

Research on the Price Volatility Mechanism under the Competition of Takeout Platforms - Thrid Party Perspective Analysis of Platforms, Merchants, and Consumers

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Abstract. In recent years, the rise of the digital economy and the "fast commerce and fast delivery" model. The significant intensification of competition among food delivery platforms has led to price wars becoming the norm in industry. Various platforms quickly stimulate order growth and increase user base through strategies such as subsidies, discounts, and free orders. This competitive approach may bring market expansion and consumer dividends in the short term. However, it has led to potential problems such as decreased profits, compressed merchant profits, and consumer price dependence. This article elaborates on the current development status of domestic and international food delivery platforms, explores the operational and profit models of conventional platforms, and analyzes the competitive strategies of platforms, changes in merchant profits, and consumer choice psychology in price wars from multiple perspectives. On this basis, through data collection and comparison, the article explores the trend of commodity price fluctuations and analyzes their causes. Finally, this article proposes suggestions for differentiated competition, product optimization, and rational consumption for platforms, merchants, and consumers. It contributes to a deeper understanding of the structural driving forces behind price fluctuations in the food delivery industry, providing theoretical and practical references for promoting sustainable competition in the industry.

Keywords: Price Fluctuations; Market Strategy; Food Delivery Platforms Competition; Case Analysis.

1. Introduction

1.1. Research Background and Topic

According to a report by Grand View Research, the global online food delivery market is expected to reach approximately \$380 billion in 2024 and is projected to surpass \$600 billion by 2030 [1]. Third party food delivery platforms such as Meituan, Uber Eats, DoorDash, and Deliveroo have emerged. With the help of digital technology, intelligent algorithms, and big data analysis, they are greatly changing consumers' dining habits and businesses' operational models [2]. In China, top platforms have achieved rapid expansion through large-scale subsidies, discount offers, and diversified business expansion [3]. By December 2024, the number of online food delivery users in China had reached approximately 592 million, accounting for 53% of total internet users [4]. However, as competition becomes increasingly fierce, the price war between platforms intensifies, leading to significant price fluctuations. At the same time, it has also sparked discussions on market regulation and sustainable development of platforms.

1.2. Research Purpose and Significance

This study aims to explore the price competition among food delivery platforms and the resulting price fluctuations and analyze the short-term and long-term impacts of price wars on multiple stakeholders such as platforms, merchants, and consumers. By reviewing typical cases and empirical data, this study aims to reveal the intrinsic relationship between subsidy strategies, user stickiness, and market share, and deepen the understanding of competition mechanisms in the platform economy [4]. Therefore, this study will provide a supplement to the academic research on the digital platform

economy. At the same time, it provides reference for regulatory agencies and industry participants in formulating reasonable pricing strategies and competition policies.

1.3. Research Methods and Framework

This study employs both the literature review method and the case analysis method. It will utilize global market reports, industry data, and other sources to clarify the trajectory of the development and operational mechanisms of the food delivery industry. At the same time, this study will analyze cases of typical businesses, including Taobao Flash Purchase, Meituan "Free Order", and Uber Eats, and explore their pricing strategies and operational performance. The research framework contains four parts: the first part covers the current development status and operational mechanisms of the food delivery industry; the second part analyzes the causes and impacts of price wars with the help of case studies and data visualization; the third part analyzes the behaviors and interests of platforms, merchants, and consumers; the fourth part looks ahead to the future of the food delivery industry and proposes countermeasures.

2. The Current Development Status and Operational Mechanism

2.1. Overview of the Global Food Delivery Industry

In recent years, the global food delivery industry has developed rapidly, becoming one of the fastest-growing sectors in the digital economy. The global online food delivery market is expected to reach approximately \$380 billion in 2024 and is projected to climb to over \$600 billion by 2030 [1]. At the same time, the epidemic has accelerated the popularization of online ordering. In 2020, food delivery service usage increased to 47% globally, and ordering patterns changed to be daily [5]. In terms of market dynamics, the North American, Asia Pacific, and European markets all have shown a trend toward expansion. Particularly emerging markets such as China and India represent the leading contributors to growth [6].

