

# Development of E-commerce Strategic Transformation under the Background of the Internet

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**Abstract.** At the end of the 20th century, the rapid development of e-commerce has become a new growth point for China's economy. The entire e-commerce industry is in a thriving state. The Internet and electronics are gradually changing people's lives. The Internet continues to develop in China, and the concept of "Internet +" has been integrated and penetrated into all walks of life in China. Various technical means and the "Internet +" policy have further promoted the development of e-commerce at a faster speed. In the past two years, the competition among e-commerce companies has become increasingly fierce, and e-commerce companies have undergone transformation, but the effect is not significant, and there is still a certain gap between expectations. Internet technology can drive the transformation of e-commerce to a certain extent. Therefore, this article is mainly based on the development research of e-commerce ST (strategic transformation) under the background of the Internet. First, a comparative analysis of the status quo of several mainstream domestic e-commerce companies shows that the domestic e-commerce industry has great potential for development. Alibaba's annual turnover is US\$114.5 million, ranking first in the 2020 e-commerce transaction list. Secondly, it analyzes the effect of e-commerce ST under the background of the Internet. The results show that the rapid development of the Internet provides an excellent logistics system for the e-commerce industry, which helps e-commerce companies achieve differentiated and diversified development strategies.

**Keywords:** Internet, E-commerce, Strategic Transformation, Development Strategy.

## 1 Introduction

As the Internet began to enter the Chinese market at the end of the twentieth century, a long road of development began. E-commerce mainly uses Internet technology to directly sell products and services to consumers. The emergence of e-commerce has accelerated the pace of transactions in the business process, expanded the participants of e-commerce, and increased the proportion of direct sales from manufacturers to consumers. Therefore, this article mainly studies the ST of e-commerce under the background of the Internet, which promotes the transformation and development of the e-commerce industry.

There are many researches on the ST of e-commerce in the context of the Internet. For example, Huang P believes that "Internet +" is becoming more and more intense, and various industries are facing new market development situations, strengthen the use of Internet platforms, seize opportunities in advance, and complete the transformation of enterprises under the power of the Internet Development[1]. Jit SM pointed out that big data will start a major change in the era. With the development of e-commerce platforms, big data has played a huge role in the development of e-commerce [2]. Liu Y discussed the opportunities and challenges of e-commerce development in the era of big data, and its applications in various fields [3]. At present, although there are not a few researches on the ST of e-commerce under the background of the Internet, the number of studies on how to apply the Internet to the transformation of e-commerce is very limited. Therefore, this article mainly studies how the e-commerce industry can achieve transformation under the background of the Internet. It can accelerate the transformation of the e-commerce industry.

This article mainly studies the research on the ST of e-commerce under the background of the Internet. This article first studies the theoretical basis related to the Internet and e-commerce, and combines the results of the questionnaire to conduct the following analysis: first, a comparative analysis of the status quo of several mainstream e-commerce companies at home and abroad. The results show that compared with foreign e-commerce companies, the domestic market has greater development potential. Alibaba has an annual turnover of 11.45 billion US dollars, ranking first in the 2020 e-commerce transaction list. Secondly, using a questionnaire survey experiment to analyze the effect of e-commerce ST in the context of the Internet, the results show that the rapid development of the Internet is conducive to the diversification and differentiation of e-commerce enterprises' ST.

## **2 Research on the development of e-commerce strategic transformation under the background of the internet**

### **2.1 Internet technology**

The concept of the Internet has been integrated and permeated into all walks of life in China. It has had an overwhelming impact in the past ten years. Because of the higher connection efficiency of the Internet and the connection of more people, money, and things, it has made the business rules of the entire world have changed[4]. The essence of the Internet is connection. The Internet has the characteristics of decentralization, de-productization, de-intermediation, and breaking information asymmetry. Before the advent of the Internet, the channels for humans to obtain information were single, complex, and inaccurate. In many cases, the transmission of information is ineffective and fruitless. After the advent of the Internet, information acquisition has become simple, making it possible to spread and transmit information at a high speed[5]. The advent of the Internet has made the input and output of information extremely efficient and accurate. The Internet has lowered various thresholds and promoted equality and sharing of information. In the era of sharing economy, the support of the Internet is behind it, such as e-commerce, which greatly reduces the cost of ordinary people's online business transactions, and can expand their products to the entire domestic market through the Internet, and lower the threshold. Another example is Zhihu. All knowledge seekers can find their own knowledge and ask questions on the platform, which realizes the equality and sharing of information. These are difficult to achieve in traditional industries, and the cost of input is a threshold [6].

