

Research on the E-commerce Competition: Game Analysis Between Taobao and JD

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Abstract. This study analyzes the competitive dynamics between China's leading e-commerce platforms, Taobao and JD.com, through the lens of game theory. The research examines four critical aspects of their rivalry: pricing strategies, logistics systems, seller management approaches, and customer retention methods. Findings reveal Taobao's open marketplace model emphasizes price flexibility and social commerce features, while JD.com's self-operated system prioritizes service quality and logistics speed. Both platforms face the classic "prisoner's dilemma" in their frequent price wars during major shopping festivals. The paper proposes strategic recommendations, including adopting personalized pricing models instead of blanket discounts, implementing hybrid logistics solutions, balancing seller quality control with marketplace diversity, and enhancing loyalty programs through social commerce integration. These insights offer valuable guidance for e-commerce operators developing competitive strategies, policymakers regulating digital marketplaces, and researchers studying platform economics. The study contributes to the understanding of duopolistic competition in China's digital economy while suggesting directions for future research in global e-commerce comparisons and behavioral economics applications.

Keywords: E-Commerce Competition, Game Theory, Pricing Strategy, Logistics Optimization, Platform Governance.

1. Introduction

1.1. Research Background

The rapid development of e-commerce in China has led to fierce competition among major platforms such as Taobao and JD.com. While both companies are committed to grabbing market share, their business models, pricing strategies, logistics operations, and customer retention methods are very different. Taobao is an open market that allows independent sellers to compete freely. JD.com, on the other hand, follows a direct sales model and strictly controls the supply chain and internal logistics.

These divergent strategies have shaped a dynamic competitive landscape, which can be systematically analyzed through game theory. This can be analyzed through game theory – a mathematical framework for studying strategic interactions between rational decision-makers. Given their interdependence in pricing and logistics decisions, game theory provides an ideal framework to model their strategic interactions. By studying key aspects such as pricing competition, logistics strategies, seller policies, and customer retention, this paper applies game theory concepts such as the prisoner's dilemma, Nash equilibrium, and first-mover advantage to explain the competitive behavior of Taobao and JD.com. Through this analysis, the study aims to understand how these two giants manage their competition and whether their strategies result in collaboration, direct competition, or a mixed equilibrium in China's e-commerce landscape.

1.2. Literature Review

Several studies have analyzed the competitive dynamics between Taobao and JD.com. For example, Zhang & Chen (2018) found that although Taobao successfully used its marketplace model to attract a large number of third-party sellers, JD.com is focused on building its own supply chain

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infrastructure, ensuring product quality, and providing faster delivery services. This difference in business models leads to consumers having different views of the platforms. Taobao is favored for its variety and affordability, and JD.com is therefore often associated with higher quality and better service. While business models define their core positioning, logistics efficiency has emerged as a critical battleground. Li & Wang (2019) explored the role of logistics in the competition between Taobao and JD.com. Their research highlights JD.com's strategic logistics investments as a key differentiator, enabling faster and more reliable deliveries—a factor significantly influencing consumer decisions. Taobao, by contrast, relies on third-party logistics partners, which sometimes affects delivery speed and reliability. Wu & Zhang (2020) studied digital marketing strategies' role in shaping the competitive landscape between the two companies. They found that both Taobao and JD.com use highly targeted advertising and influencer partnerships to attract consumers. However, while Taobao excels at social commerce, leveraging user-generated content and the influence of KOLs (key opinion leaders), JD.com is more focused on technological innovation, such as AI-driven recommendation systems, to optimize the shopping experience. Finally, Liu & Yang (2021) discussed the impact of pricing strategy on the competition between Taobao and JD.com. Their study concluded that Taobao tends to use competitive pricing and promotions to attract price-sensitive consumers. JD.com, on the other hand, focuses on providing premium products and higher levels of service, often justifying higher prices through added value such as quality assurance and faster delivery. Notably, existing studies predominantly focus on the domestic market despite both platforms' accelerating global expansion since 2020.

