

The study on the Innovative Model of Social E-Commerce: A Case Study of Pinduoduo

¹ Dr. Lifen Tsai, (Ph.D.), ² Chaotong Zhou

^{1,2} SCHOOL OF ECONOMICS AND MANAGEMENT

^{1,2} ZHAOQING UNIVERSITY, ZHAOQING, CHINA

DOI: <https://doi.org/10.5281/zenodo.17908231>

Published Date: 12-December-2025

Abstract: With the rapid development of information technology, the continuous increase in internet penetration, and the booming rise of social platforms, Social E-Commerce has emerged in response to the trend. It integrates social and e-commerce elements, leverages social network communication to drive product sales and shows very strong growth momentum. Against this background, this study takes Pinduoduo as the subject of this study, applying literature research, in-depth interviews, and case study methods to deeply analyze its innovative model of Social E-Commerce. The study finds that Pinduoduo has achieved remarkable results through innovative initiatives, such as the group-buying model, the '10-billion dollar subsidies', and the C2M (Customer-to-Manufacturer) model, but also faces many problems, such as insufficient product control, exaggerated publicity, lacks of sustained innovation in promotion and service, insufficient profitability and precision marketing, as well as deficiencies in core technology and brand image. The study proposes corresponding optimization strategies, including strengthening product control, ensuring truthful publicity, continuously improving promotional activities and services, optimizing profitability models and the accuracy of discount strategies, and enhancing core technology innovation. This research provides theoretical support and practical examples for innovation and development in the Social E-Commerce field, contributing positively to the sustainable development of the industry. It is hoped that Pinduoduo and other Social Networking Site would continuously improve their innovative models, provide better quality services to consumers, and create greater value in the e-commerce market.

Keywords: Social E-Commerce, Social Networking Site, Innovative Model, Group Buying Model.

I. INTRODUCTION

The embryonic stage of e-commerce can be traced back to the mid-1990s. Amazon, one of the world's first operational digital trade platforms, was officially launched in 1995. In China, Alibaba was established in 1999, pioneering the e-commerce industry in the country. During this period, e-commerce primarily focused on information display and online transactions. Subsequently, e-commerce gradually developed with the rise of internet technology, experiencing particularly rapid growth during the pandemic. Due to restrictions on movement, online shopping became the main consumption method for consumers ^[1].

With the rapid development of information technology, increased internet penetration rates, and the booming growth of social platforms, more people are using social platforms for social interactions and online shopping. From daily social communication to shopping consumption, from information acquisition to entertainment and leisure, Social E-Commerce, as an innovative business model in the digital economy era, has established mechanisms for social dissemination and commodity transactions. Through innovative methods such as user fission and community operations on social networking platforms, it achieves product promotion.

Social E-Commerce reconstructs the product distribution path through user relationship chains, building a product dissemination network using social fission mechanisms like community operations and word-of-mouth communication. Social E-Commerce possesses characteristics such as strong social interactivity, high user stickiness, and low promotion

costs. Leveraging its unique advantages, Social E-Commerce has developed very rapidly. Currently, the China's Social Networking Sites include Pinduoduo, Rednote, and Tiktok. Since its launch in 2015, Pinduoduo has rapidly gained market share through its innovative "group buying" model and low-price strategy, successfully listed *on a stock exchange* in 2018 and becoming an industry leader. With the explosive popularity of Social Networking Site, some traditional e-commerce platforms like Taobao and JD.com are continuously adding Social E-Commerce attributes to cope with market competition. As an emerging business form, social E-Commerce has not yet formed a systematic theoretical framework. This paper expands the theoretical framework for the integration of e-commerce and social networks by analyzing Pinduoduo's innovative model, filling the research gap in the Social E-Commerce field. Pinduoduo's success demonstrates the potential of Social E-Commerce in user growth, market expansion, and business model innovation. Studying its successful innovation experience could provide references for other e-commerce enterprises, help them to find breakthroughs in the fiercely competitive market, promote sustained industry growth, and inject new vitality into the development of E-Commerce.