## 2.2 The Impact of Internet technology on e-commerce

E-commerce is a systematic use of information network technology as a means to engage in various network business activities centered on commodity exchange without geographical restrictions[7]. In the field of e-commerce, the biggest data must come from the purchase behavior of users. At present, there are already e-commerce platforms that have thousands of people based on users' buying habits, that is, users with different consumption characteristics may have different prices. In the future, this will be developed to the extreme by commercial interest groups. The biggest change in the block chain is to the supply chain. In the future, e-commerce will use block chain technology. There is no need to worry about fakes. Every product can be traced and traced. This will greatly enhance the competitiveness of e-commerce relative to physical business. If you look a little further, you can see from the cloud computing and big data above that user privacy is being violated more and more. Under the inducement of commercial interests, it is difficult for us ordinary consumers not to show their cards to these platforms. But the magic is one foot high and one foot high. Among these technologies, the block chain is one that can be used by ordinary consumers to protect their privacy. If our data is stored on the block chain in encrypted form, and any merchant can only use the data with our authorization, then the rights and interests of our ordinary consumers will be well protected[8].

There are many points that artificial intelligence can be combined with e-commerce. For example, artificial intelligence can be used to carry out more precise logistics and warehousing arrangements. If there are more IT elites in a certain area, then the warehousing in this area can be more IT electronic Products, which can significantly improve the buying experience in this area. Another example is the use of artificial intelligence technology to make more accurate portraits of consumers, and then the targeted display of different products will definitely increase the order rate, which can not only improve the user's shopping experience, but also greatly increase the platform's revenue[9]. The maturity and application of these technologies will significantly improve the efficiency of e-commerce in general. The combination of technology will improve the quality of services while reducing the number of service personnel [10].

$$\Phi(x, c_i) = \frac{1}{(x^2 + e_i^2)}, i = 1, 2, \dots, k \quad (1)$$

C is the center of the neuron, which is activated only when the given X is close to C, so the function has local induction. The output form of the neural network is:

$$F(x) = w_0 + \sum_{k=1}^k w_k \exp\left(\frac{x - c_k}{\sigma_k^2}\right) \quad (2)$$

Among them, K is the number of neurons in the hidden layer, and W is the bias.

## 2.3 E-commerce transaction mode and development strategy

E-commerce is divided into different e-commerce transaction modes according to different participants [11]. B2B e-commerce is the transaction of products, services and information between enterprises and enterprises through the Internet. Traditional companies generally adopt this B2B model, which can reduce inventory and procurement management costs and maximize corporate profits. B2C e-commerce refers to the e-commerce between enterprises and consumers. This business model

is generally based on the online retail industry, using the Internet to carry out online sales activities, and realize mass consumption and provide services through the Internet[12]. The B2C transaction process has completely changed the traditional way of shopping. Consumers can safely buy what they need online without having to face-to-face. C2C e-commerce is a consumer-to-consumer transaction. The development strategy of e-commerce can be based on e-commerce, with the help of a macro analysis of the internal and external environment, examining the status quo, and fully grasping its own advantages and disadvantages. The development of e-commerce will involve many types of business activities, financial activities, etc.[13]. The domestic e-commerce strategy has generally gone through the stages of simple imitation strategy and Internet technology strategy. The development strategy theory mainly includes the strategic vision, and the emphasis is on what direction the company will develop into what kind of company in the future. The strategic goal emphasizes what kind of development state the company should achieve and should achieve in the future. The business strategy emphasizes which customers, which products and how to develop the company's future development. Functional strategy emphasizes what measures and strategies the company needs to take in marketing, research and development technology, etc. Because companies have various resources such as knowledge and technology, they have unique capabilities [14].

