

## Analysis of E-Commerce from the Perspective of the Development of the Internet

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**Keywords:** Network, E-commerce, Netizen, Network Security.

**Abstract:** In the era of rapid development of e-commerce, the development of the Internet has affected the development of network marketing. The analysis of the network environment and the characteristics of netizens can lay a good foundation for market segmentation, and can also enable e-commerce companies to have accurate product positioning. At the same time, network security is the cornerstone of the survival and development of e-commerce. Enterprises must use high-tech means to proactively guard against cyber threats in order to stand out from the fierce competition.

### 1. Overview of the development of Internet applications and e-commerce

The rise of e-commerce has greatly promoted the liberalization of China's trade and promoted the process of China's economic globalization. This trading model greatly saves the manpower, material resources and space resources under the line. The development of e-commerce relies on the network environment to complete commodity transactions through the combination of innovative technology and consumer demand. So the network environment acts like a container carrying all the online trading activities of e-commerce. The investigation of the network environment is of great significance to e-commerce.

As of June 2019, the number of Internet users in China reached 854 million, and the Internet penetration rate reached 61.2%. Almost all netizens have mobile phones and use their mobile phones to browse the Internet. Therefore, it is very important to use mobile phones to promote product information. From the geographical point of view, the number of rural netizens is more than 200 million, and the scale of urban netizens reaching more than 600 million is the main force to promote the development of e-commerce. Compared with the development of e-commerce in cities, there is still a lot of room for the development of rural e-commerce. Building rural Internet-related industries will accelerate the development of e-commerce in the region. According to the online behavior analysis of netizens, in addition to Internet users who use the Internet to realize instant communication, users who use mobile phones for online shopping, online video and online news occupy the vast majority of Internet users. Therefore, the use of rich and varied video formats to deliver business advertising information to increase customer visits and improve product awareness is a better marketing model. Online shopping is one of the main ways of commercial shopping mode with its convenient and fast combination of online and underline services, with reasonable price and variety of data sales. From the perspective of payment methods, the number of users using online payment in China accounts for about 90% of the number of Internet users, and most netizens use Alipay and WeChat payment methods.

### 2. Analysis of the development status of basic, entertainment and trading applications

E-commerce in the third-tier cities or rural areas to achieve vertical market sinking, in the online transactions with other countries to achieve horizontal cross-border e-commerce. The operation of e-commerce under the new model has further allocated Internet resources. According to the statistics of Internet application resources, the number of websites in China has stagnated and declined. This phenomenon indicates that the number of websites has become saturated. The mobile

Internet traffic consumption continues to grow, and customers have greater demand for traffic and faster requirements for speed. At present, the average online time per week for Internet users in China is about 30 hours. Instant messaging, web video, short video and network music related applications account for half of the total usage of various applications. The online ordering application has two small peaks at 11 noon and around 8 pm. Netizens have a greater dependence on the Meituan application, logistics and online payment during mealtimes. In an era of complex network information, attention economy has become the goal of customers in the network transaction. In the fast-paced daily life, the multi-purpose network time-based economy is also one of the factors that the take-out platform takes the initiative to consider. Accurate and considerate delivery, convenient and fast ordering, independent and clear tracking, anytime and anywhere enjoyment are the goals that the e-commerce industry is striving for. The network video generates peak usage during the night time. The e-commerce enterprise can push the personalized customization according to the user's preference and viewing characteristics which is a short and delicate video that fits the user's needs. The usage time of social, communication, online shopping, and news related applications accounts for about half of the usage time of various applications. The desire of netizens for the network makes the network become a necessity in life as oxygen. In the era of digital interconnection, online users want to know others and are eager to share and pay attention from others. In the e-commerce environment, the user's trust in the product experience pushed by the "around people" who are in the same environment as the user is obviously more reliable than the product information brought by the advertisement. Therefore, in network marketing, e-commerce companies should vigorously promote the "friend circle" communication process and product sharing activities in the community e-commerce brand consumption circle. Use data mining technology to grasp the consumer trajectory, and at the same time attract high-tech talents to develop various application environments to adapt to e-commerce development. Combining the positioning services, applications, and search engines in the traditional technology to continuously innovate in the process of interaction with users, in order to grasp and modify industry rules in the fierce digital competition, and lead the industry "trends."

### **3. Analysis of the size and structure of netizens**

#### **3.1. Analysis of structural characteristics from netizens**

From the analysis of the structural characteristics of netizens, the proportion of males and females in netizens is basically the same, and the proportion of adolescents and middle-aged people is relatively large. The penetration of the Internet has gradually deepened in older or smaller groups. Among the netizens, the number of students is the highest, the proportion of junior high school students is about 40%, followed by high school students, and one-fifth of self-employed self-employed people. Online education, which is closely related to students, is also growing in the development of e-commerce. From 2016 to 2019, the scale of online education users in China is gradually increasing, and the use rate of online education is gradually increasing. In the context of "Internet +", in order to improve resource utilization, and for more people to share high-quality resources, the educational model of "online teaching and tutoring in reality" will make education independent of time, age, occasion, etc. Restricted use in more places. In some underdeveloped areas, the introduction of high-quality video teaching or remote online teaching by teachers is an increasing choice of classrooms. This method can reduce the degree of interference of unfavorable factors in reality. In the context of artificial intelligence, artificial intelligence learning systems based on big data or front-end algorithms can issue targeted training models according to consumers' own learning conditions anytime and anywhere.

