



# A Study on Traffic Analysis of Cross-Border E-commerce Shops on the TikTok Platform

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**Abstract.** Since the new crown epidemic raged at the end of 2019, the epidemic has pushed online consumption to grow rapidly and the global e-commerce penetration rate has accelerated, making consumer demand accelerate to online consumption mode and global e-commerce sales show a high growth trend. TikTok, as one of the world's most active applications in terms of user activity, is trying to commercialize under the huge successful effect of domestic Jitterbug cross-border e-commerce, TikTok The road has been chosen for cross-border e-commerce business. With more than 1.5 billion active users in 2022, TikTok is like a huge traffic pool, bringing considerable traffic and diversion effects to the majority of cross-border e-commerce merchants and enterprises, greatly promoting the development of cross-border e-commerce merchants. This article provides an in-depth study and analysis of the impact of the huge traffic brought by TikTok's short videos on its cross-border e-commerce shops.

**Keywords:** TikTok · cross-border e-commerce · short-form video platforms · traffic conversion

## 1 Introduction

TikTok is now sitting on 3 billion + users worldwide, with the number of monthly active users as high as 1.5 billion+, and with just 3 years of development, it has topped the global popular app charts several times in a row. TikTok, as a rare short video app that can sweep the mainstream regions of Europe and the US, the huge traffic opportunities and development potential of which should not be underestimated. TikTok is backed by its parent company, ByteDance, and is influenced by the huge success effect of domestic In October 2020, TikTok reached cooperation with the e-commerce platform Shopify, and in early 2021, TikTok experimented with a small-scale launch of the TikTok Shopping function to individual countries, similar to the domestic Jitterbug shopping cart. TikTok's cross-border e-commerce business is officially on the road. This paper provides an in-depth analysis and exploration of the correlation between TikTok's short video traffic and cross-border e-commerce shops.

## 2 Related Concepts and Theoretical Foundations

### 2.1 Related Concepts

#### (1) TikTok

TikTok is an international short video social platform officially launched by ByteDance in May 2017. Unlike domestic Jitterbug, TikTok has a much wider audience and can cover more than 100 countries such as the US, Indonesia, and the UK. With the development of the Internet era, the anchors within the platform gradually opened the form of live-streaming with goods to cross-border e-commerce. In 2021 early, the official finally launched a TikTok shop to help more sellers to realize their products to the sea. TikTok has been downloaded more times than YouTube, Whatsapp, and other popular software in the past 5 years, and by the first half of 2022, the number of people downloading it exceeded 3 billion, and its daily users exceeded 1.2 billion.

#### (2) Cross-Border e-commerce.

As a new mode of international trade, cross-border e-commerce is a business activity that moves traditional sales and shopping channels online through networking and electrification, with electronic technology and logistics as the main means and commerce as the core. Cross-border e-commerce can break through time and space restrictions, reduce the intermediate links of trade, solve the problem of information asymmetry between supply and demand, and provide new development opportunities for more countries and more small and medium-sized enterprises, reflecting the inclusive development of trade<sup>1</sup>. It is a reflection of the inclusive development of trade.

Because of the rise of the Internet, a lot of information spread very quickly and the flow was amazing, and the convenience brought by online payment, the initial cross-border e-commerce successfully developed in the middle of traditional foreign trade. Affected by the new crown epidemic in 2020, the purchasing power of many consumers in Europe and the United States gradually tended towards the online market, with overseas buyers more willing to choose online platforms for shopping. Further increasing the market share of cross-border e-commerce, the transaction scale CAGR of the past 5 years reached 16.2%, large manufacturers deepen the supply chain capacity building, and cross-border e-commerce gradually become the mainstream mode.

#### (3) Live Banding.

Live streaming is a new type of service that uses live streaming technology to showcase products, answer questions, and guide sales through an Internet platform<sup>2</sup>. This helps viewers to understand more about the products.

With the rise of short-form social video platforms, some mainstream anchors have discovered that they can market their products to viewers through live entertainment, and along with the increasing maturity of video transmission and mobile communication technology, the live streaming + e-commerce model is taking off globally, with the epidemic driving the successful “going abroad” model of live streaming with goods. 2020 On December 18, 2020, Walmart launched its first live-streaming with goods on TikTok, which was the first time TikTok held a live-streaming with goods event in the US.

