

The Reality of E-Commerce Development in China: A Comprehensive Analytical Study

واقع تطور التجارة الإلكترونية في الصين: دراسة تحليلية شاملة

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Abstract

China has one of the largest and fastest-growing e-commerce markets in the world, making it the strongest in the world in this field, where the process of shopping and purchasing online has become an essential part of Chinese consumer behaviour. This study evaluates the reality of e-commerce in China, focusing on the trend of its development and its role in the economy and market expansion, by using the descriptive and analytical approach. The results of the study revealed that China's e-commerce sector is very advanced, as China leads the global e-commerce market in the term of revenues with \$1,469 billion in 2024. Major platforms such as Alibaba, JD, and Pinduoduo have played a pivotal role in market expansion, contributing significantly to economy through increased exports and job creation.

Keywords: E-commerce, development, market expansion, China.

JEL Classification: L81, F15, O53

ملخص

تمتلك الصين أحد أكبر أسواق التجارة الإلكترونية وأسرعها نمواً في العالم، مما يجعلها الأقوى عالمياً في هذا المجال، حيث أصبحت عملية التسوق والشراء عبر الإنترنت جزءاً أساسياً من سلوك المستهلك الصيني. تقيم هذه الدراسة واقع التجارة الإلكترونية في الصين، مع التركيز على اتجاه تطورها ودورها في الاقتصاد وتوسع السوق، وذلك باستخدام المنهج الوصفي التحليلي. كشفت نتائج الدراسة أن قطاع التجارة الإلكترونية في الصين متقدم للغاية، حيث تحتل الصين الصدارة في سوق التجارة الإلكترونية العالمي من حيث الإيرادات بقيمة 1,469 مليار دولار في عام 2024. وقد لعبت المنصات الكبرى مثل Alibaba و JD و Pinduoduo دوراً جوهرياً في توسع السوق، وساهمت بشكل كبير في الاقتصاد من خلال زيادة الصادرات وخلق فرص العمل.

كلمات مفتاحية: تجارة إلكترونية، تطور، توسع السوق، الصين.

تصنيف JEL: L81، F15، O53

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Introduction

E-commerce in China is considered the engine of global digital transformation. In recent decades, China has witnessed a major revolution in the field of e-commerce, making it a leading global market and a dominant force in this field, thanks to technological developments and large investments.

The Chinese e-commerce industry is the world's largest, with some estimates estimating it to be three times as large as the United States and accountable for around 50% of all spending on retail apps. The Chinese market's activity in the field of e-commerce stems from China's great economic strength as the second largest and most diversified economy in the world, in addition to the consumer's tendency to buy and sell through the Internet. Many factors have contributed to China being at the forefront of the e-commerce sector in the world, such as the development of applications that serve e-commerce, the widespread spread of the Internet with high rates of smartphone use, the development of electronic payment methods, as well as the availability and development of shipping and delivery methods.

Giant e-commerce platforms such as Alibaba and JD have played an important role in expanding the local and international market, as e-commerce in China has become not just a means of buying and selling, but rather an integrated economic system that includes the sectors of logistics, financial technology, and digital marketing.

Problem of statement

Despite the tremendous success of China's e-commerce, the sector faces many challenges that can hinder the sustainability of its growth. These include strong cross-platform competition, regulatory and legal changes, changing consumer behaviour and global economic pressures. The paper therefore seeks to explore the reality of China's e-commerce by examining its evolution, the reasons for its success and the obstacles to its development. Based on this, the study's problematic focus is on the key question: **What is the reality of e-commerce in China?**

Study hypothesis

- E-commerce in China is highly developed due to a combination of advanced digital infrastructure, widespread mobile payment adoption, and strong government support for the digital economy.
- Giant apps in China, such as Alibaba and JD, have an important role in directing and expanding the Chinese electronic market.
- E-commerce contributes to driving the Chinese economy by increasing exports and creating job opportunities

Significance of study

The importance of this study comes in light of the increasing importance of e-commerce in the international economy in general, and in the Chinese economy in particular. Understanding the mechanisms of the Chinese market can be useful in drawing advantageous lessons to be applied by other economies in an attempt to create their own digital economies. This study is useful in providing an analytical view to decision-makers about the future of this sector and its potential for continued growth in response to evolving economic and technological challenges.