E-commerce companies have successful cases of using the Internet structure report to market refined sales. For example, some companies have seized the characteristics of the younger generation who pursue individuality and like to incorporate popular elements into small objects to create a unique brand design concept. Sales crowd positioning netizens in the pursuit of fashion in the post-90s group illustrates the importance of network structure analysis in network marketing.

### **3.2. The impact of Internet users' income on e-commerce**

In the analysis of income structure of netizens, the netizens with no income and monthly income below 500 yuan account for about one-fifth, and the netizens with monthly income of between 2,000 and 5,000 yuan account for more than one-third. Among Internet users, low-income people account for a large proportion. Therefore, in the process of sales positioning of e-commerce products, the user demand of the low-income group should be fully considered by the seller. There are large differences among groups of low-income people who have a negative attitude toward technological development. They have similarities in addition to low income. For example, their trust in the benefits of new things is not too high. The creative things outside are not very stimulating to them. So the sensitivity that they own or lose something is very low, and there is an irresistible “Buddha” attitude towards the emerging fields of technology creation. Among the low-income groups who have a more positive attitude toward technological development, the common features of the products they pursue are also relatively low-priced. In general, the analysis of technical consumption characteristics helps e-commerce companies to develop, promote products and form good customer interactions.

### **3.3. Composition and facilitating factors of non-netizens**

In the non-netizen structure in China, the number of non-netizens in rural areas is about 1.6 times that of non-netizens in urban areas, and non-netizens in rural areas account for a large proportion. Nearly half of netizens are restricted from browsing the Internet because they do not understand computers, the Internet, or the low level of education such as Pinyin. Therefore, to improve the popularity of networks in rural areas, we should first strengthen the cultural construction in rural areas. E-commerce companies can provide simple network connectivity and e-business basics courses in areas where network construction is relatively backward. Among the reasons for not using the Internet is the lack of Internet access devices such as computers or the age of the people in the area is too old or too young. Among the factors that promote non-netizens to access the Internet, it is one of the most important factors to facilitate network users to contact family members or relatives. Factors such as free Internet access or accessible Internet access devices can facilitate non-netizens to access the network. Helping self-employed households to increase their income is also one of the driving factors. For example, using e-commerce information to open agricultural product sales channels on the Internet to increase sales, let agricultural products go out of the mountain and other small and inactive markets to enter a broader sales platform to build products. The popularity increased the sales income of agricultural products. Some netizens log in to the website in order to obtain more formal official information or to purchase goods from a convenient location. In e-commerce activities, companies can provide more accurate and persuasive data to network users who need it free of charge to increase the number of browsing and access to the website. Enterprises can also attract users with online shopping methods that are low in price, good in quality, and simple in transaction process.

## **4. The impact of the security situation of the Internet on e-commerce**

Under the background of the emerging network transaction mode and the continuous expansion of commodity sales channels, network security has become the focus of continuous attention in the e-commerce environment. Because business information mainly relies on computer transmission, recording or storage, the vulnerability of network communication technology or the loss of access rights of the database will become a threat to e-commerce security. The cybersecurity incidents in the first half of 2019 showed that half of the netizens did not suffer from network security problems during the online process, but half of the netizens suffered from network information such as personal information disclosure and virus trojans in scam devices. In order to ensure the normal transactions of both parties to the transaction and protect the information of both parties from the transaction, the e-commerce enterprise may adopt a firewall technology that prohibits external users of the network from illegally entering the internal network to obtain information, and may also

adopt an active prevention technology for information encryption. In the current e-commerce, government affairs, the most common, the most mature technology, the most operability of network security technology is digital signature technology. However, with the development of science and technology, its perfection and reliability have yet to be further improved.

In the process of investigating netizens' scams, we found that there are a large number of netizens who are scammed by virtual winning information. Most of the deceived users had the speculative psychology of "If I lose the chance, chances will no longer come." and stepped into the trap. Many netizens are fraudulently deceived by scammers who pretend to be friends. Some people pay cash in the part-time job of the network and eventually encounter the scam of "money and people disappear." In the big data environment, e-commerce companies should verify the authenticity of the inbound merchants, registered users and platform information. Enterprises should adopt high-tech innovative means for the management of information, and at the same time formulate strict rules and regulations.

Security is the cornerstone of the survival and development of e-commerce. If the enterprise can always stand at the forefront of technology to prevent loopholes in advance, then the opportunity of the network to change the double-edged sword to the e-commerce enterprise will outweigh the risks and challenges.

## **5. Conclusion**

Under the background of big data, e-commerce is developing rapidly, but e-commerce companies are also facing huge challenges. Enterprises need to analyze the characteristics of netizens from the development of the Internet and formulate clear development strategies. At the same time, enterprises must use high-tech means to actively prevent cyber threats in order to stand out from the fierce competition.

## **References**

- [1] Judy Strauss, Raymond·Frost. Internet Marketing [M]. Beijing: China Renmin University Press, 2015: 131.
- [2] Liu Wei, Xing Yingzi. On the impact of network security on the development of e-commerce and its countermeasures [J]. Shopping Mall Modernization, 2009 (13): 147-148.
- [3] Wang Peng. Exploration of O2O Education Model "Future Teacher" [D]. Shanghai Normal University, 2017.
- [4] Office of the Network Security and Informatization Committee of the CPC Central Committee, National Internet Information Office of the People's Republic of China. The 44th Statistical Report on Internet Development in China [R]. Beijing: China Internet Network Information Center, 2019:44.