Live Streaming E-commerce Leads to ByteDance’s Global Invasion
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Abstract. After its success in video-sharing market, ByteDance, the most rapid-growing Chinese technology company, is approaching to open up cross-border E-commerce platform and operating B2B and LKP business aiming to seek for new profit growth points intending to enhance its international influence. ByteDance provides its users with various methods and platforms from creation to cash realization and new recreation, which creates a diverse self-ecosystem with active circular flow driven by constant user-generated content. This paper will analyse the underlying strategy of ByteDance to maintain sustainable development that achieves the target of becoming one of the top-notch international enterprises.

Keyword: Cross-border; E-commerce; ByteDance; Douyin; TikTok; Live-streaming; User traffic.

1. Introduction
This article aims to briefly introduce and analyze the development history, product data, thinking logic of Tiktok, Douyin and its parent company ByteDance, as well as business strategies and globalization in the e-commerce market. Especially in the two years of COVID-19 pandemic, ByteDance has relied on TikTok to develop a huge global market and accumulated hundreds of millions of user groups. What makes TikTok emerged as the rising star? What makes TikTok stood out of those native-owned platforms as an aggressive cultural invader to change people’s habits on entertaining spend?

At the same time, it analyzes its performance and achievements in advertising placement, B2B market and live broadcast e-commerce, as well as its investment in the field of e-commerce, especially overseas. It is also pointed out at the end that TikTok needs to face many problems brought by different market environments in the future, such as different regional cultures, religions, consumer preferences, challenges and limitations of inventory and logistics, etc.

2. Methods
Through the case study method and the literature research method, this paper determines the research target of ByteDance and its product TikTok. In terms of time, by collecting and organizing Internet news, research articles, expert interpretations and market data to introduce the rapid development of ByteDance and TikTok since its inception in 2016, especially during the COVID-19 epidemic. In terms of content, it collects the business path, globalization strategy and foreign investment of ByteDance in the field of social media and e-commerce, so as to find out the reasons for its rapid development and how to successfully "invade" in the field of culture and commerce. In the end, it puts forward many cross regional and cross-cultural development problems that ByteDance company needs to face in the future.

3. Organization of The Text
3.1 ByteDance’s Success Factors
3.1.1 General situation
TikTok, as a short-video sharing application, launched back in 2016, but it had gone viral at the beginning of 2020 under the circumstance of quarantine policy due to Covid-19. According to the
report from Apptopia, TikTok became the most downloaded App of 2021 in the U.S. and the world supported by data analysis collected from Google Play and IOS’s App Store. With a meteoric rise, TikTok has solidified itself as the most popular social media since 2020 world widely. As a signature product, TikTok breaks an astonishing approach to overseas market, and introduces a brand-new Chinese technology company ByteDance among the world. ByteDance started its business from developing the news and information platform Toutiao, and launched the video sharing social networking services Douyin and then the overseas version TikTok. “As of June 2021, ByteDance hosts 1.9 billion monthly active users across all of its content platform.” Success in video-sharing market is unable to meet ByteDance’s ambition to become one of the most influential corporation internationally. Zhang Yiming, founder of ByteDance, declared the main mission in 2021 that aiming to open up its cross-border E-commerce platform and operating B2B and LKP business. Despite owning a huge success of B2C operation, a heap of household apps beyond TikTok, ByteDance is seeking to exploit an internet ecosystem like Alibaba, Tencent and Baidu which digital economy plays an increasingly significant role in China’s and worldwide economic development. From 2002 to 2022, the proportion of China’s digital economy in GDP increased from 10.0% to 38.6%. For any technology company who is capable to reach the admission ticket on this track would strain every nerve to seize this enormously growing market towards companies and governments. In the meantime, ByteDance plans to crack the gaming, education and communication industry finding multiple ways to monetize its users and weaving its further commercial layout.

