

The Impact of the Epidemic on Consumer Decision-making in the Online Food Delivery Industry

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Abstract: COVID-19 pandemic have a huge impact on human life, and it also creates a demand shock in various industries, including the food industry. This paper mainly researches the impact of the epidemic in the online food delivery industry and the variations in consumer decision-making in this industry. Methods of literature review and questionnaire are used to find out the differences in the online food industry before and after the pandemic and the greatest influencing factors of consumer decision-making after the pandemic. The paper reveals consumers' decisions are affected by COVID-19, and consumers care about coupons and promo codes the most after the pandemic. Development applications of online food delivery and further research line are suggested according to consumer decision-making factors.

Keywords: online food delivery, COVID-19, consumer decision-making, e-commerce

1. Introduction

E-commerce is gradually becoming more popular, including the online food delivery industry. Consumers increasingly move online over the past decades and order goods from online platforms [1]. Several online food delivery platforms are set up and attract consumers who are more willing to order food online and prefer takeaway services.

In recent years, the COVID-19 pandemic has greatly influenced the food delivery industry. The data from the U.S. Census Bureau and the National Restaurant Association indicated that there was a huge revenue loss in 2020, one year after the pandemic broke out, compared to 2019. For example, in April 2020, there was a 48.7% year-over-year decline for food and drink services, which further reflected a revenue loss of over 30 billion dollars [2]. The factors of consumer decision-making have changed after the epidemic. As a result of the differences and the closure of the dine-in channel, restaurants increased their activities on online platforms such as Uber Eats, leading to impacts on the online food delivery industry [2].

The objectives of this paper are to study the changes in influencing factors of consumer decision-making in the food delivery industry and analyze the impacts of the COVID-19 pandemic on online food delivery.

This paper mainly uses the methods of literature review and questionnaire, concludes the net impact on consumer decision-making, and explores the economic effect of the COVID-19

pandemic. In addition, this paper reveals the changes in online food delivery industry during COVID-19, and it can be utilized to study related research topics in the future.

2. Overview of Online Food Delivery Industry

2.1. Consumer Decision-making in the Online Food Delivery Industry Before the Pandemic

Considering the purchase, choice, and use of products and services, consumers regularly make decisions. Consumer decision-making is closely related to the consumer information environment and the elements of a consumer's choice, which include components like alternatives, attributes of value, and uncertainties [3].

Before the COVID-19 pandemic, with the development of the internet and online services, the online food delivery industry has become more popular among consumers. Some restaurants started to provide services such as online orders, and several online food delivery platforms were set up. For example, in America, Uber Eats was set up in August 2014, and DoorDash was set up in January 2013. Also, in China, Eleme was founded in 2008, and Meituan was founded in May 2010.

Although the online food delivery industry was developed before the pandemic, some consumers still preferred dine-in channels and presented concerns about online food delivery. Using online food delivery platforms as examples, a typical problem is food safety. The platforms lack supervision of restaurants. As the main purpose of the platforms is profit maximizing, most of the platforms only record the environments and licenses of restaurants the first time the restaurants entered the platforms with no regular reviews later. Moreover, for restaurants that have food safety problems, the online food delivery platforms do not set up a strict punishment mechanism. According to Yuyun Jin and Chao Li's survey, when consumers discover a food safety problem, about 66.7% of them will contact the restaurants through the platforms, and 22.2% of them only post bad reviews and do not take further action. Many restaurants will spend money buying some people to post good reviews and cover the bad reviews; however, the platforms will not punish this kind of behavior and the food safety problems will not be exposed.

90% of consumers in the survey have concerns about food safety, which affects their decision-making about online food delivery [4].

2.2. Consumer Decision-making in the Online Food Delivery Industry After the Pandemic

The influencing factors of consumer decision-making in the online food delivery industry have changed during the COVID-19 era.

After the pandemic, the range of online food delivery products and services becomes wider than before, including raw materials for cooking, instant food from markets, and ready-to-eat meals from restaurants [5]. The pandemic indirectly forces more restaurants and supermarkets to enter the online food industry, which increases suppliers in the market and provides more substitutes of products for consumers.

Also, the consumer information environment changes. Online food delivery services in the pandemic era offer more extensive, latest, and precise information to customers, involving restaurants' locations, menus, prices, and online ratings [5]. This produces a more transparent environment of food delivery for consumers.

Besides the improvements in online food delivery services, people's fear of COVID-19 also drives them to alter their decisions. According to research, online food delivery innovates in three ways. Firstly, let consumers unbox their food by themselves and enjoy a surprise at home, and the fear of COVID-19 makes this option more attractive to consumers because they want to have their meals alone to prevent infection. The second way is home chef, and this option becomes less charming, as people do not want to get in touch with strangers in the pandemic era. The third way is

a DIY meal kit, and the fear does not cause significant impacts on this option [5]. The fear of COVID-19 affects consumers variously in different situations.