Objectives of study: this study aims to:

- Analysis of the extent of development of the e-commerce sector in China.
- Clarify the importance of e-commerce in the Chinese economy.

Methodology of study

The study adopts the descriptive and analytical approach, with the aim of analysing the trend and development of e-commerce in China, and studying the challenges facing this sector. Official sources, statistical reports and previous studies were used to reach accurate conclusions.

Literature review

China's e-commerce sector has experienced remarkable growth over the past two decades, driven by technological advancements, regulatory support, and changing consumer behaviors. Numerous studies have examined different aspects of this evolution, ranging from foundational success factors to emerging trends and challenges. This literature review categorizes the key

findings of previous research into six main themes to provide a comprehensive understanding of China's e-commerce development.

-Foundation and success factors of china's e-commerce:

Several studies explore the foundations of China's e-commerce sector and the factors contributing to its rapid expansion. (Vlasenko & Goloventchik, 2022), analyse the underlying infrastructure and policy support that facilitated China's rise as a global leader in e-commerce. They highlight how digitalization, mobile penetration, and government policies have played a crucial role in shaping the sector. Similarly, (Dabrynin & Zhang, 2019), investigate China's e-commerce development from the consumer perspective, emphasizing consumer behaviors and the strategies used by foreign companies to penetrate the Chinese market. Their study identifies the unique shopping habits of Chinese consumers and the emergence of new e-commerce segments.

-Cross-border e-commerce and global integration:

The expansion of China's e-commerce has had significant implications for global trade, particularly in cross-border e-commerce. (Chen, Luo, & Tong, 2024), examine how China's Cross-Border E-commerce Comprehensive Pilot Zones (CBCEPZ) have driven digital technology innovation among Chinese enterprises. Their study highlights how these zones alleviate financing constraints and encourage digital transformation. Additionally, (Lyu, 2024), investigates the link between China's cross-border e-commerce pilot zones and urban residents' tourism consumption, demonstrating how digital trade fosters consumer spending beyond traditional sectors.

-E-commerce and socioeconomic development:

The role of e-commerce in rural development and subjective well-being is another significant area of research. (Wei, Zhao, & Luo, 2024), examines how e-commerce initiatives, such as the National Rural E-commerce Comprehensive Demonstration County (NRECDC) policy, have enhanced subjective well-being in rural China. The study finds that digital trade contributes to economic welfare, reduces disparities, and fosters social capital accumulation, although challenges related to the digital divide remain.

-E-commerce platforms and market legitimacy:

A key aspect of China's e-commerce evolution is the role of dominant platforms such as Alibaba. (Kwak, Zhang, & Yu, 2019), investigates how Alibaba built legitimacy in the market through regulatory adaptation, stakeholder engagement, and platform development. The study underscores how legitimacy in market, relational, and social dimensions contributed to Alibaba's sustained success despite intellectual property challenges.

-Legal and regulatory framework:

The regulatory landscape plays a crucial role in shaping e-commerce operations in China. (Huang & Li, 2019), provide an in-depth analysis of the E-commerce Law of the People's Republic of China, particularly focusing on the liability of e-commerce platform operators (EPOs) concerning third-party patent infringement. Their study reveals challenges in balancing patent protection with market openness, emphasizing the need for judicial interpretations and policy refinements.

-Trends and future directions of e-commerce:

China's e-commerce sector is continuously evolving, with new trends shaping its future. (Junyong & Linbo, 2021), analyse emerging developments such as mobile commerce, social commerce, and the integration of big data in e-commerce operations. Their research provides insights into the unique aspects of China's digital trade and offers policy recommendations for sustaining growth. Additionally, (Tian, Zhu, & Zhou, 2024), explore the relationship between e-commerce and regional value chain reconstruction. Their study finds that e-commerce accelerates regional economic restructuring but follows an inverted U-shaped trajectory, indicating that its impact may plateau over time.

The reviewed literature highlights the dynamic evolution of China's e-commerce industry, driven by technological innovation, regulatory frameworks, and socioeconomic factors. The studies collectively demonstrate how China has leveraged digital trade for domestic economic development and global market expansion.

1. Analysis of the trend and development of e-commerce in China

China strongly imposes itself as a dominant and influential force in the global e-commerce market, through platforms that have managed to reserve a special position at the international level, thus enhancing the superiority of the second largest economy in the world.