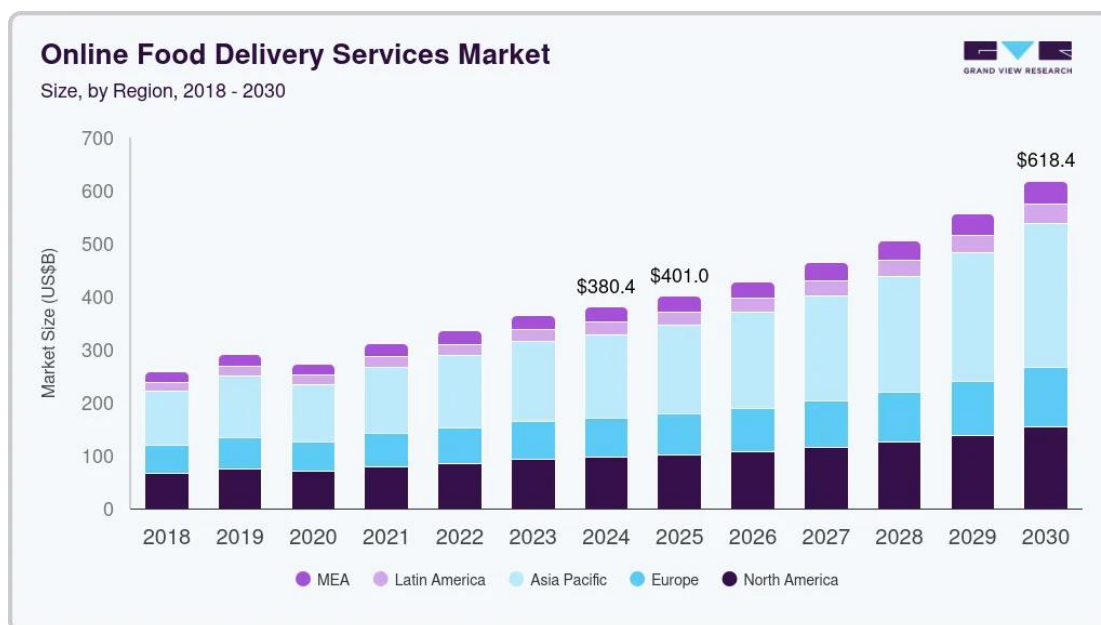


Fig. 1 Online Food Delivery Service Market (Source: Grand View Research)

From Fig.1, on a global scale, the food delivery user group shows characteristics of youthfulness and digitization. International survey data shows that from 2018 to 2021, the average age of users of food delivery services in samples covering Canada, Australia, the United Kingdom, the United States, and Mexico was about 46 years old. Among them, the age group of 18-44 is the main group, accounting for over 50% [7]. In China, food delivery users are concentrated between the ages of 18 and 35. They are highly sensitive to consumer convenience and price [1]. In contrast, European and

American users place greater emphasis on the quality, safety, and accessibility of their meals. However, the willingness to accept food delivery services still significantly increased [5].

The global platform landscape is currently dominated by companies such as Meituan and Ele.me in China, Uber Eats and DoorDash in the United States, and Deliveroo in Europe. The success of these top platforms relies on multiple factors. They have built a mature delivery network and optimized order matching through AI recommendation systems. Adopting a "subsidy+membership" strategy, the platform quickly accumulates users. By actively expanding diversified businesses such as instant retail and grocery delivery, they enhance the stickiness of the platform ecosystem [6].

2.2. Industry Operation Mechanism

The core profit models of food delivery platforms can be summarized into three parts: order commission, merchant advertising and promotion fees, and value-added service fees. The commission on orders generally ranges from 15% to 30%, which is the main source of income. Merchant advertising increases exposure and provides additional revenue for the platform. Value added services such as membership subscriptions and scheduled delivery are increasingly becoming supplementary channels [8].