Subsequently, Macy's and Sephora also started live-streaming on YouTube and TikTok, and more and more brands are entering this space.

Basic Operation Mechanism of TikTok Shop.

The TikTok shop was launched in early 2021, and initially, only two countries, Indonesia and the UK, were officially opened, but as TikTok's business model gradually improves, more countries will be opened, with the majority of developed countries in Europe and Asia.

TikTok shop has two ways of selling Sell your products: If you choose to sell your products via your page, you can showcase your products via live or short videos and embed links to them in your content. Users can click on the product link to direct them to the corresponding product details page. Selling through TikTok creators: TikTok affiliates offer a new way for merchants to attract customers to their products and showcase them to the wider TikTok audience through their creativity.

## 2.2 Theoretical Foundations

AISAS refers to Attention, Interest, Search, Action, and Sharing. It is a gradual change from the traditional AIDMA marketing rules to the AISAS which contains the characteristics of the Internet, fully reflecting the impact and change of the Internet on people's lifestyles and consumer behavior.

From 2019 to today, online sales practices have become increasingly widespread due to the general environment of the epidemic. During the epidemic, people in home isolation for various reasons have gradually reduced their spare time projects, and with the rise of short-video platforms, many viewers have become dependent on them, and many businesses or bloggers have seized the opportunity to set off a wave of live-streaming with goods, which together have contributed to the rapid development of TikTok cross-border e-commerce.

## 3 Sources and Destinations of Traffic on TikTok's e-commerce Platform

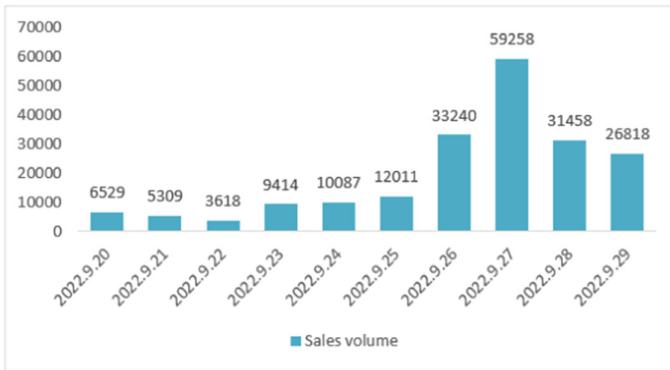
### 3.1 Sources of Traffic to the Shop

Based on the attributes of TikTok – a short video platform, so the main way to attract traffic on TikTok at present is to publish short videos, in recent years TikTok has been improving the new mechanism, adding a new mode of life with goods, short video and live mutual diversion, short video after TikTok's big data user portrait model The new form of short video + live streaming can give users more sensory stimulation and richer forms of content display, the fun of live interaction makes up for the relatively heavy monotony of short video, and short video fills in the shortcomings of live streaming in storytelling ability, pushing the boundaries and setting off a new wave of goods on TikTok. The more diverse content attracts more users to stay and watch, so that users invest time in the product without realizing it, and eventually make them dependent on it so that they become accustomed to watching and habitually watch its products, which is naturally more conducive to increasing the conversion of users' purchases<sup>3</sup>. This is naturally more conducive to increasing user purchase conversion.

**Table 1.** Random 10-day plays and likes on Skintificid’s official account

Date	Play count	Number of likes	Sales volume	Date	Play count	Number of likes	Sales volume
2022.9.20	475.5K	1.9K	6529	2022.9.25	4.2M	11.3K	12011
2022.9.21	14.4K	192	5309	2022.9.26	17.1M	42.5K	33240
2022.9.22	539.7K	2.3K	3618	2022.9.27	32.2M	72.2K	59258
2022.9.23	2.5M	7.1K	9414	2022.9.28	26.2M	53.9K	31458
2022.9.24	1.2M	3.3K	10087	2022.9.29	24.3M	50.5K	26818

Data source: TICHOO data platform



**Fig. 1.** Skintificid official account random 10-day play count and likes

By observing the random 10-day traffic data of the official account of the Indonesian shop Skintificid, we found that the number of video plays and likes on a single day, i.e. the high level of video traffic on a single day, largely influenced the sales volume on a single day, with high traffic meaning high popularity, and the number of likes also confirming users’ recognition of the video content and products. The only way to attract users to place orders and convert traffic into sales is to have a high level of interest and recognition, as shown in Table 1 (Figs. 1 and 2).

