

The Comprehensive Comparison of Huya Live and Twitch

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ABSTRACT

It is well known that many young people nowadays pursue some relaxed entertainment, such as sitting in front of the computer, watching some anchors play games. It is probably the most mindless form of entertainment. You do not have to do it yourself, just can take your hands off the keyboard, and you will have the same amount of fun as playing games. As the result, the emerging industry of live streaming has emerged and maintained a trend of accumulation and growth over time. Nowadays, network live streaming has entered the era of nationwide live streaming, and both China and United States have more than 100 million users in their respective countries. However, behind the appearance of this carnival, there are significant hidden dangers in social governance, network supervision, moral construction, and other aspects. Therefore, the research on the development status and characteristics of the network live streaming industry is conducive to strengthening the network live streaming service management and creating a good network space for the majority of internet users. This article will make a detailed comparison between the two heavyweight companies in the Chinese and American live streaming industry -- Huya Live and Twitch, and comprehensively analyze the differences between the two companies in terms of their respective business model, revenue, user analysis, and industry forecast.

Keywords: Huya, Twitch, business model, forecast

1. INTRODUCTION

1.1. Huya Live

Huya Live is a leading interactive live streaming platform in China, built by the core technology and superior resources invested by Huanju Shidai, the world's first communication service operator, it provides users with high-definition, smooth, and rich interactive live video services. Huya Live streaming products cover PC, Web, and mobile terminals, with nearly 300 feature channels in 4 categories, including online game competition, stand-alone hot games, mobile game leisure, entertainment, and variety shows. It covers e-sports, music, sports, beauty, outdoor activities, reality shows, variety shows, food, and other diversified popular content.

1.2. The timeline of Huya Live

As we all know, the predecessor of Huya Live is YY Live, which was a voice software company. And in 2012, YY launched its live streaming service for the first time, becoming the first game live streaming platform in China. However, the company's development has not been smooth, in 2014, the Chinese live-streaming industry developed rapidly and presented a situation of a hundred schools of thought contended. Nevertheless, due to YY Live's economic reasons, YY could not compete with its strong competitors in the market, such as Douyu Live and Zhanqi Live, and at one point, the company was even on verge of bankruptcy. Heaven will always leave a door open, finally, at the end of 2014, YY announced the establishment of Huya Live, and in March 2015 announced that it would invest 700 million yuan to help update its company's technology and software facilities to help its long-term development. Today, Huya Live is a successful listed company in New York and has become

the most popular live streaming platform in China.

1.3. Twitch

Twitch was designed to be a pure gaming esports video platform, which has become one of the most popular hangout sites for games because Twitch allows them to watch other players' games in real-time. Twitch users can not only watch the game's races but also can learn how to play the game from other players. Twitch also hosts game-related radio shows, talk shows, and more, the platform always to become "the ESPN of game industries".

1.4. The timeline of Twitch

In 2007, Twitch's predecessor, Justin TV, was launched, and from the start, this site just focused on a few very specific areas, including social, tech, sports, entertainment, news, and games. However, its game section grew so fast that it became one of Justin TV's most popular sections, so Justin TV decided to spin it off and name it a new brand, Twitch. Eventually, in 2014, Justin TV stopped running and instead focus on Twitch exclusively. As early as 2011, Twitch launched a Partner Program, which aimed to attract some of the world's most popular game streamers, game teams to raise awareness of the company. And from today's perspective, this program certainly helped Twitch grow rapidly. Nowadays, Twitch is the world's largest and most popular live-streaming platform for games.

2. BUSINESS MODEL

Huya is a live broadcasting platform. Most intuitively, its value created is a good network environment. There are many streamers to show their various talents and let the audience relax. It is a significant entertainment product. In the latest quarterly financial report, it shows that he sits in the Mau of 178million, which means that there is huge customer traffic. The emergence of Huya has changed China's labor market. When there is no anchor, it is difficult for the game industry or leisure and entertainment industry to maintain their life, but the emergence of live broadcasting platforms such as Huya has solved many employment problems. Because the emergence of streamers tells the older generation that young people's work can not only rely on high education but also give more young people new motivation. For example, there are 520000 streamers on the Huya platform, and 100000 people live with streamers.