### **3 Experiments on the research and development of e-commerce strategic transformation under the background of the internet**

#### **3.1 Experimental background**

The scale of the Internet industry continues to expand in China. Only 10 years after the Internet entered China, the number of Internet users has surpassed that of the United States. E-commerce relies on the rapid development of the Internet, and the Internet and e-commerce are also changing people's lives step by step. In the past two years, in order to expand their competitiveness, e-commerce companies have made ST one after another, but the effect is not too obvious. How to quickly realize the ST of e-commerce is a very realistic and very important issue before us, and it is also a very urgent issue. Therefore, this article conducts research on the development of e-commerce ST under the background of the Internet.

#### **3.2 Experimental process steps**

This article describes theories related to the ST of Internet technology and e-commerce. In order to better explore the ST of the e-commerce industry under the background of the Internet, it mainly borrows the literature research method and the questionnaire survey method to carry out comprehensive experiments. The experiment is mainly divided into two key contents. The first half of the experiment uses the literature survey method to compare and analyze the status quo of domestic mainstream e-commerce. In the second half of the experiment, a questionnaire survey method was used to analyze the effect of e-commerce ST in the context of the Internet. The questionnaire survey subjects were 100 senior employees of e-commerce companies, and the content of the survey was the effect of Internet technology on the ST of e-commerce.

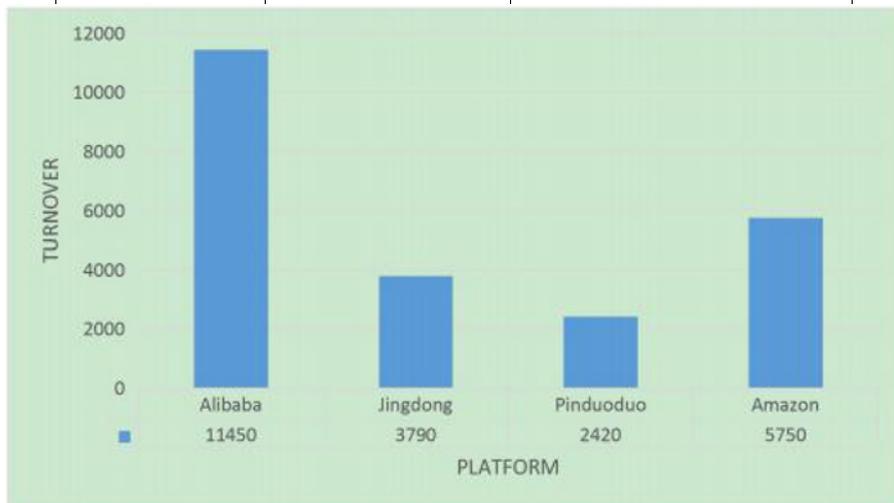
## 4 Experimental analysis on the research and development of e-commerce strategic transformation under the background of the internet

### 4.1 The status quo and comparative analysis of mainstream e-commerce at home and abroad

The development of the Internet makes our life more convenient. In recent years, e-commerce has made our life more rich and convenient. Up to now, more and more online shopping platforms have emerged in endlessly, with batch after batch of online shopping apps, the scale of online shopping trading market is also expanding, and the transaction volume of e-commerce is also increasing. The current situation of transaction volume of several mainstream e-commerce platforms in 2020 is shown in the table below.

