Legal Traceability of Information Leakage of Artificial Intelligence Rural E-commerce Shopping Guide Platform Based on Big Data

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Abstract. China's economic aggregate has reached a new level in the 40 years of reform and opening up, and rural e-commerce has turned out to be a significant economic growth point in the new era. The state's policy support for rural e-commerce continues to enlarge, and the growth of rural e-commerce ushered in a significant historical opportunity, with the market scale expanding and the social recognition steadily increasing. At present, big data network has become very popular all over the world, so e-commerce based on big data and artificial intelligence has also developed by leaps and bounds. E-commerce has been very developed in urban areas, but the use of e-commerce in rural areas is comparatively less. With the strategy of "revitalizing the countryside" put forward, the wide application of e-commerce in rural areas will be a significant measure to promote the growth of rural economy. On the one hand, the development of this path can vigorously promote the transformation of backward production methods in rural areas, on the other hand, it will make the circulation of agricultural products in China smoother and more convenient, and even promote the internationalization of agricultural products. Since rural e-commerce plays a very important role in the development of rural economy, we can certainly believe that with the support of preferential policies, rural e-commerce will be a good and rapid development. However, with the growth of e-commerce platform, consumers' personal information in e-commerce environment has been leaked for no reason. Therefore, it is extremely necessary to establish a relevant protection system with information collection providers, information trading platforms as regulators, state-led, industrial self-discipline and individual citizen participation as supplementary.

Keywords: Big Data, Rural E-commerce, Personal Information Disclosure, Legal Traceability

1. The correlation of rural e-commerce and its significance to rural areas

1.1. Overview of rural e-commerce

The center of e-commerce is also commodity transactions, which are based only on information technology, so they are highly efficient and have significant cost savings. People's shopping style is no longer just from a single, traditional brick-and-mortar store, online shopping platform is becoming...
more and more popular. E-commerce also involves product delivery, marketing, after-sales service and other aspects. Since e-commerce has been very successful in urban areas, it is also gradually seeping into the vast rural areas. On the one hand, agricultural products can be circulated to various regions through e-commerce platform, promoting the economic growth of rural areas, on the other hand, rural areas can be easily and quickly through the network platform to buy a variety of products and services, greatly getting better the living standards and convenience in rural areas.

1.2. Rural e-commerce on the significance of rural economic development

1.2.1. Rural e-commerce helps to narrow the gap between urban and rural areas
Rural online shops, "Taobao Village" business points, live agricultural products, etc. can drive the development of rural characteristic industries, thereby creating a large number of employment opportunities, especially for low-income people to increase income, help the rural poor out of poverty, while changing the cultural life of rural areas, promote the overall growth of rural economy, effectively narrow the gap between urban and rural areas.

1.2.2. Rural e-commerce helps to promote the rural revitalization strategy
The scheme of rural revival is a main scheme to revitalize the economic and social development of rural areas in the new era, and the growth of rural e-commerce is one of the amounts to improve the rapid growth of rural revitalization strategy. The growth of rural e-commerce has promoted the application of the scheme of rural revival in the aspects of market docking and industrial layout. The growth of rural e-commerce can make agricultural products express sales to achieve income growth, on the other hand, rural e-commerce optimize product structure to promote industrial integration, promote the revitalization of rural industries, and then change the rural production lifestyle, to achieve the overall revitalization of rural areas.

1.2.3. Rural e-commerce contributes to rural supply-side reform
Rural e-commerce is a production and operation model that directly connects supply and demand. Compared with the old-fashioned agricultural production and sales model, the rural e-commerce model has the advantages of simple connection and high efficiency, greatly improving the quality of circulation and circulation, and promoting the improvement of supply quality in the production chain. The growth of rural e-commerce has effectively resolved the illogicality between input and output, made the development of production, supply and marketing sound, promoted the physical improvement of rural supply side, and realized the sustainable growth of rural economy.

Figure 1. Farmers through the big data network to promote agricultural products.