In the Mau of 178 million, 6 million are paying users.

Huya makes money from the platform through the following ways: a) live broadcasting business, mainly through the sale of virtual goods; b) Online advertising business.

In its live broadcast service, users can obtain online

content on the Huya platform for free, but they need to pay for various virtual items. The anchor will share a certain proportion of the sales revenue of virtual goods on the Huya platform. On Huya's platform, any user can register as a host and start living broadcasting. In the fourth quarter of 2017, the Huya platform had more than 610000 active anchors per month on average. In 2017, the revenue of the live broadcasting business was RMB 2.059 billion, a year-on-year increase of 161.3%, and the rewards from customers accounted for 94.7% of Huya's total revenue.

In terms of the online advertising business, online advertising services were provided in October 2017, mainly through the sales of various online advertising and promotional activities. In general, Huya provides three types of advertisements: a) background advertisements, which are displayed on one side of the screen; b) Put advertisements in various positions of the platform; c) The advertisement that appears on the screen when the Huya mobile application starts.

At present, most of the company's online advertising revenue comes from the game industry, such as game developers, game publishers, and E-sports institutions. From 2016 and 2017, Huya's popularity and passenger flow increased rapidly, and the company's online advertising business revenue increased from RMB 4.9 million to RMB 115.3 million respectively.

Huya's focus is on signing fees, operating finished products, and promoting these projects

For example, for a well-known stream, its annual signing fee is about 10-million-yuan, operating cost

1.2 billion RMB, Promotion cost 445 million RMB

To improve the popularity and user stickiness of the platform, Hoya actively encourages users to become anchors and join the platform. The platform shares a certain proportion of the sales profit of virtual goods with the anchor; Cooperate with trade unions to recruit more high-quality hosts; Describes various features to improve user host interaction, such as viewing and streaming, content recommendation, and host analysis tools

Twitch's main profit model for a long time has been to rely on paid members and post-bar advertising. Recently, the threshold of the reward system has been lowered, which also increases the anchor's stickiness to the platform. The talent barrier formed by the business model and the e-commerce gene introduced by Amazon has brought the convulsion of a virtuous ecological cycle.

Announcers - announcers who play their programs through twitch can open channels on twitch for free, use streaming API and use third-party podcasting software to send instant videos to twitch, which is responsible for playing. The caster can decorate your channel. You can set users you know as channel administrators. When the number of visitors is large, the administrator can help

maintain the order of real-time chat. The caster can make profits in the following ways: - the user mode can be opened after the account has passed twitch authentication. The user (caster fan) can pay \$5 a month to become the caster's subscriber and enjoy some special benefits in the caster channel (special ChAT expression, subscriber's exclusive chat access, etc.). Most of the user's fees are paid directly to the caster, and a small part is paid to twitch - the caster can choose to let twitch play advertisements during the live broadcast. Most of the advertising revenue is given to the twitch platform. Some are given to the caster himself - the caster is generally related to a game and can earn income by participating in special activities held by stunts. Each advertisement played by a caster depends on the number of viewers. For example, the revenue brought by each advertisement ranges from one cent to one dollar per viewer. Official twitch can make profits in the following ways: - users can pay monthly for turbo, which is equivalent to the VIP of the whole website and can enjoy some exclusive areas, chat logos, and emoticons - users pay for the subscription of caster, some of which are used for twitch - when twitch plays advertisements, Caster gets most of the revenue - from activities such as game equipment manufacturers and official offline activities - advertising on Twitter itself.

