

# Analysis of China's Takeaway Industry in the Context of the Epidemic

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## ABSTRACT

China's food delivery market has grown rapidly over the past decade, growing more than 30-fold since 2011. Amid an overall decline in the restaurant industry due to the widespread coronavirus, the takeaway industry has continued to grow steadily, injecting new life and vitality into the market. Behind this brilliant achievement, legislative challenges brought by the new employment model, unfair competition on the platform, damage to the interests of merchants caused by monopolistic behavior, pollution, and waste caused by takeout packaging have become major obstacles to the sustainable development of the takeout industry. This review explains the reasons for the food delivery industry to keep growing during the epidemic from the perspectives of policy, economy, and technology. At the same time, it points out the seriousness and adverse effects of the above three problems and proposes to solve the problems by exploring new labor relations to reduce the legislative burden, promoting the implementation of anti-monopoly law to eliminate infringement, and improving the waste pollution recovery system and the corresponding accountability mechanism to improve the social consciousness. Sustainable development of the food delivery industry inevitably requires the cooperation of all stakeholders, and the best way to push the industry forward is to solve internal problems.

**Keywords:** Takeout, Pandemic shock, China.

## 1. INTRODUCTION

With the rapid development and popularity of the Internet in China, the take-out industry has shown a rapid development momentum to inject new vitality into catering, and nowadays, take-out has become an important business model in the catering field. Especially during the COVID-19 epidemic, online food delivery has more advantages than the traditional model. Online delivery facilitated low-risk access to cooked food for consumers and allowed many traditional food providers to continue operations. However, the rapid growth of the take-out industry has been accompanied by a growing discussion of its drawbacks and negative impacts. Therefore, it is time to review the reasons for the continued growth of the takeaway industry in the face of the epidemic, the drawbacks arising from its rapid development, and the implications for the people involved.

The growth of China's takeaway industry is due to the popularity of the Internet and the development of mobile clients in China. The superiority of the Internet

environment provides a good space for online takeaway to develop. Charlene discusses the growth of the online food delivery industry and emphasizes the action of all stakeholders should maximize its positive effect [1]. Compared to traditional marketing methods in the industry, take-out can provide more personalized service and is more preferred by consumers. China's takeaway industry has maintained growth despite the overall decline in restaurant revenues last year. Gao studied the short-term impact of COVID-19 on consumers' online food buying behavior, and the results showed that the proportion of reported cases of COVID-19 increased the likelihood of consumers buying food online [2]. Sangeeta's findings show that customers who purchased take-out during the COVID-19 outbreak mostly had a low perceived threat [3].

This paper analyzes the driving factors of China's food delivery industry during the COVID-19 pandemic. It affirmed the vitality and vitality of China's food delivery industry, faced up to the existing problems, and provided solutions for the purpose of inspiring

policymakers to improve the system to solve the problem.

## 2. PEST ANALYSIS

### 2.1. Policy support

In February, China's Ministry of Commerce and the National Health and Wellness Commission jointly issued guidelines to provide regulatory standards for takeaway delivery during the epidemic [4]. The government issued the Contactless Delivery Service Specification changed the situation that courier delivery personnel are not allowed to enter communities and neighborhoods for delivery, and also protects the rights of consumers [5]. People can make a note specifying the location of the goods to be placed before placing an order. If the goods are damaged, lost or miss-delivered, the merchant must take the initiative to coordinate and solve the compensation problem, promoting the healthy and orderly development of the takeaway industry during the epidemic.

Food delivery has high requirements for logistics timeliness, has benefited from the policy support for smooth logistics during the epidemic. Adjustments to the logistics industry during the epidemic also facilitated takeaway delivery. [6-7].

### 2.2. Economic progress

Affected by the new crown epidemic, the national restaurant revenue in 2020 was only 3.98 trillion yuan, down 15.3% year-on-year. Against the backdrop of restaurant revenues facing the first decline in nearly 10 years, China's takeaway industry still maintains growth. 2020, China's online takeaway market size has reached 664.62 billion yuan, and the user size of online takeaway exceeds 456 million people [8].



Figure 1 2011 to 2020 Revenue change of catering industry

The epidemic accelerated the transformation of traditional businesses online, driving the expansion of China's online takeaway market size. During the

epidemic, many caterers were affected to varying degrees, especially dine-in food. As a result of the epidemic, a large number of consumers were unable to leave their homes due to travel restrictions, and the safety and food safety issues of eating out eroded consumers' confidence, the dine-in consumption model was impacted and take-out became an important way for catering companies to achieve sales. On the one hand, take-out reduces the flow of people, reducing the risk of cross-infection, and on the other hand, as a relatively safe way to consume, it increases consumer confidence in the prevention and control period. The China Chain Store Association's research report on the impact of the new pneumonia epidemic on China's chain restaurant industry shows that during the epidemic, 91.6% of sample companies tried to sell take-out products, 73.2% tried to expand group meal take-out business, and more than 40% of sample companies sold ingredients, semi-finished meals, and pre-packaged products to increase revenue while also reducing the loss is caused by raw material waste. The loss is caused by raw material waste [9].