1.1 Global e-commerce revenue for 2024

Table 1 data indicate that there is a significant difference in e-commerce revenues between countries, with China and the United States of America leading the list by a wide margin from the rest of the countries. This disparity can be explained by several factors, including market size, number of consumers, digital infrastructure, income levels, and cultural trends towards e-commerce.

Table 1. Revenue of e-commerce worldwide in 2024, by country, (in billion USD).

Country	Revenue of e-commerce
China	1469
USA	1223
Japan	169.4
Britain	129.7
Germany	98.31
South Korea	80.35
France	66.37
Italy	64.18
Canada	65.55
India	58.97

Source: (Statista, Revenue of e-commerce worldwide in 2024, by country, 2024)

China has taken the lead in e-commerce globally, with revenues reaching \$1469 billion in 2024. The reasons for this superiority are several key factors, notably the country's high population density, high rates of Internet use and e-commerce, as well as the existence of giant platforms such as Alibaba and JD, which control the domestic market and extend to global markets. The development of electronic payment services and the spread of smartphones have enhanced the ease of access to electronic markets. The Chinese government has also played a key role in the process of developing the e-commerce sector, in terms of creating an environment for its

prosperity and developing regulations and policies to support the sector as it develops (Hongfei, 2017, p. 1). Followed by the United States of America, which ranked second with total revenues estimated at \$1,223 billion. This is due to the country's strong economic environment, high purchasing power, and technical development that contributes to enhancing e-commerce, as major companies such as "Amazon" and "eBay" play a fundamental role in the development and growth of digital commerce, benefiting from the advanced logistical infrastructure and the expansion of express delivery services.

Compared to China and the United States, other developed countries generate significantly lower revenues. Japan recorded \$169.4 billion, followed by the UK with \$129.7 billion, and Germany with \$98.31 billion. These levels are due to the fact that, despite having advanced markets, these countries have relatively smaller populations compared to China and the United States, which limits the overall revenue size. However, the high-income levels in these countries compensate for the market size, as consumers tend to purchase heavily through digital platforms.

South Korea (\$80.35 billion), France (\$66.37 billion), Italy (\$64.18 billion), and Canada (\$65.55 billion) represent important markets in e-commerce, characterized by their technological advancement and the availability of infrastructure necessary to support digital trade. South Korea, in particular, is one of the most advanced countries in e-commerce, due to its high internet penetration and consumers' reliance on advanced applications for online shopping. As for India, it recorded revenues amounting to \$58.97 billion, a number that reflects the development of the e-commerce market in the country, although it is still lower compared to developed markets. However, India is one of the fastest growing markets, with increasing smartphone penetration, rising internet usage rates, and the entry of giants like Amazon India and Flipkart all fueling future growth.

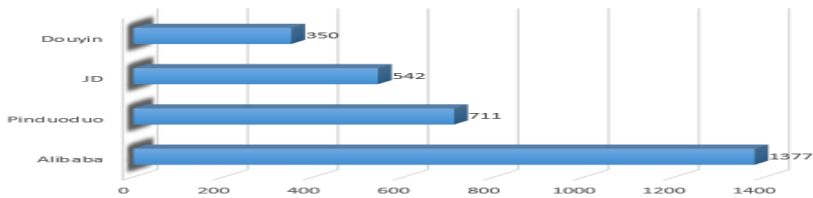
The previous analysis highlights the fundamental differences between various countries in terms of the extent of development of e-commerce, where both China and the United States hold the largest share of revenues, while the rest of the countries, despite having strong markets, are still far from competing with these two countries.

1.2 China e-commerce Applications

Appendix.1 indicates that Alibaba's dominance of China's e-commerce market in terms of total volume of traded goods (GMV), with Taobao and Tmall trading at around \$1300 billion in 2023. Alibaba has accounted for more than 90 per cent of traditional e-commerce transactions since 2014 (Jiang, Zhang, & Jin, 2021, p. 146). However, JD leads the market in terms of revenue, posting \$152.8 billion, outperforming Alibaba, which generated \$130.5 billion.

This disparity is due to JD's different business model, which focuses on direct sales rather than Alibaba's open market model. While Suning was ranked penultimate in revenue value and estimated at \$7.5 billion, it is one of the oldest e-commerce platforms in China, which saw its fortunes decline as Alibaba grew. The Xiaohongshu platform ranks last in terms of \$4.8 billion in revenue.

Fig.1. China ecommerce GMV by application 2023 (USD billion).



