



Analysis of Difficulties in the Implementation of Online Food Delivery Safety Policies Based on the Interactive Adaptation Model

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Abstract. This paper analyzes the difficulties in the implementation of China's online food delivery safety policies. Firstly, it elaborates on the current status of policy implementation in this field. Driven by internet technology, China's online food delivery market scale grew significantly in 2023, while food safety issues became increasingly prominent. The paper further explores the causes of difficult policy implementation, including inadequate government laws, regulations and supervision mechanisms, lax merchant verification by e-commerce platforms, and online food delivery merchants prioritizing economic benefits over food safety. Finally, countermeasures are proposed based on the Interactive Adaptation Model, emphasizing the importance of the mutual adaptation process between policy implementers and affected parties in solving the problem.

Keywords: Online Food Delivery; Food Safety; Policy Interactive Adaptation Model

1 Introduction

With the in-depth integration of internet technology and the catering industry, online food delivery has rapidly become a mainstream catering consumption format in China, profoundly changing residents' daily dining habits and promoting the transformation and upgrading of the catering industry. In recent years, the scale of China's online food delivery market has maintained a steady growth trend, forming a trillion-yuan industrial scale and a huge user group, which has become an important part of the digital economy ^[1]. While the online food delivery industry brings convenience, efficiency and diversification to consumers, its inherent characteristics such as virtual operation, long supply chains, and scattered business entities have led to the frequent occurrence of food safety problems, which have become a prominent bottleneck restricting the high-quality development of the industry and a key issue of social concern.

In response to the food safety risks in the online food delivery industry, the Chinese government has issued a series of policies and regulatory measures to

standardize the market order, trying to construct a multi-dimensional food safety supervision system covering market access, process supervision and post-event accountability. However, in the actual implementation process, these policies often face various obstacles such as unclear regulatory responsibilities, inadequate platform supervision, and non-compliant operation of merchants, resulting in a large gap between the policy goals and the implementation effects. The root cause of this phenomenon is the inconsistent interest demands and unsmooth interactive communication among multiple stakeholders in the policy implementation process, including the government, e-commerce platforms and online food delivery merchants.

The Interactive Adaptation Model proposed by American scholar M. McLaughlin provides a systematic theoretical framework for analyzing the implementation difficulties of online food delivery safety policies. This model holds that policy implementation is not a one-way top-down command and execution process, but a dynamic mutual adaptation process between policy implementers and affected parties through negotiation, adjustment and compromise based on their own interests. Based on this model, this paper combs the current development status of China's online food delivery industry and the prominent food safety problems, analyzes the causes of the implementation difficulties of safety policies from the three core subjects of the government, e-commerce platforms and online food delivery merchants, and further puts forward targeted countermeasures from the perspective of mutual adaptation among the three subjects. The research aims to clarify the interactive mechanism among different stakeholders in the policy implementation process, improve the effectiveness of online food delivery safety policy implementation, and provide practical reference for the healthy and sustainable development of the online food delivery industry.

2 Current Status of Online Food Delivery Safety in China

Driven by the continuous advancement of internet technology, China's online food delivery market showed a growth trend in 2023. According to data from China Business Intelligence Network, the scale of China's online food delivery market had reached 1.1 trillion yuan by 2022, making the online food delivery business a new business format with a trillion-yuan scale. As of December 2023, the number of online food delivery users in China had reached 545 million, accounting for 49.9% of the total number of internet users [1] (see Figure 1). Users aged 21-35 accounted for the largest share at 73.04%, followed by those under 20, who made up 22.66%. These data fully indicate that online food delivery services have been integrated into people's daily lives in China and become an indispensable part. The rapid growth of the market not only demonstrates the strong momentum of the online food delivery industry but also reflects the increasing demand of consumers for convenient catering services [2]. However, as the market scale continues to expand, online food delivery safety issues have also become increasingly prominent.

Year	Online Food Delivery User Scale (100 million people)	Penetration Rate of Internet Users (%)
2020	4.19	42.3
2021	4.69	45.5
2022	5.12	48.8
2023	5.45	49.9
Note: Data sources: China Business Intelligence Network; [1] Yu, A. N. (2023). Problems and Governance Measures of "Sunshine Kitchen" in Online Catering. China Quality Supervision, (7), 39-41.		

