

Analysis Of Profit Model of Network Broadcast Platform -- Taking Huya Live Broadcast as An Example

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Abstract. The continuous development of the Internet has created the rise of different Internet entertainment industries, and the network broadcast industry is an important part of it. Since 2013, China's network broadcast platform began to sprout; In 2015, it began to enter a blowout period, and a large number of network broadcast platforms mushroomed in people's field of vision; By 2019, China's network broadcast industry has entered a mature development period, and the industry shows a pattern of "two super and many strong" with Tiger teeth and Betta fish as the head platform. Whether the current profit model of the network broadcast platform can support the continued development of the platform? In addition, how to enrich the profit model of the network broadcast platform to meet the challenges in the future. Based on the above research questions, this paper will take Huya Live Streaming as an example, explore the profit model of Huya Live streaming platform through the combination of financial perspective analysis and non-financial perspective analysis, evaluate and summarize the existing profit model of the network live streaming platform, and make appropriate forecasts for its prospects. This paper is divided into four parts. The first part mainly introduces the research background and significance of this paper; The second part will explain the development status of Internet live broadcast, and make a preliminary analysis of Huya's current profit model; The third part will further analyze Huya's profit model from financial perspective and non-financial perspective, explain the advantages and disadvantages of the profit model and put forward corresponding suggestions; The fourth part summarizes the previous contents and makes future prospects

Keywords: background of creation; development history; profit models.

1. Introduction

1.1. Research background

With the continuous development of the new scientific and technological revolution and the popularization of Internet technology, human entertainment activities tend to be diversified, and watching live broadcasting has become one of the common ways to decompress in modern people's leisure time. As an emerging Internet entertainment activity, from the embryonic period to the mature development period today, it is only a short time of less than ten years, the network broadcast industry has witnessed the birth of many platforms, but also witnessed the demise of many platforms. It is foreseeable that the network broadcast industry is still a popular industry in a short time and will continue to maintain a development trend. Huya Live broadcast, as a network broadcast platform that has been born since the infancy of China's network broadcast platform, its profit model and financing plan have considerable representative and research value.

On top of that, games and the webcast industry they spawn are rapidly changing the way people are entertained. In just the past few years, the livestreaming industry has gone from uncharted territory to hot. Among them, watching network broadcast and game competitions have also become a common way of entertainment for contemporary young people. Affected by the epidemic and employment difficulties, many young people are forced to lose their jobs, and many of them choose to become game anchors to pass the embarrassing "unemployment period". Although watching network live broadcast has become more and more hot in recent years, in addition to the most intuitive share of anchor income, network live broadcast platforms have also adopted a profit model that many

users are difficult to detect for profit. Therefore, this paper will take Huya Live broadcast as an example to explore other profit models of network live broadcast platforms.

Huya Live, the predecessor of YY network broadcast, is a plug-in that combines games and commentary officially launched by YY official in 2012 and 2012, and its birth time is even earlier than the embryonic stage of China's network broadcast industry. By 2014, Huya Live was officially established, and adopted a reasonable profit model and financing plan, stood firm in the live broadcast war from 2015 to 2019, and was listed in the United States in 2018, and gradually grew into one of the "two super" under the current "two super" pattern after 2019 to today. Although Huya Live also faces the impact of video apps such as Bilibili, Kuaishou, watermelon video and Douyin joining the network broadcast sector, Huya Live has existed for a long time and can still maintain a leading position after the changes of China's network broadcast industry. Therefore, it is of representative significance and operability to study the network broadcast platform by taking Huya Live as an example.

1.2. Theoretical and Practical Significance

1.2.1 Theoretical significance

Although from a macro point of view, the development of the entire network broadcast industry is good and stable, but the game industry is surging. In general, with the listing of Huya Live broadcast and Douyu Live broadcast, video apps such as Bilibili and Douyin joining the network live broadcast sector, and the withdrawal of platforms such as Panda Live broadcast and Battle Banner live broadcast, the network live broadcast industry, which has been closely related to modern entertainment, is undergoing changes.

Among them, the choice of profit model plays a crucial role in the development of the platform. In many cases of platform transformation failure, the wrong choice of profit model is the fuse that leads to the final bad results. The wrong profit model will lead to a large loss of platform audience, resulting in financing failure, capital chain break and so on. This paper chooses Huya platform as a case, takes the birth and development of the whole network broadcast platform as the timeline, and conducts a case study on the choice of its profit model and the motivation of its connotation, which has certain theoretical significance for enriching the research on the profit model of network broadcast platform.