II. LITERATURE REVIEW

A. Social E-Commerce

Abdelsalam (2020) believes that Social E-Commerce is a new business model that utilizes Web 2.0 technology and social media to support socially relevant communication activities ^[2]. Amran, Li, & Al-Bakhrani (2026) believes that Social E-Commerce integrates social media functions with E-commerce platform resources and leverages online social technology to build a user relationship network system, effectively achieving precise attract traffic of high-value consumer groups ^[3]. Liu et al. (2024) propose that mobile Social E-Commerce refers to E-commerce transactions utilizing mobile tools and integrating social interaction functions such as user following, content sharing, and topic discussion to build a community operation system ^[4]. Zhu and Chen (2016) emphasize that Social E-Commerce is a new e-commerce model based on the social media ecosystem, using platforms like WeChat and Tiktok to create user social networks. Furthermore, it combines methods like WeChat Moments sharing and the interaction of live webcast to promote product information, allowing consumers to naturally participate in discussion processes and content topics to complete the transaction decision-making process ^[5]. Jin (2025) also proposes that social commerce takes social interaction as its core driving force, building a user-generated content ecosystem. It embeds product marketing activities into the communication chain of interpersonal relationship networks to achieve commercial value conversion through the process of social collaboration ^[6].

The most important characteristic of Social E-Commerce is interactivity and shareability. Zhang and Benyoucef (2016) believe that the core feature of Social E-Commerce utilizes user-generated content and the social relationship chains to create a user-centered business ecosystem that increases user dependence on the platform ^[7]. Xu (2022) proposed that the important characteristic of Social E-Commerce is the use of the social networking site to form user communities and continuously accumulate user resources through interactive activities. Multi-party interactions between merchants and users and among the users would strengthen brand loyalty and establish the trust for social relationships, thereby effectively improve transaction efficiency ^[8]. The biggest characteristic of Social E-Commerce is that it can greatly improve user satisfaction and trust. Chopdar and Balakrishnan (2020) found that Social E-Commerce can influence users' perceived value, thereby affecting consumer satisfaction and repurchase intention ^[9]. Venkateswaran et al. (2021) emphasized that in the sharing economy, the trust of users is the core of enterprise success. Social E-Commerce captures the price-sensitive users of lower-tier markets through social fission effects ^[10]. Pinduoduo effectively converts users' social behaviors into purchasing behaviors through group-buying models, reduces customer acquisition costs, and achieves viral spread through users' spontaneous sharing ^[11]. Zheng (2024) proposed that Social E-Commerce has five advantages: enhanced user stickiness, precision marketing, reduced marketing costs, rapid feedback acquisition, and convenient shopping experience ^[12].

Social E-Commerce, as an innovative business model in the digital economy era, integrates social attributes with traditional e-commerce functions, leveraging social network infrastructure to achieve socialized upgrades in product distribution and brand communication.

B. Innovation Model

Abdurehman, Abdureyim and Xie (2020) proposed that the innovation model of Social E-Commerce mainly focuses on five aspects ^[13]:

1. Innovation in value proposition: Redefining the value that enterprises provide to customers, such as making breakthroughs in product functionality, emotional experience, social significance, and other aspects.

2. Innovation in customer relationships: Changing the way businesses interact and engage with customers, such as increasing personalized services, improving user participation mechanisms, etc.
3. Partner Innovation: Expand the scope of cooperation partners or change cooperation methods, conduct in-depth collaboration with multiple industries to jointly explore emerging market spaces.
4. Innovation of core resources: Updating or expanding the key resources of the enterprise, including technology, talent, brand, channels, etc.
5. Innovation in profit models: Explore new ways of making money, achieving profit growth through various methods such as subscription models and sharing economy models.

BaoHeng and Thanathamath (2025) proposed a four-dimensional analysis model for innovative business models, consisting of value proposition reconstruction, value creation system, value delivery network, and value capture mechanism. This model covers nine major elements including customer positioning, core resources, and partnership ^[14].

III. RESEARCH METHODS

A. Case Introduction

Pinduoduo was founded in 2015 as an E-Commerce platform based on social interaction, rapidly rising in China's E-commerce market. Through its unique "group buying" model and social sharing mechanism, Pinduoduo leverages the viral effect of social networks to attract users to participate in group purchases through sharing, thereby significantly reducing product prices. With this innovative model, Pinduoduo quickly accumulated a large user base and successfully formed a tripartite competition pattern with Alibaba and JD.com. In 2023, Pinduoduo's total revenue reached 147.4 billion dollars and increased 29%.

Through the core feature of group buying, Pinduoduo enables price-sensitive users to purchase goods at lower prices and promotes this through social media and instant messaging tools. This model effectively enhances user engagement and platform activity. Additionally, Pinduoduo continuously innovates. In 2021, it launched the "DuoDuo Grocery" community group buying service, and "Billion-Dollar Subsidies" and "Agricultural Product Uplift" further expanded its users and product categories.