Despite the continuous expansion of the global food delivery industry, there are differences in behavior patterns and product preferences among different regions. With the high-frequency consumption characteristics in line with the subsidy driven model, the Chinese market is dominated by fast food, snacks, and beverages. In the European and American markets, healthy meals, customized or high-priced meals are more popular. At this point, delivery speed and quality have become key competitive factors [1]. It can be seen that platforms should adopt differentiation strategies in different regions and product categories to adapt to local market demands.

3. Cases and Data Analysis

3.1. Reasons for Price Competition and Fluctuations

In recent years, competition among Chinese food delivery platforms has evolved from early delivery service competition to an unprecedented "price war". Taking 2025 as an example, JD.com, Alibaba (Taobao flash purchase and Ele.me), and Meituan will invest heavily in subsidizing users and merchants in the field of instant retail, with a total amount of nearly hundreds of billions of yuan. JD.com plans to invest billions of yuan. Alibaba's Taobao Instant Commerce plans to invest 50 billion yuan in subsidy funds in the next year, while Meituan will quickly trigger a consumption boom through promotional activities such as "milk tea" for free. This intense subsidy model has led to a surge in the number of orders. At the same time, they have also led to a significant increase in platform profit pressure and regulatory intervention in healthy competition policies.

3.2. Typical Case Analysis

In China, during the peak promotion week in July 2025, Meituan, Taobao flash purchase, and JD.com launched a large-scale subsidy war. Among them, Meituan's daily order volume exceeded 120 million, setting a new historical high. Taobao and Ele.me jointly reached 80 million flash purchases. JD.com achieved 25 million orders [9][10]. The total amount of subsidies disbursed in this round reached 8 billion yuan, driving the total number of instant retail orders nationwide to 250 million [11]. However, this short-term outbreak has not significantly changed the market landscape between platforms. Meituan still maintains its lead, Taobao flash purchases expand their market share through traffic resources, while JD.com enters the track through a low-price strategy.

In foreign markets, the price war between Uber Eats and DoorDash in the United States is equally intense. According to Statista data, DoorDash will launch a "\$0 delivery fee" strategy from the end of 2024 to the first half of 2025 [11]. The free trial of subscription based DashPass resulted in a 25% increase in monthly active users (MAUs) within three months, reaching 35 million people. Uber Eats immediately followed suit and attracted over 30 million active users in the second quarter of 2025

through subsidy strategies such as cashback points and limited time free orders. Although the order volume has significantly increased in the short term, the net profit margins of both platforms have been compressed to below 3% [11], indicating the unsustainability of subsidy competition.