1.2.2 Practical Significance

Nowadays, the fast pace of life makes people's entertainment activities tend to be fragmented, and watching live broadcasting has become the way that many people choose to decompress. The advent of the information age has also enriched career choices, and with the increase in the number of viewers watching live broadcasting, the number of people making a living from live broadcasting is also on the rise. With the continuous penetration of live broadcasting into people's lives, major online live broadcasting platforms have developed more "live +" content and refined the field of live broadcasting, including new content such as live shopping, live news and so on. The diversity of live content and types has greatly enhanced the user stickiness of live streaming platforms. In general, the live streaming industry has become closely related to people's lives.

In the operation of the network broadcast platform, the profit model plays a vital role in the healthy development of the network broadcast platform. Therefore, it is of practical significance to study the profit model of webcast platform for optimizing the future development of webcast platform.

2. Analysis of Profit Model of Internet Live Broadcasting Platform

2.1. Development Status of Internet Live Broadcasting Industry in China

2.1.1 Comparison and relationship between live broadcasting industry and other network industries

From the 53rd Statistical report on the development of the Internet in China released by the China Internet Network Information Center, it can be intuitively seen that the network broadcast has achieved an 8.7% growth in user scale and user usage. Of course, the substantial growth of network broadcast also benefits from online shopping, online games and other content closely related to network broadcast. The growth of user scale and user usage of these contents also promotes the growth of network broadcast. The intuitive and distinct mode of network live broadcast provides a good platform for online shopping, online games and other content, and also increases the popularity of these content.

Table 1. 2022.12-2023.12 user scale and usage rate of Internet users

Application	2023.12 User Size (10,000 people)	2023.12 Internet Users Utilization rate	2022.12 User Size (10,000 people)	2022.12 Internet Users Utilization rate	Rate of increase
Network video (inclusive Short video)	106,671	97.7%	103,057	96.5%	3.5%
Instant communication	105,963	97.0%	103,807	97.2%	2.1%
Short video	105,330	96.4%	101,185	94.8%	4.1%
Online payment	95,386	87.3%	91,144	85.4%	4.7%
Online shopping	91,496	83.8%	84,529	79.2%	8.2%
Search engine	82,670	75.7%	80,166	75.1%	3.1%
Webcast	81,566	74.7%	75,065	70.3%	8.7%
Online music	71,464	65.4%	68,420	64.1%	4.4%
Online takeaway	54,454	49.9%	52,116	48.8%	4.5%
Online car-hailing	52,765	48.3%	43,708	40.9%	20.7%
Network literature	52,017	47.6%	49,233	46.1%	5.7%
Online travel booking	50,901	46.6%	42,272	39.6%	20.4%
Internet medical treatment	41,393	37.9%	36,254	34.0%	14.2%
Network audio Network audio	33,189	30.4%	31,836	29.8%	4.3%

Source: China Internet Network Information Center

2.1.2 Network broadcast industry development environment

As of December 2023, the number of online live broadcast users in China reached 816 million, an increase of 6501 million compared with December 2022, accounting for 74.7% of the total Internet users. Among them, the number of e-commerce live broadcast users was 597 million, an increase of 82.67 million compared with December 2022, accounting for 54.7% of the total Internet users; The number of network broadcast users was 297 million, an increase of 31.33 million compared with December 2022, accounting for 27.2% of the total Internet users; The number of live reality show users was 200 million, an increase of 12.59 million compared with December 2022, accounting for 18.3% of the total Internet users; The number of live concert users was 223 million, an increase of 15.96 million compared with December 2022, accounting for 20.4% of the total Internet users; The

number of live sports users was 345 million, 28.47 million fewer than in December 2022, accounting for 31.6% of the total Internet users.

