

Research on the Product Quality Problem of Chinese Online Shopping Platform Enterprises

-Based on Pinduoduo

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Abstract: This paper takes Pinduoduo, a famous e-commerce platform in China, as an example, analyzes the typical product quality problems of the platform, and obtains the method to improve the product quality of the e-commerce platform. The research method adopted in this paper is case analysis and hypothesis demonstration, using existing papers and financial information disclosed by enterprises to locate, analyze and solve the possible product quality problems of Pinduoduo. At present, the main problems of Pinduoduo are frequent quality management mistakes between the platform and suppliers, easy enterprise marketing methods to cause customer dissatisfaction, and improper internal management of enterprises. The above problems are common in China's e-commerce platforms. The main theory used in this paper is Deming's 14-point management principles. The conclusion is that the e-commerce platforms represented by Pinduoduo should stop taking the price as the only channel to choose suppliers, change their marketing strategies, and improve the internal management level of enterprises.

Keywords: quality management, platform enterprise, Pinduoduo, product quality

1. Introduction

1.1. Background

In the past five years, the rapid development of the e-commerce industry in China has spawned several online e-commerce platforms. However, there are significant differences in the quality of products and services on e-commerce platforms. For a while, a large number of e-commerce platforms have neglected the quality of their products and services in pursuit of profitability.

Some shopping apps are flooded with low-quality products, and customer satisfaction has declined seriously. As the head enterprise of China's e-commerce platform, Pinduoduo has encountered development problems with certain typical characteristics. The research and analysis of Pinduoduo as a case are conducive to exploring ways to improve the service quality of the platform.

1.2. Related Research

After the search and analysis, the research on the business model of China's e-commerce platform

has been relatively sufficient. However, the paper on the product quality improvement of the e-commerce platform still needs to be supplemented. Zhang pointed out that when the platform economy receives more and more attention, the frequent occurrence of service quality problems has caused a lot of doubts for platform enterprises. The author believes that the characteristic of the platform enterprise is that it will not directly participate in the process of providing services, and cannot fully control the information in the process of service implementation, making the platform in a passive position in service quality control. Platform enterprises must eliminate the negative impact of information asymmetry to effectively improve service quality [1]. Wang and Cao proved through research that the static game model with incomplete information can be established by using the reputation model, and then the game can be analyzed in the first, second, and multiple phases respectively. When the game duration is greater than the second stage, as long as the number of high-quality enterprises is greater than a certain proportion, the overall platform will present a high-quality level [2].

Li et al. proved through research that improving and strengthening the system quality and information quality, training e-commerce platform service providers, and increasing the interaction between the platform and users are effective ways to improve the reputation of e-commerce platform enterprises [3]. Rong pointed out in his research that China must establish an online commodity quality and integrity monitoring system for online shopping platform enterprises. The author believes that the current online shopping platform is in a monopoly environment. In this case, some online shopping platforms will not consciously abide by business ethics, and product quality is difficult to guarantee. We should improve the quality integrity supervision system of platform enterprises in the bilateral market. At the same time, the author also studied the incentive mechanism of platform enterprises to the seller's product quality for the first time from the perspective of online shopping based on the concept of supply chain quality management [4].

Zhao et al. through the research based on the Hotelling model, found that within a certain range, by increasing the depth of competition between platform enterprises and consumers and reducing the breadth of competition between sellers, the online shopping platform can effectively improve the monitoring of enterprise product quality [5]. This method can be applied to the competition between online shopping platforms under the advertising profit model. Yue and Liu, taking Pinduoduo, a famous online shopping platform in China, as an example, systematically explained the profit model and possible risks of the online shopping platform in the current competitive environment. The research object still lacks reputation maintenance, marketing expenses, and business diversification. The author points out that this is a common phenomenon in China's online shopping platforms and needs to be improved [6]. Similarly, taking the Pinduoduo platform as an example, Zhang and Xu found that a large number of enterprises with low product quality entered the e-commerce platform through research on the operation mode of the platform, resulting in a significant decline in the service quality of the platform [7].

The author points out that the platform needs to improve the service quality gradually and provide customers with low-cost access to daily practical goods by improving the quality management process, optimizing the after-sales service system, changing the mechanism of bidding ranking of merchants in the platform and optimizing the method of profit extraction [7]. The research of Cheng and Wang has proved that some online shopping platforms in China are currently falling into the "low-quality trap" [8]. The reason is that very few Internet platforms occupy a monopoly position in this field, including price monopoly, traffic monopoly, and channel monopoly [8].