### 3.2 Collaboration with TikTok Celebrities to Promote Mutual Traffic Within the Site

One of the ways to quickly increase shop traffic is to cooperate with TikTok celebrities. By cooperating with TikTok celebrities to promote their products, they can make use of the huge fan base accumulated by the KOLs themselves to achieve mutual traffic conversion between the two accounts, which greatly increases the conversion rate of user traffic while expanding the influence and publicity of the cooperative video. By observing the official account of Indonesian shop Skintificid, we found that Skintificid launched a beauty product promotion video called “SCIENTIFIC” on 22 September,

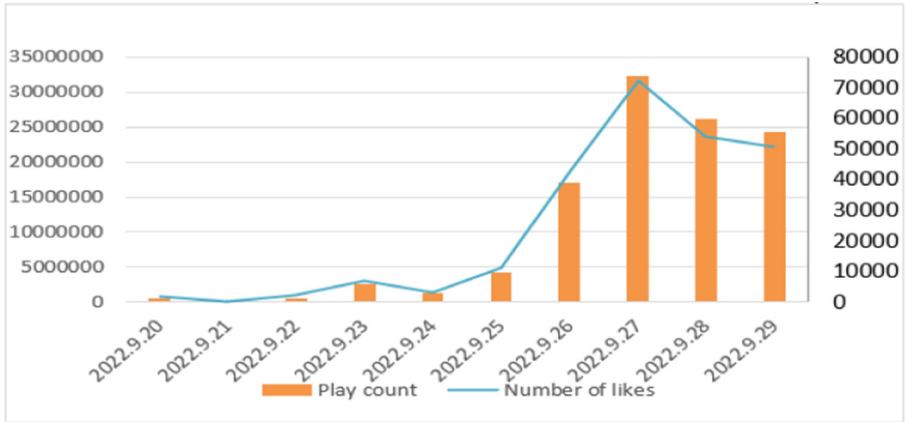


Fig. 2. Skintificid shop random 10-day merchandising volume

Table 2. Comparison of traffic to Skintificid’s official account before and after collaboration with KOL

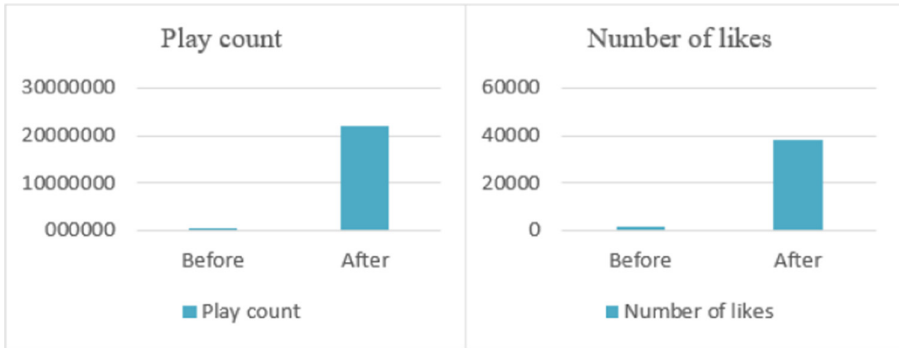
	Pre-collaboration	After the partnership
Play count	69.4K	20.1M
Number of likes	1352	38.4K

with the following video effect (Fig. 3), which was officially released two days later with TikTok After the official release of the promotional video with beauty blogger @jharnabagwani, the video’s traffic volume and likes increased by nearly 20M + compared to the first promotional video, with a year-on-year growth rate of 99% and a significant increase in traffic. It also improves the brand effect and achieves the desired marketing effect (Table 2).

