

A Brief Analysis of Tik Tok's Successful Strategies as a Multi-Sided Internet Platform

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Abstract: Since the establishment of Tik Tok in 2016, its user base has been increasing with good momentum. Compared with the Internet platforms of the same period or earlier, the number of users of Tik Tok and the growth rate of the platform volume has significant advantages. Therefore, the research on the strategies adopted by Tik Tok in various development periods is worth studying and worth learning from emerging Internet platforms. This article analyzes Tik Tok's well-developed strategies, using perspectives in economics and other fields to explain Tik Tok's success. In the writing of this article, a large number of previous works of literature were analyzed and cited, combined with some authoritative data statistics. Finally, the strategies used in the successful process of Tik Tok were found. In addition, after analysis, the conclusion is that Tik Tok uses different strategies at different stages of development. At the same time, regardless of its state and external conditions, the network effect is the core of Tik Tok's strategies. In general, the strategies used by Tik Tok can be summarized as identifying targeted user groups, accumulating user volume, and continuously transforming to provide a more attractive service scope.

Keywords: Tik Tok, multi-sided internet platform, successful strategies

1. Introduction

Since the 21st century, with the continuous advancement of technology, people's lives have undergone tremendous changes. With the popularity of mobile phones and the continuous emergence of various APPs, ordinary citizens' social interaction and entertainment, especially young people, have gradually become closely related to the Internet. In 2016, a legendary social app was born. TikTok, or Douyin in the Chinese market, is an emerging Internet platform with both short-form video viewing and social networking functions [1]. At the same time, the recently implanted live broadcast and shopping functions are bringing continuous income to the platform [1]. Although many social Apps, such as Instagram and Facebook, and a considerable amount of shopping networks, such as Amazon and eBay, have occupied most of the market share, Tik Tok's new attempt at function combination achieved 3 billion downloads in 2021 [2]. However, the success of Tik Tok is not achieved overnight; failures and improvements are accompanied by the expected growth of Tik Tok and its developers. The following text will include an explanation of the development process of Tik Tok, an

analysis of the reasons for its success, a discussion of its future development, and also enlightenment on the emerging Internet platforms.

2. Development and Success

The current success of Tik Tok is based on the reform of traditional social media forms and the use of excellent and effective strategies in both the early user accumulation period and the later period of expanding service content.

2.1. Developing Progress

The current version of Tik Tok used by the public can be considered a combination of Instagram and Musical.ly. When ByteDance first developed Tik Tok in 2016, it was utterly the Chinese version of Instagram, and it is a confirmed social platform, excluding any video and subsequent shopping functions [3]. Since many alternatives are competing for market share, the download volume of Tik Tok was not ideal. After a year of support without selling points and features, in November 2017, Tik Tok ushered in a turnaround: the acquisition of Musical.ly [3]. This merger made Tik Tok abandon the traditional forms of image and text social networking and use short videos of about 15 seconds as the primary carrier of social networking, which finally brought ByteDance the first high-light moment, improving the download volume of the last quarter in 2017 to about twice the original amount [2].

Musical.ly was originally a short video platform that integrated entertainment and education for the target youth group. However, the video authors discovered that it was tough to consider both education and entertainment. In addition, it was approximately impossible to control the length of the video to three or five minutes [3]. Therefore, such a new short video platform did not attract the expected audience and video authors, and in the end, only 8% of the funds were left [3]. Later, developers provided video authors with more usable music on the platform to attract more authors and viewers, but unfortunately, they ultimately failed due to funding issues [3].

After Tik Tok merged with Musical.ly in 2017, it retained the characteristics of entertainment and short videos. It applied these characteristics to social media, creating a new short video social networking era. However, before Tik Tok left China and opened up the international market, Douyin was its name. When the international name Tik Tok was gradually known to people, it marked the successful development of Tik Tok's international market.

At the end of 2017, the same time as the acquisition of Musical.ly, Tik Tok started developing in the international market and gradually entered the market in many Asian, North American, European, and Latin American countries, finally obtaining 1 billion cumulative downloads in 2019 [4]. Also, until 2019, Tik Tok is available in 155 countries, and versions of 75 languages are provided [5]. The gradual development of the international market has also laid a solid foundation for Tik Tok's subsequent increase in the number of users.