1.3. Objective

This paper summarizes the previous research of other authors on product quality management, e-

commerce platform profit model, and customer behavior analysis, and clarifies the research direction and content. This paper selects Pinduoduo as the research object, and will determine the main problems existing in the platform by analyzing its development history and financial data in recent years. Subsequently, this paper will propose the corresponding solution according to Deming's 14-point management principles.

2. Description of Pinduoduo

2.1. Enterprise Description

Pinduoduo is a third-party social e-commerce platform in China that focuses on C2M group shopping. The platform has a typical development experience in product quality management. Pinduoduo takes cheap goods and fast logistics and transportation as its core competitiveness, and its innovative social networking group as its core model, becoming a platform for connecting small and medium-sized online e-commerce and large-scale users.

Compared to traditional e-commerce, Pinduoduo creatively added the "social" function and deeply bound it to online shopping. To obtain lower prices, customers will actively help merchants promote and increase product sales. The platform draws profits from both customers and merchants, as shown in Fig 1.

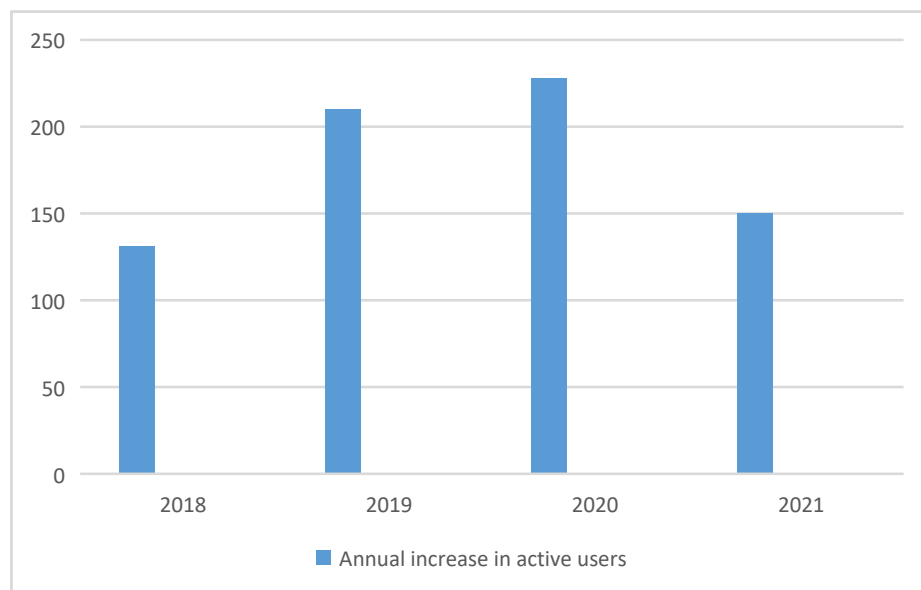


Figure 1: The number of annual increases in active users of Pinduoduo (unit: billion).

2.2. Enterprise Development Process and Current Situation

Since 2010, the e-commerce industry in China developed rapidly, with a large number of e-commerce platforms emerging and capital pouring in[9]. In September 2015, Pinduoduo was established. In less than a year alone, the monthly turnover of this platform exceeded 10 million yuan, with more than 20 million paying users. In July 2016, the number of Pinduoduo users exceeded 100 million.