2. E-commerce in the legal traceability of personal information
with the rapid growth of e-commerce, citizens' personal message leakage is becoming more and more serious. Article 111 of the General Provisions of the Civil Law distinguishes personal information from privacy, and the E-Commerce Law, introduced in 2018, also provides new provisions for the guard of citizens' personal information in the e-commerce surroundings, so there is a new legal basis for the guard of personal data in China. Through the comparison of personal information and privacy,
it is concluded that personal information is more property and commercial than privacy, and then the concept of using "personal information" in e-commerce environment is more reasonable, and secondly, it discusses the current situation and reasons for the leakage of consumer personal information in e-commerce environment, and then puts forward the proposal of establishing a government-led, industry-based self-discipline, and public participation in the guard of personal data.

2.1. The coincidence of personal information and privacy
According to Professor Zhang Xinbao's definition of privacy in the book "Legal Protection of Privacy": "Privacy, also known as the secret of private life or the secret of private life, refers to the tranquility of private life without illegal interference with others, and the confidentiality of private information is Wei Zhenxuan. The professor believes that "privacy does not include illegal collection, espionage and disclosure by others", "privacy specifically includes personal information, private life, private space, physical privacy, life information, private communications, etc.". Privacy is the most basic personality expression and basic content of natural persons, and has a strong personality. Personal information, also known as personal data, is a new concept based on the development of information technology, which refers to information that can be accurately accurate to a particular individual created with the relevant content. Compared with the customary concept of "privacy", the author thinks that personal information is an extended concept of privacy in a particular environment. Both are the external expression of natural person's personality and the "personality" with personality right.

2.2. The difference between personal information and privacy
Because personal information is a new concept with the growth of data technology, personal details is richer and more obvious than traditional privacy. In addition, personal information users can analyze according to the content of information to distinguish and specificize the main body of information, personal information has long become one of the important market resources for stakeholders to compete for, the consumer's personal information has mastered the entire market. Based on this, the relevant market operators in order to occupy market share to trade personal information, from this point of view, personal information is more property than privacy, its commercial value is much higher than traditional privacy[1].

2.3. The rationality of using personal information in e-commerce environment
E-commerce refers to trading activities over the Internet. Since the end of the 20th century, the Internet into China, with the quick growth of computer technology, as of June 2018, the amount of Internet operators in China is 802 million, online shopping users reached 569 million, mobile online shopping ranked first in the world, so it seems that the development of e-commerce in China has a wide range. In the e-commerce environment, all data that can differentiate the subject can be called personal information. Before the promulgation of the General Principles of Civil Law of the People's Republic of China in 2017, all personal details was classified as a right to privacy and the characteristics of criminal legislation were more obvious. However, based on China's current actual situation, Article 111 of the General Provisions of the Civil Code provides for "personal information", which not only makes a clear distinction between personal information and privacy, but also clarifies the legal status of personal information. In addition, seven of the 88 E-Commerce Laws, which were introduced in August last year, explicitly replace the concept of privacy with personal information. These behaviors show the rationality of distinguishing personal information from personal privacy in the e-commerce environment, and the concept of using personal information in e-commerce in the future is an inevitable trend[2].

3. The current situation of personal information leakage under the rural e-commerce platform
Since e-commerce entered the Chinese market, its application scope and market scale have expanded rapidly with the continuous submission of cloud computing, big data, artificial intelligence and other technologies, and it has become a new economic growth point and a new engine of economic transformation in China. In the report of the 19th National Congress of the Communist Party of China, it was obviously suggested to build a "digital China" and a "network power". According to the
statistics of the Ministry of Commerce in 2017, "in 2017, the national e-commerce business quantity reached 29.16 trillion yuan, and the online trade transaction reached 718 million yuan, accounting for about 50% of the world". However, with the quick change of data technology and the unique characteristics of Internet, such as virtuality, technicality and electronization, the quick growth of e-commerce has brought inevitable intrusion to people's lives. However, the rural e-commerce platform is extremely easy to leak personal information because of insufficient technical information. I think the leakage problem can be summarized as follows: First, e-commerce operators use different ways to collect personal information freely; Second, an organization with personal information illegally trades personal information; The third is the abuse of personal information by operators or third parties. \[3\]

Figure 2. Personal information was leaked.