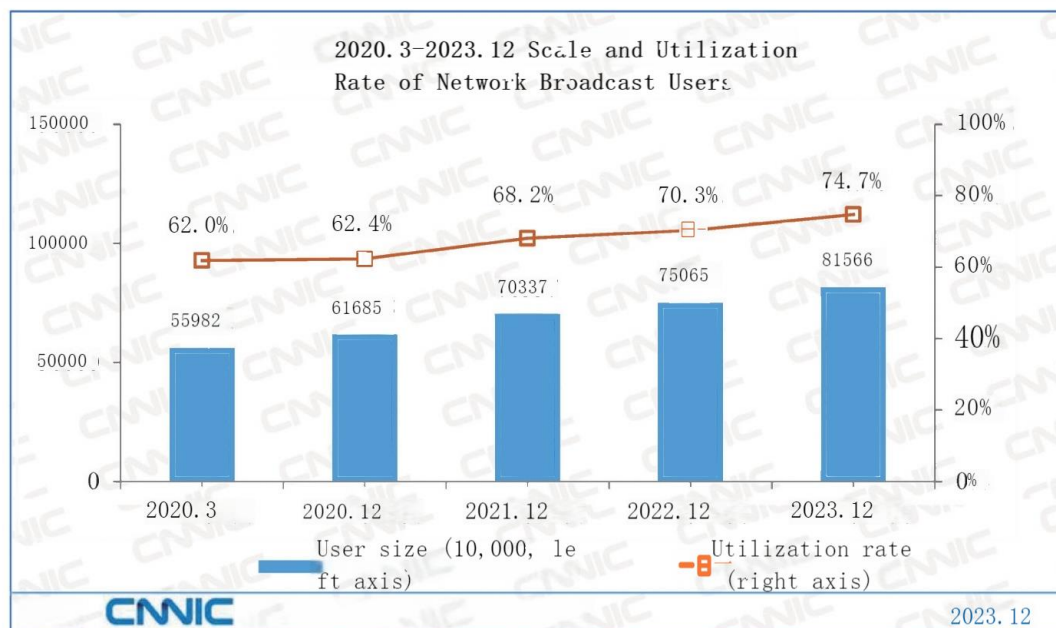


Fig. 1 2020.3-2023.12 scale and utilization rate of network broadcast users

Source: China Internet Network Information Center

2.2. Huya live profit model analysis

2.2.1 Development history

Huya Live Broadcast, the predecessor of YY network broadcast, is a plug-in combining games and commentary officially launched by YY in 2012 and 2012, and its birth time is even earlier than the embryonic stage of China's network broadcast industry. By 2014, Huya Live was officially established, and adopted a reasonable profit model and financing plan, stood firm in the live broadcast war from 2015 to 2019, and was listed in the United States in 2018, and gradually grew into one of the "two super" under the current "two super" pattern after 2019 to today. Huya Live has existed for a long time and can still maintain its leading position after the changes of China's network live broadcasting industry.

At the same time, major online broadcasting platforms have reached close cooperation with e-sports teams or game unions. The platform represented by Tiktok even launched an e-sports club, and the anchors of the platform were selected to form an e-sports club directly under Tiktok. Game MCN agency business model expansion, for example, Huya live and game MCN agency Lumy tired reached cooperation, Lumy tired became the agent of Huya live advertising business.

2.2.2 Huya live profit model

As early as the YY live broadcast period, Huya Live broadcast adopted the guild system, and the guild system also originated from YY Live broadcast. In the beginning, the guild system was actually popular within the game, especially in the massively multiplayer role-playing games (MMORPGs), where the resources available to a single person in the game were often insufficient, especially for new players. Therefore, the operation of the guild system was born on the one hand, the game demand gave birth to the necessity of the team to obtain resources, on the other hand, with the development of the game, people's sense of teamwork is becoming more and more strong.

In the early days of Huya Live, the use of a guild system similar to the game was very wise. Huya Live has different categories (generally divided into the categories of the main live games), large and small different associations, these associations are very friendly to the new people who have just started the live industry, effectively preventing the new people from giving up live because of the

difficulties in the initial stage, in a sense, played a "huddle" role. The guild system not only ensures the ability to continuously send new anchors to the Huya live streaming platform, but also prevents the easy loss of new anchors. In addition, Huya Live also consciously cultivate and help the growth of the guild, Huya Live under the platinum guild, gold guild and so on, these associations through the official certification of Huya Live, the use of the guild system to train anchors, giving anchors a more open platform for communication and learning.