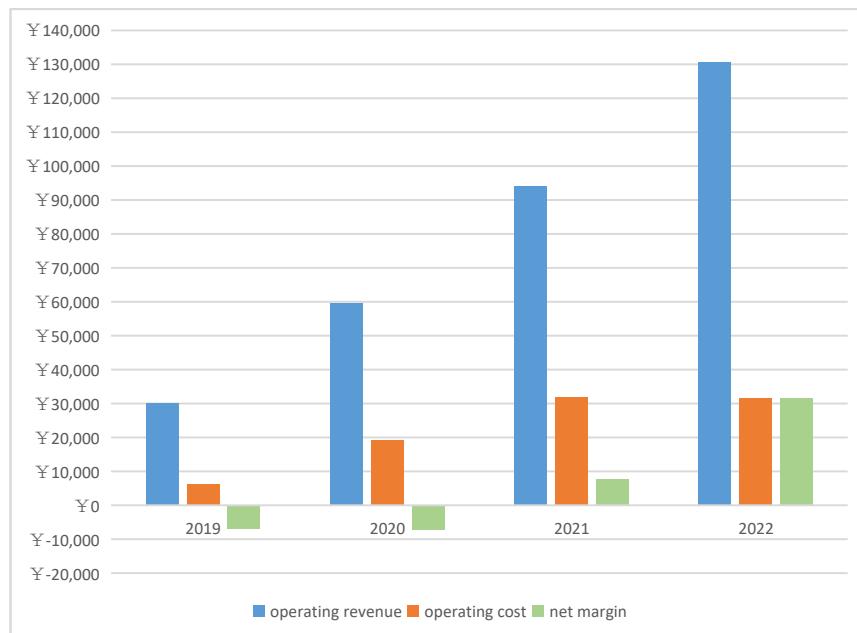


Figure 2: Financial standing of Pinduoduo from 2019 to 2022(billion/RMB).

The rapid development of the platform has brought huge benefits to it. On October 10th, 2016, the daily turnover of the platform exceeded 100 million yuan. However, at the same time, the quality management issues of the platform are gradually exposed at this stage. The specific manifestations of quality management issues are as follow:

I. The quality of the products recommended by this platform is low, and a large number of Inferior and damaged products appear.

II. Poor after-sales service quality and frequent customer complaints. A large number of users believe that the performance of the Pinduoduo platform in after-sales service is not positive, and they do not pay enough attention to customer opinions. Some customers cannot timely safeguard their legitimate rights and interests after purchasing low-quality goods.

III. There is unfair commercial competition within the Pinduoduo platform. The platform selects suppliers based on price and allocates traffic to them based on their quotations. This practice has led to suppliers having to reduce the quality of their products.

IV. The marketing methods adopted by Pinduoduo cannot be accepted by all customers. Some customers suspect that the platform has price fraud. Some customers have participated in group buying activities but are unable to provide corresponding discounts.

V. The internal management of the company has exposed a scandal, and some employees have disclosed that the company has significantly violated the rights and interests of workers. Internal education and self-improvement mechanisms in enterprises are very lacking.

With the continuous expansion of the market scale of Pinduoduo, its quality problems are becoming increasingly apparent. A large number of product quality issues have caused a negative public opinion impacts on enterprises, leading to a certain degree of customer turnover. Starting in 2018, Pinduoduo platform began to improve product quality issues and continue enterprise expansion. In July 2018, Pinduoduo platform was officially listed on NASDAQ. By the end of 2018, Pinduoduo has become the second-largest e-commerce platform in China. From 2019 to 2020, Pinduoduo is committed to product quality upgrading and public welfare services. Utilizing relevant preferential policies to create a large number of profits and improve the visibility of the enterprise.

During this period, the service level of Pinduoduo has significantly improved, and product quality issues and internal management of the enterprise have improved. By the end of 2020, Pinduoduo has become the largest e-commerce platform in China. Since 2021, the platform has significantly improved on product quality issues compared to previous ones, and both customer scale and sales level have remained stable. Affected by COVID-19, Pinduoduo suffered significant losses in 2021. From 2023, the platform will expand to the European market.

3. Analysis of Pinduoduo Quality Management Problems

In 1950, W. Edwards Deming proposed the strategy of "occupying the market with lower prices and better quality" for the revitalization of Japanese industry. He believes that quality is a method of producing the most useful products on the market with the most economical means. Once the quality of the product is improved, productivity will automatically increase. His management ideas were summarized into 14 items. These 14 items are vital for the development of an enterprise. The principles are adopted in the following parts:

3.1. Analysis of the Causes of Frequent Quality Control Errors between Platforms and Service Providers.

The author believes that ignoring product quality, corporate reputation, and user evaluation, and selecting suppliers based on price alone is not conducive to the long-term healthy operation of e-commerce platforms.

Taking Pinduoduo as an example, at the beginning of its establishment, the platform mainly relied on price to select suppliers. Generally, among suppliers who sell the same goods, suppliers with lower product prices or suppliers who provide more funds to the platform will gain more advantages [10]. In return, the platform will allocate more traffic to these vendors. In this case, some suppliers will reduce the cost of maintaining product quality in exchange for more traffic allocated by the platform. The period from 2020 to 2022 is the fastest expansion period for this platform. At the same time, during this period, the number of customer complaints about product quality issues on the platform has surged. According to the "2021 White Paper on Consumer Rights and Interests Protection" published by a third-party agency, as of March 15, 2021, Pinduoduo's operating entity, Shanghai Xunmeng Information Technology Co., Ltd., had received 27130 judicial documents, 37498 relevant court announcements, and 23293 court filings. The total number of judicial documents, together with court announcements and case filing information, is approximately 87000. Most of the adjudication documents involve the illegal theft of product trademarks, patents, and appearances by merchants on the Pinduoduo. Some consumers have reported that there are significant defects in the product quality of merchants on this platform, and some merchants selling regular products have been suppressed.