Source: (Curry, 2025)

Figure 1 shows structural changes in the e-commerce market, with Alibaba accounting for the largest value of total e-commerce volume estimated at \$1377 billion, followed by Pinduoduo, where e-commerce was estimated at \$711 billion, surpassing JD, although its actual revenue remains lower at \$34.8 billion. This is due to the Pinduoduo platform's reliance on the mass shopping model and discounted offers more than direct revenue. Douyin (the Chinese version of TikTok) also shows a significant shift towards e-commerce via live streaming, recording \$350 billion in total e-commerce volume, reflecting the growing popularity of short video shopping and live streaming as a way to stimulate demand for products.

Table 2 shows the revenue development of three major e-commerce platforms in China: Alibaba, JD, and Pinduoduo during the period 2017-2023.

Table 2. China e-commerce app revenue (USD billion)

Platform	China E-commerce App Revenue		
	Alibaba	JD	Pinduoduo
2017	34	55.6	0.2
2018	51.5	67.1	1.9
2019	70.4	82.8	4.3
2020	94.4	114.2	9.1
2021	129.4	149.3	14.7
2022	127.8	151.6	18.9
2023	130.5	152.8	34.8

Source : (Curry, 2025)

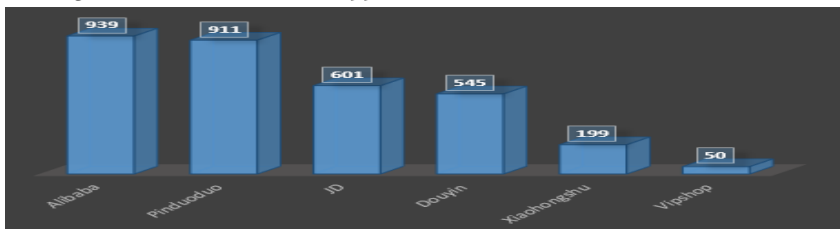
A number of important conclusions can be drawn from these statistics, highlighting general trends and key changes for each platform.

- **Steady growth in revenues from the three platforms:** the data indicates consistent growth in e-commerce revenues for all platforms, albeit at varying rates. In 2017, revenues were relatively low, especially for Pinduoduo, which recorded only \$0.2 billion, compared to \$34 billion for Alibaba and \$55.6 billion for JD. However, all platforms saw a significant rise over the following years, reflecting the expansion of China's e-commerce market and consumers' increasing reliance on online shopping.
- **Alibaba’s revenue development:** Alibaba has recorded remarkable growth, with its revenue rising from \$34 billion in 2017 to \$130.5 billion in 2023, registering a 2.1% annual increase. This growth can be explained by several factors, including the expansion of logistics services, integration with financial technologies such as Alipay, as well as the diversification of offers to consumers.
- **JD's performance and continued growth:** JD maintained its revenue advantage throughout the study period. The platform's revenues recorded a continuous increase, rising from \$55.6 billion in 2017 to \$152.8 billion in 2023, which reflects sustainable growth. This strong performance of the DJ platform is because most of its revenues come from the first-party market, which made it able to achieve much greater revenues than Alibaba on lower volumes.

- **The rapid rise of Pinduoduo:** despite Pinduoduo's humble beginning, it has achieved remarkable growth, as its revenues increased from \$0.2 billion in 2017 to \$34.8 billion in 2023, marking an exceptional jump. This rapid growth reflects the success of the company's group shopping model, which relies on offering significant discounts through group purchases. In addition to the incredible success of Temu in introducing it to international markets.
- **Stability and slowdown in growth after 2021:** Although revenues continued to grow on the three platforms, they recorded a relative slowdown in growth after 2021, especially for the Alibaba and JD platforms. JD's revenues increased from \$149.3 billion in 2021 to \$152.8 billion in 2023, representing an increase of 2.3%, which is a slight increase compared to the large increases witnessed in previous years. The same is true for the Alibaba platform, which recorded an increase estimated at 0.9% in 2021 compared to 2023.

It is clear from the above that JD remains the leading platform in terms of e-commerce revenue in China, overtaking Alibaba. However, Pinduoduo showed the highest relative growth rate, which indicates the possibility of changing the balance of power in the future, especially if it continues its innovative strategy and is able to attract more users.