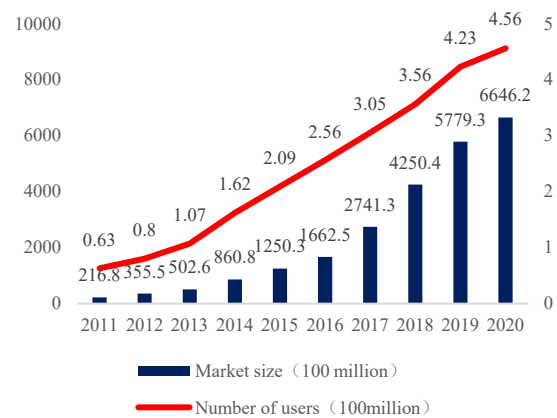


Figure 2 2011 to 2020 revenue change of China's catering industry

### 2.3. Social conception

During the epidemic, the segregated economy represented by the take-out industry and contactless delivery gained consumer acceptance. Contactless delivery refers to a delivery method in which the rider negotiates with the merchant and the user to place the goods at a designated pickup point or a location designated by the user, and the user picks up the food by himself, with no human contact throughout. Since the risk of virus transmission through commodities is extremely low, users can prevent infection by washing their hands promptly after picking up commodities. Contactless delivery meets the convenience and personalized needs of consumers improve the efficiency of logistics delivery and reduce the risk of cross-infection. According to the "Contactless Delivery Report" released by Meituan Takeaway, orders with

contactless delivery account for more than 80% of the total orders, and the percentage of users who use contactless delivery" service for every single takeaway is more than 60% [10].

The epidemic has brought about the formation of user habits, and it is likely that after the epidemic is over, contactless delivery services will still be loved by consumers, and even further enhance the popularity of smart delivery cabinets, even unmanned delivery machines, unmanned delivery vehicles, and other related delivery methods.

## **2.4. Technical development**

The advent of the digital age has promoted the rapid development of the food delivery market. For takeaway, delivery efficiency and user experience are of the utmost importance. To ensure that orders can be delivered to users in time, a dispatching system that can reasonably plan routes is indispensable.

In the early stage of the research, and development of the dispatching system, there are problems such as high operating costs and low level of distribution informatization. With the analysis of distribution data and the continuous collection of distribution route planning information, the algorithm is constantly improved. At present, major food delivery platforms such as Meituan, Ele. me and Baidu Waimai have developed their own relatively complete intelligent scheduling systems [11]. When the rider encounters extreme weather such as heavy rain and snow, the system will also allocate more time for the rider to deliver the meal to ensure that the rider will not exceed the speed because of fear of being late for the meal, and reduce the probability of the rider's traffic safety accident. The average delivery time of Meituan Food Delivery has been reduced to less than 28 minutes. Ele. me's intelligent dispatch system has covered 2,000 cities and counties in China. Over 70% of Baidu Food Delivery orders have been completed through system consolidation.

## **3. PROBLEMS**

### **3.1. Ambiguous labor relations**

In September, Beijing Zhicheng Law Firm published a report. The author reviewed the development and changes in the employment model of the food delivery platform and pointed out that the platform evaded social security obligations through ambiguous labor-management relationship design [12]. The takeaway platform outsources the distribution business to distributors, and the distributors outsource to other companies layer by layer. The takeaway rider is not only related to the platform but also has multiple labor relations with many companies. This led to the inability

to identify the employer at the time of the judgment, and the court was unable to determine the labor relationship through social security and thus was unable to judge the infringement of the foreign sales platform. What's more, the platform shirks responsibilities by allowing riders to register as individual businesses and is not protected by labor laws. Platforms and crowdsourcing companies have escaped their legal responsibilities as employers, and have evaded their social security payment obligations. They also have no obligation to pay compensation after an accident with a takeaway rider.

There has always been a discussion about the labor-management relationship between the platform and the food delivery staff in the food delivery industry. The difficulty in resolving the dispute is that it is unrealistic for the traditional labor relationship of the food delivery platform to fully pay social security for the rider. The take-out industry under the market economy, forming the current commercial employment model is a natural result of a multi-party game. However, capital pursues profit and evades social security obligations through the design of ambiguous labor-management relations.