Zhang and Xu pointed out through their research on the operation mode of the platform that improving the quality management process and optimizing the after-sales service system is very helpful for improving the quality management of the platform. The platform should change the current merchant bidding ranking mechanism and profit extraction method, gradually improve service quality, and provide customers with low-cost access to daily practical goods [7].

Currently, Pinduoduo has not claimed management responsibility for the vast majority of platform suppliers involved in the illegal misappropriation of product trademarks, patents, and appearances. However, the bidding ranking mechanism adopted by Pinduoduo objectively contributes to the occurrence of such illegal acts. The author believes that Pinduoduo, as a platform for managing suppliers, should regulate the behavior of suppliers and create a legitimate competitive environment.

The platform should be responsible for managing the illegal acts of merchants within the platform.

If the current problem of poor product quality within the Pinduoduo platform cannot be effectively curbed in the short term, it will cause serious damage to the brand image of Pinduoduo, which is not conducive to building consumer confidence. Failure to resolve product quality issues for a long time will result in gradually increasing losses. At the same time, most businesses that normally sell on this platform will also be affected.

3.2. Marketing Strategies and Methods are Unreasonable

Pinduoduo's "social group buying" business marketing model needs to be improved. In particular, the highly questioned "group purchase discount" strategy is suspected of deceiving consumers due to its difficulty in cashing out.

Pinduoduo, as one of China's leading e-commerce platforms, has a strong competitive relationship with other e-commerce platforms that provide similar products. It is a special marketing strategy and shopping model that make the products provided by Pinduoduo significantly different from other e-commerce platforms. Pinduoduo completes commercial marketing through the use of consumers' social behavior, and in essence, does not violate any regulations. However, since 2020, the Pinduoduo platform has excessively occupied consumers' daily social resources, inducing consumers to conduct intensive marketing for platform merchants, and causing strong dissatisfaction among some users. At the same time, the author notes that Pinduoduo will also use preferential policies to attract consumers to participate in marketing. However, it is extremely difficult to implement its preferential policies, resulting in some consumers being unable to obtain preferential policies even if they participate in intensive marketing using their social resources.

This behavior has caused great dissatisfaction among consumers. Yue and Liu believe that the current Pinduoduo profit model may pose significant risks. Pinduoduo's marketing approach is single and unsustainable, and the platform still has significant deficiencies in reputation maintenance, marketing costs, and business diversification [6].

3.3. The Internal Management Level of Pinduoduo Needs to be Improved

An important reason for the current product quality dilemma faced by Pinduoduo Platform is its improper internal management. According to the 14 points proposed by W. Edwards. Deming, enterprises should carry out strong education and self-improvement activities while eliminating slogans, and digital goals for ordinary employees. Pinduoduo places excessive demands on employees in the process of enterprise management, constantly exerts pressure on bottom employees, resulting in dissatisfaction among employees within the enterprise, and is not conducive to the maintenance of the enterprise's reputation.

From December 2020 to January 2021, the abnormal death of two Pinduoduo employees caused great concern in public opinion. Labor and Social Security conducted an investigation on Pinduoduo in accordance by relevant laws and regulations, but Pinduoduo did not disclose employee occupational health and safety, labor contracts, and other information [11]. At the same time, Pinduoduo's official website did not publish content related to the company's corporate culture, and its corporate culture paid more attention to value creation, while ignoring social responsibility and internal management, resulting in a very weak overall corporate culture of Pinduoduo [11].

Pinduoduo as a branch of the Internet industry should actively participate in creating a good working environment, adopt a reasonable salary evaluation mechanism, and provide development channels for employees. However, at present, the internal management level of Pinduoduo Company is relatively low, the corporate culture is weak or even lacking, and employee

compensation and benefits cannot be significantly improved, which is not conducive to the healthy development of the company.