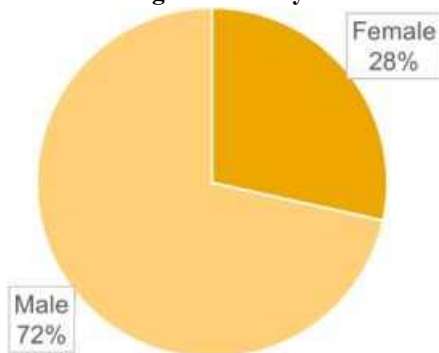
There is no essential difference between the cost of twitch and Huya, excluding the cost of signing up with the anchor

Promotion cost 238.1m\$

Operating cost data traffic4-6m\$ service 772,000\$

For most of the profitable platforms, customers should be the most significant part of it, especially in the

Male and female usage rate Huya



Male and female usage rate Twitch

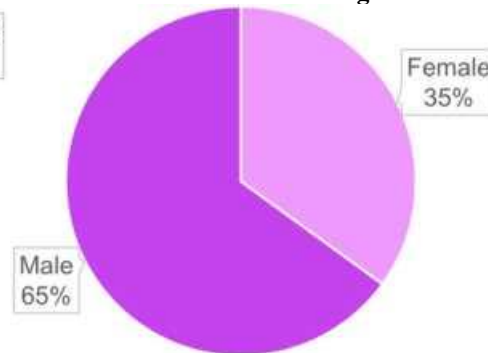


Fig.1. Male and female usage rate of Huya and Twitch

As Figure 1 had shown, in 2019, Huya had 72% male and 28% female, while Twitch had 65% male and 35% female. Hence, the live streaming market is still dominated by men. The reason is that there are more male gamers than female gamers. Women have more desire to consume than men. Now the data showed that the male market has been explored a lot, and the potential female market is very large. Therefore, most live-streaming platforms aim to attract more female users and get them

live streaming field. In 2013, the level of telecommunication has made great progress - ERA of 4G network globalized. Where 3G only allowed users to view high-definition pictures, 4G now allows users to watch stream video. For this reason, the usage of video users on PC is on the decline, while on mobile is on the rise, especially among young users aged 10-29, who watch more than 69% of video on mobile. In June 2014, the number of online video users in China reached 439 million, and the number of Chinese game users reached about 517 million [1]. Therefore, the popularization of 4G later laid the basis for the development of mobile live broadcasting and game live broadcasting.

We found user information of Huya and Twitch. In 2011, Twitch separated from Justin. TV, in the content, twitch already had 3.2million unique visitors per month. And in 2012, this value increased by more than 6 times. Twitch has 20million visitors per month at this time [2]. In addition, when Huya split from YY in 2014, it also attracted a large proportion of YY's users. Therefore, it can be seen that Both Huya and Twitch inherited the user resources of their predecessors. Furthermore, both of them found the user favorite specific direction ---- Game Live streaming through the predecessor data [1].

The customers of Huya and Twitch are of two kinds: users and streamers. Through the tipping mechanism, which is a way that user interacts with streamers, the users would feel like they are "friends" with streamers and increases the likelihood that users will stay on the platform. Huya and Twitch have also recently lowered the threshold for their rewards system, making it possible for more people to become streamers and receive rewards. This also makes the streamer stickier for both platforms.

to spend money. Twitch and Huya will explore several areas to appeal to women. In 2017, according to Twitch, the percentage of male users was 81.5 percent, which has dropped considerably. A more balanced mix of male and female users is a market trend.

In 2018, Huya had 49.4 million monthly active users, which grew rapidly to 1.73 billion in 2020. The reasons behind this include the listing of Huya in 2018 and

Tencent's investment in it. Compared with the mature twitch, the growth is not obvious, which only increased

from 127million in 2018 to 140million in 2020[3].

