

Relationship between the Technical Architecture of ISPs and the Application of the Law

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Abstract: In the network environment, cross-border consumer contracts are mainly carried out under the operation of network service providers, and this paper analyses the connecting points of legal application from the payment architecture of network platforms and the cross-border logistics architecture itself. In terms of the payment structure, traditional connecting points only focus on surface of the trade. However, the platform server is the core of the close contact of the contract, and the location of the platform server should be determined as a new type of connection point. In terms of cross-border logistics, overseas warehouse, bonded warehouse and other new logistics modes are applied to cross-border e-commerce, and the location of the logistics link should be determined according to the conclusion of the consumer contract to determine the possible connection point of the application of the law.

1. Introduction

In terms of application of conflicting legal norms, the rules applicable to cross-border consumer contracts under the operation of online platform service providers tend to be specialised. First, from the perspective of the parties' geographical connection to the contract, the way in which the contract is concluded through the medium of the network service provider makes it more difficult to determine the place of negotiation, conclusion and performance of the contract^[1]. Secondly, from the point of view of the place of the acts related to the contract, due to the intervention of ISPs and the remote nature of network transmission, cross-border consumer contracts in the network environment often have multiple places of acts overlapping. In this regard, some scholars believe that the place of conduct should not be taken as one of the connecting factors of the conflict rule^[2]. Thirdly, from the perspective of the principle of autonomy, in the network environment, this principle can ostensibly avoid the geographical and identification difficulties mentioned above, showing greater advantages. However, as far as consumer protection is concerned, the fact that ISPs often advertise their products on the basis of a partnership with the operator and technically support their unilateral formulation of contracts increases the vulnerability of consumers and makes it difficult for the principle of autonomy of intent to come into play.

Considering the special characteristics of the above rules of law application, scholars in the twenty-first century have generally agreed that the impact of the cyber world should be dealt with by adapting and updating the real conflict of laws rules, rather than studying them in isolation from the real world.^[3] It is

undeniable that the use of real conflict of laws rules in the network environment to solve the problem of law application has its own necessity, but this does not mean that the view from the Internet itself^{[4][5]} is meaningless. Especially under the premise that the current network service platform penetrates into the transaction process, the network cross-border e-commerce has not only improved the transaction method and technology, but also provided a new network transaction mode. It is based on this fact that this article hopes to start from the underlying structure built by the network service provider technology, to explore the real connecting point or the real connecting point of the application of law, and to realise the accuracy of the application of law of the cross-border consumer contract under the operation of the network service provider.

2. Web-based platform payment architecture

One of the ways for network service providers to penetrate into specific transactions is to build their own payment structures, and mainstream network platforms have developed their own payment tools, such as Amazon. Network service providers in this case, as it provides not only the basic transaction platform, but also with the advantages of the platform will develop many of their own transaction-related products into each specific e-commerce transactions, and can not only be considered as a technical tool for communication.

In order to analyse the impact of the payment architecture of the online platform on the connecting points of the application of the law, it is necessary to analyse the logic of the construction of the payment

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architecture itself, as well as what kind of close connection its operation process will have with the parties involved (see Figure 1). In fact, the payment system itself has a fixed business structure, from its own structure, the main responsibility of the payment system is to deal with all transaction requests initiated by the business system, including the cashier, transaction system, payment core and other modules, according to the different functional responsibilities of each module, the payment system can be divided into two parts: the business layer and the payment layer. The business layer is responsible for providing the business system with the interface for receiving and paying and processing the transaction requests submitted by the business system, while the payment layer is responsible for completing the receipt and payment of funds through the payment channel in real time, recording the flow of funds between accounts involved in the transaction, and splitting and merging the funds belonging to the account in accordance with the predefined rules^[6]. The operation of the payment layer is centred on command response, and payment and clearing lines are built (see Figure 2).

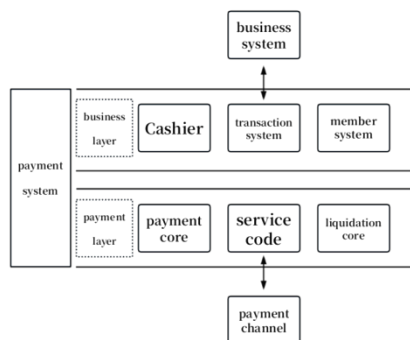


Fig. 1 Payment system

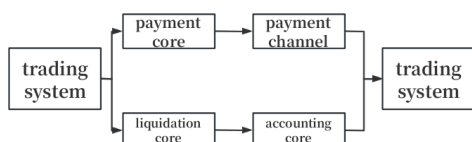


Fig. 2 Illustration of payment layer response

Since the payment layer is only designed for technical operations and is not closely related to the contract itself, the transaction system at the business layer is needed here as the central factor affecting the connecting point for legal application. The transaction system itself serves as a peripheral system for processing business logic external to the payment system. In other words, after processing various transaction types on the business side externally, the transaction system transforms the business information into payment orders recognisable by the payment system and imports them into^[7]. Take the guaranteed transaction of Tmall International as an example, the C-end user buys a commodity on the platform, and after the user pays successfully, it will correspond to the status of successful payment of the transaction system, the merchant will then deliver the goods, and after the user confirms the harvest, the transaction system will correspond to the successful status of the transaction, and the platform will

settle the payment for the goods to the merchant at this time.