3.3. Visual Data Comparative Analysis

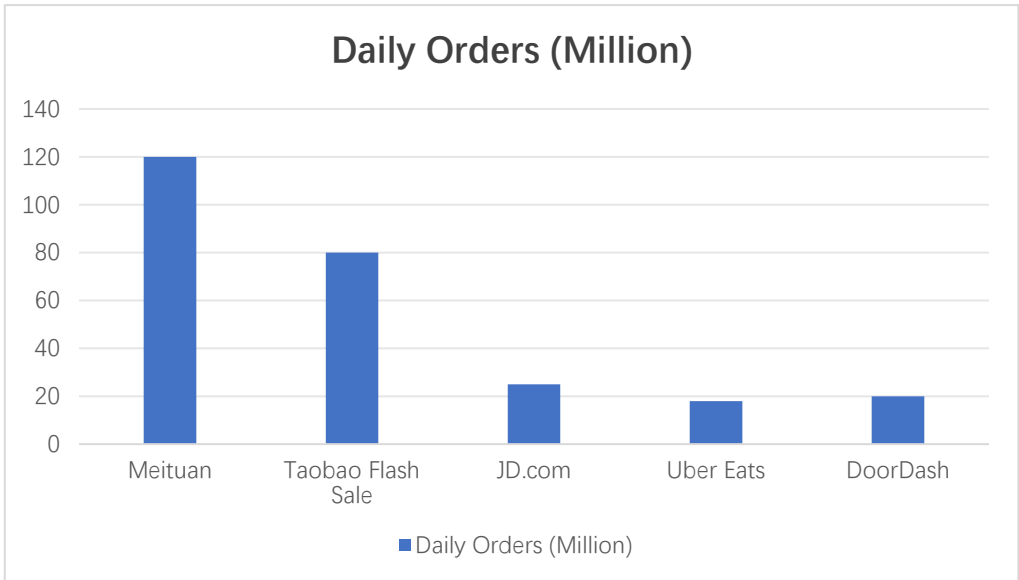


Fig 2. Daily Order Volume Comparison Among Platforms (July 2025 Peak Day)

Fig. 2 shows that on the peak day of promotions in July 2025, the order volume in the Chinese market is significantly ahead of that in the US market. Meituan remained at the top with 120 million orders, followed closely by Taobao's flash sale with 80 million orders. This result reflects the high dependence of Chinese consumers on instant retail services and the efficient operational capabilities of the platform in the delivery network. In contrast, DoorDash and Uber Eats have order volumes of 20 million and 18 million respectively in the US market. Although performing well, there is still a significant gap compared to the size of the Chinese market. The fierce competition in the Chinese market has also brought about more marketing innovations, such as larger scale free to order activities and cross platform linkage. The US market, on the other hand, places more emphasis on the subscription model, which typically refers to paid membership programs (such as DashPass or Uber One) that provide users with benefits like reduced delivery fees, exclusive discounts, and additional perks.

Table 1. Total Daily Orders and Subsidy Investment Comparison

Time Point	Total Daily Orders (Million)	Total Subsidies (Billion RMB)
Early 2025 Avg	100	Negligible
July 2025 Peak	250	8

Table 1 reflects the significant stimulating effect of promotional subsidies on market transaction scale. In July 2025, the total number of instant retail orders in China increased from 100 million at the beginning of the year to 250 million, with a growth rate of over 150%. At the same time, the platform has invested nearly 8 billion yuan in subsidies during this stage. This demonstrates the high investment strategy of enterprises in traffic competition. This "high investment for growth" model greatly increases user activity in the short term, but in the long run, it will exacerbate the financial pressure on the platform.

Table 2. Market Share and Daily Order Changes Before and During Subsidy War

Platform	Pre-Subsidy Daily Orders (Million)	Peak Daily Orders (Million)	Market Share Change (%)
Meituan	70	120	15
Taobao Flash Sale	20	80	20
JD.com	5	25	8
Uber Eats	12	18	5
DoorDash	15	20	4

Table 2 shows the changes in order volume and market share of each platform before and after the price war. From the data, it can be seen that Taobao's flash purchase has seen the most significant increase in market share, with a growth rate of 20%. This shows that it has achieved breakthrough growth by relying on the Alibaba ecosystem and precise user subsidy strategies. Although Meituan has grown by 15%, its market leadership position remains stable. Although the growth rate of JD.com orders is as high as 400%. However, due to its low base, its overall competitiveness is still limited. In the US market, the order growth of Uber Eats and DoorDash is relatively moderate, only 5% and 4% respectively. This reflects the limited effectiveness of its subscription driven growth strategy. It can be seen that in the Chinese market, short-term subsidies can significantly leverage market structure. In the United States, market growth relies more on long-term membership systems and localized service strategies.

4. Multi Subject Behavior and Interest Analysis

4.1. Competitive Strategy for the Platform

In the price war of food delivery platforms, the platform is the most direct driver. Its competitive strategy is mainly reflected in two aspects: expanding user base and competing for market share. In order to rapidly increase market share in the short term, platforms generally adopt measures such as large-scale subsidies, free to order activities, and cross ecological integration [12].

However, this "high subsidy+high expansion" model, while bringing short-term growth, also exacerbates the financial pressure on the platform. Data shows that during the peak of the price war in July 2025, Meituan's subsidy investment exceeded 4 billion yuan, resulting in a significant decrease in profit margin for the quarter. Therefore, some platforms have begun to explore differentiated competitive strategies. For example, Uber Eats and DoorDash tend to target high-frequency users through subscription systems such as Uber One and DashPass. This strategic shift means that in the future, platform competition may gradually transition from simple price competition to multidimensional competition in user experience and ecological construction.