While the existing literature provides valuable insights into the competitive dynamics between Taobao and JD.com, there are certain gaps in the research that this study attempts to address. Most scholars focus on the business models and operating strategies of these platforms, but there is limited comparative analysis of how these strategies directly impact each other in terms of market share and consumer behavior. Furthermore, while logistics, marketing, and pricing strategies have been extensively studied, few studies have comprehensively examined how these factors interact and influence consumers' decisions in the context of competition between Taobao and JD.com. Furthermore, although most research has focused on the Chinese market, the broader international implications of this competition remain underexplored. As Taobao and JD.com expand globally, their competitive strategies may change, impacting local and global e-commerce markets in ways that are not adequately considered in the existing literature. Therefore, the interaction of various factors, such as logistics, marketing, consumer trust, etc., should be considered. There is a clear research gap in understanding the relative strengths and weaknesses of Taobao and JD.com from a holistic perspective.

1.3. Research Objectives and Framework

This study aims to analyze the competitive strategies of Taobao and JD.com, as well as their impact on consumer behavior and market outcomes, to fill the identified research gaps. First, will examine the different business models of the two platforms, focusing on Taobao's marketplace model and JD.com's direct-to-consumer model. Second, the study will analyze the role of logistics, digital marketing, and pricing strategies in shaping consumer preferences and platform performance. Third, people will explore how these strategies interact and influence each other, focusing on market share fluctuations and consumer satisfaction.

The study will also incorporate a wider international perspective, considering how both companies are preparing for global expansion and the potential impact of their competition on global e-commerce trends by investigating these interrelated factors. The study will provide a comprehensive understanding of the competitive dynamics between Taobao and JD.com, providing valuable insights for businesses, policymakers, and researchers in the field of e-commerce.

This framework will guide research to gain a deeper understanding of the competition between these two e-commerce giants, fill gaps in the literature, and provide practical recommendations for

companies operating in or entering the Chinese market. These recommendations will be particularly relevant for cross-border e-commerce players seeking to navigate China's complex digital ecosystem.

2. Description of Taobao and JD.com

2.1. Taobao

Since its 2003 launch, Taobao has evolved from an online shopping platform into a cultural phenomenon, embedding itself in Chinese consumers' daily lives through innovative technology and massive product variety. There is not only a variety of products on the platform, but it also provides new shopping methods, such as live streaming and social e-commerce, which greatly enhance the user's shopping experience. Through precise big data analysis, Taobao can make personalized product recommendations based on consumers' purchase history, browsing habits, and search preferences. By leveraging big data analytics to personalize recommendations (based on purchase history and browsing behavior), Taobao increases user stickiness and repeat purchase rates. By leveraging big data analytics to personalize recommendations (based on purchase history and browsing behavior), Taobao increases user stickiness and repeat purchase rates.

Taobao's business model is also quite flexible, with both B2C (business-to-consumer) and C2C (consumer-to-consumer) models to meet the needs of different consumers—the payment tools on the platform. As part of Alibaba's ecosystem, Taobao integrates Alipay as its primary payment tool, alongside third-party options like WeChat Pay and bank card payments, ensuring transaction security and convenience. As the market develops, Taobao has gradually introduced more intelligent services. For example, technologies such as AI customer service, unmanned warehouses, and unmanned delivery have further improved operational efficiency and reduced costs. In 2023, Taobao introduced 'AI Shopping Assistant', leveraging generative AI to simulate personal shoppers through natural language interactions.

Intensifying competition from low-cost rivals (e.g., Pinduoduo) and Gen Z's demand for interactive shopping (e.g., gamification) pressure Taobao to innovate beyond traditional marketplace models, particularly in content-driven commerce and AI-powered personalization. In particular, how to balance the openness of the platform with the control of merchant quality and how to adapt to the needs of emerging consumer groups remain the key to Taobao's future development.