B. In-depth Interview

This study employed the in-depth interview method by surveying and interviewing 15 consumers through semi-open interview questions to collect the required data. (as shown in TABLE 1)

TABLE 1: BASIC INFORMATION OF INTERVIEWEES

Interviewee	Gender	Age	Occupation	Consumption Frequency
A	Female	30	University staff	20~24 times/month
B	Female	22	Student	20 times/month
C	Female	22	Student	1~2 times/month
D	Female	22	Student	15 times/month
E	Male	22	Student	5~6 times/month
F	Male	21	Student	10 times/month
G	Female	25	Bank Clerk	2~3 times/month
H	Female	34	Office worker	3~4 times/month
I	Female	28	Waitress	4~8 times/month
J	Male	22	Student	8~10 times/month
K	Male	22	Student	6~7 times/month
L	Male	22	Student	10~20 times/month
M	Male	20	Student	6 times/month
N	Male	22	Student	2~3 times/month
O	Male	22	Student	5 times/month

IV. DISCUSSION

Based on literature review, case studies, and in-depth interviews, this study found that Pinduoduo's innovative model has three key points: (as shown in FIGURE 1)

1. Value Innovation:

(1) Group buying model getting low price and enhancing social relationships: Users can invite friends, family, or even strangers to form groups for purchasing goods, thereby obtaining products at lower prices. Meanwhile, the platform can leverage users' group buying records and preferences, using big data to intelligently recommend other suitable bundled products, providing users with more choices and increasing sales opportunities for the platform. The group buying model capitalizes on users' desire for low prices and their social connections to achieve rapid dissemination and user growth.

(2) Hundred Billion-Dollar Subsidies for improving Quality and Image: In terms of pricing strategy, Pinduoduo provides substantial subsidies to brand merchants, allowing consumers to purchase branded products at low prices. Pinduoduo also strictly screens and reviews products under the Hundred Billion Dollar Subsidies program to ensure authenticity and enhance consumer confidence. The Hundred Billion Subsidies is a long-term strategy that brings continuous benefits to

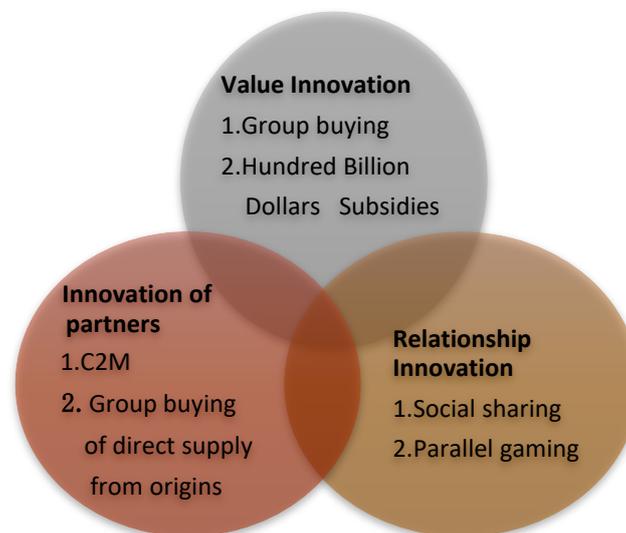


FIGURE 1: INNOVATION MODEL OF PINDUODUO

consumers, attracts high-quality merchants to join the platform, and improves the quality of products and brand image.

2. Relationship Innovation:

(1) Social sharing to rapidly expand customer ranges: Through social fission, the users could share product links with friends to invite joint purchases, significantly increasing the amount of friends for various social platforms.

(2) Parallel gaming experience, participation, and rewards: Pinduoduo integrates mini-games, for example, Duoduo Orchard and group bargaining for free items, and the users would earn real prizes or coupons through participation.

3. Innovation of partners:

(1) C2M (Customer-to-Manufacture) model to precisely match the supply and demand: Pinduoduo achieves the dual optimization goals of precise supply-demand matching and production efficiency improvement through user demand co-creation modules and big data consumer behavior analysis systems.

(2) Group buying adds direct supply from rural origins model: Pinduoduo platform utilizes the "group buying + direct supply from origins model" to help farmers directly sell agricultural products to consumers through the Pinduoduo platform.