4.2. For Merchants

In the platform price war, merchants are both beneficiaries and pressure bearers. On the one hand, large-scale subsidies and traffic tilts have enabled small and medium-sized catering merchants to gain higher exposure and order volume. On the other hand, platforms often require merchants to bear some of the discount costs, resulting in a compression of individual profit margins.

In the long run, growth driven by excessive reliance on subsidies is not sustainable. Large chain catering brands, due to their strong bargaining power, can reduce costs through stable supply chains and economies of scale [13]. However, small and medium-sized merchants lack such ability and are easily trapped in the dilemma of "high sales and low profits". Therefore, more and more merchants are seeking multi-platform layouts to avoid excessive reliance on a single platform.

4.3. For Consumers

Consumers are the most direct beneficiaries in the price war. Stimulated by high subsidies, users can enjoy a wider range of product choices at lower prices and experience faster delivery. However, the "dividends" of subsidies are often short-lived. After the price war ends or the subsidy intensity weakens, users' consumption habits and platform preferences will significantly change. Research shows that about 40% of users have switched to platforms with higher low-price competitiveness after subsidy cancellation, indicating that user loyalty remains low [11]. This places higher demands on the platform. How to retain users through service quality, product diversity, and membership benefits beyond price.

5. Future Prospects and Suggestions

In the future development of food delivery platforms, the roles and interests of platforms, merchants, and consumers will continue to affect the industry's competitive landscape. For platforms, the competition model relying solely on subsidies and low-price strategies is no longer sustainable, and differentiated competition will become the key. The platform should create a diversified service system based on the preferences of different regions and consumer groups. Explore models such as membership and subscription to enhance user stickiness and achieve a transition from "price driven" to "experience driven". For businesses, they should pay attention to the two-way improvement of products and services. On the one hand, by improving the quality of dishes, enriching product categories, and innovating differentiation, we can meet the diverse needs of consumers. On the other hand, innovation can be made in marketing forms, such as launching package combinations, limited time discounts, etc., to attract more users' attention and orders. Meanwhile, a multi-platform layout will become an important strategy for businesses to avoid dependence on a single platform and balance profits and order volume. From the perspective of consumers, they must rationally evaluate the value of goods, while being simultaneously influenced by price discounts, while paying attention to the quality-of-service interactions and their health and safety. It is essential to avoid over-dependence on a previously existing and short-term subsidy, and to develop a sustainable consumption pattern. Overall, the "multi-agent game" created in the interaction between food delivery platforms, merchants and consumers will slowly shift to service innovation and value creation, and the variation in prices may stabilize in their frequency and intensity.

6. Conclusion

This research examines the multi-dimensional drivers of price changes, by addressing the current circumstances, operating methods, and price war instances of domestic and foreign food delivery platforms. The issues addressed include platform subsidy strategies, user stickiness, and market share changes. Literature suggests that short-time price wars can stimulate the volume of orders and increase market share quickly. However, in the long run, it is easy to lead to platform profit compression, merchant profit shrinkage, and the increase in the user's dependent psychology. Multi subject behavior analysis shows that in the future, industry competition will focus more on differentiation strategies, service optimization, and ecological construction, rather than simply low-price competition.

However, this study still has certain limitations. Data relies heavily on public and industry reports, and the behavior of some regions and platforms may not be fully covered. Meanwhile, the changes in user psychology and merchant strategies are complex and require further long-term tracking and research. Especially, changes in consumer behavior are often due to the emergence of sudden consumption stimuli (such as limited time promotions, sudden subsidies, flash sales activities, etc.) rather than gradual changes. Hence, future research can explore the price fluctuation mechanism, subsidy strategy effectiveness, and multi-party interaction patterns in the platform economy through empirical data and experimental studies on a wider geographical and longer time span.

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