Fig. 1. Scale and Usage of China's Online Food Delivery Users (2020-2023)

3 **Analysis of Causes for Difficulties in Implementing Online Food Delivery Safety Policies in China**

The difficulties in implementing China’s online food delivery safety policies arise from the different interest demands of various stakeholders. The following analysis explains the causes from three perspectives: the government, e-commerce platforms, and online food delivery merchants.

3.1 The Government

The government’s laws, regulations, and supervision mechanisms need to be improved and refined. Compared with traditional restaurants, online food delivery services have stronger virtuality, concealment, longer food supply chains, and more supply links, which put forward higher requirements for the establishment of a food safety supervision legal system. Currently, China’s relevant laws and regulations have not well adapted to the characteristics and complexity of online food delivery services on e-commerce platforms, resulting in many legislative gaps and ambiguities in practice.

Supervising the food safety of online food delivery on e-commerce platforms requires the involvement of multiple departments, such as market supervision, food and drug supervision, and health supervision. However, the unclear division of supervision responsibilities at the legal level leads to inadequate coordination and collaboration mechanisms among these departments. Consequently, in actual supervision work, supervision blind spots and duplicate supervision are likely to occur, which not only wastes supervision resources but also imposes a heavy burden on government agencies.

3.2 E-Commerce Platforms

E-commerce platforms fail to conduct on-site inspections of all merchants entering the platform. During the merchant entry process, only simple checks of the materials and information submitted by merchants are sometimes conducted, without in-depth verification. This allows some “ghost restaurants” and merchants that do not meet

food safety standards to enter the platform ^[4], which has become a major hidden danger to the food safety of online food delivery.

Inadequate and untimely information verification and maintenance by food delivery platforms are also important causes of food safety issues. During the 315 inspection this year, it was found that some online catering enterprises either failed to publicly display their business licenses, had expired food operation permits, or displayed small catering registration certificates (which do not qualify for online food ordering). Even for takeout services with "no dine-in" business scope, the platform's implementation of label display requirements is not in place ^[5], making it difficult for consumers to identify the actual operation qualification of merchants. This has led to a number of merchants without legal operating qualifications entering the online catering market, increasing food safety risks.

3.3 Online Food Delivery Merchants

Online food delivery merchants overly pursue economic benefits while neglecting food safety. In terms of processing environments, the overall hygiene of business premises is poor: walls, floors, and equipment lack regular cleaning and maintenance; and facilities for preventing mosquitoes, flies, and rats are inadequate. Many merchants, in order to receive more orders, disregard kitchen hygiene and fail to promptly dispose of kitchen waste, leading to the breeding of cockroaches and other pests.

To reduce food production costs and obtain higher profits, many merchants choose low-cost supply sources. Among these raw materials, some vegetables are grown with excessive pesticide use, resulting in severe pesticide residues. Long-term intake of such residues can cause serious harm to the human body. Additionally, some meats come from unknown sources, and they may even be from sick or dead poultry, which enter the kitchen without strict inspection and quarantine. Furthermore, the raw material storage conditions of some enterprises are extremely poor. Some perishable raw materials are stored for a long time under high-temperature and unsanitary conditions, becoming deteriorated, yet they are still used to prepare online food delivery.

4 Countermeasure Analysis Based on the Interactive Adaptation Model

4.1 Meaning of the Interactive Adaptation Model

The Interactive Adaptation Model was developed by American scholar M. McLaughlin. Based on a case study of the reform of the education structure in the United States at that time, McLaughlin used an inductive approach (from specific to abstract) to illustrate that policy implementation is a process of mutual adaptation between policy implementers (organizations or individuals) and affected parties regarding goals or means. He believed that this should be a process of dynamic

balance, and the effectiveness of policy implementation depends on the degree of mutual adaptation between the two parties.

The logical assumptions of the Interactive Adaptation Model mainly include the following four aspects:

(1) The needs and perspectives of policy implementers and affected parties are not entirely consistent. Based on their common interests in the policy, both parties must explain, negotiate, and compromise to determine a policy implementation method acceptable to both.