### **3.2. Unfair competition**

On October 8, 2021, the State Administration of Market Supervision ordered Meituan to stop illegal activities and imposed administrative penalties on Meituan's "two-choice-one" monopoly in the online catering take-out platform service market in China and imposed its 2020 domestic sales in China 3% fine, totaling 3.442 billion yuan [13].

The so-called "choose one of two" means that e-commerce platforms use various explicit or implicit means to require cooperative merchants to enter only their e-commerce platform, and cannot enter competitors' platforms at the same time. If merchants do not cooperate, they will not be able to get many discounts on the platform. The support of policies and advantageous resources will even be expelled from the platform, requiring merchants to choose one of the two is essentially unfair competition and monopolistic behavior.

In the food delivery market of more than 600 billion yuan, Eleme and Meituan have always competed fiercely for merchants and consumer groups in the limited market, and mutual complaints involving unfair competition between the two are not uncommon. As early as April this year, Eleme was sentenced by the court to compensate Meituan for economic losses of 80,000 yuan due to the "choose one of two" behavior. Meituan was also fined millions of indemnities twice for unfair competition. Recently, the Qingdao Intermediate People's Court of China issued a ruling requesting Meituan to immediately stop the unfair competition on the Internet and compensate the plaintiff Eleme for

economic losses and reasonable expenses of 1 million yuan. Earlier, Meituan was also sentenced to 1 million yuan in compensation for "choosing one of two" behaviors [14].

The development of the platform economy is inseparable from the scale effect and network effect, but it does not mean that platform companies can move towards monopoly. The implementation of monopolistic behaviors such as "choose one between two" by platform enterprises will inevitably restrict the freedom of operation of small and medium-sized enterprises on the platform, and may even endanger their survival. Similarly, monopolistic behavior also restricts consumers' choices, and their legitimate rights and interests cannot be fully protected.

### **3.3. Pollution and Waste**

The outbreak of the takeaway business has caused the overuse of lunch boxes. The Greenpeace website researched and analyzed 100 take-out orders and found that on average, each take-out order consumes 3.27 disposable plastic lunch boxes [15]. This means that more than 60 million plastic lunch boxes are used every day on China's Internet ordering platform. Except for lunch boxes, plastic bags, plastic tableware, and plastic outer packaging used for take-out meals are all plastic garbage. The main component of ordinary plastic lunch boxes and tableware is polypropylene, and the main component of plastic bags is polyethylene, both of which are non-degradable ordinary plastics.

On the other hand, there is currently no efficient plastic recycling method in China [16]. Plastic lunch boxes, as low value-added recyclables, have low recycling prices and high recycling costs, making it difficult to enter the recycling channels of renewable resources. In the end, it can only be solved by massive incineration, which wastes materials and causes environmental pollution.

## **4. DEVELOPMENT JUDGMENT IN THE POST-EPIDEMIC ERA**

### **4.1. Improve legislation and strengthen supervision**

The core of alleviating the oppression of riders by takeaway platforms is to solve the legal disputes on the labor relations of takeaway workers. This issue is related to whether the platform is legally responsible for the delivery rider's payment of workplace injury insurance, salary, and compensation, and more importantly, how to identify workplace injuries and compensation when the delivery rider has an accident during the delivery process.

In the judgment of the employment relationship between riders and delivery platforms, local judicial

decisions have different standards [17]. Courts in different regions can have opposite judgments at different times. What is more, riders have provided similar evidence, but it has been a reason to reach opposite verdicts in different local courts.

There have been court decisions that provide realistic guidance on the division of liability. California State Assembly Bill 5 (AB5), signed in 2019, requires companies to classify temporary workers as regular employees, to better regulate companies [18]. Although subsequent Congressional Act 2257 rewrote some of the requirements of AB5 and exempted a large number of job categories. But it still affects many companies that rely on temporary workers, such as Uber. The Uber platform also began allowing drivers to set their prices based on service time and distance as a result of the bill. The creation of a third category of work between employees and contract workers, preserving some of the flexibility of freelance work while giving it some of the benefits available to full-time employees, maybe one way to solve the problem.

The takeaway platform entered the Taiwanese market as early as 2012, and until the two fatal car accidents involving takeaway workers in October 2019, however, the platform involved emphasized that there was only a "contracting relationship" between the platform and the takeaway workers, without any social security. This has led to widespread discussion in the community and the government's initiative to intervene. Taiwan's labor department conducted labor inspections of the two platforms involved, Uber eats and Foodpanda, and determined that the platform and the delivery person were in an "employment relationship" and punished the platform for failing to file employment insurance for the delivery person by relevant labor laws.