4. Suggestions

4.1. End to Rely on Price to Select Service Providers

According to Deming's 14-point management principles and the analysis of Pinduoduo, the business model of relying on the price selection of service providers is not conducive to maintaining the product quality of the platform. It is recommended that the criteria for selecting suppliers to be diversified. The e-commerce platform shall establish a complete and fair product quality analysis and assessment standard for suppliers by comprehensively examining the actual suppliers' product quality, historical reputation records, product sales, and cost performance, to select suppliers or distribute traffic to suppliers. The standard should be published on the official website of the platform, and its implementation is subject to the supervision of the whole society. At the same time, the market regulatory authorities should improve the supervision system of e-commerce platforms, implement the supervision responsibilities, and improve the product quality of e-commerce platforms.

4.2. Change the Marketing Strategy

Pinduoduo has a unique social marketing strategy. According to the analysis, the disadvantages of this marketing method are mainly manifested in the overuse of social space and the difficulty of discounts. For the problem of excessive occupation of social space, Pinduoduo should reduce repeated information push and reduce the number of orders needed for users to get discounts. At the same time, the marketing behavior of advertising on other APP launch interfaces will be banned to optimize the user experience. For the problem that the discount is difficult to cash, Pinduoduo should lower the threshold for users to get discounts on the whole and reduce the social pressure on users. At the same time, Pinduoduo should reiterate the standards for obtaining preferential treatment, and clearly explain them on the activity interface.

4.3. Strengthen the Internal Management of Enterprises and Pay Attention to the Needs of Employees

According to Deming's 14-point management principle and the analysis of the current situation of Pinduoduo enterprises, Pinduoduo should respond to public opinion concerns, optimize staff management, timely adjust the work process, and reduce the work pressure on employees. At the same time, Pinduoduo should give positive incentive measures to employees to effectively protect their right to receive education, improve themselves, and the right for get equal remuneration to their workload. Enterprises should reduce the setting of specific performance goals internally, and shift the focus to product quality improvement and enterprise self-improvement.

5. Conclusion

Since 2023, Pinduoduo has made many improvements to product quality problems, but the company still needs to strengthen the selection of suppliers, marketing strategy, and internal management. As one of the most successful e-commerce platforms in China, Pinduoduo's successful experience and current difficulties are somewhat representative. Taking Pinduoduo as a typical case study, it is conducive to improving the overall product quality of China's e-commerce platform and improving the collective image of Chinese e-commerce brands.

References

- [1] Zhang, Li.: *Research on transparency-based service quality control strategy of platform enterprises [D].* (2020).
- [2] Wang, Rui, Cao, Yuhong.: *Analysis of enterprise quality composition of virtual supply chain platform [J]. Journal of Tongji University (Natural Science Edition), 44 (02): 317-323, (2016).*
- [3] Li, Caicai, He, Ruijuan, Han, Yanxiong, etc.: *Empirical study on the impact of service quality on enterprise reputation of e-commerce platform [J]. Business Economics Research, No.772 (09): 80-83, (2019).*
- [4] Rong, Shuai.: *Research on the online commodity quality and integrity monitoring strategy of online shopping platform enterprises [D].* (2017).
- [5] Zhao, Hongxia, Rong, Shuai, Yang, Jiaoping.: *Study on the influence of bilateral user competition among online shopping platform enterprises on their product quality monitoring strength [J]. Journal of the Central University of Finance and Economics, No.363 (11): 107-117, (2017).*
- [6] Yue, Shizhong, Liu, Lang.: *Under the background of standardized supervision of platform economy, e-commerce enterprises choose —— Take Pinduoduo as an example [J]. Future and Development, 46 (04): 17-23, (2022).*
- [7] Zhang, Yang, Xu, Bing.: *Will "Pinduoduo" social group buying reduce the quality of products on the platform?— Analysis based on the perspective of e-commerce enterprises entering the platform [J]. Business Research, No.505(05), (2019).*
- [8] Cheng, Hong, Wang, Huaxing.: *Internet platform monopoly and low-quality trap [J]. The Southern Economy, No.386(11), 44-59, (2021).*
- [9] Yi, Wanjun.: *Research on multiple quality problems of e-commerce from the perspective of supply chain [D]. Chengdu University of Technology, (2020).*
- [10] Chen, Zhiyuan.: *Research on the third-party logistics service in the online shopping environment [D]. Jiangxi University of Finance and Economics, (2018).*
- [11] Kong, Yabin.: *Research on Pinduoduo Corporate Social Responsibility Issues [D]. Shandong University of Finance and Economics, (2021).*