2.2. JD.com

JD.com, a giant in China's e-commerce market, has set high standards in the e-commerce industry with its self-operated products, perfect logistics system, and strong after-sales service. Unlike Taobao, JD.com mainly adopts a self-operated model, where the platform directly purchases goods, ensuring the quality of goods and control of the supply chain. JD's in-house logistics network ('JD Delivery'), with nationwide coverage through proprietary warehouses and delivery teams, enables same- or next-day delivery for 90% of orders. They have their own warehouses, logistics centers, and delivery personnel, ensuring a fast and on-time delivery experience. Especially in the field of fresh food e-commerce, JD's delivery advantages are particularly prominent.

In addition, JD.com continues to promote the development of the platform through technological innovation. JD's technology investments span three layers: (1) AI-driven supply chain optimization, (2) automation (e.g., unmanned warehouses), and (3) fintech integration (e.g., JD Pay), collectively enhancing operational efficiency. Financial services such as "JD Pay" and "JD Baitiao" on the platform also allow users to enjoy a more convenient payment experience while shopping.

However, JD.com will also face many challenges in the future. First, since the self-operated model requires higher logistics and inventory costs, JD's self-operated model results in operating costs 20-30% higher than asset-light competitors, compressing its profit margins to 3-5% versus Taobao's 15%. Secondly, market competition is becoming increasingly fierce, especially in terms of price and service. The rise of other low-price e-commerce platforms, Pinduoduo's group-buying model, and Temu's cross-border ultra-low pricing have forced JD to launch budget sub-brands like Jingxi,

diluting its premium positioning. JD's 'Chain-Based Supply Chain' initiative aims to reduce logistics costs by 15% through blockchain traceability as part of its asset-light transformation strategy (Wang et al., 2023). Therefore, in the future, JD.com needs to find a balance between reducing costs, improving supply chain efficiency, and further expanding its business scope in order to continue to maintain its advantage in the competition. While Taobao dominates in user scale and innovation agility, JD competes on supply chain control and service reliability—a dichotomy reflecting China's bifurcated e-commerce demand: mass-market diversity versus premium assuredness.

In general, Taobao and JD.com are the two giants in China's e-commerce industry, and each has different advantages and challenges. Taobao continues to attract users through its flexible business model and innovative technologies, while JD.com has set an industry benchmark by relying on its own products and powerful logistics system. The future development of both will continue to be affected by factors such as the market environment, changes in consumer demand, and technological innovation.

3. Competitive Dynamics: A Comparative Analysis of Taobao and JD.com

3.1. Shared Competitive Strategies

Although Taobao and JD.com have different business models, they still have the following common features

3.1.1 Market Dominance

Taobao and JD.com are the two leading players in China's e-commerce industry. According to the China E-Commerce Research Center, by 2023, Taobao will have a market share of about 60%, attracting a large number of consumers with its vast merchant network and flexible pricing strategies (Liu, 2024). JD.com has a market share of about 20% and has established its competitiveness in the mid to high-end market with its self-operated model and efficient logistics. The market advantages of the two companies mean that their competition will not only affect their own development but also affect the pricing, logistics system, and consumer behavior of the entire Chinese e-commerce industry. This duopoly structure mirrors the 'winner-takes-most' phenomenon in platform economies, where network effects reinforce their dominance.

3.1.2 Digital Marketing Innovation

Both platforms use big data, artificial intelligence, and social commerce to improve user experience. Specifically, include the following: Intelligent recommendation: use an AI algorithm to analyze user browsing history and push personalized products. Live streaming sales: Taobao and JD.com have both invested in live streaming e-commerce, with Taobao relying on top anchors and JD.com enhancing user stickiness through live streaming of its own brands. Short video marketing: Both use short videos to promote products. For example, Taobao uses Douyin to attract traffic, and JD.com relies on JD.com Mini Cube to launch new products.