2.3. Comparison and Analysis

On the whole, the COVID-19 pandemic produces a demand shock among consumers and alters some critical factors that influence consumer decision-making. At the beginning of the pandemic era, producers suffered a decrease in profits compared to previous years, and the market gradually started to rebound. The changes cause more consumers' preferences to transform from in-person channels to online food delivery and services. This shift is obvious and not only limited to the food industry. There are also some permanent changes in other industries, which represents e-commerce may become dominant in the future [2].

3. Methodology

To better investigate the effects of platforms' performances and improvements on consumer decision-making, methods of literature review and questionnaire are used.

3.1. Online Food Delivery Platforms' Performances and Improvements

In the COVID-19 pandemic era, to avoid epidemic transmission, many industries faced an economic crisis, including the online food delivery industry [6]. As in some countries, dine-in services were forbidden for some time when COVID-19 broke out, there appeared a notable increase in online food delivery orders. The online food delivery industry flourished during the pandemic era, and the platforms performed differently facing diverse challenges and consumers' expectations [7]. Previous researches conclude three dimensions that affect consumers' decisions and satisfaction, containing performance on the platforms, product quality, and service quality [8]. To be more specific, performance on the platforms includes customized orders, coupons, and promo codes; product quality mainly refers to food quality, materials quality, and package design; service quality involves vaccination requests, help and support from drivers and restaurants, and delivery operations [7].

Take China as an example, the changes in performances of online food delivery platforms and consumer decision-making are clearly shown. Service industries in China were influenced by the pandemic, and in 2020, offline market transactions declined by 15% compared to the previous year [9]. According to Jingyi Ma's paper, the present Chinese online food delivery market size exceeds 650 billion yuan, which is equal to approximately 91 billion dollars, and there are more than 460 million customers in the market. In 2021, the online food delivery market accounted for more than 20% of the total food market in China [10]. The pandemic led consumers to care more about food safety and further led to problems with traditional food packaging. As a result, several online food delivery platforms improved their food packaging during the pandemic. The improvements in packaging focus on the needs of epidemic prevention and control, food safety, and environment friendly [10]. Also, several online food delivery platforms improved their ways of food delivery. Using Meituan online food delivery platforms as an example, it provides consumers with a contactless delivery option, which allows consumers to take their food without contacting restaurants or drivers. Regarding the data from Meituan official website, over 80% of Meituan customers choose contactless delivery [10].

3.2. Questionnaire Design and Data Collection

In order to find out the most effective factors that influence consumer decision-making after the COVID-19 pandemic, a questionnaire is designed to complete the survey. The questionnaire is electronic, contains five main questions, and asks participants where they are from, their age, how often they order food online a week, whether the COVID-19 epidemic will affect their decisions about online food delivery, and what type of performances of the online food delivery platforms do they prefer. The participants in the experiment are randomly recruited from social media sites and are mostly from China. They fill up the questionnaire through a web survey, and filling out the questionnaire takes about 1 to 3 minutes. Data collection was completed in June 2023.

3.3. Results and Discussion

The results of the questionnaire show that 11.83% of the participants are under 18 years old, 55.91% of them are 18-25 years old, 12.9% of them are 26-30 years old, 15.05% of them are 31-40 years old, and the rest of them are from other ages. When being asked about participants' order frequency a week, only 10.75% of people choose they don't order online food. 58.06% of people choose they order online food once or twice a week, 21.51% of people order 3-4 times a week, and 9.68% of people order more than 4 times a week. 60.22% of the participants think the COVID-19 pandemic influences their decisions on ordering online food, and the factors that have great effects are coupons and promo codes, free delivery, and food quality, as shown in Figure 1.



Figure 1: Influencing factors of consumer decision-making after the pandemic.

The method of the questionnaire has high efficiency, and the results are easy to quantify. However, the data of the questionnaire is mainly from Chinese participants, different countries' citizens may have different values and opinions. As a result, the data may be not very comprehensive.

4. Conclusion

This paper discusses the performances of online food delivery industry and how consumer decision-making was affected in the COVID-19 pandemic era. The online food delivery industry make improvements and growing, leading to changes in consumer decision-making. Factors such as coupons and promo codes influence consumers' decisions the most. This paper only focuses on the past and present situation of online food delivery industry, and the future trends of consumer decision-making are not mentioned as an emphasis. Looking forward to the future, the online food delivery industry has good prospects for development. The platforms can improve their services

according to consumer decision-making factors, such as providing more coupons in a way of small profits and quick returns. Researchers in the future can make more explorations along this direction.

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