In any case, the relevant departments need to speed up the introduction of laws and regulations to clarify the labor relations between freelancers, including take-out riders, and the sharing economy/odd jobs platform, and to classify the legal status of full-time riders and part-time riders and define the corresponding rights and obligations. To fully satisfy the core interests of multiple participants with different goals, and let each party release the maximum goodwill to achieve a win-win situation, to improve the overall welfare level of society, and construct a harmonious, efficient, and sustainable takeaway labor system.

### **4.2. Punish monopolistic behavior**

In terms of anti-monopoly and anti-unfair competition, the relevant state departments are gradually tightening and improving their regulation. It has been a general trend to maintain fair market order and strengthen competition regulation, and combat monopoly in the takeaway industry market.

On November 10, 2020, the anti-monopoly guidelines issued by the State Administration of Market Supervision for the first time clearly defined "two-for-one" as an abuse of dominant market position and constituting a limited trading practice. In February of the following year, it was further clarified that "two-for-one" may constitute an abuse of dominant position and a restriction of trade [19].

In April 2021, the General Administration of Market Regulation imposed an administrative penalty on Alibaba for a "two-for-one" monopoly, ordering it to stop the illegal conduct and imposing a fine of 4% of its 2019 sales in China of RMB 457.512 billion, or RMB 18.228 billion. This is the highest fine amount and the most socially impactful anti-monopoly penalty since the release of the anti-monopoly guidelines [20].

With the increasingly stringent regulation and enforcement of national anti-monopoly and anti-unfair competition, it is foreseeable that the government will attach great importance to the implementation of platform compliance, enforcement will be continuously strengthened, and unfair competition will be more effectively curbed in the future. The merchants will be able to do business, abide by the law, and compete with reasonable means to create a better market environment and bring benefits to consumers.

Labor relations and monopolistic behavior are caused by unsound industrial systems and norms. Only rely on a concerned branch to step up management, punish illegal behavior and consumer to inform against actively, cooperate procuratorial personnel to obtain evidence photograph union ability reduces the harm that its place causes.

### ***4.3. The Solution to Pollution and Waste***

The environmental problems caused by take-out packaging have attracted the attention of relevant departments and industries. To systematically solve the environmental problems caused by takeaway waste from the whole supply chain, the takeaway platform, the merchants, and consumers in the supply chain need to assume common but differentiated environmental responsibilities.

As the core link in the supply chain, the platform should implement the extended producer responsibility system in the take-out enterprises, and the take-out enterprises should bear certain costs of recycling and disposal of take-out waste, instead of being paid by the government and the people, the take-out platform and the merchants can set up a recycling and disposal fund, which will be allocated to the lunch box recycling or disposal enterprises according to their sales.

At the same time, the government should take up the responsibility of guidance and supervision. Packaging

waste management regulations should be formulated at the national level to define the responsibilities of all parties involved in the chain of packaging design, production, distribution, recycling, treatment, and utilization, including take-out waste, and to regulate the behavior of individuals, enterprises, and governments. Accelerate the establishment of effective waste classification, and recycling system, strengthen the classification and recycling of take-out waste, resource utilization, and allow enterprises to actively participate in the take-out waste recycling system by giving subsidies, etc., so that more waste can be turned into treasure. At the same time, increase scientific and technological research, and development efforts, research, and development of low-cost, more appropriate environmental protection materials to replace traditional packaging materials.

## **5. CONCLUSION**

This paper reveals the factors that have contributed to the continued growth of the Chinese take-out industry in the context of the epidemic and reflects on some of the problems exposed in the development of the take-out industry such as, labor relations between riders and platforms, unfair competition within the industry, and pollution and waste. It highlights the need for action by all stakeholders including platform merchant policymakers, consumer food delivery riders, hoping that this paper will provide reference and comparison for future policy and system modification.

From a policy perspective, the logistics and home-based policies to ensure the effective implementation of epidemic prevention and control have facilitated take-out delivery. From an economic perspective, the dire situation of the traditional dine-in sales model in the context of the epidemic has led to a large number of restaurants accelerating their transition to online or developing online services. From a social perspective, the no-touch delivery promoted by the take-out industry caters to people's psychology of going out less and avoiding cross-contamination. The technological influence includes intelligent route planning systems, drone service systems, and delivery cabinets in the delivery process. These factors are the main reasons why the take-out industry continues to grow despite the increasingly severe background of epidemic prevention and control.

The rapid development of the industry often means that there are drawbacks within the industry. The ambiguous labor relationship between take-out platforms and riders makes it difficult for many riders to defend their rights against the platforms after accidents, and unfair competition among take-out platforms also harms the interests of merchants, both of which need to be addressed by legislation and supervision to strengthen management and activity reporting. The key

to solving environmental issues is to improve the waste recycling mechanism, implement the whole industry chain responsibility mechanism, and make everyone involved in takeaway pollution and waste responsible for this.

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