Fig.2. Users of Ecommerce Application in China 2023, in million



Source: (Curry, 2025)

Figure 2 shows that Alibaba has the largest number of users estimated at 939 million users, followed by Pinduoduo with 911 million users, reflecting the popularity of shopping platforms that offer group offers. While JD has 601 million users, which is relatively lower number given its focus on high quality products and formal trade; it is followed by Douyin, which has 545 million users as it is considered a thriving live commerce platform. The number of users on the Xiaohongshu platform, known as: China's Instagram, has reached 199 million users, which reflects

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the popularity of social e-commerce, as consumers increasingly rely on visual content and social recommendations when making purchasing decisions. The number of users decreased significantly in Vipshop reached 50 million users.

1.3 Evolution of online shopping users' size and proportion of total internet users (2017-2023)

Table 3 indicates the continued increase in online shopping users, rising from 5.3 billion in 2017 to 9.15 billion in 2023. This rise in users indicates the widespread spread of e-commerce, supported by technological development and increased Internet use.

Table 3: The scale of Chinese online shopping users and its proportion among internet users from 2017 to 2022.

Years	The scale of online shopping users (hundred million people)	The proportion of online shopping users in the total number of Internet users (%)
2017	5.3	69
2018	6.1	73.6
2019	6.9	78.6
2020	7.8	79.1
2021	8.4	81.6
2022	8.5	79.2
2023	9.15	83.8

Source: (Yuan, 2024, p. 5)

As for the proportion of e-shopping users out of total Internet users, it recorded a steady increase from 69% in 2017 to 83.8% in 2023, with the exception of 2022, where the proportion declined from 81.6% in 2021 to 79.2% in 2022.

The data in table 4 indicate that the majority of users exhibit a strong interest in prices when shopping online, with 86.4% of consumers emphasizing the importance of price considerations. Conversely, a smaller proportion (13.6%) does not prioritize prices to a significant extent, suggesting a diversity in consumer behavior—ranging from those seeking the best deals to others who focus on factors such as quality or brand reputation.

Table 4: The consumption attitude of online shopping users 2023.

The situation of online shopping users' emphasis on commodity prices when shopping online in 2023		The online shopping consumption attitude of online shopping users in 2023	
Do not value much	13.6 %	Relatively impulsive	14.8%
value much	86.4%	Relatively rational	85.2%

Source: (Yuan, 2024, p. 16)

Moreover, the figures reflect a balance between rational and emotional purchasing tendencies. Specifically, 85.2% of consumers demonstrate rational purchasing behavior, while 14.8% exhibit impulsive buying tendencies. These percentages reinforce the notion that online shopping has become more mature, as consumers increasingly make informed decisions based on price analysis and the perceived value of products.

The data on purchase frequency and spending in 2023 (table 5) reflect a general trend toward increased online consumption. More specifically, 54.3% of users experienced improved purchase activity compared to the previous year, while only 15.8% experienced a decline in purchase frequency. The statistics indicate the increasing importance of e-commerce within consumer purchasing behavior.

Table 5: Online shopping consumption frequency & expenditure.

The year-on-year change situation of the online shopping frequency of online shopping users in 2023.		The year-on-year change situation of the monthly average expenditure of online shopping users in 2023 for online shopping	
increase	54.3%	increase	52.1%
decrease	15.8%	reduce	16.6%
no obvious	29.9%	no obvious	31.3%

Source: (Yuan, 2024, p. 13)

Regarding spending, 52.1% of respondents indicated an increase in their monthly online shopping expenditures, whereas 16.6% experienced a decline in online spends. Alternatively, 31.3% users experienced no difference in spends, which indicates the relative stability of online purchasing habits for a segment of consumers.

2. Contribution of e-commerce to Chinese economy

E-commerce significantly contributes to the Chinese economy by driving exports through global online marketplaces and creating millions of jobs in digital retail, logistics, and technology sectors.

2.1 E-commerce sales in China

Data in Table 6 indicate an increasing trend in e-commerce sales in China, which reflects its vital role in the Chinese economy.

Table 6. Retail e-commerce sales in China (Trillions of USD) 2019-2024.