3.1.2 Introduction of the signiture App: TikTok

As of November 2021, ByteDance set up 6 business sectors as Douyin, Dali Education, Feishu, Volcano Engine, NUVERSE, and TikTok. TikTok, the most signature product of ByteDance, opened a completely new era of network trend. TikTok surpasses Instagram, Snap Chat and Facebook, and become the most popular application in the United States then spreading to the world. What makes TikTok emerged as the rising star? What makes TikTok stood out of those native-owned platforms as an aggressive cultural invader to change people’s habits on entertaining spend? TikTok hosts a variety of short-form videos with the duration from 15 seconds to 10 minutes among the types of pranks, stunts, daily life sharing, cooking and makeup tutorial, dance, musical performance and so on. Apart from the fact that diversity of contents can reach the shallow users, but TikTok created its patented secret algorithm system to personalize content recommendations for each user. Database background monitors every subtle action from each user, as a tiny touch of likes to the vedio and comments, the time duration staying on each post, frequency ratio of comment, accumulating datas to figure out each user’s content preference. As a result, as a user leaves 10 likes, the system will know what kind of content will impress the user; as a user contributes more than 100 likes and even leaves some unconscious comments or repeat playing one video several times, the system will generate the specific user profile for more accurate recommendations; as more statistics gathered from the condition of environmental terminals from each user, and online interaction among three situations such as user to user, user to content producer, and tracking user and producer’s online or offline behavior, the system will enhance the label of each user profile to decide the most attractive content to recommend. For You page was born to demonstrate the core idea of TikTok’s algorithm behind the screen. It also means the characterized content of preference will automatically change over time as your viewing behavior change. For example, once a female user who rarely watches cars or video game content looked up any keyword containing car, combining the watching duration of each action with specifically detected key content, the For You page will recommend the user similar post. The system made a significant use of data computing ability to push TikTok’s user sustaining the interest to slide down to the next post with nonstop, and encourage more people to use its product. Once you touch it, it will become as addictive as drugs sticking to your life. In order to create a unique self-operating online ecosystem, the parent company ByteDance’s technology team generated a video-editing platform CapCut. “CapCut is an all-in-one online video editing software with tons of free features which makes creation, upload and share easier.” cited from the official website. Without
complicated skill need for video editing experience, CapCut quickly bonds to TikTok’s creation workers.

3.1.3 Competitive occupation in B2B market

As the awareness of extensive room for B2B service market growth, ByteDance launched Volcano Engine brand to offer its personalized recommendation algorithm to corporations in 2021, as seeking more possibility to extend its mainstay business. ByteDance said in a statement that Volcano Engine would offer enterprise clients technologies such as recommendation algorithm, data analysis and artificial intelligence. Volcano Engine had already had corporate clients such as e-commerce giant JD.com, smartphone maker Vivo and automaker Geely (GEELY.UL). Statement from a source close to the matter, Volcano Engine arranges a program to launch public cloud computing services which is massively predominated by big tech companies in China. Even under the circumstance of this huge space growth market, competitors such as Alibaba, Huawei, Tencent had already arranged comprehensive layout and formed their own stable scale effect. As a new entrant, ByteDance has marched in another path that seems to be completely opposed to the traditional strategy: first testing the water with Feishu as a lightweight SaaS application, then launching Volcano Engine as an enterprise cloud service platform, and then, as long as time is appropriate, customizing it to complement LaaS at the underlying infrastructure level. But ByteDance still faces a threat. There are plenty of companies capable to offer similar services. Why choose ByteDance? Statement from Zhenyuan Yang, vice president and head of algorithm and data technology of ByteDance, government and business clients were interested in replicating the technologies and tools that led to ByteDance’s rapid growth in revenue and users. Large enterprises and government sectors prefer to gather the strength from various service providers as they intending to build digital platform capabilities. ByteDance owns the technology to provide the clients with richer content, more refined operation and more sophisticated recommendation in the application, which can improve user experience and engagement. ByteDance holds the absolute superiority in comparison to other technology companies in this certain field.

3.1.4 Further approach to e-commerce market

In 2020, under the impact of the pandemic, the live streaming e-commerce model fully broke out, and this new retail format accelerated the rise of international e-commerce trade, which not only affected people’s daily consumption habit, but also boosted enterprises to expand domestic and foreign markets. Whether in China or overseas, live streaming has become a hot new flow. Since 2020, cross-border live streaming e-commerce industry had been gathering tons of well-known social networking, e-commerce and short-video platforms intending to push this industry to a historical peak. ByteDance had been set apart from other competitors, which as formidable as Meta or Alibaba, relying on its exceptional advantaged internet traffic from Douyin and TikTok. According to the statistics in 2021, the number of short video users in China was 934 million, while Douyin hold 7 billion daily active users; in overseas sector, TikTok reached out 1.2 billion monthly active users in Q4 2021 and is expected to have over 1.8 billion monthly active users by the end of 2022. The evidence shows a fact that ByteDance has an enviable user base around the world, which is fully-supportable to achieve its global ambition through live streaming e-commerce industry.