(2) The mutual adaptation process is a two-way communication process between parties on an equal footing, rather than the traditional one-way process of “top-down command and execution”.

(3) The goals and means of policy implementers can be adjusted according to changes in environmental factors, as well as the needs and perspectives of affected parties.

(4) The interests and value orientations of affected parties will be fed back to the policy, thereby influencing the interests and value orientations of policy implementers.

The final conclusion is: Successful policy decisions rely on effective policy implementation, and effective policy implementation relies on a successful mutual adaptation process.

4.2 Countermeasure Analysis from the Perspective of the Interactive Adaptation Model

4.2.1 Adaptation Between the Government and E-Commerce Platforms.

In the current online food delivery market environment, it is necessary to establish a specialized supervision system for the food safety of online food delivery on e-commerce platforms as soon as possible. At present, although China has formulated corresponding laws and regulations, there is a severe lack of supervision over the safety of online food delivery products on e-commerce platforms.

Targeted laws and regulations should be formulated to clearly divide supervision responsibilities, so that each supervision department can clearly understand its specific tasks and responsibilities in the food safety supervision of online food delivery on e-commerce platforms. E-commerce platforms should cooperate with the government: they must actively implement the relevant food safety policies and documents issued by the government, conduct food safety monitoring and reporting, establish a data sharing mechanism with government departments, and promptly submit the operation data of merchants on the platform to supervision departments. This enables government departments to grasp market dynamics and implement targeted supervision.

4.2.2 Adaptation Between E-Commerce Platforms and Online Food Delivery Merchants.

Improving the sound verification mechanism for merchants is conducive to the continuous development of online food delivery e-commerce platforms and the supervision of food safety. Firstly, online food delivery e-commerce platforms should enhance their self-supervision awareness, strengthen the management and supervision of merchants, and ensure that merchants conduct online food delivery business in a legal and compliant manner. All merchants entering the food delivery platform must undergo strict verification by the platform to ensure the completeness of their qualifications.

Merchants themselves should also comply with the supervision regulations of food delivery platforms: strictly select raw materials, ensure that employees hold valid certificates to work, and guarantee that food is not contaminated during the packaging process. Only in this way can the food safety of consumers be protected.

4.2.3 Adaptation Between the Government and Online Food Delivery Merchants.

At the source, supervision agencies should strengthen the verification of the raw material sources of online food delivery merchants to ensure that the raw materials are fresh and safe. During the food production process, attention should be paid to food hygiene, the cleanliness of kitchen facilities, and the standardization of employees' operations.

Big data analysis can be used to monitor the quality of online food delivery products. By tracking the hotspots of consumer reviews and complaints, key supervision can be imposed on enterprises with problems. In addition, penalties for non-compliant operators should be strengthened to increase their cost of non-compliance. Merchants, on the other hand, should actively cooperate with the inspections of supervision departments and strictly abide by food safety regulations.

5 Conclusion

As a key link connecting merchants and consumers, food delivery platforms should actively assume more social responsibilities in the adaptation process. They should leverage technological advantages such as digitalization and intelligence ^[3] to build a more comprehensive mechanism for merchant screening, supervision, and information disclosure, strictly regulate the access of merchants ^[4] and the standardized display of business information ^[5], control food safety risks from the source, and promote the process of industry standardization.

Under policy guidance and platform constraints, merchants should gradually enhance their food safety awareness, improve the standards and norms of food processing and production, and win consumers' trust with high-quality and safe dishes to achieve sustainable operation.

By formulating appropriate policies and regulations, strengthening supervision efforts, and innovating supervision methods, the government has built a solid legal defense line for online food delivery safety and created a fair and orderly market environment for the healthy development of platforms and merchants.

The adaptation among the three parties (government, platforms, and merchants) cannot be achieved overnight; instead, a dynamic balance is gradually reached through continuous communication, adjustment, and mutual understanding. In the future, all parties still need to maintain close cooperation, focus on consumer rights and interests, and continuously optimize adaptation strategies and actions.

It is believed that under the continuous role of the Policy Interactive Adaptation Model, online food delivery safety will reach a higher level, providing more reassuring and satisfactory catering services for the majority of consumers, and injecting continuous impetus and vitality into the healthy and stable development of the entire catering and online food delivery industry.

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