# A Study on the Low-Price Competitive Strategy of the E-Commerce Platform Based on Pinduoduo

Bowen Zheng<sup>1, a, \*</sup>

<sup>1</sup>School of Mathematical Science, University of Southampton, Southampton, SO17 1BJ, United Kingdom School of Mathematical Sciences

a. bz1m21@soton.ac.uk

\*corresponding author

Abstract: The rapid growth of e-commerce platforms has intensified competition among businesses and prompted the exploration of various competitive strategies. Among these strategies, adopting low-price pricing has become an important method for attracting and retaining customers. This research paper delves into low-price competition, focusing on one of the key participants in the Chinese e-commerce landscape - the Pinduoduo e-commerce platform. The study aims to examine the complex strategy network through which Pinduoduo maintains its competitive advantage through low-price strategies, discussing the advantages of its low-price strategies in the e-commerce domain. The practical application of low-price strategies is explained by examining Pinduoduo's group buying, limited-time flash sales, and user-driven discount propagation. Additionally, this paper investigates factors influencing the effectiveness of these strategies, including cost control, platform scale, and market positioning. Through case studies, it evaluates Pinduoduo's successes and challenges in pursuing low-price competition.

*Keywords:* Pinduoduo, low-price bidding strategy, e-commerce platform

#### 1. Introduction

The rapid development of information technology and the widespread use of the internet have shaped a dynamic and opportunistic digital era. In this context, China's e-commerce industry has demonstrated remarkable growth in recent years. According to data from the "China E-commerce Report (2022)", the e-commerce transaction volume in China reached an astonishing 4.383 trillion yuan in 2022, representing a growth of 3.5% from the previous year [1]. This statistic indicates the continuous increase in consumer demand for online shopping, with e-commerce holding a significant position in China's business landscape.

With an online shopping user base of 845 million, accounting for 79.2% of the total internet users, e-commerce plays a crucial role in China's economic growth. Data from the China National Bureau of Statistics shows that in the first half of 2022, online retail sales of physical goods in China increased by 5.6% year-on-year, accounting for 25.9% of the total retail sales of consumer goods [2]. This statistic highlights the emergence of online retail in the overall retail market and its profound impact on traditional retail.

Against this backdrop, the Chinese e-commerce platform landscape has gradually shaped, with giants like Alibaba, Pinduoduo, and JD.com standing tall. These three platforms represent the

<sup>© 2023</sup> The Authors. This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (https://creativecommons.org/licenses/by/4.0/).

trajectory of China's e-commerce, achieving significant success nationwide through their innovative, large-scale, and diversified business models. However, in this tripartite competition, the strategy of low-price competition has gained increasing attention as a vital means of market competition.

Founded in 2015, Pinduoduo became an e-commerce dark horse in 2017, surpassing 300 million users, achieving a daily platform turnover of tens of millions, and reaching an annual GMV of hundreds of billions. This accomplishment took JD.com 10 years and Taobao 5 years, whereas Pinduoduo achieved it in just two and three months. On July 26, 2018, Pinduoduo successfully went public on the NASDAQ stock exchange in the United States. Pinduoduo quickly made a name in three short years, ranking among the top three in China's e-commerce field. Through its innovative and efficient bidding strategy, Pinduoduo's market value grew fourfold in this limited time, setting a remarkable example of success [3].

Pinduoduo's success represents the rise of a new e-commerce platform. It demonstrates the significant influence of low-price competition strategies in e-commerce, providing valuable lessons for developing other e-commerce platforms. Additionally, despite its rapid growth and impressive achievements, Pinduoduo has consistently been in the spotlight of public opinion. There have been issues with product quality and quality control on the Pinduoduo platform, with incidents such as protests against the sale of counterfeit television products by Skyworth and Konka, as well as the "6·13" merchants' rights protection at Pinduoduo headquarters [4]. Alongside the low prices are controversies surrounding the platform's product quality, lax product control, and fraud. This paper attempts to analyze the current state and marketing environment of the Pinduoduo e-commerce platform, revealing its operational successes and shortcomings, conducting an in-depth study of the issues currently faced by the Pinduoduo e-commerce platform, and proposing targeted strategies to provide insights for its future development.

#### 2. Case Description

In 2015, Taobao and JD.com, the two leading e-commerce platforms, had gradually matured and occupied significant positions in the domestic consumer market. However, these two platforms mainly targeted consumers in first and second-tier cities, lacking attention to the low-end consumer market. According to National Bureau of Statistics data, China's average disposable income per capita was around 4,600 yuan in 2015. Consumers in less developed areas couldn't afford luxury goods, indicating a huge potential low-end consumer market. However, mainstream e-commerce platforms failed to notice this group of people and the market because these consumers couldn't make purchases on mainstream e-commerce platforms. They needed a shopping platform that matched their spending levels.