Years	e-commerce sales
2019	1.801
2020	2.297
2021	2.779
2022	3.085
2023	3.331
2024	3.565

Source : (International Trade Administration, 2023)

Table 6 shows the growth of retail e-commerce sales in China during 2019-2024, where the continued increase in sales during this period is evident, as sales rising from \$1.801 trillion in 2019 to \$3.565 trillion in 2024. This continued and sustained growth reflects the significant expansion of the e-commerce sector, underpinned by digital transformations and the expansion of online sales platforms, as well as the significant trend towards e-shopping after the COVID-19 pandemic, as the year 2020 witnessed an increase of 27.5% compared to 2019.

Table 7. China online retail market value (2017 - 2022, \$ Billion).

Years	Market value
2017	334.9
2018	436
2019	522.1
2020	652.9
2021	793.9
2022	941.8

Source : (GlobalData, 2022)

Table 7 reveals the continued and increasing growth in China Online Retail Market value, as the market value rose from \$334.9 billion in 2017 to \$941.8 billion in 2022. This growth indicates increased consumer confidence in purchasing online, as well as continuing improvements in logistics infrastructure and digital logistics services in China.

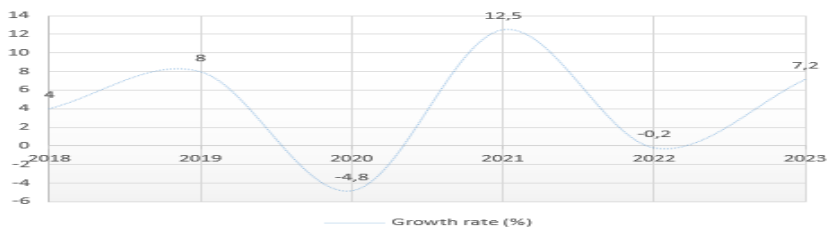
Fig.3. Domestic online retail sales.



Source: (Yuan, 2024, p. 5)

Regarding domestic online retail sales (Figure 3), it is noted that they have recorded a continuous increase in value, rising from \$1.46 trillion in 2019 to \$2.12 trillion in 2023. However, the growth rate has experienced notable fluctuations, reaching 17.8% in 2019 before falling to 5.4% in 2022, with growth returning to 11.7% in 2023, indicating a rebound in domestic demand. Digital transactions have been preferred by the country's middle class and dynamic urbanization, leading to the growth of online retail (Wedel & Xie, 2023). China's e-commerce market has begun to shift from focusing on increasing growth to focusing on both increased growth and the current market, with further exploration of new development models (Chin, Kong, & Ng, 2024, p. 5).

Fig.4. Total retail sales of consumer goods in China and its growth rate from 2018 to 2023.



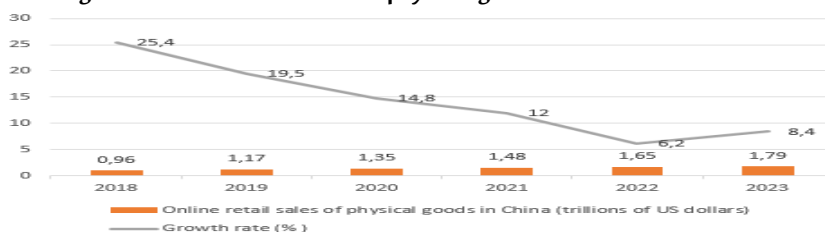
Source: (Yuan, 2024, p. 4)

As for the total retail sales of online consumer goods in China, it witnessed fluctuations in the sales growth rate during the period 2018-2023 (Figure 4). Despite strong growth of 12.5% in 2021, the growth rate recorded a significant decline of -4.8% and -0.2%, during 2020 and 2022, reflecting the impact of public consumption on economic turmoil, especially due to the Covid-19

pandemic. However, the recovery of growth by 7.2% in 2023 indicates improved consumer confidence and a recovery in markets.

Figure 5 shows the continuous rise witnessed by the online retail market for physical goods in China, as the scale of the market increased from \$0.96 trillion in 2018 to \$1.79 trillion in 2023.