It should be noted that, unlike offline transactions, here the online service provider establishes a credit system that the merchant must comply with, which can be understood as the platform providing a guarantee for the consumer's receipt of the goods, i.e., the merchant will receive the payment for the goods that is directly billed by the platform only if the consumer confirms the receipt of the goods. Therefore, the impact of the platform on the application of the law in this scenario can be simplified to the position of the guarantor in the application of the law on cross-border contracts.

As for the specific identification of the location of the network service provider, since we ultimately want to point to the link with the contract is closely linked to the link, then look for the part of the platform that plays the greatest role in the contract can determine the location. In the network platform on the payment process should be the biggest role in the platform server, the server for the operation of the platform to provide technical support, from the response to the user's request for transactions, to the platform audit the transaction is completed to the merchant payment and other links, are inseparable from the server. In addition, the role of the server can even be reflected in the product itself, in order to better meet the trend of increasingly personalised consumer demand in the digital era, many companies are beginning to use cloud servers to enhance the interaction with the user's design, through the operation of the server, the software layer to achieve personalised product customisation^[7]. In summary, to determine the location of the network platform service provider should be the core of the "web server location".

As mentioned earlier, the platform's payment process can be analogised to a contract of guarantee, which then allows the location of the guarantor to be the place of application of the law according to the relevant provisions. However, the important feature of the network service provider is that all contracts are concluded by means of data messages, and it is then necessary to consider the characteristics of the form of the data message itself, and the impact on the application of the principle of close connection in the contract. And from the point of view of the relevant provisions, the fact that a contract takes the form of a data message can determine the place of incorporation of the contract. This is mainly due to the fact that the conclusion of a contract in the form of a data message, in which the process of transmitting the data message through a computer is very abstract and the processing logic is inconsistent, and at the same time, the place where the data message is sent and received is objectively arbitrary or technically difficult to determine because of the lack of standards, therefore, the traditional place of entry into force of the promise is uncertain or difficult to determine, thus affecting the determination of the place of establishment of the contract. In this regard, the Model Law on Electronic Commerce adopted by the United Nations Commission on International Trade Law. presumes the place of receipt and the place of actual receipt by means of a number of links, such as "place of business",

"principal place of business", "habitual residence", etc. It provides that the place of receipt and the place of actual receipt are the same. The Model Law on Electronic Commerce presumes the place of receipt and the place of actual receipt by using multiple links such as "place of business", "principal place of business", "habitual residence", etc., stating that: "Unless otherwise agreed between the originator and the addressee, a data message shall be deemed to have been sent at the place where the originator has a place of business and received at the place where the addressee has a place of business". "If the originator or the addressee has more than one place of business, the place of business that has the closest relationship to the underlying transaction shall prevail, or, if there is no underlying transaction, its principal place of business; if the originator or the addressee does not have a place of business, its habitual residence shall prevail." The place of formation of a contract concluded in the form of a data message under online e-commerce, then, should be determined as the consumer's place of business or domicile, thus making the location of the consumer the connecting factor. It should be emphasised here that this conclusion points to a connecting point for the application of law contrary to the contract of guarantee, so the author believes that in practice the law to be applied should still be determined in combination with the place of performance of the contract, the signing of the contract, the domicile of the parties, and the place of performance of the secured obligation.

Thirdly, while the principle of closest connection remains central to determining the place of application of the law in the context of platform payment structures, it also emphasises the extent of platform guarantees it brings, the particularities of the electronic transaction model, and other points of connection from the network itself. As for the issue of consumer protection, while the payment architecture ostensibly provides a guarantee for the buyer, such a guarantee does not distinguish between the consumer in the buyer and the buyer for other commercial purposes; on the contrary, in the EU, for example, many consumer protection directives should be directed at natural persons who carry out an act for a non-trade and non-professional purpose^[8]. On the other hand, from the perspective of the consumers themselves, offline transactions are also based on the "cash on delivery" model, and the role of platform payments in consumer protection does not play an advantageous role in comparison. Therefore, consumer protection in the application of the law can hardly be reflected in the payment structure itself, and the relevant specific rules for the application of the law should be further improved, emphasising the factors that are most familiar to the consumers themselves and whose consequences can be easily foreseen^[9].