On the supply side, regulatory authorities strengthened supervision, and various e-commerce platforms also intensified efforts to combat counterfeit goods. Taobao closed the shops of many small vendors. Consumers and suppliers urgently needed a platform to facilitate transactions. This platform needed to cater to both consumer demands and supplier offerings. It was in this context that Pinduoduo emerged, meeting the supply and demand needs. Pinduoduo became a dark horse in the e-commerce field through a low-price strategy.

As of August 2023, for example, an iPhone 14 in the Starlight color (128GB), with an official suggested retail price of 5,999 yuan. However, on platforms such as Taobao and JD.com, both under the Alibaba Group, the price is around 5,399 yuan. On Pinduoduo, through a billion-dollar subsidy campaign and a unique "group buying bidding" auction model, the same phone is sold for only 4,998 yuan, establishing a clear price advantage.

## 3. Analysis on the Problem

#### 3.1. Analysis of Pinduoduo's Low-Price Competition Strategy

#### 3.1.1. Market Positioning

In China, significant disparities in disposable income between urban and rural residents, as well as between different regions, persist. Pinduoduo has adopted a clear product and market positioning within its low-price competition strategy. Pinduoduo's is deeply engaged in sinking markets, and the number of users in third and fourth-tier cities, can account for 40-50% of the total users. Meanwhile, users from first-tier cities constitute only 7% to 9%. This underscores Pinduoduo's deep engagement in lower-tier markets, targeting low-income individuals and consumers in third and fourth-tier cities seeking cost-effective and high-value shopping experiences. Pinduoduo fulfills the shopping needs of this population segment by providing a wide array of discounted products. This market positioning starkly contrasts mainstream e-commerce platforms like Taobao and JD.com, allowing Pinduoduo to carve out its niche in different consumer strata.

## 3.1.2. Pricing Strategies and Promotional Methods

Pinduoduo's pricing strategies are primarily focused on attracting users with low prices. In June 2019, Pinduoduo initiated the "Hundred Billion Subsidy" promotion plan, initially selecting 10,000 of the most popular products nationwide for precise subsidies. Later, this subsidy plan was expanded to include 20,000 products. Company spokesperson Wang Ting explained that this campaign involves Pinduoduo investing 10 billion RMB to subsidize selected products, providing consumers with even lower prices. While benefiting consumers, this strategy also encourages merchants to make concessions, with the platform providing unlimited and unrestricted subsidies based on the cost price [5]. This precise subsidy strategy reduces the prices of popular items such as smartphones and computers, enabling Pinduoduo to accumulate users rapidly.

In terms of bidding, Pinduoduo employs a unique bidding model known as "group buying bidding." In this model, users can invite friends to participate in group buying for products, lowering the product price based on the cumulative number of participants. For instance, a clothing item originally priced at 100 yuan can be purchased for 80 yuan per person within a group if a certain number of people join, and a refund is given if the group-buying target is not met. This collective purchasing approach fosters user engagement and substantially reduces product prices, catering to the demand for affordable goods among the general public. To some extent, this bidding model encourages users to expand the group-buying scale through social sharing, resulting in even lower prices.

In addition, Pinduoduo's low-price strategy has lowered consumers' psychological expected price, which refers to consumers' expected judgment of the prices of goods sold on an e-commerce platform before entering the platform for shopping, reflecting the pricing factors of the e-commerce platform. As Cai, Xie, and Fan (2022) pointed out in their research, when consumers decide to purchase the same product on Tmall and Pinduoduo platforms, they will predict that the price on Tmall platform may be higher than that on Pinduoduo platform in advance [6]. Therefore, when consumers find it difficult to accept high prices, they may first consider choosing the Pinduoduo platform.

Through centralized procurement, group buying bidding, limited-time flash sales, and other approaches, Pinduoduo offers relatively low prices to consumers, further enhancing its price advantage. Additionally, by utilizing methods like user sharing and friend invitations, Pinduoduo promotes viral spread, boosting user engagement and activity while reducing the cost of purchases.