Fig.5. Scale and growth rate of China's online physical goods retail market from 2018 to 2023



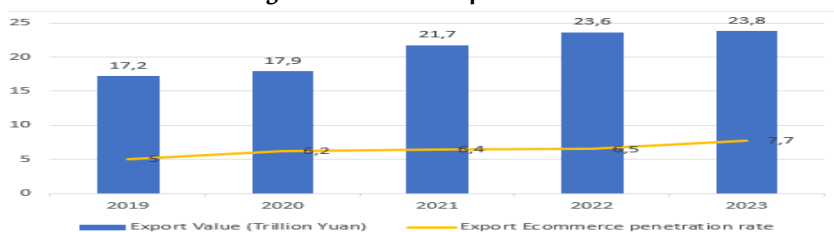
Source: (Yuan, 2024, p. 11)

However, the annual growth rate of this market has witnessed a clear continuous slowdown, as it decreased from 25.4% to 6.2% in 2022, to rise again to 8.4% in 2023. This trend points to the maturity and stabilization of the market, where growth is no longer as fast as in the early years, as well as increased competition, relative saturation in the market, and changes in consumption patterns after the Corona pandemic.

2.2 Ecommerce exports

Figure 6 shows the upward trend in the penetration rate of e-commerce exports and their value during the period 2019-2023.

Fig.6. E-commerce exports.



Source : (Savills Research, 2024, p. 7)

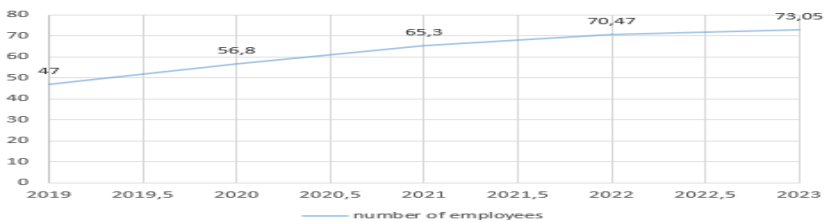
The penetration rate increased from 5% in 2019 to 7.7% in 2023, which indicates an increase in Chinese companies' reliance on e-commerce as a main channel for the export process. Regarding the total value of exports, it in turn recorded a noticeable increase, rising from 17.2

trillion yuan in 2019 to 23.8 trillion yuan in 2023, which reflects the technological development of the country and the increase in consumer confidence in electronic transactions.

2.3 Employment in the e-commerce sector

E-commerce can contribute to creating new jobs across three channels. First, it can enhance entrepreneurship. Second, it can create jobs directly linked to e-commerce. Third, it is possible to create jobs indirectly linked to e-commerce through upstream or downstream links, such as logistics (World Bank Group, 2019, p. 70).

Fig.7. Number of employees in China's e-commerce sector from 2019-2023 (million).



Source: (Statista, Number of employees in the e-commerce segment in China from 2019 to 2023, 2025)

Figure 7 shows the increase in the e-commerce sector in terms of number of employees, as the number rising markedly from 47 million in 2019 to 73.05 million in 2023. This rise reflects the sector's significant growth and impact on the labour market, which in turn indicates increased demand for e-commerce skills. On the other hand, this expansion of employment also reflects the role of e-commerce in promoting economic growth and creating new jobs, making it a fundamental pillar of China's economy.

3. Results Discussion

The findings of **this study confirm that China's e-commerce sector is highly developed due to a combination of advanced digital infrastructure, widespread mobile payment adoption, and strong government support for the digital economy.** The study's results align with the literature review, which highlights the rapid digital transformation and the regulatory frameworks that have enabled China to become a global e-commerce leader (Vlasenko & Goloventchik, 2022). The development of the e-commerce sector is supported by an extensive internet penetration rate, robust logistics networks, and innovative financial technology,

particularly mobile payment solutions like Alipay and WeChat Pay, which facilitate seamless transactions. Furthermore, the study data indicates that online shopping users have continuously increased from 5.3 billion in 2017 to 9.15 billion in 2023, with the proportion of e-shopping users among total internet users rising from 69% to 83.8%. This aligns with previous research demonstrating how consumer behaviors and digital adoption trends significantly contribute to the industry's success (Dabrynin & Zhang, 2019).

The findings also **validate the hypothesis that giant apps such as Alibaba and JD have played a crucial role in directing and expanding China's e-commerce market**. As indicated in the analysis, Alibaba's platforms (Taobao and Tmall) dominated the sector with \$1377 billion in Gross Merchandise Value (GMV) in 2023, while JD led in revenue generation, recording \$152.8 billion. Pinduoduo, which operates on a mass-discount model, has also emerged as a formidable competitor, surpassing JD in total GMV at \$711 billion. These platforms have transformed e-commerce in China into an integrated ecosystem involving digital marketing, logistics, and financial services, further reinforcing their market dominance (Kwak, Zhang, & Yu, 2019). Additionally, the rise of social commerce and live-streaming platforms, such as Douyin and Xiaohongshu, has reshaped consumer engagement, illustrating the dynamic evolution of China's digital commerce landscape.