3.2 Profit Model

3.2.1 Profit model of ByteDance

ByteDance gains the most of revenue through its two kinds of core business: Douyin and B2B service. Both Douyin and TikTok have been monetized through advertising and streaming bonus share. ByteDance’s internet advertising is characterized by the use of AI technology to carry out precise advertising marketing plans towards thousands of different features. The main modes include open screen advertising, information flow advertising, open screen board cast and video advertising. At the meaning time, ByteDance intends to expand distribution mode that to seek greater cash ability from users. Users consume products through the consumption of content. On the one hand, the content
attracts users, and users showed positive reactions to their preferred content, no matter passively or actively see it, then the platform uses algorithm to push more content to users along with the labeled preference. On the other hand, video content or live streaming have higher information density. It is more vivid for consumers to get involved with a new product through video narration. Interaction via vision and audition can comparatively arouse one’s interest leading to the end of purchase action. This entire process forms a basic business loop.

3.2.2 Profit model for users

There are several mature ways for Douyin users to get cash flow from content in China. The first category is advertising which extends into 4 subdivisions of product placement. First of all, advertising cash refers to product placement in one Douyin video content. When one account has a certain fan base or influence, the merchant will pay a certain amount of money to the blogger to have their product significantly displayed in a video. There are two common ways to realize cash: one is through the official platform or MCN institutions, and the other is to contact with merchants directly. Douyin builds up an official advertising promotion platform named Xingtu which provides advertising services from creators, brand owners, MCN institutions, celebrities and merchants. The profit model of Xingtu is to collect fees from the transaction of advertising cooperation orders. Xingtu requires users owns over 100000 fans to settle in, the settled creators can take orders according to their workforce of creativity. The average time length of a video advertisement is 15 to 30 seconds, but there is no limit above corresponding to advertisers’ particular requirements ranging from the length of script, characters, props, scene settings. Creators would be benefited with as minimum as hundreds of Yuan, or as maximum as hundreds of thousands of Yuan or millions of Yuan. There are 4 common video product placement methods: soft advertising, titled video, patch ads, and endorsement ads. Video containing soft advertising is featured with the use of heart-touching words to generate emotional response from the audience. Titled videos is a staged propaganda strategy adopted by advertisers in order to enhance the influence of enterprise and its products. In the short video industry, naming is prevalently reflected in subtitles, hashtag challenges, special acknowledgment and so on, which is similar to soft advertising, but in contrast, named videos emphasize more on branding. The cost of title advertising is relatively high that only giant enterprise is capable to do such publicity. Hence, the subsequent events such as topic competitions for Douyin bloggers will offer rich traffic support on those hash-tagged videos, which is especially conducive to improving the exposure of personal accounts. Patch ad refers to advertising shows at the beginning, end, or insert of a video with low production cost. It is commonly accepted for not affecting the original content of the video with 5 to 15 seconds duration. Endorsement advertising apparently refers to a product or a brand endorsement, of course, this form of advertising requires the account to have a lot of traffic, especially tending to get key opinion leaders involved.

The second category is monetization of e-commerce. Platforms such as Taobao and JD are the first-class e-commerce, while short video platforms such as Douyin is the second-class e-commerce. Under this mode of realization, the second level platform will directly jump into the first level platform via a link at a left-below yellow cart. Douyin serves as entry point that cooperating with Taobao, JD, NetEase and other platforms to guide its flow. On the other hand, creators can apply for the “shop window” function when reaching over 1000 followers, which also requires blogger to meet the two conditions of “no less than 10 videos to be released” and “real-name verification”. After the approval, the entrance of “shop window” can be seen on the personal homepage. These ways of realizing cash has three advantages. First, soft product replacement plants a seed in consumers’ mind, as the seed growing into a sprout (as more relevant content of a same product consumer received), resulting in stimulation in purchase demand. Second, as long as the video content for promotion is prepared, there is no other matters to worry about. Products are distributing on a third-party platform without the trouble of pre-sale, after-sale and delivery. Lastly, the trading volume is related to the video view with light effect of follower base in some situation. In other words, even a newly operated account can crack to the top of the sales ranking.
The third category is live streaming. It is more intuitive to display the characteristics of a commodities through live streaming. Relying on the timeliness and interactivity of live streaming, the advantage and personality of products can be represented to the maximum extent. The Forth Category is private domain traffic diversion. Amusing content with directive word can attract people to other platforms such as WeChat Official account, personal WeChat account, WeChat group and personal community transforming into private domain traffic, and then realizing from courses, consolation or other services. One way is to make tutorials demonstrating one’s well-trained skills and publishing it on Douyin. Meanwhile, you can put personally contact information on your homepage to attract people with such needs to contact you in order to realize the sale of certain service. This realization method has a huge amount of audience in each one specific vertical field, especially suitable for makeup, fitness, automobile, baby-caring, education, movie, technology, gaming, mental consulting and etc. The fifth category focus on the strategy of transferring online inflow to offline intending to establish fully-fledged life service community. Douyin has made vigorous preparations for the life service business divided into restaurants, hotel and tourism pack, neighborhood entertainment, one-day trip, scenic spots, and group purchasing on all the categories mentioned above. Douyin’s life service connects merchandises with offline scenes, so as to meet people’s yearning for better life. The last but not the least, after the operation process is stable and mature, the author can apply his own qualifications and experience to write and publish books, and sells books as a means of profit, which is an efficient way of monetization at the later stage of short video operation. However, the realization of publication has high requirements on the author’s personal quality and distribution conditions, and it also brings giant long-term profit and high overall income. ByteDance provides its users with various methods and platforms from creation to cash realization and new recreation, which creates a diverse self-ecosystem with active circular flow driven by constant user-generated content. It is the underlying strategy of ByteDance to maintain sustainable development that achieves the target of becoming one of the top-notch international enterprises.