3.1. Rural e-commerce platform operators use different ways to collect personal information at will
E-commerce is based on the Internet, so it is virtual and technical. These characteristics determine that in electronic transactions, e-commerce operators are virtual image, and consumers are specific personal image, which determines the status of the two sides of the transaction is not equal. With the growth of big data and synthetic intelligence technology and the fierce competition in the e-commerce industry, the traces left by consumers in e-commerce activities are becoming more and more important to operators, and many bad rural e-commerce operators pay more attention to the collection and sorting of consumers' personal information. When a consumer is conducting a complete transaction, they even ask for a home address, phone number, etc. Second, in the browsing of many software or websites, users are required to enter into a "privacy agreement" and cannot use or browse the software and websites without consent. The operator's behavior is to ask users to choose between their own "personal information" and "easy to use", according to the 2016 China Personal Information Security and Privacy Protection Report, published jointly by the Internet Rule of Law Research Center of the China Youth Political Academy and the cover think tank, when citizens were asked, "Would you like to provide personal information for more convenient service enjoyment?", 53% chose "yes". \[4\]

3.2. Illegal trading of personal information under the rural e-commerce platform
Because personal information is super differentiated, operators can specificize consumers through the analysis of information, and then push relevant product or service information to them, so in the e-commerce environment, the business value of personal information is more obvious, the operator has the personal information library means that it controls the relevant areas of the market. In this context, illegal transactions of personal information between operators, between operators and government departments, as well as between operators and other downstream buyers, are becoming more and more rampant. In 2014, Alipay's data breach resulted in former Alipay employees stealing more than 20G of information from the system and selling it to other agencies. In 2016, JD.com, a well-known Chinese e-commerce company, was revealed to have illegally traded 12G data online, amounting to tens of millions. In China, the illegal transaction of personal information is mainly carried out through the "underground black market", a considerable number of black market daily transactions of citizens personal information number of 100,000, daily transactions amounting to more than one million yuan, covering the personal lives of citizens. These cases show that in the
e-commerce environment, citizens' personal information has become the object of illegal transactions and the demand is great, but lack of a legal circulation and sharing mechanism.

4. Personal information protection measures in e-commerce environment

Analysis of the collection, processing and transfer of citizens' personal information by e-commerce operators can be summed up as follows: First, the backwardness of the confidentiality technology of rural e-commerce operators; Therefore, to establish and improve the personal information protection system should combine the state, industry and individual citizens to form a state-led, industry self-discipline, individual citizen participation as the basic protection system, should run through the collection, circulation and use of personal information three links[5].

Article 111 of the General Provisions of the Civil Law of the People's Republic of China, which has been in force since October 2017, formally separates citizens' personal information from their right to privacy as "the right to personal information" and clearly states that "all natural persons' personal information is protected and that no organization or individual may illegally collect, use, process or transmit other people's information, and may not illegally trade, provide or disclose other people's personal information". Similarly, the E-Commerce Law of the People's Republic of China, which was just introduced in September last year, also provides for the first "right of deletion" in Article 24 of the E-Commerce Law, which allows e-commerce operators to delete users' information in response to their needs. This is a major innovation in the history of personal information protection in China and a prerequisite for China's future cross-border e-commerce development and cooperation with high-standard countries such as the European Union and the United States.

In the stage of collecting personal information in the e-commerce environment, the state should introduce the Personal Information Protection Law as soon as possible, and the E-commerce Law, the General Principles of Civil Law and the Tort Law become the pillar laws of civil law in the personal information protection system in the e-commerce environment of China and strengthen the links with the criminal law and administrative law to ensure that citizens have a legal basis in the e-commerce environment; In this link, strict qualification criteria and systems for e-commerce operators should be established, and in the process of personal information circulation, the government should clearly define the amount of personal information that can be transferred, the scope of transactions and the requirements of transactions, in addition to which citizens should be given the "written right of consent" to respect the dignity of citizens and personal independence in order to protect their right to know[6].

5. Conclusion

Although the current development of rural e-commerce is still very limited, but with the strong support of government departments, rural e-commerce will certainly show a vigorous and rapid development trend. And personal information is the identity code of citizens in the e-commerce environment, based on the General Principles of Civil Law has listed personal information as the object of guard and the introduction of the E-commerce Law, and combined with the reasons for the current disclosure of personal information, only to establish a government-led, industry-based self-discipline, citizen participation protection system, as soon as possible to clarify the standards and scope of personal information protection, the introduction of data sharing platform operating rules, strengthen the supervision of industry personnel and the establishment of civil rights website, To encourage citizens to actively partake in the protection of personal data can deal with the problem of the leakage of personal data, and thus promote the healthy and tidy growth of China's e-commerce industry.

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