Furthermore, **the study supports the hypothesis that e-commerce significantly contributes to China's economy by driving exports and generating employment opportunities**. The retail e-commerce market has grown substantially, with sales increasing from \$1.801 trillion in 2019 to \$3.565 trillion in 2024. This growth has also been reflected in the employment sector, where the number of jobs in the e-commerce industry increased from 47 million in 2019 to 73.05 million in 2023. These findings align with the research by Wei, Zhao, & Luo (2024), which emphasizes e-commerce's role in improving economic welfare and reducing regional disparities, particularly in rural China. Additionally, the increase in the penetration rate of e-commerce exports from 5% in 2019 to 7.7% in 2023 underscores China's growing reliance on digital trade to sustain its global market presence.

Despite the tremendous success, the study acknowledges several challenges facing China's e-commerce sector. The fluctuations in growth rates, particularly the decline observed in 2022,

suggest that external factors such as economic downturns and global supply chain disruptions affect the industry. Additionally, intense market competition, regulatory changes, and evolving consumer preferences pose continuous challenges to the sustainability of rapid growth (Huang & Li, 2019). The increasing focus on new e-commerce models, such as cross-border trade and digital financial services, highlights the sector's adaptability, but also signals the need for regulatory adjustments to ensure continued innovation and consumer protection.

In conclusion, the study confirms that China's e-commerce sector is a key pillar of its economy, driven by technological innovation, strong market players, and supportive government policies. The rapid expansion of digital commerce, the dominance of e-commerce giants, and the increasing role of cross-border trade reinforce China's position as a global leader in e-commerce. However, the industry must navigate regulatory complexities and market saturation challenges to maintain sustainable growth in the future.

Conclusion

This study set out to analyse the reality of China's e-commerce sector, focusing on its evolution and success factors. The results demonstrate that China has successfully developed the world's largest and most advanced e-commerce market, driven by digital innovation, mobile payment adoption, and strong government support. Major e-commerce platforms such as Alibaba, JD, and Pinduoduo have played a critical role in shaping the industry, while increasing consumer adoption and technological integration have sustained growth.

The study also highlights the economic significance of e-commerce in China, both in terms of export expansion and job creation. The continuous increase in online shopping users and transaction values reflects consumer confidence and the sector's integral role in China's broader economic landscape. However, challenges such as regulatory uncertainties, market saturation, and external economic fluctuations present potential risks to sustained growth.

Based on the findings, the study recommends the following measures to ensure the continued success of China's e-commerce sector:

- **Strengthening Regulatory Frameworks:** Authorities should develop balanced regulations that protect consumers and businesses while encouraging innovation in digital trade.
- **Encouraging Cross-Border E-Commerce:** Expanding policies to support global market integration can enhance China's dominance in digital exports.
- **Investing in Rural E-Commerce Development:** Further government support for rural e-commerce initiatives can reduce digital divides and increase nationwide participation in online trade.
- **Enhancing Data Security and Consumer Trust:** Strengthening cybersecurity and privacy measures is essential for maintaining consumer confidence in digital transactions.
- **Diversifying Business Models:** Encouraging alternative e-commerce models, such as social commerce and AI-driven retail, can sustain growth and adapt to changing consumer preferences.

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Appendices

Appendix.1. Top China Ecommerce Apps

Apps	Definition	E-commerce Revenue (USD Billion)
Alibaba	The largest ecommerce company by merchandise volume, generating \$1.3 trillion GMV primarily through Taobao and Tmall.	130.5
JD	While far behind Alibaba in volume, JD is the largest ecommerce platform in China by revenue.	152.8
Pinduoduo	Responsible for the shift in China's ecommerce market towards direct-to-consumer business over the past five years.	34.8
Douyin	China's TikTok, which has a thriving live commerce platform responsible for billions in merchandise sales.	12.4
Vipshop	An ecommerce platform focused on discount and flash deals, serving about 50 million customers.	15.9
Suning	One of the oldest ecommerce platforms in China, which has seen its fortunes decline as Alibaba grew in the 2010s.	7.5
Xiaohongshu	Called 'China's Instagram', similar to Douyin it offers live commerce services which are very popular in the country.	4.8

Source : (Curry, 2025)