In addition, in 2020, the total number of users of Tik Tok reached 700 million, which is about twice that of 2019 [1]. However, in 2020, Tik Tok has not made any improvements or enhancements. A plausible explanation for such a massive surge in users and revenue is that under the influence of COVID-19, people worldwide lack are effectively socializing in real life. Therefore, online social networking has become a sensible alternative [6]. Based on the number of users in 2019 has reached an ideal level, it is reasonable to speculate that the surge in 2020 is the result of the combined effect of COVID-19 and network effects, which will be discussed in section 3.

2.2. Great Success

In the social networking industry, ByteDance's development and operation of Tik Tok is generally considered a success. In 2020, the annual download volume of Tik Tok had far exceeded that of Instagram and Facebook, as shown in figure 1, and the number of downloads per quarter is still increasing rapidly [7]. Also, many investors have valued Tik Tok at more than \$50 billion, far greater than the value of Snap Inc.'s Snapchat [8]. In a relatively short period, through the new social carrier, it has obtained quite good downloads and revenue, which is undoubtedly very successful [2]. Even though the total number of Tik Tok users is only about half of Facebook and Instagram, it has reached the same level as WeChat, shown in figure 2 [2]. Such achievements are worth exploring and learning for a platform that has joined the social networking industry in a state where the Internet economy has developed for a while and is relatively saturated.

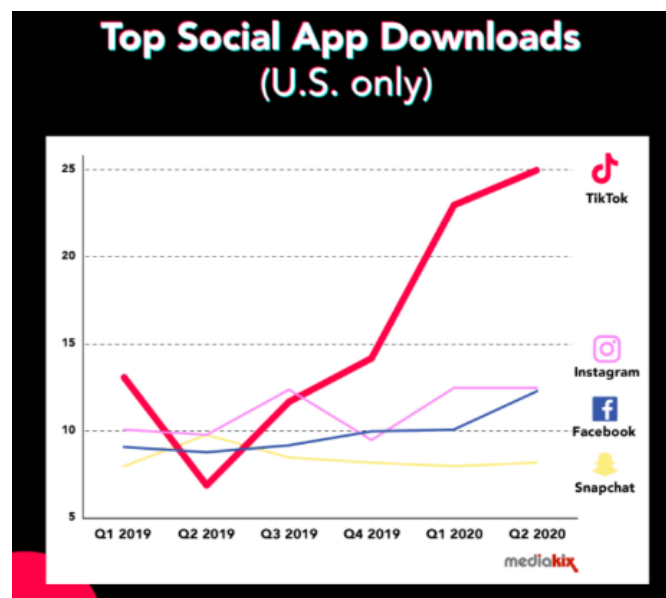


Figure 1: Top social App downloads. adapted from TikTok vs. Instagram influencers: What's the difference? by Grin, n.d. <https://grin.co/blog/tiktok-vs-instagram-influencers/> Copyright by Grin.

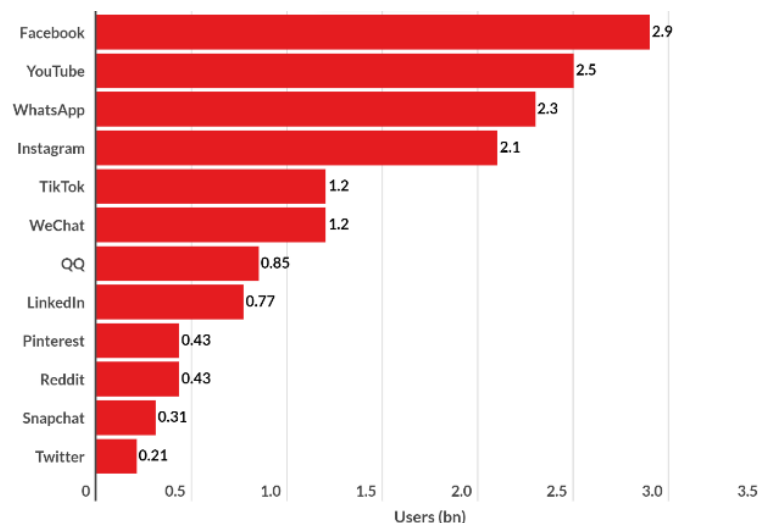


Figure 2: TikTok vs. Social Apps: Users. adapted from TikTok revenue and usage statistics. By M. Iqbal, 2022. *Business of Apps*. <https://www.businessofapps.com/data/tik-tok-statistics/> Copyright by business of Apps.