A. Existing problems of Pinduoduo

1. Insufficient control of product quality and exaggerated promotion

Pinduoduo reduces product prices through group buying models, but this would lower the profit margins for merchants. Some merchants, in order to increase profits, would cut costs from quality. This would lead to insufficient control over

product quality and packaging, as well as exaggerated advertising to attract consumers. Therefore, 'strict control of product quality' (Interviewee G, interview date: December 23, 2024) is currently the most critical issue. 'The variety of products under the billion-dollar subsidy program should be increased' (Interviewee H, interview date: December 23, 2024), as the current selection in the billion-dollar subsidy section is limited and fails to meet consumers' demand for high-quality products. Some merchants enhance product images and exaggerate descriptions which damages consumer trust.

2. Lack of continuous innovation in promotions and services

With the emergence of innovative models from numerous competitors, Pinduoduo's promotions have become less attractive and novel and lead consumers to experience fatigue and decreased participation enthusiasm.

"Game marketing activities are too cumbersome and I hope they could be more friendly and simplified" (Interviewee J, interview time: December 24, 2024). This reflects some consumers believe game marketing content is overly complicated to participate in.

"I hope the platform has a toggle switch for social sharing features" (Interviewee C, Interview Date: November 21, 2024). This opinion indicates some users experience interference and social pressure from the social sharing mechanism. For example, automatically pushed shares by the platform and frequent appearances of friends' sharing links would disturb users and negatively impact their favorability toward the platform.

The user reported that 'customer service is robotic and the handling methods are impersonal' (Interviewee D. Interview date: November 21, 2024). When the users contact with customer service for problems, they often face long response times, robotic replies, or machine-like responses that result in low problem-solving efficiency. The customer service representatives lack patience and proactive attitude during the service process. Therefore, the platform should strengthen customer service management and focus on customer service and compensation mechanisms' (Interviewee F. Interview date: November 21, 2024).

3. Insufficient profitability and precision marketing

Value-added services are relatively limited, such as membership systems or financial services being less comprehensive compared to other E-commerce platforms. Additionally, excessive subsidies could quickly attract customers but may impact profitability in the long term. In summary, it's necessary to explore multiple sustainable profit avenues.

Some users report frequently receiving mismatched product coupons. Pinduoduo's discount strategy lacks precision and fails to adequately incorporate users' personalized needs.

4. Lacking core technology and quality image

Pinduoduo's investment in technology lags behind that of Alibaba and JD.com, particularly in AI recommendation algorithms and big data analytics. Additionally, its brand image primarily focused on low prices and lacked recognition in the high-end market, which is a deficiency for core resources.

B. Optimization Strategies

In response to the existing problems of Pinduoduo, this study proposes the following optimization measures:

1. Strengthen product control to ensure the authenticity of promotion

Pinduoduo should establish the multi-dimensional product quality inspection process, including regular quality sampling inspections, disguised buyer purchase testing, and collaboration with authoritative quality inspection agencies to implement multiple approaches simultaneously. For problematic merchants, Pinduoduo should immediately implement strict penalty measures, such as heavy fines and suspension of business. Secondly, the platform would set up a reward mechanism. (Interviewee H. Interview date: December 23, 2024) to encourage consumers to actively report product quality issues, and maintaining the quality of products.

The platform should establish detailed guidelines for product packaging specifications, clearly defining standards for packaging materials and protection requirements to guide merchants to prioritize product packaging quality.

The platform should establish a professional content review team and introduce artificial intelligence review technology to strengthen the review of merchants' product promotional materials.

2. Continuous optimization of promotional activities and services

The enterprises could establish separate departments or teams specifically responsible for researching, developing, and continuously optimizing promotional models. The platform should constantly monitor industry trends and changes in consumer preferences to launch innovative and interactive promotional activities.

Pinduoduo should simplify tedious tasks and complex rules of the games, increase the fun and guide users to discover desirable products.

Pinduoduo should provide the options in the social sharing function settings to allow the users controlling the sharing function according to their needs.

The platform should establish a dual-line customer service system combining artificial intelligence to improve response speed and processing efficiency.

3. Optimize the revenue model and precision of discount strategies

Pinduoduo should deeply analyze user interests, behaviors, and shopping preferences to provide personalized discount recommendations and advertisements, and ensure that the coupons and ads pushed are highly aligned with user needs. At the same time, it is necessary to strengthen discount intensity (Interviewee N. Interview date: December 24, 2024).

Additionally, the site should actively explore diversified profit paths to broaden the enterprise's revenue sources, such as experimenting with subscription models and sharing economy models.

