

The economic impact of e-commerce platforms in China: business models, regional growth, and future outlook

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Abstract. E-commerce platforms have been experiencing exponential growth and expanding worldwide, with the most significant growth observed in Asia. This paper delves into the landscape of e-commerce platforms in China, meticulously dissecting their diverse business models and prevailing trends. Simultaneously, it explores the mutually beneficial relationship between e-commerce, express logistics, and online payment systems. This study analyzes these effects using data from government sources and news reports, including regional GDP, online retail sales, and regional logistics volume. The findings indicate that e-commerce platforms have had an overall positive impact on China's economy by fostering business innovation, reducing the urban-rural gap, and driving economic prosperity.

Keywords: e-commerce, economic development, express delivery, online retailing

1. Introduction

E-commerce is a global trade activity that uses the internet and electronic tools to facilitate efficient transactions between consumers and businesses. Propelled forward by cutting-edge digital technologies such as cloud computing and artificial intelligence, it has revolutionized operational processes, significantly boosting efficiency while simultaneously elevating the overall consumer experience.

Pioneering online marketplaces like Alibaba and Amazon have reshaped global commerce, allowing businesses to reach a wider customer base and optimize supply chain management. E-commerce has also transformed remote and underdeveloped areas by enabling small businesses to enter markets, create employment opportunities, and narrow the income gap between urban and rural populations. This study undertakes a comprehensive analysis of the multifaceted impacts of e-commerce, with a particular focus on its impact on remote areas. It also explores the important role that logistics and mobile payment systems play in supporting the expansion and sustainability of digital commerce. Through a comprehensive examination of these aspects, this study aims to gain a deeper understanding of how e-commerce continues to shape the global economic landscape.

2. The mode and current situation of e-commerce platforms

E-commerce platforms, influenced by their scale and positioning in the same and different regions, can be divided into Business To Business e-commerce (B2B), Business To Consumer e-commerce (B2C), Business To Government e-commerce (B2G), Consumer To Government e-commerce (C2G), Consumer To Consumer e-commerce (C2C), e-commerce through the transformation of enterprises, consumers, and agents (ABC), a new consumer centered business model (C2B2S), and a new type of e-commerce targeting supply and demand (P2D) in figure 1 [1].



Figure 1. Trend of China's internet users percentage, 2020-2024 [1]

2.1. Analyzing the models and current status of e-commerce platforms

As of December 2024, China had 974 million online shoppers, up 59.47 million from 2023, making up 87.9% of internet users. With an estimated 1.108 billion internet users, the online shopping market reaches nearly 970 million people.

As of December 2024, the number of online payment users in China has reached 1.029 billion, an increase of 75.05 million from December 2023, accounting for 92.8% of the total number of netizens follow figure 2 [1].

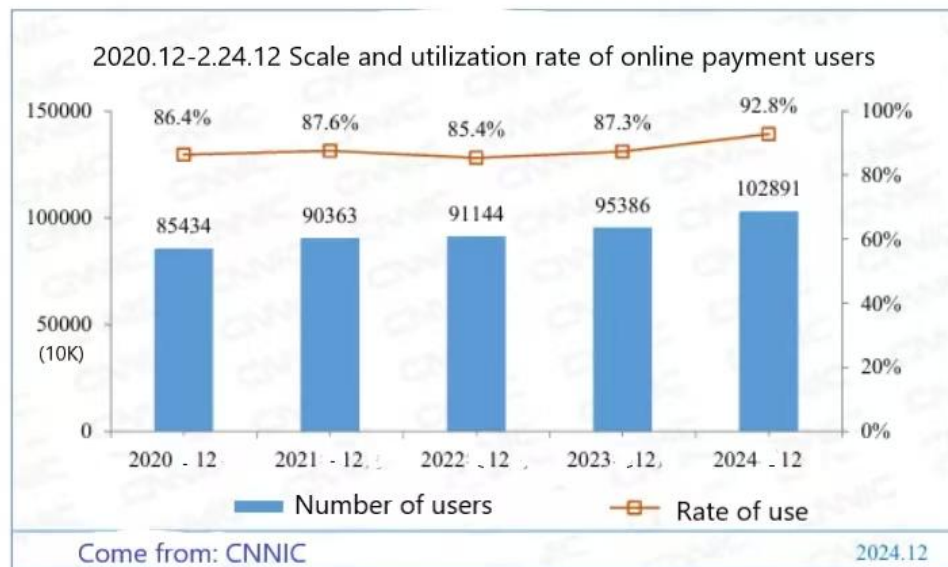


Figure 2. Online payment user trends, 2020-2024[1]

The global e-commerce market is expected to reach \$7.9 trillion by 2027, with an 8% annual growth rate. Amazon dominates the market, holding 37.8% of the global market. Alibaba leads China with 13.9%, followed by JD.com and Pinduoduo. In 2024, policies like the "Action Plan for Promoting the Trade-in of Consumer Goods," "Opinions on Further Optimizing Payment Services to Improve Payment Convenience," and "Implementation Plan for Innovative Applications of General Aviation Equipment (2024 - 2030)" have spurred innovation in e-commerce. Online shopping is growing steadily, driven by trade-in and cross-border e-commerce. Technology development has enhanced efficiency in the online takeaway sector, with Meituan's instant delivery transactions reaching 7.078 billion in Q3 2024.