3.1.3 Competition in Promotional Activities

Both companies use big promotions to attract consumers. For example, in the "Double 11" shopping festival, Taobao and JD.com both invested huge marketing budgets to compete for user traffic (Wang & Aldave, 2024). 618 Anniversary Celebration: JD.com's annual promotional event, in which Taobao also participates to grab market share. Subsidy war: Taobao and JD.com have both launched strategies such as large-scale discounts and red envelope cash back to attract users through price wars. This resembles a prisoner's dilemma: while both platforms incur losses from subsidies (JD's 2023 Q4 marketing spend surged 22%), neither can unilaterally withdraw without ceding market share (Strauss, O'Reilly & Mazzucato, 2024).

3.2. Divergent Operational Models

Although they both occupy an important position in the market, there are significant differences between the two in terms of pricing strategies, logistics models, and merchant management.

3.2.1 Pricing Strategy

Taobao adopts open market pricing, allowing merchants to adjust prices freely according to market demand. This has led to fierce price competition. Especially in the field of fast-moving consumer goods and electronic products, Taobao often sees price wars. Merchants strive to win more orders by continuously lowering prices due to fierce competition; some merchants adopt strategies such as low prices + additional charges (such as high shipping costs), which affects the consumer experience.

JD.com: JD.com's self-operated model means that the platform directly controls the prices of goods. Therefore, prices are relatively stable, and the brand premium is obvious. JD.com relies on high-quality services (such as excellent after-sales service and authentic product guarantee) to maintain high prices. In some categories (such as 3C electronic products), JD.com's prices are 5%-10% higher than Taobao's. A price comparison of iPhone 15 (256GB) in March 2024 showed ¥6,999 on JD vs. ¥6,499 on Taobao, with JD's premium attributed to its '360-Day Return Policy (Liu, Xu & Zhang, 2022). However, it can still maintain a stable customer base due to its high reliability.

Taobao's low-price strategy is suitable for price-sensitive users, while JD's high-quality strategy attracts consumers with high brand loyalty.

3.2.2 Logistics Model

JD.com: JD.com has established its own logistics system (JD Logistics), providing "same-day delivery" and "next-day delivery" services. It has built its own warehousing system to reduce transit links and improve delivery efficiency. Its door-to-door delivery and door-to-door pickup services have been widely praised. Optimize logistics costs and improve delivery accuracy through intelligent scheduling systems. JD Logistics covers most cities across the country, but its maintenance costs are high, which affects profitability.

Taobao: Taobao does not operate its logistics but relies on third-party couriers such as SF Express, YTO Express, and ZTO Express. The cost is low, but the delivery speed and service quality are unstable, and most express deliveries will not be delivered directly to the user. Instead, they are concentrated in post stations (except SF Express). Most Taobao merchants provide ordinary express delivery, and only some high-end stores use high-quality express delivery, such as SF Express. The logistics experience varies greatly among merchants, affecting user satisfaction. Although JD.com's logistics model is costly, it provides a better user experience, while Taobao's logistics system is flexible but has uneven quality.

3.2.3 Merchant Management

Taobao: Allows individual sellers and corporate merchants to settle in freely, with a low entry threshold. The quality of goods varies greatly, and the problem of counterfeit goods is quite serious. In 2023, Taobao removed 2.1 million counterfeit listings (Alibaba Annual Report), yet still faced 3x more consumer complaints than JD on China's 12315 platform (Wei, Lin & Zhang, 2020). The platform's supervision is weak, and some merchants improve their rankings through methods such as "brushing orders".

JD.com: A brand authorization system is adopted, and only certified merchants are allowed to settle in; product quality and after-sales service are guaranteed, and consumers have a high level of trust. Due to strict auditing, it is difficult for small and medium-sized businesses to settle in, which affects the number of SKUs (stock-keeping units) on the platform.

Taobao is suitable for small businesses and individual sellers, while JD.com is more suitable for brands and large suppliers.

3.3. Strategic Challenges and Trade-offs

In the long-term competition, both Taobao and JD.com face some key challenges that affect their market strategies and profitability.