3. Cross-border logistics structure

Cross-border e-commerce shopping, compared to other e-commerce shopping behaviours, is characterised by the fact that the goods come from outside the country and need to be transported across the border to the consumer.

Therefore, cross-border logistics and transportation can be regarded as the characteristic behaviour of cross-border e-commerce consumer contract performance. In view of the complexity and diversity of the cross-border e-commerce logistics system, this article takes the typical logistics model of cross-border e-commerce as an example to dismantle the role of logistics in the various aspects of the cross-border e-commerce transport process as well as the role of logistics in the application of the law of the consumer contract in the selection of the connecting point. The logistics models of cross-border e-commerce include direct mail model, overseas warehouse model and e-commerce self-management model. The basic cross-border logistics model is shown in Figure 3, with the process above the dotted line being the process outside the country of the goods and the process below the dotted line being the process within the country of the goods. When searching for the connecting point of extraterritoriality from the perspective of logistics structure, whether there is an extraterritorial process or not is the key point. The following is a comparison of two common cross-border e-commerce logistics derivation modes, namely overseas warehouse and bonded warehouse, to illustrate the role of offshore processes in determining the point of connection for the application of law.

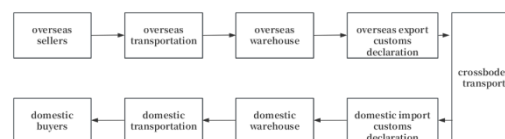


Fig. 3 Basic flow chart of cross-border e-commerce logistics

Overseas warehouse mode refers to the cross-border e-commerce service provider's self-owned or using third-party warehouses in the place of export for storing goods and providing cross-border logistics mode that integrates the processes of customs clearance, sorting, packaging, distribution, and return processing, etc.^[10]. It is characterised by the elimination of the overseas seller's delivery and overseas transport links, and the integration of overseas warehousing and customs clearance. After the consumer places an order, the overseas warehouse serves as the starting point of cross-border e-commerce logistics, playing the role of storage, sub-assembly and delivery. As shown in Figure 4, this model still has links above the dotted line. Since after the consumer places an order, the goods still need to be packed and shipped by overseas warehouses and transported across the border before entering the consumer's country (or location), analysed from the perspective of looking for a link to the application of the law, this model and the basic model have an offshore process, i.e., it is possible to find an offshore link to apply the law of the place where the offshore process takes place.



Fig. 4 Flow chart of overseas warehouse model
 The bonded warehouse mode refers to the network

service provider will overseas imported goods in bulk customs clearance way stored in the domestic customs special supervision area or bonded logistics centre bonded warehouse, the consumer in the cross-border e-commerce platform to order payment, the goods in the form of courier parcel directly from the bonded warehouse delivery to the hands of consumers. This mode is characterised by the fact that the cross-border e-commerce network service provider will transport the overseas goods to the territory in advance and store them in the bonded warehouse through bonded stock preparation, and then start the domestic import customs clearance procedure and transport them to the consumers directly in the territory after the consumers place the order. There is some controversy over whether the bonded warehouse mode belongs to the domestic process before the import declaration of goods after the consumer places an order. This paper argues that, because the bonded warehouse is approved by the customs of the importing place to establish, after the consumer orders, the final flow is also the consumers in the territory. In this process are required to comply with the relevant legal provisions of the place of import. Therefore, the process should be regarded as an in-country process. As shown in Figure 5, all processes in this model are below the dotted line, i.e. there is no offshore process. From the point of view of looking for a link to the application of law, this model cannot find an offshore link to apply the law of the place where the offshore process takes place, so the cross-border e-commerce under this logistics model can only apply the law of the place where the consumer is located.

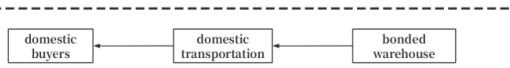


Fig. 5 Bonded Warehouse Model Flowchart

In summary, through the comparison of the three typical cross-border logistics models, it can be seen that the key to the application of the law of cross-border e-commerce consumer contracts lies in the existence or non-existence of the point of connection for the application of the law, i.e., the existence of the point of connection within the country can be applied to the domestic law on the basis of the principle of characteristic fulfilment and the principle of the closest connection, while the existence of the point of connection outside the country can be applied to the law of the place where the link outside the country is directed on the same basis. For the logistics process of cross-border e-commerce, the existence of an offshore point of connection depends on whether there is an offshore component to the logistics model.

4. Conclusion

This article focuses on connecting points of legal application from the payment structure of network platforms and the cross-border logistics structure. In terms of the payment structure, it can be found that the platform server is the core of the close connection of the contract, and the location of the platform server should be determined as a new type of connection point; in

terms of cross-border logistics, The application of law should be determined based on the location of the logistics process.

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