2.1.1. Trends in e-commerce platforms

To gain a clear understanding of the development trend of e-commerce, one must first grasp the essence of e-commerce, which at its core is retail. All e-commerce activities are centered around retailing, and because of the different understanding of e-commerce platform development trends by individual companies, the main directions of e-commerce development trends are:

Internationalization:

In the first three quarters of 2024, China's cross-border e-commerce import and export of 1.88 trillion yuan in the first three quarters, an increase of 11.5% year-on-year, cross-border e-commerce has become a living force in the development of China's foreign trade. The construction of cross-border e-commerce live bases has been accelerated to help Chinese brands go overseas. Leveraging platforms like TIKTOK Shop, enterprises are promoting their products to consumers worldwide through engaging short videos and live streaming sessions. E-commerce platforms carry out technological innovation to help cross-border e-commerce development.

Socialization:

Social + e-commerce will become a never-ending topic in the mobile Internet era. The development of social e-commerce represented by micro business and Xiaohongshu is also in full swing in China. With the full advent of the mobile Internet era, the core issue of each e-commerce platform is decentralization. Social e-commerce diversion is more accurate, promotion is more timely, and the carrier is more complete.

Live streaming:

TIKTOK, which has rapidly risen in China, serves as a prime example of the growing influence of live streaming in the e-commerce sector. It is gradually making its mark on the global market, reshaping the way products are promoted and sold.

Intelligence:

The application of technology such as driverless cars, smart wearable devices, big data and so on makes the new retail can retail objects and retail scenes have changed drastically. The artificial intelligence business assistant of Ali international station provides product release, marketing and promotion services for the international expansion of small and medium-sized enterprises. As of October, the AI business assistant for domestic sellers has 45,000 users [2].

2.2. Impact of e-commerce platforms on economic development

E-commerce platforms provide opportunities for enterprises, especially small and medium-sized enterprises (SMEs), to enter the global market, greatly promoting economic development [3]. These platforms lower the entry threshold, allowing businesses to reach customers outside of their local area, thereby increasing sales and promoting innovation. In addition, e-commerce has created employment opportunities in multiple fields such as logistics, customer service, and technology. It has also driven the digital transformation of traditional industries, improving efficiency and productivity.

2.2.1. The impact of e-commerce platforms on the business economy

E-commerce platforms serve as a public information exchange and trading hub, empowering businesses to effectively advertise and sell their products.

Early e-commerce platforms favored portal-based B2C and C2C business models, with the B side aiming to help target enterprises reduce costs and increase efficiency. Through the collection of business data, companies can effortlessly communicate information, check product prices, and even plot demand and supply curves. Optimization analysis plays a crucial role in providing both customers and businesses with appropriate pricing strategies.

Commercial information is an invaluable asset for any business, and reviews on e-commerce platforms can monitor product quality and help consumers and businesses make decisions.

The emergence of e-commerce platforms has increased sales profits for businesses. For example, Xtep International Holdings Limited, which faced unprecedented challenges during the coronavirus outbreak in 2020, actively shifted sales to its main brand's e-commerce platform and encouraged distributors to adopt new and cost-effective sales channels, such as private traffic. This led to significant recovery in the second quarter of 2020 [4].

The Chinese government's containment measures and stimulus policies helped the group's retail performance show signs of recovery in the second half of 2020. The epidemic will further raise health awareness in China, and the company remains optimistic about the long-term business development and outlook of the sporting goods industry in Mainland China. In 3Q2023, retail sales (including online and offline channels) of Xtep's main brand grew by 20% to 25% year-on-year, with retail discount levels ranging from 70% to 75% and inventory turnover ranging from four and a half to five months. Xtep achieved revenue of 5.684 billion yuan in 1H2022, up 37.5% year-on-year, with strong performance in the e-commerce channel [5].

2.2.2. *The positive impact of e-commerce and logistics on the economy of remote areas (with China as an example)*

E-commerce platforms have wrought a remarkable transformation in agricultural sales within remote regions, deftly overcoming the constraints imposed by geographical isolation [6].

They support farmers with subsidies, cold chain logistics, and supply chain integration, enhancing efficiency from planting to transportation [7]. Pinduoduo's Nongyun Action supports farmers with subsidies and direct-to-consumer sales. When extreme weather events led to a substantial 40% decline in lychee production in Guangdong and Hainan, Pinduoduo stepped in to stabilize market prices, demonstrating its crucial role in safeguarding the interests of farmers and ensuring market stability.