3. Strategies

As a relatively successful Internet platform, Tik Tok has adopted different strategies in different periods of development. For example, in the developing stage before 2020, launch strategies are mainly used, while in the relatively mature stage after 2020, it is more about business and expansion strategies.

3.1. Strategies Before 2020 – Launch Strategies

TikTok launched in late 2017 as the international version of the Chinese platform "Douyin". As an intermediary between at least two sets of users, the "chicken-and-egg" dilemma was the first obstacle it faced. Similar to other multi-sided internet platforms, known as MSPs, it heavily relied on the positive externalities of the network effect to provide utility for consumers. The demand for the product is directly correlated with the number of users on the different sides of the platform. For instance, a content consumer can benefit from another consumer joining the platform, while they can also benefit (and often more) when a video creator joins the platform. This phenomenon is known as the same-side and cross-side network effect [9]. Due to the emergence of cross-sided network effects being crucial for MSPs, a certain critical mass of users is needed on one side to attract users on the other side. However, neither side will join the platform without the expectation that a certain number of users on the other side will join, which is the essence of the chicken-and-egg dilemma. TikTok overcame the chicken-and-egg dilemma using several strategies during the first year of its launch and successfully acquired a critical mass of users by 2019, providing the positive network externality that stimulated the boom in its popularity in 2020 [10].

The first and most prominent strategy TikTok used was focusing on single target groups, also known as Divide and Conquer [11]. The target demographic of TikTok can be put into two categories, the type of users they aim to attract and the geographical location in which they promote the product. The first area that ByteDance focused on was China. China was a perfect target since it was mainly in the size of its market, with a population close to 1.4 billion in 2017, and the relatively less severe competition from international focal platforms such as Instagram and YouTube due to the country's policy. As a result, the Chinese application reached its critical mass of users and beyond with fewer resources and less time. This allowed ByteDance to advertise TikTok as the international version of a famous Chinese app. In addition, it raised consumers' expectations of the number of users joining the platform, helping it reach the critical inflection point. In terms of having a specific target audience, ByteDance was also able to learn from its previous success in merging with Musical.ly and its failure to imitate Instagram. They designed TikTok's user interface and services catering specifically to one type of user, perfect for their fast-paced video format and algorithms that eliminate search costs — the teenagers of generation z. According to Statista, TikTok's user consists mainly of 13- to 24-year-olds who grew up with the internet and an array of digital products, constantly seeking new impulses and stimulation, and relies on social media for self-expression and a sense of belonging. By focusing on lip sync, dance challenges, and short-form videos, TikTok acquired these loyal consumers. They are less likely to churn and more likely to create content without immediate rewards, such as creator funds [12]. This was an efficient strategy for achieving the critical inflection point as it required fewer financial resources in subsidizing the content supplier.

Another strategy that TikTok used when creating its core features was side switching, where a two-sided platform can solve the Chicken and egg problem by allowing a single side of the user to fill the roles on both sides [13]. Unlike other video-sharing platforms such as YouTube, which have two sides: video suppliers and video consumers, TikTok provides its users with templates, filters, and sets of challenges and allows them to create short videos without specific knowledge of video

editing or filming. This significantly reduced the cost for users to switch sides and allowed TikTok to benefit from the network effect provided by both the consumers and content creators at its launch stages and reach the critical mass of users that will attract businesses to join the platform as well for them to expand on their revenue models. This can also be seen as a variation of platform staging, as TikTok focused on building a one-sided platform at its launch and added advertisers, businesses, and firms after the critical mass of users had been achieved [12]. Such a strategy avoided the risk of adverse cross-sided effects early on, where consumers might be discouraged by adding advertisers as their primary content creators and potentially abandoning the platform.

The third strategy that TikTok used was platform envelopment, where it took advantage of its shared network with other established platforms and acquired its user base as part of its critical mass of users. TikTok is a platform that is highly compatible with its competitors; it strived to combine its unique editing and video format with the products provided by other platforms. This is possible since platforms that share the same user demographic with TikTok, such as YouTube, Instagram, Snapchat, and Pinterest, do not operate in a 'winner take all' regime. Instead, they can be simultaneously consumed by the same set of core users — the multi-homing users [14]. For instance, a large proportion of user demographics of platforms such as YouTube, Instagram, Snapchat, and Pinterest are very similar to TikTok. Therefore, allowing users to repost TikTok videos on other platforms can become a natural form of advertisement for teenagers who are already users of established platforms. As a multi-homing user joins a platform highly compatible with TikTok, the increase in the utility of these platforms will benefit the value of TikTok, just to a lesser extent. Another platform envelopment strategy it used was automated harvesting. It is the processing of existing content on other platforms. This attracts the consumer side of TikTok without needing many original content or content suppliers [12]. For instance, a YouTube video can be edited by TikTok users into a much shorter form, and Instagram and Pinterest photos can be made into a TikTok video after minimal editing and background music. This dramatically reduces the time and financial resources needed to increase the number of users on the supply side to the critical inflection point, as consumers can quickly fill the role by transferring existing content from other platforms.