4. Strengthen innovation of core resources

Pinduoduo should focus on R&D investment of AI algorithm optimization, big data analytics platform iteration, and blockchain technology empowerment. By building a technological innovation matrix, the company aims to enhance core competitiveness and establish technical barriers for the platform's sustainable development. The brand enhancement strategy also formulated to improve the platform's image of low price and poor quality, and collaborated with well-known brands and organizing brand events.

V. CONCLUSION

This study analyzed the Social E-Commerce innovation model, explored its characteristics, challenges, and optimization strategies by literature research, case studies, and interview analysis, and drew the following conclusions:

Pinduoduo has rapidly risen in the E-Commerce market through its unique innovative model, forming a competitive landscape with traditional giants. Its innovative measures such as the group buying model, social sharing, C2M model, rural E-Commerce model, billion-dollar subsidies, and gamified marketing have achieved significant results. However, Pinduoduo's innovative model also faces numerous challenges: inadequate product control, exaggerated advertising, lack of sustained innovation in promotions and services, insufficient profitability and precision marketing, and deficiencies in core technology and quality image.

For existing issues, Pinduoduo should strengthen commodity control, ensure the authenticity of promotional content, continuously optimize promotional activities and services, improve the accuracy of profit models and discount strategies, and enhance core technological innovation. This research provides theoretical and practical references for the innovative development of the Social E-Commerce industry, contributing to the healthy growth of this sector. It is expected that Pinduoduo and other Social Networking Sites would continually improve through innovation and offer higher-quality services to consumers.

REFERENCES

- [1] Wu, J.W. (2021). Research on the Impact of E-commerce on China's Foreign Trade and Countermeasures. *Marketing Circles*, (04): 56-57.
- [2] Abdelsalam, S., Salim, N., Alias, R. A., & Husain, O. (2020). "Understanding Online Impulse Buying Behavior in Social Commerce: A Systematic Literature Review". *IEEE Access*, (8): 89041-89058.
- [3] Amran, G. A., Li, X., & Al-Bakhrani, A. A. (2026). Link prediction in social networks and E-commerce: A comprehensive review and bibliometric analysis. *Expert Systems with Applications*, 299, 129914.

- [4] Liu, M., Yu, J, Li, Y, et al. (2024). Optimization and Innovation of the Operation Model of Mobile Social E-commerce under AI Empowerment: Taking the Female Community Platform "Little Red Book" as an Example. *Proceedings of Business and Economic Studies*, 7(4): 269-274.
- [5] Zhu, X.D., Chen, J. (2016). A Review of Research on Socialized E-commerce in China. *Modern Information*, 36(01):172-177.
- [6] Jin, M. (2025). Research on the Value of Data Assets of Companies Based on GA-BP Neural Network E-commerce Platform—Take Pinduoduo as an Example. *World Journal of Economics and Business*, 3(2), 49.
- [7] Zhang, Kem ZK, and Benyoucef, M.. (2025). Consumer behavior in social commerce: A literature review. *Decision Support Systems*, (86): 95-108.
- [8] Xu, J.. (2022). Business Model Innovation of E-commerce Enterprises Based on Community Economy—A Case Study of Pinduoduo. *Modern Marketing (Late Edition)*, (03):128-130.
- [9] Chopdar, P. K. & Balakrishnan, J. (2020). Consumers' response towards mobile commerce applications: SOR approach. *International Journal of Information Management*, (53): 102-106.
- [10] Venkateswaran, Viswanathan, Deepak S. Kumar, & Deepak Gupta. (2021). To Trust or Not': Impact of Camouflage Strategies on Trust in the Sharing Economy. *Journal of Business Research*, (136): 110-126.
- [11] Huang, Z.X. (2018). A Comparative Study of Social E-Commerce and Traditional E-commerce: Taking Pinduoduo and Taobao as Examples. *Economic and Trade Practice*, (23):188-189.
- [12] Zheng, D.W.. (2024). Discussion on Online Marketing Strategies in the E-commerce Environment. *Modernization of Shopping Malls*, (21):80-82.
- [13] Abdurrahman, ·Abduaini & Xie, Ying. (2020). Research on Social E-Commerce Business Model Innovation Based on Multiple Case Comparison. *Economic Forum*, (10):123-132.
- [14] BaoHeng, L.I. & Thanathamathsee, P. (2025). DETERMINANTS OF CONSUMER PURCHASE DECISIONS ON AGRICULTURAL E-COMMERCE PLATFORMS: A CASE OF PINDUODUO IN CHINA. *Procedia of Multidisciplinary Research*, 3(11), 2-2.