3.3.1 Price War Leads to Decreased Profitability

As Taobao and JD.com have invested a lot of resources in price competition, their profit margins have been compressed. Taobao merchants have been lowering prices to increase sales, but this has resulted in reduced profits, affecting their continued operations. JD.com's promotional subsidy policies (such as the "10 billion yuan subsidy") have significantly reduced its profit margins. In 2023, JD.com's net profit margin will be only 3.5% (Cao, 2024).

3.3.2 Cost and Stability Issues of Logistics System

Taobao relies on third-party couriers, which leads to an unstable delivery experience and affects consumer trust.

JD.com's self-operated logistics costs are too high to cover all regions, especially in low-tier cities, where profitability is limited.

3.3.3 Counterfeit Goods and Merchant Management Issues

Taobao's open platform leads to a large number of fake and low-quality goods, which damages the brand image. JD's strict merchant management model makes it difficult for some merchants to enter, and the number of SKUs is small. JD's 40 million SKUs pale against Taobao's 1.2 billion, reflecting their curation vs. inclusivity trade-off (Shen et al., 2024). Taobao needs to improve merchant supervision and logistics management, while JD needs to reduce operating costs to improve market competitiveness.

4. Strategic Recommendations: Breaking the Competitive Deadlock

After analyzing the strategies of Taobao and JD.com in the competition, people can make suggestions for improvement in four aspects: pricing, logistics and fulfillment, seller competition, and customer retention.

4.1. Pricing Strategy: Prisoner's Dilemma in Price Wars

In the competition among e-commerce platforms, pricing strategy is crucial. JD.com typically adopts a direct sales model and strictly controls prices, while Taobao gives sellers more freedom in setting prices. This has led to a "price war" between the two platforms during major promotional events (such as the "Double 11" shopping festival). This situation can be explained by the prisoner's dilemma in game theory:

The best option (cooperation): If both parties maintain a reasonable price level, profits are maximized, and consumers can also get a stable service experience.

Actual choice (competition): Due to market pressure, when one platform offers a large discount, the other platform has to follow suit; otherwise, it may lose market share. This leads to a decline in profits for both parties, forming a "prisoner's dilemma". During 2023's Double 11, JD and Taobao collectively spent ¥58 billion on subsidies, yet industry GMV grew only 2.3% --revealing diminishing returns from price wars (Kumar, 2023).

Suggestion:

Price discrimination strategy. The platform can use big data analysis to implement differentiated pricing. Offer personalized discounts to different users rather than across-the-board price cuts. For example, Leveraging Alibaba's 'Guanying' system, Taobao could implement dynamic pricing tiers: Platinum users (annual spend >¥50k): 5% exclusive discounts; New users: Limited-time 'loss leader' offers; Inactive users: Geo-targeted reactivation coupons (Kumar, 2023).. Non-price competition: By improving the shopping experience and perfecting after-sales service, Attract consumers by optimizing membership benefits and other means rather than relying solely on price wars.

4.2. Logistics and Fulfillment: First-Mover Advantage and Nash Equilibrium

Logistics is an important competitive factor for e-commerce platforms. JD.com has established its own logistics system (JD Logistics) to ensure the speed and reliability of delivery, which can form a first-mover advantage. This makes its service quality an important selection factor for users. Taobao mainly relies on third-party logistics companies, such as SF Express and Cainiao Network. Although the cost is lower, the delivery quality may fluctuate.

From the perspective of game theory, this logistics model competition can be regarded as a Nash equilibrium: If Dong tries to reduce logistics costs (e.g., outsourcing to a third party), it may damage the brand image. If Taobao invests in self-operated logistics on a large scale, it may increase costs in the short term and affect merchants and user experience.

As a result, both parties choose to maintain the existing logistics model rather than change it easily. This equilibrium holds because JD's logistics CAPEX reached ¥32 billion in 2023 (21% of revenue), making model switching prohibitive.

Taobao's 3PL partners handle 12 million parcels/day—a scale impossible to replace abruptly.