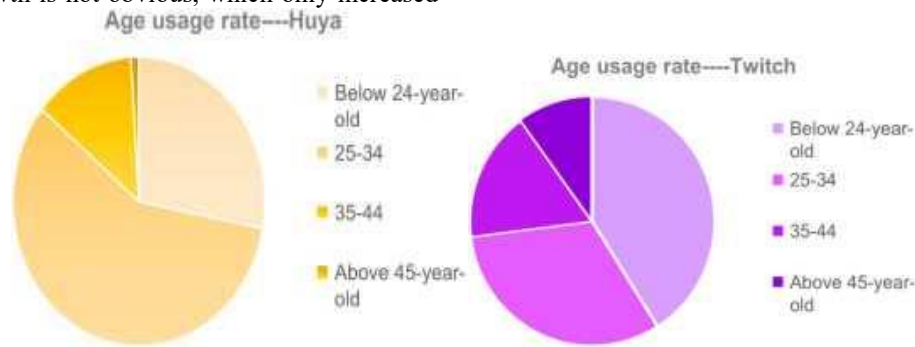


Fig.2. Age usage rate of Huya and Twitch

As can be seen from Figure 2, Twitch and Huya's users are mostly under 35. The under-24 audience is younger, has a lot of players, and is easily drawn to new social trends. Young people under the age of 24, who often have no self-control, reward streamers indefinitely. These people have become an important source of income for live streaming platforms. Users between 24 and 35 years old are probably already working. At this time, there is not much work pressure and free time, so they are characterized by time fragmentation, which can be filled by live streaming.

advertising, and comprehensively improving the effectiveness of display, including short videos, dynamic pictures, and static pictures. Also, Huya Live supports external hyperlinks that users can easily browse the following contents. Huya Live's advertising is divided into online platform advertising and offline events advertising.

2.1. How does Huya make money

2.1.3. Gifts/Tips

2.1.1. VIP fee

Huya Live has launched the "Huya Noble" system for paid members. Similar to QQ VIP, customers need to pay a certain monthly membership fee. The fee for opening a VIP account has increased from 50 yuan to 1.5 million yuan, and a certain amount of virtual currency will be returned. The VIP level from low to high is "Swordsman", "Knight", "Lord", "Duke", "King", "Emperor", and "Super God". Privileges increase sequentially. For example, the lowest-level "swordsman" has 6 privileges, such as exclusive mounts (Mythical beast), speech bubbles, VIP seats in the living room, and privileges to interact with streamers. Level differentiation not only brings a better viewing experience to paid members but also enhances the stickiness of the platform to users. The cost varies greatly between different levels. After opening, monthly renewal is required to maintain the VIP. At present, the Huya Live VIP system is effective. It has become a symbol of membership status, and the number of paying users has increased significantly. Huya Live uses the privileges of a small number of paying members to attract and stimulate a large number of ordinary users so that the platform can continue to make profits[3].

Huya Live provides virtual gifts and commodities. When users find something interested, they would reward the streamer. Generally, consumers need to recharge Golden Beans in Huya and then use Golden Beans to purchase goods to reward the streamers. The platform will take 30% of the charging fees. When rewarding expensive gifts, the living room will roll out special announcements, which make consumers satisfied, encourage them to consume more gifts, and further increase platform revenue [4].

2.1.4. E-Commerce

In the inflection point of the continuous outbreak of live e-commerce, Huya Live launched the e-commerce shopping section "Huwu" in November 2019. Based on the original intention of the user group, Huwu initially opened categories including jewelry and jade, calligraphy and seal carving, tea and wine nourishment, cultural and entertainment miscellaneous, clothing and luggage, snack food, digital appliances, and daily necessities, etc. In December 2019, Huya further introduced e-commerce functional permissions for food [5].

2.1.2. Advertising fee

Huya Live continuously launches high-quality advertising products, enriching the form of living room

2.2. How does Huya spend money

2.2.1. Service Building and Maintenance Fee

The highest cost of the live stream platform is the maintenance cost of the server. In the second quarter of 2020, according to the financial report, Huya Live bandwidth expenditure was 264.8 million yuan, an average of 88.26 million per month.

2.2.2. Famous Live Streamer Commission

Huya Live will increase the internet traffic and popularity of the platform by signing famous live streamers or celebrities in a certain field. Huya Live once signed a contract with an e-sport (LOL) player UZI in 2017 and offered a price of 50 million yuan per year.