# 3.1.3. Channel Management and Supply Chain

Pinduoduo employs a C2B business model and is not involved in producing or operating goods. Pinduoduo directly purchases products from producers through collaborations with manufacturers, bypassing intermediary costs and achieving lower selling prices. Merchants on the platform first list information for products that have not yet been produced. After users successfully group-buy, merchants procure raw materials from suppliers in bulk for production. Ultimately, merchants manage orders independently and deliver products directly to courier companies for distribution.

Moreover, Pinduoduo has introduced a model similar to Rural Taobao's, allowing agricultural products to be sold directly on the platform. This provides a sales channel for rural areas and expands the platform's market share.

#### 3.2. Problem Identified by Pinduoduo's Low-Price Competition Strategy

Despite achieving significant success in the e-commerce domain, Pinduoduo still faces several critical issues that require in-depth analysis. The following are some of the prominent issues currently faced by Pinduoduo:

## 3.2.1. Product Quality

At the present stage, one of Pinduoduo's most pressing issues is product quality. According to the 2022 China Consumer Data Report, Pinduoduo received an alarmingly high number of complaints, reaching 428,300 cases, ranking first in the industry. On the supply side, Pinduoduo's sourcing channels largely include small manufacturers and leftover products from larger manufacturers, leading to inevitable problems such as counterfeits and product defects. As merchants on Pinduoduo are responsible for self-delivery, the platform lacks oversight over merchants. A survey by Xiang Song showed that among 209 Pinduoduo users, 76.4% believed that "low prices" were the platform's main advantage. In contrast, only 3.73% considered product quality to be good. Disadvantages such as "poor product quality," "misleading promotions," and "disgusting advertisements" were all acknowledged by over half of the consumers surveyed [7]. This situation directly results in consumer mistrust of the platform, making consumers reluctant to risk purchasing high-value products due to the risk of receiving counterfeit goods. Even high-income consumers are unlikely to choose products from Pinduoduo solely based on its price advantage. This scenario is bound to have a long-term impact on the platform's trustworthiness and affect the user experience negatively.

## 3.2.2. Brand Reputation

The "Slash One Price" activity introduced by Pinduoduo is a social group-buying game. Buyers are given a success rate percentage for purchasing products based on the number of friends they invite. They can acquire the product for free when the success rate reaches 100%. However, in March 2022, news broke that 60,000 live-streaming platform hosts attempted to participate in Slash One Price but were unsuccessful, causing a major public outcry. Pinduoduo's reputation has deteriorated significantly, and terms like "pyramid scheme fraud software" and "malicious virus software" have become new labels associated with the platform.

Furthermore, persistent product-related issues severely damage the platform's reputation. A survey by Xiang Song indicated that among 209 Pinduoduo users, 76.4% believed that "low prices" were the platform's main advantage, while only 3.73% considered product quality good. Disadvantages such as "poor product quality," "misleading promotions," and "disgusting advertisements" were all acknowledged by over half of the consumers surveyed [8]. False advertising easily triggers consumer aversion and negatively impacts the shopping experience due to frequent pop-up ads.

#### 3.2.3. Low-Value Product

Despite being one of the leading e-commerce platforms, Pinduoduo's poor reputation has deterred users from purchasing high-value items. Research by Xiao in 2022 shows that 'Pinduoduo's main source of profit comes from various categories such as daily necessities, snacks, fashion, personal care, kitchenware, etc. Food products lead with a transaction volume of 4.035 billion yuan, followed closely by maternity and baby products and women's clothing, with 3.134 billion yuan and 2.728 billion yuan respectively [9]. Although the transaction amounts may appear substantial, these products are primarily consumables with limited profit margins, making penetrating the high-value product market challenging. Moreover, selling too many low-value products can create an image of pursuing a 'low-end' route, making it difficult to attract high-end suppliers.

# 3.2.4. User Information Leakage

In April 2023, revelations of user information leakage added another layer of trouble for Pinduoduo. According to CNN, several experts discovered malicious software using vulnerabilities in the Android operating system within the Pinduoduo app. It was reportedly used to monitor users and competitors, ostensibly to boost sales performance [10]. Engineers who found the vulnerabilities explained that around 100 engineers and product managers within Pinduoduo examined ways to exploit these vulnerabilities. The functionality developed from these vulnerabilities initially avoided first-tier cities like Beijing, Shanghai, Guangzhou, and Shenzhen, focusing on rural areas and smaller towns to minimize exposure risk. This incident threw Pinduoduo into a whirlwind of public opinion, causing a crisis of trust among its users.