## 4 Difficulties Faced by Cross-Border E-commerce Shops on the TikTok Platform to Boost Traffic

### 4.1 There is an Uneven Distribution of Geographical Traffic on TikTok

TikTok’s main source of traffic is posting short videos, but according to the ranking of the most popular Hashtag categories on TikTok worldwide in 2020, it can be seen that: entertainment videos such as dance and fitness are the most popular, which in line with the entertainment nature of the TikTok platform itself; followed by home, beauty, fashion, food, etc. Based on users’ interest preferences, entertainment short videos on TikTok will be more popular and will receive more traffic; on the contrary, those short videos on goods posted through TikTok for cross-border e-commerce trade will receive less traffic.



**Fig. 3.** Before and after the collaboration on the number of plays and likes

According to official TikTok 2021 data, TikTok has 1 billion monthly active users worldwide, ranking 6th in the world. TikTok has 99.1 million active users over the age of 18 in Indonesia and 136.4 million active users over the age of 18 in the US. All these figures show that Southeast Asia and the US are the areas where TikTok users are concentrated, while other regions have fewer active TikTok users, showing obvious geographical differences.

#### 4.2 TikTok Suffers from Low Conversion Rates

The TikTok platform, as a short-form social video platform, is very entertaining and the primary purpose is to socialize and entertain rather than to shop. In both the US and emerging markets such as South East Asia, social media is generally perceived as being used for entertainment and socializing only, and even if a product is spotted on TikTok, shopping will still be done on traditional shopping platforms such as Amazon. The average time spent by Indonesian users on short videos in 2021 is 23.1 h per month, but the TikTok Seller app has only been downloaded by 18,000 users. Comparing the situation to the mainstream e-commerce platforms in Southeast Asia, Lazada and Shopee both have more than 3 million local sellers in Malaysia. It can be indirectly seen that most sellers do not use TikTok as their main sales channel. Whether it is the inherent attributes of the TikTok platform itself, the youthfulness of the user base, or the lack of identification of sellers with the TikTok platform, all reflect the low conversion rate of TikTok's high traffic<sup>4</sup>.

#### 4.3 Insufficient Innovation in Short Video Content

The diverse needs of users make it more difficult to find a target audience. Content marketing is ideally about delivering products to users that match their preferences. However, consumers' needs are becoming increasingly diverse and current artificial intelligence technologies are unable to accurately identify and tailor content to the needs of such a large number of consumers, making it impossible to truly 'personalize' them. In addition, many users are more concerned about their privacy when using the internet,

and the difference between the information they reveal on the internet and their reality certainly makes it more difficult to find target users.

The increasingly diverse needs of users have led to a bottleneck of innovation in video content. With a variety of short video platforms online, the competition between them has become increasingly fierce, and video content is also presented in front of users in a spurt, in the emergence of a variety of original content at the same time, there is also serious content homogenization phenomenon, and over time the user will produce aesthetic fatigue, and even cause the rapid decline of video in the short term.

## **5 Ways to Promote the Development of Cross-Border E-commerce Shops on the TikTok Platform**

### **5.1 The Inclusion of Overseas Media Social Media Platform Celebrities Boosts Conversion Rates**

The rapid growth and popularity of TikTok have attracted a large number of celebrities and netizens from overseas social media platforms such as Youtube and Instagram to the TikTok platform, and the presence of these celebrities and netizens has also attracted a wave of “celebrity effect” to TikTok. The presence of these celebrities and weblebrities has attracted a wave of traffic to TikTok from the “star effect”<sup>5</sup>. In addition, TikTok’s users have been able to use the platform for several reasons. In addition, TikTok users share their videos on Youtube, Instagram, and other overseas social media platforms that also have internet traffic, which can achieve a mutual attraction effect<sup>6</sup>, further increasing the conversion rate and helping to iterate and update the user traffic on the TikTok platform.

### **5.2 TikTok’s Incentive System and Traffic Realization Opportunities**

TikTok, as a traffic-short video platform, needs to produce high-quality videos to attract and retain users and creators. TikTok has set up a set of user-created video billing and reward mechanism to support original content, and to attract and encourage creators to continue to produce high-quality videos<sup>7</sup>. TikTok has set up an incentive fund of approximately US\$200 million to give back to quality creators, starting in August 2020, with TikTok giving out a total of at least US\$200 million to eligible creators in one year, and over US\$2 billion globally over the next three years. Where the users are, the traffic is. With no high barrier to participation in TikTok, creating and uploading videos can lead to a great deal of recognition and attention, as well as rewards and the opportunity to cash in on the traffic. This smells like a business opportunity for the large young demographic of TikTok users.