2.3. How can Twitch make money

2.3.1. VIP Fee

Consumers can open three different services in a live stream room. The first-level VIP requires 4.99USD, the second-level VIP requires 9.99 USD and the third-level VIP requires 24.99USD. VIP users can use special emoticon stickers, membership identification, advertising blocking, and subscription medals in the living room. At the same time, members can also communicate in the "members only" chat room. Amazon, as the parent company of Twitch, provides a Prime Gaming service The price this service is 5.99USD per month. It allows users to open a VIP in any streamers' living room (only once per month) and receive in-game items. The platform will split the revenue from the subscription fee with live streamers (50% each). Of course, if the streamer is popular, Twitch will even increase the share ratio to 60-70%[2].

2.3.2. Advertising Fee

Twitch will place advertisements on the platform. Some live streamers on twitch cooperate with twitch. These streamers sometimes advertise in their living rooms. Twitch will withdraw about 50% of the advertising fees from live streamers.

2.3.3. Gifts/Tips

In the living room, viewers can donate or buy bits, which are the virtual currency sold by Twitch. Viewers

can send small emotion stickers in the chatting board to reward (cheer) the live streamer. A bit is equivalent to a cent. In other words, every 100 singularities received by the viewers is equivalent to \$1 in income[6].

2.4. How does Twitch spend money

2.4.1. Service Building and Maintenance Fee

Similar to Huya Live, the largest proportion of expenditure is the maintenance cost of the platform and server[7].

2.4.2. Famous Live Streamer Commission

Twitch doesn't spend that much money on commission fees because Twitch is the most famous and popular streaming platform in the western world. Streamers are willing to live stream here. Twitch's leading position in the live streaming industry attracts countless excellent streamers.

2.4.3. Advertising Fee of Twitch itself (twitch needs to provide in-game items)

Twitch will give its users free game items as gifts

3. FUTURE EXPECTATION

3.1. Explore the market for advertising and e-commerce

2021Q1, Huya's advertising, and other business revenue rose 54.6% from a year earlier. In the same period last year, when the COVID-19 epidemic was spreading, Huya users surged, and advertising and other revenue also rose. But this year the whole country has returned to work and production, Huya in this respect still maintains a larger increase in income, so it can be seen that the potential of AD and other business revenue is big.

Tab.1.Profit statement of Huya[8]

	For the year ended December 31,					US\$
	2016	2017	2018	2019	2020	
	RMB	RMB	RMB	RMB	RMB	
(in thousands, except for share, ADS, per share and per ADS data)						
Selected Consolidated Statements of Comprehensive (Loss) Income:						
Net revenues:						
Live streaming	791,978	2,069,536	4,442,845	7,976,214	10,311,624	1,580,326
Advertising and others	4,926	115,280	220,595	398,287	602,750	92,375

As can be seen from Table 1, advertising and other business revenue just accounted for a small proportion. Therefore, it is predicted that Huya will take a series of measures to develop the market in this respect. For instance, advertisements should be added to the pages of its APP and website and big streamers should be encouraged to receive more advertising business. It can also take advantage of its platform to enter the current hot e-commerce field, such as attracting restaurants and

encouraging big streamers to enhance cooperation with Taobao merchants.

In terms of attracting restaurants, Huya can encourage some new restaurants to broadcast dishes, restaurant environment, and restaurant service on Huya to attract customers. Using Huya live streaming or using Huya streamers to promote their restaurants requires payment to Huya. During the live broadcast, the restaurant can post

some links offering discounts in the studio, through which customers can get some discount coupons and other discounts, to better attract customers. The restaurant itself can also judge whether the attracting effect of Huya meets the expectation by counting the number of such concessions and decide whether to continue the cooperation with Huya based on this.

3.2. Expand overseas markets

As can be seen Figure 3 and 4, domestic live broadcasting user numbers in China and Twitch continue to grow, but the growth rate is slowing down. At the same time, the two are also facing competition from other live streaming software. Therefore, we expect the number of users of both will continue to grow but will gradually reach saturation. In search of more users, we expect both companies to expand their overseas markets.