3.2. Strategies after 2020 – Business and Expansion Strategies

Although the main development ideas of Tik Tok after 2020 have not changed, due to the gradual accumulation of the user base, the launch strategies that help accumulate user volume have been gradually replaced.

TikTok's promotion strategy after 2020 includes business and expansion strategies. The most crucial strategy in business strategies is the vigorous application of network effects. In 2020, Douyin, the Chinese version of Tik Tok, launched the Douyin Store function for the first time, which has also been attempted in international versions [6]. The Douyin Store works by creating a connection between merchants and consumers, charging an intermediary fee from it without producing and selling any merchandise itself.^[6] Moreover, in section 2, it was mentioned that in 2020, Douyin, or Tik Tok had accumulated a perfect user base. Therefore, opening the Douyin Store function is an excellent use of network effects. Economists are somewhat concerned about the Internet platform model of the Douyin Store, as when sellers think other sellers will not participate, they will not participate, leading to low merchant supply and consumer demand [15]. The network effect can usually be explained that when merchants or consumers think that other merchants or consumers will use a specific platform, they will follow the same pace and use it so that the entire platform will develop in a prosperous direction. [15]. Alternatively, in other words, when one group of merchants and consumers enters a platform in large numbers, the other group may profit [16]. Hence, when Douyin Store appeared in 2020, the original large user base encouraged more consumers to enter the platform and eventually attracted more merchants to join the platform, dispelling concerns about

the platform Internet economic model of economists. In more detail, new users found that Tik Tok already had many users, so they conjectured that many users were accumulated because Tik Tok was attractive or easy to use. They were willing to start using Tik Tok. Then, the merchant found that the number of users of Tik Tok was increasing, determined that it was a growing platform, and deduced that joining the Douyin Store could benefit or make a profit from a large number of users choosing to join the platform.

Since the store function launched by Tik Tok has indeed led to a surge in users and downloads in terms of time and data, it must be affirmed that the network effect has made a significant contribution. It is recognized to seize the critical nodes after the development and strengthening of the platform to utilize the network effect since the network effect provides a dominant or focal platform with short-term advantages, and dominant platforms can prevent emerging platforms from occupying market share by utilizing the network effect to maintain position in the industry [17]. For Tik Tok, 2020 is indeed a critical period after sufficient development, fully equipped with the conditions of the dominant platform, so the use of the network effect at this time is justified and wise.

In addition, another notable feature of Tik Tok's business model is the choice of a low-risk model. Generally speaking, Internet merchants have two business models, a one-sided merchant mode and a two-sided platform mode [15]. The operation of merchant mode is that the Internet platform first buys the goods or goods from the seller and then sells them to consumers [15]. The Internet platform in the platform mode only needs to help sellers and customers make connections and does not need to involve services such as warehousing and sales, only earning profit from intermediary fees [15]. As can be inferred from the selling model where Tik Tok charges a 20% commission from the successful sales of the merchant, Tik Tok adopts a two-sided platform mode. [6] According to the operation of the platform mode described above, it is inevitable that when the quality of products is uncertain, the platform mode is better since sellers take risks and platforms take less risk [15]. To be more specific, when the selling of goods is not ideal, the platform does not have to bear the losses due to overstock. Therefore, in theory, although the platform mode reduces the benefits, reducing the risk is a significant advantage of the platform mode [15]. It is commendable that Tik Tok chose a low-risk operating model in its initial attempt to involve the retail industry.

In addition, Tik Tok's advertising form is also low risk. Influencer marketing is a service provided by Tik Tok for merchants who need advertisements [6]. The merchants put forward their own needs, and the platform matches the appropriate influencers or creators of videos for the merchants [6]. Influencers reduce adverse cross-sided network effects by including product advertisements in their video content [6]. For Tik Tok, when the platform's primary goal has changed from expanding the number of users to creating revenue, choosing such indirect advertising placement undoubtedly avoided the loss of users and minimized the risk.