3.3 ByteDance’s Global Expansion via Live-streaming E-commerce

Assumption that live-streaming e-commerce is the next dominant consumption method worldwide assures the success of ByteDance’s globalized ambition. In the 2020 Douyin e-commerce ecological conference, Wei Wenwen, president of Douyin e-commerce, said that the GMV of Douyin e-commerce was 3.2 times compared to the same period in the past year. The annual cumulative sales of over 10 billion goods, 1.8 million new merchants entered the market, 3.86 million dynamic e-commerce professionals to obtain their glittering career, and more than 20,000 MCN institutions and other service providers have vigorous development. Compared with April 2021, the cumulative number of playing short videos with purchase link increased by 31%, and the number of submitted orders from board-cast room increased by 112%. The statistics shows that user’s shopping behavior driven by premium content is still growing rapidly. All of the continuously growing numbers prove the fact that content-centric interest e-commerce business model has been verified to occupy a main position in the coming new consumption era. In 2022, the most rapid-growing year of Douyin’s streaming e-commerce business, Douyin upgrade its target from “interest e-commerce” to “all-domain interest e-commerce”, which means it keeps the former mode that content-bearing goods seek people to buy it, but also encourage users to take initiative purchase instead. This scenario can form a synergism providing users with a “one-stop” shopping experience, while also bringing merchants with traffic and brand precipitation, comprehensive long-term growth, and stable and healthy business structure. Douyin also have the policies to support the head steamers with more traffic and more professional operation team which forms a reliable brand to attract more fans and enhance the ability to monetize. This also leads to Douyin’s outstanding board-cast performance far ahead of other opponents.
3.4 Overseas Challenges

At the meantime ByteDance has been participated in investment with business-related companies for further layout towards the live streaming e-commerce overseas market since 2020. TikTok launched the Indonesia Shop and the UK shop in February and April in 2021. With a new move, TikTok launched cross-border business in four Southeast Asian countries including Thailand, Vietnam, Malaysia and Philippines on April 25th 2022. Consumers can make one-stop shopping on TikTok in countries and territories in which TikTok Shop is officially available, whether via live streaming or short video with product link. TikTok Shops replicate the similar e-commerce model of Douyin with particular adjustment towards different local policies, regulations, economic and cultural diversity and religions. According to TikTok shop’s official documents, the platform allowed merchants to enter and distribute products at the first day of cross-border business launch. And it was able to support the merchants to start broadcasting, hang on product links, transaction performance and one-side refund. And TikTok launches a new global sale of cross-border merchant function in early May in the same year. Relying on its own traffic, TikTok shop is different from traditional cross-border e-commerce platforms such as Amazon that obtain traffic through online search. Under the effects of the pandemic, war and other uncontrollable factors, the growth of e-commerce market in Europe and United States has been relatively moderate this year. Industry data shows that the internet penetration rate in Southeast Asia (excluding Singapore) exceeds 50%, but the penetration rate of retail e-commerce is less than 5%. In comparison with mature e-commerce markets such as China (24.9%) and the United Kingdom (19.3%), the size of Southeast Asia’s e-commerce market has potential multiply growth. In other words, marching in Southeast Asian e-commerce market is the breakthrough into the global market. The focus of competition in Southeast Asia’s e-commerce market has been Shopee and Lazada in the past few years, but TikTok’s entry would bring out a disruptive reformation to the local industry. The huge growth potential of the Southeast Asian market and TikTok’s large number of active users in the region provide a broad operating space for ByteDance’s cross-border e-commerce business as the first attempt to overseas market.

4. Summary

Even TikTok owns a massive number of users and traffic, it still faces challenges and limits of different regional cultures, religions, consumption preference, inventory and logistics. TikTok, which is vying for a bigger slice of the pie, also faces a host of competitors with strong background such as Alibaba, Amazon, JD, Shopee and Lazada. Even the heading road is strewn with thistle and thorns, ByteDance will eventually break a new commerce model to reform the world pattern in many ways.

References