#### 3.2.5. User Stickiness

Pinduoduo's user stickiness is relatively weak, primarily relying on price advantages and advertisements to attract users. However, due to poor product experiences and the prevalence of fraudulent advertising, user stickiness and the platform's trustworthiness continue to decline. The Black Cat Platform data indicated that Pinduoduo had accumulated 428,300 complaints, ranking first online. However, it only provided 91,300 replies and resolved 67,500 cases, accounting for around one-seventh of complaints. Failing to respond promptly to complaints leads to user attrition.

The platform largely acquires a substantial number of users through ad promotion and social group-buying activities, where a significant proportion of users register via friend-invited group-buying campaigns. However, these users exhibit weaker stickiness and seldom display strong intentions to make purchases on Pinduoduo. Although Pinduoduo's user base has grown rapidly, user stickiness and activity levels still have room for improvement.

#### 3.2.6. Sustainability Concerns

For Pinduoduo, there are also serious concerns about its prospects. Due to its long-standing strategy of continuous price wars, Pinduoduo has become synonymous with 'low prices' in many people's minds. However, Wei explains, 'For high-consumption groups and users in first and second-tier cities, Pinduoduo represents budget shopping, along with the risk of purchasing low-quality products [11]. Therefore, it is challenging for Pinduoduo to establish a strong presence in the high-end consumer market. Additionally, Pinduoduo's advantages are relatively narrow, with users primarily valuing its low-cost advantage, but there are also many underlying risks. Other e-commerce platforms are continually emulating Pinduoduo's business model, and future competitors may offer even lower prices, further threatening Pinduoduo's strategy and market share."

#### 4. Suggestions

It is worth noting that Pinduoduo's low-price strategy has been effective, especially given the backdrop of China's economic slowdown in recent years after the pandemic and the tightening of consumer spending. Pinduoduo's low-price strategy can bring it closer to consumers. Upon this, Pinduoduo needs to strengthen product quality control and enhance product quality. The platform can establish close cooperation with suppliers, strengthen product quality supervision and testing on the supply side, and ensure that the goods suppliers provide meet quality standards. At the same time, it should enhance merchant reviews, conduct stricter reviews and selection of entering merchants, remove bad actors, and reduce the influx of counterfeit and substandard products. When product quality improves, Pinduoduo's low-price strategy will demonstrate greater advantages. Only by establishing a scientific competition mechanism can it promote healthy competition, elevate overall merchant quality, and allow high-quality merchants to stand out.

Pinduoduo's low-price strategy sacrifices the interests of merchants, as the platform opens up to small and medium-sized manufacturers while using this as a condition to lower their prices. This approach attracts more small and medium-sized manufacturers to join the platform, promoting competition and product diversity. However, it may also put pressure on supplier profits and product quality. Therefore, balancing this issue is crucial for maintaining the platform's sustainability. Pinduoduo can establish a fairer pricing policy while providing more support and resources to help small and medium-sized manufacturers improve product quality and competitiveness, achieving a win-win situation between suppliers and the platform. The platform can also actively promote cooperation among suppliers, facilitating resource sharing and technical collaboration to alleviate price pressure on individual manufacturers and improve the overall efficiency and quality of the supply chain. Ultimately, the platform can establish closer partnerships with suppliers to formulate policies and strategies to achieve sustainable growth and mutual benefit.

Brand reputation is the cornerstone of Pinduoduo's long-term development. Regarding Pinduoduo's negative platform reputation and false advertising issues, Pinduoduo should actively listen to consumer feedback, establish a user rating system, and introduce user reviews and feedback, allowing consumers to evaluate the purchasing process and product quality. It should handle complaints proactively, respond promptly, and increase transparency and trust. To improve its reputation, Pinduoduo can carefully plan marketing activities to avoid false advertising and misinformation, thus enhancing the credibility and trustworthiness of its activities. The platform also needs to establish a robust after-sales service system to quickly resolve consumer issues and complaints, reducing the spread of a negative reputation.

In addressing the issue of user information leakage, for external malicious attacks, the platform should enhance data security, employ advanced data encryption techniques, and ensure the security and privacy of user personal information, effectively avoiding the risk of data leakage. Regarding internal oversight, strengthening the management of employee and internal personnel permissions can effectively prevent the misuse of user data and information. Removing backdoors in the software that could compromise consumer privacy is also essential to respecting consumer privacy.

In improving user stickiness, Pinduoduo needs to focus on enhancing the product experience, optimizing the user interface, reducing pop-up ads when browsing products, and improving the shopping interface on the mobile app, providing users with a better online shopping experience. Improving the usability of the website and app will enhance the user's shopping experience on the platform. Additionally, strengthening after-sales support promptly responding to user feedback and issues can increase user satisfaction and loyalty.