Suggestion:

Smart Supply Chain Optimization: JD.com can use AI to optimize inventory management and reduce unnecessary inventory backlogs, improving logistics distribution efficiency. JD's 'Yingshanhong' AI system reduces deadhead mileage by 17% through real-time traffic prediction, while Taobao's Cainiao IoT sensors cut warehouse picking errors by 35% (Cao, 2024). Taobao can encourage third-party logistics companies to adopt more intelligent delivery solutions, such as drone delivery and smart warehousing.

Mixed flow mode: Taobao can consider introducing "semi-self-operated" logistics. For example, Taobao provides "official certified logistics services" for high-end products and specific areas while ensuring flexibility and improving the delivery experience.

Win-win cooperation: Taobao can establish closer cooperation with third-party logistics companies, for example, optimizing delivery routes and reducing overall logistics costs through data sharing.

4.3. Seller Competition: Balancing Openness vs. Quality in Two-Sided Markets

To address the trade-offs in seller competition, both platforms should adopt differentiated strategies: Taobao and JD.com have adopted different strategies in seller management:

Taobao: An open market model that attracts a large number of small and medium-sized sellers and provides a low entry threshold but requires balancing the contradiction between freedom and quality control.

JD.com: It mainly adopts the model of self-operation + selected third-party sellers to ensure quality, but it may limit the diversity of product types.

This competition can be viewed as a two-sided market game. That is, Taobao needs to find a balance between "increasing sellers' freedom" and "maintaining product quality".

JD needs to balance "strengthening self-operated business" and "attracting high-quality third-party merchants".

Suggestion:

Strengthening platform governance: Taobao should further optimize its merchant credit scoring mechanism to enhance platform governance efficiency. Increase penalties for low-quality sellers while encouraging high-quality sellers to gain more exposure opportunities.

Selected market strategies: JD.com can attract high-quality third-party sellers while maintaining its self-operated advantages, such as launching the "JD.com Certified Quality Merchants" system to ensure the service quality of third-party products. Similar to Amazon's 'Fulfilled by Amazon' program, this could include strict onboarding reviews and performance-based incentives.

Differentiated market strategy: Taobao can continue to leverage its "long-tail market" advantage to attract personalized, niche brands, while JD.com can focus on increasing the number of high-end brands and forming a clearer market positioning.

4.4. Customer Retention: Repeated Game Strategies for Long-Term Loyalty

Beyond seller management, customer retention requires long-term engagement strategies. E-commerce competition is not only about how to acquire new users but also about how to retain existing users. In game theory, this can be viewed as a repeated game. That is, companies need to weigh the relationship between “short-term benefits” and “long-term brand loyalty” in long-term competition.

JD.com and Taobao have adopted different customer retention strategies:

JD.com: Enhance user stickiness by providing exclusive discounts, priority delivery, additional services, etc., through the JD Plus membership system.

Taobao: Rely more on social e-commerce (such as live streaming, social interaction, and gamified shopping) to attract and retain users.

Suggestion:

Personalized recommendation system: JD.com could leverage AI-driven personalized recommendations to improve user retention by analyzing behavioral data. Improve user stickiness. Given the success of social commerce models (e.g., live streaming), Taobao should optimize its social recommendation algorithms to capitalize on user-generated content and community-driven purchases.

Cross-platform ecological expansion: Taobao can further integrate the Alibaba ecosystem (such as Alipay, Hema Fresh, etc.) to provide richer value-added services; JD.com can combine resources such as JD Health and JD Technology to create a more comprehensive user experience.

Optimization of the membership system: Taobao can learn from JD.com’s membership model and provide more exclusive benefits to high-value users, such as shipping fee reductions, priority customer service, etc., to enhance user loyalty.