**Table 1.** The status quo of mainstream e-commerce at home and abroad.

	Operating model	2020 turnover
Alibaba	B2B	11450
Jingdong	B2C	3790
Pinduoduo	B2C	2420
Amazon	B2C	5750



**Fig.1.** The status quo of mainstream e-commerce at home and abroad.

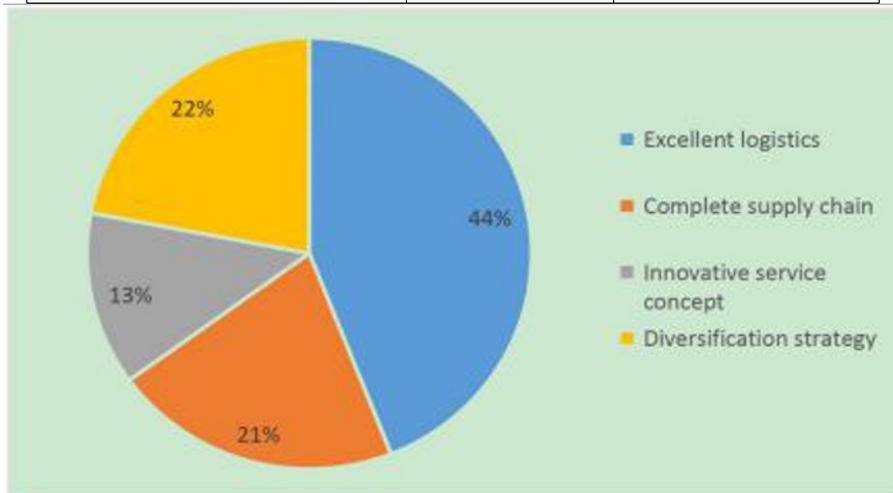
Alibaba, jd.com and pinduoduo are well-known e-commerce shopping platforms in China. They are known as the three giants of the e-commerce business community. As can be seen from table 1 and figure 1, as of December 31, 2020, Alibaba's annual turnover was USD 114.5 million, ranking first in the list of e-commerce transactions in 2020. In 2020, Jingdong's turnover was 3790 trillion yuan. The turnover of pinduoduo, a newly developed platform in recent years, is second only to JD in 2020, reaching 24.2 million yuan. The turnover of the three domestic e-commerce platforms reflects that the purchasing power of China's per capita consumption is very strong, and the development of the e-commerce industry is still optimistic. At the same time, foreign e-commerce platforms are not inferior. In 2020, Amazon ranked second with a turnover of

US \$575 billion, second only to Alibaba enterprises. Among these four enterprises, only Alibaba is the business model between enterprises, which connects enterprises with each other. Jingdong, pinduoduo and Amazon adopt the business model between enterprises and consumers and strengthen the relationship between enterprises and consumers.

#### 4.2 Analysis of the effect of e-commerce strategic transformation

**Table 2.** E-commerce strategy transformation effect.

	Number	Proportion
Excellent logistics	44	44%
Complete supply chain	21	21%
Innovative service concept	13	13%
Diversification strategy	22	22%



**Fig.2.** E-commerce strategy transformation effect.

It can be seen from the Table 2 and Figure 2 that 44% of people believe that the rapid development of the Internet provides an excellent logistics system for the e-commerce industry. The new logistics system uses information extraction, data mining and other technologies to ensure that orders are sorted automatically and accurately. 21% of the people also pointed out that e-commerce companies under the Internet background have a complete supply chain system, which is conducive to achieving their own differentiation strategy. For example, JD Business enterprise differentiation. 13% of people also feel that the development of Internet technology and information technology will help e-commerce companies provide users with special services and achieve their own differentiation. The remaining 22% also pointed out that the rapid development of the Internet will help e-commerce companies implement diversification strategies. The company has developed from initially focusing on the sales of one product to a comprehensive e-commerce company covering various categories. The relevant diversification strategy has given E-commerce companies have brought opportunities to transform the strategic matching of different product value chain activities into competitive advantages.

## 5 Conclusion

In today's world, e-commerce is always influencing people's life choices and changing the way people work. The mobilization and social networking of online shopping provide new business opportunities for e-commerce companies. Many e-commerce companies are only a few years away from establishment to exit. The reason is that some e-commerce companies ignore their own ST, do not have clear goals, and are gradually eliminated. For e-commerce companies, continuous transformation in line with market trends is the only way to go. Therefore, this article focuses on the ST of e-commerce in the context of the Internet, hoping to provide suggestions for promoting the diversification and differentiation of domestic e-commerce companies.

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