Similarly, plum farmers in Xianju plum farmers also benefited, achieving record sales in a short harvest period. In 2022, despite reduced production, spot sales on Pinduoduo saved profits, with some merchants earning millions. Since mid-June, Xianju prune sales have risen 30-40%, boosting farmers' annual incomes from 60,000–70,000 yuan to 300,000–400,000 yuan [8].

E-commerce has not only promoted rural e-commerce development but also profoundly transformed the rural development environment. It provides farmers with new sales channels, increasing their income. This improvement in the economic situation alleviates the need for rural laborers to migrate for work. Moreover, e-commerce has substantially reduced the learning and transaction costs associated with agricultural trade, creating a more favorable environment for local entrepreneurship.

As a result, there has been a notable shift in rural labor dynamics, with an increasing number of individuals transitioning from migrant work to starting their own businesses at home.

Additionally, the convenience of e-commerce and online payment has enhanced the quality of rural life. More industrial products are accessible in rural areas through e-commerce, alleviating material shortages. With the support of relevant policies, rural areas have more promising development prospects, which is crucial for retaining local talents [9].

2.2.3. *Argue that e-commerce platforms have led to economic prosperity (using China as an example)*

The rise and development of e-commerce platforms are a significant driver of economic prosperity, rather than merely a passive byproduct of it.

First, e-commerce platforms unlock market demand by overcoming geographic limits. Traditionally, remote areas struggled to access broader markets. For example, Alibaba's agricultural sales grew from \$7 billion in 2013 to \$28 billion in 2019 [10]. As for the remote region of Xinjiang, in 2021, the e-commerce turnover in Xinjiang reached 260.46 billion yuan, an increase of 17.1% year-on-year; online retail sales amounted to 50.96 billion yuan, an increase of 22.3% year-on-year, which is 6.6 percent higher than that of the whole country [11].

Moreover, e-commerce has significantly enhanced logistics efficiency through the application of advanced technologies such as unmanned warehouses and drones.

For instance, Pinduoduo's Western Action helps Middle Eastern manufacturers enter western markets through logistics innovations and subsidies, increasing sales of goods like assault jackets and aquatic products while stimulating remote-area consumption [12].

Additionally, online payment has enhanced transaction efficiency. In 2023, banks processed 296.163 billion electronic payments totaling 3,395.27 trillion yuan, up 6.17% and 9.17% year-on-year. Mobile payments reached 185.147 billion transactions, totaling 55.533 trillion yuan, with 16.81% and 11.15% growth [13]. The convenience of these payment methods has lowered the threshold of transactions, stimulated consumption, and promoted the development of small and micro-enterprises, further boosting economic growth.

2.2.4. *Impact of e-commerce platforms on new legal regulations*

E-commerce platform as a new industry to the original entity industry also brings a series of problems. Including taxation, environment, labor protection, consumer rights and industry monopoly and other issues. Countries are also through the improvement of relevant laws and regulations in solving the above problems.

China's 2025 Provisions on the Reporting of Tax-Related Information by Internet Platform Enterprises (Draft for Public Comments) strengthens tax supervision of e-commerce platforms. It mandates platforms to report operators' identity and income, enhancing tax authorities' ability to combat evasion and ensure fair taxation. The regulation promotes a fairer market for SMEs, curbs improper business practices, and fosters sustainable platform economy growth. It also enhances interdepartmental cooperation, tackling unfair competition like false billing [6].

With the rise of e-commerce, countries have strengthened antitrust regulations to ensure fair competition and protect consumers. In 2021, China fined Alibaba for abusing its market dominance by restricting competition, violating Article 17(1)(d) of the Anti-Monopoly Law. The U.S. enforces laws like the Sherman Act and has intensified antitrust investigations into Amazon and Google. In India, a court fined Amazon \$39 million for trademark infringement, and an antitrust probe found it favored specific sellers, though Amazon denied the charge.

3. Conclusion

This study investigates the positive impact of e-commerce on economic development, especially its promotion of remote areas. E-commerce has revolutionized the way business is conducted by enabling efficient global transactions through advanced logistics, mobile payment tools, and by breaking through the time and space limitations inherent in traditional business models. The research results show that the popularization of e-commerce not only promotes market circulation and improves transaction efficiency, but also breaks down the traditional market barriers in remote areas, enabling local specialties to reach a wider market, creating more employment opportunities and promoting economic prosperity. Looking ahead, as technology continues to advance, e-commerce will play a greater role in more fields and regions. In particular, the application of technologies such as artificial intelligence, big data and the Internet of Things is expected to further enhance the precision marketing, logistics management and consumer experience of e-commerce platforms. Meanwhile, internationalization and cross-border e-commerce will become important research directions in the future as more countries and regions join the global e-commerce ecosystem. However, the evidence regarding whether remote areas can continue to benefit from the development opportunities brought by e-commerce remains inconclusive. Therefore, governments and e-commerce platforms should collaborate to refine policies, promote infrastructure development, and bridge the urban-rural divide. Only through these efforts can we achieve sustainable economic growth and balanced regional development.

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