The competition between Taobao and JD.com involves many aspects, and game theory provides us with an effective tool to analyze these competitive relationships. In view of the current market situation, people have put forward the following optimization suggestions:

Avoid pure price wars and turn to personalized pricing and non-price competition. To optimize logistics strategies, Taobao can explore a “semi-self-operated” model, while JD.com can intelligitize its supply chain. To balance seller competition, Taobao should strengthen seller quality management, while JD.com can introduce more high-quality third-party sellers. To improve customer retention, user stickiness can be increased through personalized recommendations, social e-commerce, and membership system optimization. This aligns with the ‘superior rewards for loyal users’ principle in repeated game theory, as seen in Costco’s membership success.

Through these strategies, Taobao and JD.com can maintain their own advantages in the competition while avoiding entering into a “zero-sum game” and ultimately achieve healthier market development.

5. Conclusion

5.1. Main Findings

The analysis reveals three core dimensions of competition between Taobao and JD.com: pricing, logistics, and platform governance. Adopting a game-theoretic lens, this study conducts an in-depth analysis of the competitive dynamics between Taobao and JD.com.

Comparative study highlights that the two platforms have adopted different but effective strategies to maintain and grow their market share. While Taobao adopts a decentralized marketplace model dominated by third-party sellers, JD.com employs a centralized, self-operated model with vertically integrated logistics.

This fundamental difference leads to differences in pricing strategies, supply chain efficiencies, and customer retention strategies.

From a pricing perspective, Taobao benefits from the price flexibility of its many independent sellers. This has created a highly competitive environment. In contrast, JD.com leverages economies

of scale and supply chain optimization to offer consistent pricing and guaranteed delivery times. The logistics comparison further reveals JD.com's advantage in fast and reliable delivery, while Taobao relies on third-party logistics providers, which leads to potential variations in service quality.

The study also identified key challenges facing both platforms. Taobao has been struggling with counterfeit goods and inconsistent service quality. JD.com, on the other hand, faces high operating costs associated with maintaining its logistics network. Based on these arguments, scholars suggest that Taobao strengthen its quality control measures and logistics cooperation while JD.com can explore a more flexible marketplace model to attract more sellers. These recommendations align with Porter's generic strategies, where Taobao pursues cost leadership through scale, while JD.com differentiates via service quality.

5.2. Research Significance

This study contributes to the understanding of competitive strategies in the e-commerce industry, providing practical implications for businesses and policymakers. The findings highlight the importance of balancing pricing strategies with logistics efficiency to achieve long-term customer retention. For companies in the e-commerce sector, this study provides strategic references for optimizing their business models through market expansion, logistics investment, or differentiated pricing mechanisms.

More broadly, the research sheds light on how different business models affect consumer behavior and market competition. The study also contributes to the literature on two-sided markets by demonstrating how platform governance choices shape competitive equilibria. Policymakers and regulators can use these insights to design policies that promote fair competition and strengthen consumer protection in digital markets. In addition, for emerging e-commerce companies, the comparative analysis of Taobao and JD.com provides valuable lessons on market positioning and operating strategies.

5.3. Limitations and Future Study

Despite its contributions, this study has certain limitations. A major constraint is the reliance on secondary data, such as financial reports, market analysis, and existing literature, rather than primary data collection. Additionally, the game-theoretic framework assumes rational decision-making, which may not fully capture behavioral factors in real-world competition. The lack of direct consumer or seller survey data limits the ability to capture real-time market sentiment and emerging trends. Future research could include collecting primary data through interviews, surveys, or case studies to gain a deeper understanding of consumer preferences and business strategies.

Furthermore, this study focuses primarily on the Chinese e-commerce market, limiting its applicability to other regions with different regulatory environments and consumer behaviors. For instance, comparing JD.com's logistics model with Amazon's FBA (Fulfillment by Amazon) could reveal cross-market scalability patterns.

Comparative studies involving international e-commerce platforms such as Amazon or eBay can provide a more comprehensive understanding of global e-commerce competition. Finally, while game theory provides a useful analytical framework, adopting machine learning-based market analysis can further improve the accuracy of competition predictions.

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