Compared with business strategies, expansion strategies are easier to understand as Tik Tok provides more convenient services for current consumers or audiences to help them maintain their position in the industry. TikTok has undergone an expansion in content. [6] Due to the impact of COVID-19, many students cannot go to school usually, and the demand for online education has increased [6]. Therefore, as a developed and improved video platform, Tik Tok started to provide online education services [6]. Experts point out that Tik Tok is a platform favored by teenage students, so when students study on the platform, they are more willing to express their creativity [18]. Hence, Tik Tok's development of online education functions is not only the development of its own business but also to promote youth education. Moreover, starting in 2020, Tik Tok provides audiences in different countries with content in their own cultures, purposing to stabilize the user base and ultimately convert it into economic benefit. In addition to the direct expansion of service items and video content, Tik Tok has also done some indirect actions to promote the expansion of the

platform scale. TikTok has cooperated with Adobe since 2020 to provide production tools for video authors, which will significantly improve authors' experience and thus attract more new creators [6].

4. Musically Failure and Tik Tok Success

Musical.ly used to be the former presence of the current Tik Tok. There are many similarities between the two platforms because they both involve short videos for entertainment. However, Musical.ly did not exist anymore, and some reasons are worth analyzing.

First, there are fundamental conflicts between the video creators and the platform. For example, Musical.ly tried to start as an educational short-form video platform to make more teenagers learn online with efficient methods [3]. However, according to founders Alex Zhu and Luyu Yang of Musical.ly, many producers had a tough time creating videos that were worth learning and not dull for children [3]. Moreover, videos on Musical.ly should be short enough, between 3-5 minutes, and it is hard for video makers to create videos under too many limitations. Therefore, many people do not want to use this app anymore because of a negative network effect. As a result, the platform, Musical.ly, failed to attract more users.

Furthermore, how Musical.ly advertises its product is not appropriate. When videos being made on Musically were downloaded and shared on other social media platforms, links or references were not contained, making the platform unable to attract more users [3]. However, nowadays, any video of Tik Tok will include the TikTok logo automatically. In addition, TikTok allows users to share links to Instagram, YouTube, and Twitter. Therefore, compared to Musical.ly, Tik Tok's sharing mode is more reliable and can advertise its products on other platforms.

Additionally, Musical.ly did not fully use its advantages. When Musical.ly first came out, the volume and response of users were very optimistic. Ten months later, however, the growth rate of the number of users has become very slow [3]. As a result, Musical.ly did not seize the best time for user data for further business or platform expansion.

Moreover, the biggest problem is the insufficient variety of videos and the initial purpose of Musical.ly. In the beginning, the videos are only for online educational purposes. Based on its launch strategies, Musical.ly seemed to focus on a single target group: teenagers. However, it finally failed because the proper method was chosen at the wrong time. At the age of Musical.ly, online education was far away from the life of teenagers. However, after COVID-19 broke out in the world, online education became the only safe way for students to study, and the demand for online education increased. According to statistics, DingTalk, a platform that assists online education, has seen a roughly sevenfold increase in comment volume after the COVID-19 outbreak [19]. Therefore, Musical.ly is effective for the development of online education but cannot launch the product at the right time.

5. Future and Conclusion

For the success of Tik Tok, although the influence of the external environment, such as the outbreak of COVID-19, is an essential factor, it is more the choice of strategies that leads to ultimate prosperity. Throughout the development history of Tik Tok, it has been the core concept of development to use its advantages to accumulate user volume and gradually attract new users through many users, assisting in broadening the scope of services. Even though the detailed strategies are different at different stages of development, the core idea of such development is worthy of reference for emerging Internet platforms. Besides, one of TikTok's most significant advantages is having Douyin as a frame of reference. TikTok has been replicating almost all of Douyin's strategies, from the initial launch to developing shop mode and live sales. However, based on the fact that the target user group is young people, the saturation of users is inevitable in the future. Therefore, how to

widen the diversity of user groups will become an inevitable issue on Tik Tok's future development path. Similar to how Douyin produced a popular music variety show with ZJSTV in China, TikTok is likely to collaborate with mainstream media, such as TV channels from the US, and present their content in novel forms. Eventually, it is hoped that more Internet platforms can keep pace with the times and bring more value to human development.

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