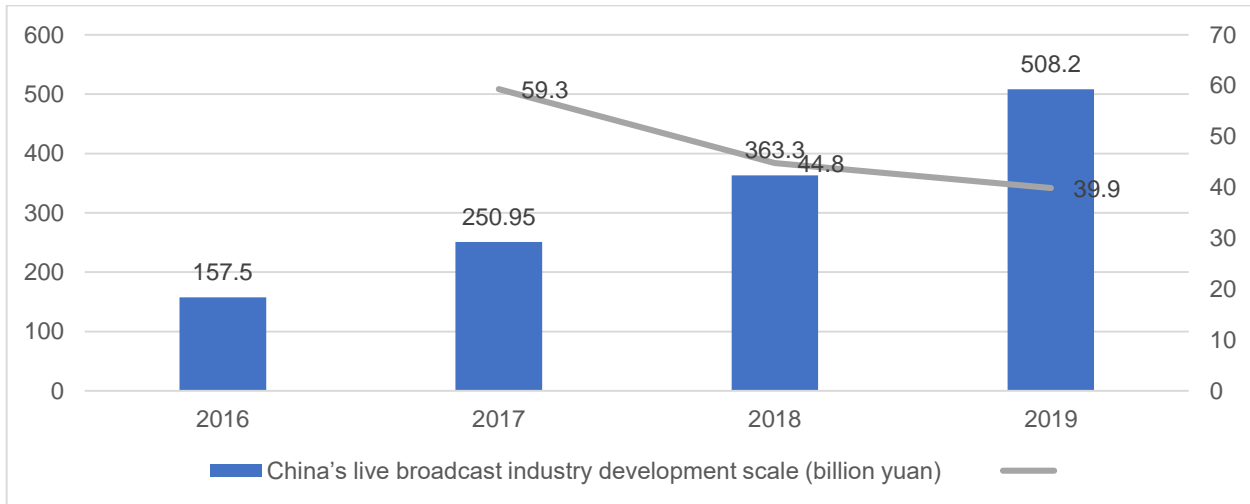


Fig.3.Live broadcasting scale of China[9]

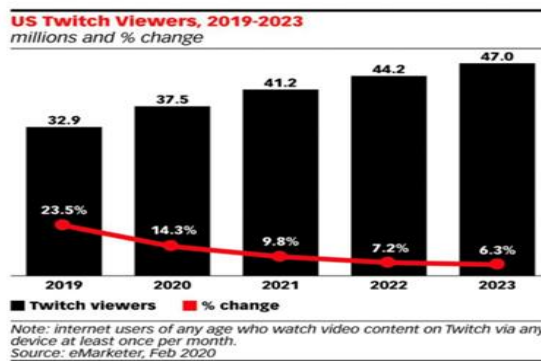


Fig.4.Live broadcasting scale of Twitch[10]

3.3 Line stream + pattern

During the epidemic, many colleges and universities opened some live broadcasting activities on live streaming platforms such as Huya, which received a good response. Therefore, Huya can continue to develop its live broadcasting + business.

3.4 Technology upgrade

Twitch senior engineers have said that the highest number of simultaneous Twitch users has exceeded 4 million, so the need for low latency for the codec is very high. The low delay of live broadcasting is also one of the development trends of the live broadcasting industry. Based on this, we suspect that Twitch will continue to upgrade its codec technology and cooperate with 5G

technology to bring users low latency, high picture quality, and high frame rate live streaming. It is believed that this is also what the Huya will do.

4. CONCLUSION

Huya and Twitch are representative livestreaming companies in The U.S. and China. As an early live streaming software and a leading enterprise in today's live streaming field, Huya and Twitch share a certain degree of similarity in business model, profit model, user portrait and other aspects. According to the prediction of this paper, the future development direction of the two enterprises will also have similar elements.

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