Pinduoduo's "social group buying" model undeniably played a significant role in rapidly accumulating users in its early development. Initially, Pinduoduo gained massive free traffic through

social viral marketing. However, as people became familiar with the tactics, the incremental growth of target users reached a plateau, coupled with the negative effects of a damaged reputation. Pinduoduo's free traffic will quickly peak and may even decline. Therefore, for Pinduoduo to ensure long-term success, it must quickly transition away from social aspects, build brand value, and achieve self-generated traffic.

Finally, to maintain long-term development, Pinduoduo needs to adopt a diversified strategy, expand its product lines, not solely rely on low-cost strategies, and introduce more high-quality and unique products. It should establish its unique niche to attract more consumer groups. In terms of the supply chain, it can attempt to engage with upstream suppliers to increase product diversity and provide users with more choices. Furthermore, continuous innovation and differentiation are key. Pinduoduo should continuously innovate its business models, offering users novel shopping methods and experiences to respond to challenges from competitors effectively.

#### 5. Conclusion

This research explores Pinduoduo's case as a low-price competition strategy in the Chinese e-commerce. The analysis covers market positioning, pricing strategies and promotional methods, channel management, and supply chains. Pinduoduo has achieved rapid user growth through clear product positioning, precise pricing, and promotional methods targeting low-income individuals and the lower-tier market. However, Pinduoduo also faces challenges such as product quality, brand reputation, user information leakage, user stickiness, and sustainability. The paper offers a series of recommendations to address these issues.

In summary, Pinduoduo's low-price competition strategy has achieved a certain degree of success but requires continuous optimization and improvement in the face of challenges. By proactively addressing these issues, Pinduoduo is poised to maintain its competitive advantage in the Chinese e-commerce market and establish a solid foundation for future development.

#### References

- [1] Ministry of Commerce of the People's Republic of China, Department of E-commerce and Informatization, China E-commerce Report (2022), June 9, 2023. http://images.mofcom.gov.cn/dzsws/202306/20230609104929992.pdf
- [2] Xinhua News Agency, "New Consumption Trends in 'Cloud Shopping' Data," July 19, 2022. https://www.gov.cn/xinwen/2022-07/19/content\_5701713.htm
- [3] Jiang, Y. C. (2023). Analysis of Pinduoduo's "Slash One" Activity from the Perspective of Game Theory. National Circulation Economy, 2023(01), 4-7. DOI: 10.16834/j.cnki.issn1009-5292.2023.01.033.
- [4] Liu, L., & Yan, Z. H. (2023). Analysis of Pinduoduo's Business Model Based on Entropy Theory. Commercial Modernization, 2023(07), 1-6. DOI: 10.14013/j.cnki.scxdh.2023.07.002.
- [5] Yu, W. T. (2020). Analysis of the Financial Effects of Pinduoduo's "Billion Subsidy" Program: Based on Pinduoduo's 2019 Financial Statements. Times Economic & Trade, 2020(08), 39-41. DOI: 10.19463/j.cnki.sdjm.2020.08.017.
- [6] Cai, Z., Xie, X., & Fan, L. (2022). Motivation and Pricing Strategy of Hybrid Online Retailers Accessing E-commerce Platforms. Management Review, 19(5), DOI: 731.3969/j.issn.1672-884x.2022.05.012.
- [7] Xie, C. H. (2019). Who Made Pinduoduo a Success: Investigation of Chinese Consumers' Intentions to Buy Knockoff Products. National Circulation Economy, 2019(06), 8-10. DOI: 10.16834/j.cnki.issn1009-5292.2019.06.003.
- [8] Tian, X. S. (2021). Strategic Optimization of Pinduoduo's "Viral" Marketing Model (Master's thesis). Yanbian University. DOI: 10.27439/d.cnki.gybdu.2021.000957.
- [9] Xia, Y. (2022). A Study of Pinduoduo's Profit Model Based on the Value Chain. Xi'an Shiyou University. DOI: 10.27400/d.cnki.gxasc.2022.000178.
- [10] Central News Agency, CNN: "Pinduoduo App Monitors Phones, Experts Say Unprecedented," April 3, 2023. https://www.chinatimes.com/cn/realtimenews/20230403001908-260408?ctrack=pc\_main\_rtime\_p05&chdtv
- [11] Wei, X. (2023). Research on the "Pinduoduo-style" Consumer Behavior of Middle-Income Groups. Zhejiang Normal University. DOI: 10.27464/d.cnki.gzsfu.2022.000374.