks and steals users' personal information

In recent years, big data is expanding, and more and more online virtual trading platforms have appeared in the public view. Among these platforms, there are hundreds of merchants entering and online

consumers conducting transactions, and active online transactions promote the development of the network. However, these platforms are also transfer stations for infringement, and these use of the loopholes of the network trading platform infringe on the legitimate rights and interests of users. According to statistics, online trading platforms can receive hundreds of infringement complaints every day.

3.3 National legal protection of personal information security in network virtual transactions

(1) Insufficient legal protection for it at present. In the context of big data, most of the personal information leakage comes from the network, and the concealment and universality caused by it seriously affect the relevant law enforcement departments to conduct legal crackdown on criminals. At present, China has not formulated a sound laws and regulations for the security protection of personal information in the network virtual trading platform, which also causes the users' weak awareness of personal privacy, and even don't notice when their personal information is leaked and infringed.

(2) The punishment for the corresponding violation platform is lighter. National laws are not strong enough to investigate the platforms or individuals for illegal crimes, and they will still give criminals an opportunity to exploit the specific supervision and treatment. For example, a place issued a guide on the protection of personal information and put forward many suggestions for the protection of personal information, but the guide is not mandatory, so the final effect is not very significant.

4. Protection countermeasures of personal information security under the network virtual trading platform

4.1 Personal protection strategy for information security

(1) Develop good Internet habits. First, do not leave your private data on the network virtual trading platform; do not open the pop-up on the platform; do not fill in the network questionnaire, to improve the awareness of personal information security. Secondly, do not use the virtual trading platform of unknown origin, and should also set personal privacy according to the authorization, and often clean up the Internet traces, improve their network security awareness level to protect their personal data. Finally, when using the network virtual trading platform in public places and needing to fill in the personal privacy information, the personal browsing records and the stored personal information data should be cleared in time after use, so as to maintain the protection of personal information at all times[3].

(2) Strengthen the awareness of personal information security and prevention. Users should strengthen their own information security awareness, to avoid personal information leakage due to their bad behavior and negligence. When using the network virtual trading platform, you should pay attention to check your access rights at any time, and set up your personal privacy in time. After the personal privacy setting, the relevant network functions should be authorized and used according to the needs to prevent users from leaking their personal information or preventing their personal information from being "collected".

4.2 The Platform's protection strategy for information security

(1) Establish a sound personal information security protection and supervision system. When establishing the personal information security protection and supervision system, the relevant network virtual trading platform can adopt the top-down top-level design scheme to upgrade the future development and use of big data to the national government. The platform should correctly regulate the collection and practical application of personal information. At the same time, it is necessary to strengthen the protection of users' personal information security on the network virtual trading platform, establish an active social responsibility for them, and strengthen the management measures of these network platforms, such as the "symbolic" processing of user information on the platform, to ensure that users' personal information will not be leaked.

(2) Update the network prevention technology of the platform. At the technical level, the platform should strengthen the development of personal information protection software, such as improving the anonymous technology and expanding the scope of technology and fuzzy processing technology, so as to maximize the protection of users' personal privacy security. Use professional privacy protection software to set the destruction time of the data involving privacy, so as to "burn after reading", so that the power of technology can strengthen people's strong shield, so that the personal information security

problems under the network trading platform can be better solved.

4.3 Government protection strategy for information security

(1) Improve relevant laws and regulations. Establishing and perfecting the laws and regulations of personal information security protection is one of the important ways to protect personal information security from leakage and infringement. In the protection of personal information security, it is not only necessary to manage and plan the relevant online trading platforms, but also need to establish relatively perfect laws and regulations. In the future legal formulation, it can be stipulated that even if the user data is collected, the user has the legal obligation to make significant and clear information before use, and the user has the right to refuse or agree to use what data, and the right to know the use of personal data and the relevant legal qualifications of the user and the user. At the same time, the state should improve the supervision mechanism, raise the cost of illegal activities, intensify the crackdown, and simplify the reporting and litigation process[4].

(2) Increase the punishment for illegal platforms. On the basis of improving the laws and regulations on the protection of personal information security, we should also strengthen the relevant judicial operation ability, improve the adaptability of judicial operation, increase the punishment of criminals or platforms, and correctly regulate the behavior of major institutions using users' personal information. Strengthen the management and supervision of relevant platforms, regularly carry out the recovery of personal information protection work, and improve the quality of personal information maintenance only through the regular maintenance and upgrading of the platform system.

5. Conclusion

In the context of network transactions, due to the concealment of personal information infringement and the lack of legal protection of personal information, their personal information is constantly sold and violated in the network, which seriously reduces the protection efficiency of personal information security. Therefore, strengthen the modern personal information security protection self awareness, actively establish and improve the network trading platform of personal information security supervision mechanism, improve the personal information security protection laws and regulations, to ensure the network technology development and effective use, on the basis of safeguard people's personal information security from infringement by the outside world.

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