### **5.3 Open Integration of Geographical Restrictions on the TikTok Cross-Border E-commerce Platform**

In 2021, TikTok beta-launched the Indonesia mini-shop and the UK mini-shop one after another, and in April 2022, it launched the e-commerce mini-shop for four Southeast

Asian countries. However, the early TikTok Shop is still in the cross-border closed-loop stage, early merchants must be locally registered accounts in a certain country, and only users with accounts attributed to that country will be able to see the shopping links. Only users with an account in that country could see the shopping links. As the TikTok Shop enters the “one shop can sell worldwide” phase, which will allow for the release of country-specific restrictions, TikTok’s live streams and short videos will begin to be streamed across borders, with users around the world receiving short videos and ongoing live streams from merchants in each country, watching live streams and short videos and purchasing products without restrictions. There will be no more restrictions on watching the content and purchasing products.

#### **5.4 Content Innovation is Always the Decisive Factor**

In short videos, innovation is always the decisive factor, and innovation is what makes short video applications commercially valuable. The huge user base covering the global scope is like cross-cultural communication, different users have different cultural backgrounds, and as we all know, there are certain differences in user preferences and cultural backgrounds in different cultures. If you want to capture the vane of the short video boom and get rid of content homogenization, you must first avoid catering to your audience. Innovation in content must then be audience-centered and constantly focused on user needs. To disseminate content more efficiently, short videos must focus on the actual needs of users, know what they want, and then produce personalized content products that are more efficient and appeal to the maximum audience<sup>8</sup>. This will allow for more efficient distribution and maximum audience engagement.

## **6 Conclusion**

With TikTok’s small yellow car and TikTok small store online in more and more countries, TikTok will also attract more sellers from all over the world in the future, and the cross-border e-commerce stores on TikTok platform will be a major trend of cross-border e-commerce trade in the future. Store traffic on TikTok is to get traffic by binding accounts in the form of constantly innovative and updated short video display to attract Consumers, the resident stores can use KOL cooperative promotion to achieve mutual attraction within the station to attract traffic. With the gradual international popularity of TikTok platform, the scale of users is gradually expanding, and their interests and needs are more diversified. In the future, the TikTok platform will focus on the needs of users as the starting point to produce more personalized and high-quality short video content to attract the attention of viewers, which will help improve the conversion rate of stores. Overall, through the platform’s innovation, function enhancement, and business expansion, TikTok’s development prospects are very broad.

**Fund Project.** Guangdong Institute of Science and Technology 2022 Annual School-level Student Innovation and Entrepreneurship Program Project “Research on Cross-border E-Commerce Store Traffic Analysis on Tiktok Platform” (No.: School 2022003); 2021 Guangdong Province General University Characteristic Innovation Project (Humanities and Social Sciences Project):



“Exploration of Big Data in Cultivating Cross-border E-Commerce Industry Chain - Taking the Cross-border E-Commerce Platform in the Greater Bay Area as an Example” (No. 2021WTSCX103); Guangdong Institute of Science and Technology 2021 School-level Research Project “Research on Cultivating Cross-border E-Commerce Industry Chain in Dongguan City Based on Big Data Technology” (No. GKY-2021KYYBW-13); Guangdong Institute of Science and Technology 2021 School-level Research Project “Research on Developing a New Cross-border E-Commerce Industry in Dongguan in the Post-Epidemic Era” (No. GKY-2021KYYBW-23). Guangdong Institute of Science and Technology (GIST) 2021 School-level Research Project “Research on the Policy Effect of Dongguan Comprehensive Pilot Zone for Cross-border E-Commerce” (No. GKY-2021KYYBW-14). Research Project of Guangdong Institute of Science and Technology at School Level in 2022: “Research on Optimization of Cross-border E-Commerce Business Model Based on Blockchain”(No. GKY-2022KYYBW-14).

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