On the basis of the guild system, the current Huya live mode is more diverse. First, the big and small anchors have fans of users to tip, and Huya live can be a commission; Second, Huya direct broadcasting cooperates with the game to sell virtual goods in the major broadcast rooms to obtain profits, and the platform can also extract profits from it; Third, advertising cooperation, set advertising Windows on the page of the broadcast room, or carry out direct promotion on the home page; Fourth, Huya Jindou contest, the anchor can open the contest in the broadcast room, can be based on the competition results and so on. Viewers who want to participate in the guessing game need to buy Huya Live's gold beans specifically for guessing, which are similar to gambling companies. The model not only increases the interaction between anchors and fans, but also enriches the user's gameplay experience on the live streaming platform; Fifth, member subscription model, Huya Live encourages users to subscribe to member services by pushing higher-quality, more personal preferences for members, and exempting advertising and other benefits; Sixth, host carnival activity. Online Host Carnival activity will select the annual anchor by comparing the number of virtual gifts received by the anchor, so as to encourage the fans of the anchor to consume for them. The offline anchor carnival activities not only invite the platform's internal head anchors to participate, but also invite stars to enhance the topic. To attract more traffic and heat in the form of outdoor live broadcast; Finally, with the rise of other live content such as online live shopping and live performances, Huya Live no longer relies solely on the "live + game" model but launches a new model of "live + e-commerce". Combined with national policies and considerable social needs, Huya Live's live sales are not solely for-profit purposes, but also add the element of "poverty alleviation". By expanding the mode of "live +XX", Huya Live can constantly adjust according to the needs of The Times, and on the basis of meeting the original audience, it can also attract other new audiences through new content and elements.

3. Analysis of the Case

3.1. Huya Live Profit Model Financial Perspective Analysis

3.1.1 Profitability analysis

Table 2. Comparison of profit model indicators from 2019 to 2023

	2019	2020	2021	2022	2023
Gross profit ratio (%)	17.70	20.78	14.10	6.63	11.66
Net Profit Margin on Sales (%)	5.59	8.10	5.14	-5.28	-2.92
Average return on equity (%)	6.53	9.58	5.75	-4.56	-1.91
Net interest rate on total assets (%)	5.07	7.44	4.55	-3.69	-1.57

Source: Choice

Profitability usually refers to the amount of enterprise income and the level of benefit in a certain period of time, which shows the ability of enterprises to obtain profits, and usually also shows the ability of enterprises to increase capital. This paper will use the four indicators of gross profit margin on sales, net profit margin on sales, average return on equity and net profit rate on total assets from 2019 to 2023 to analyze the profitability of Huya Live.

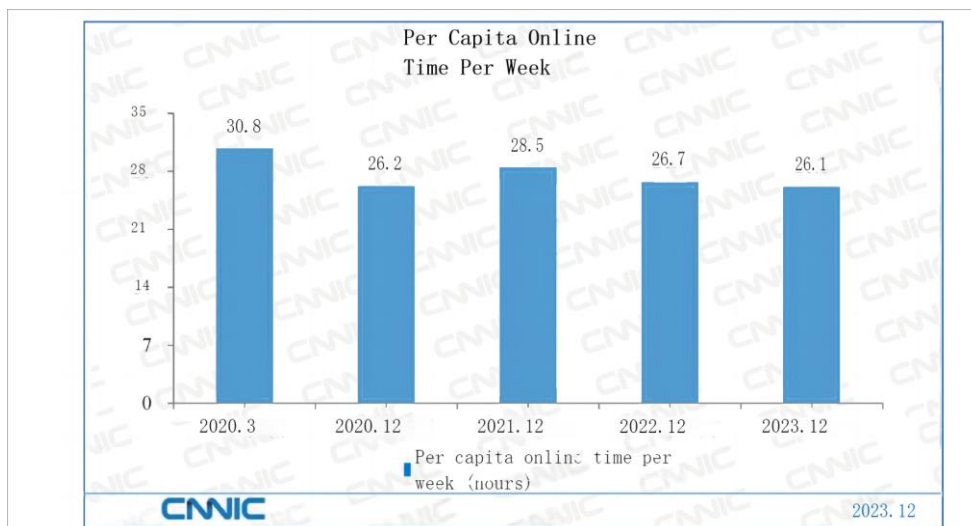


Fig. 2 2020.3-2023.12 scale and utilization rate of network broadcast users

Source: China Internet Network Information Center

As can be seen from the profitability indicators from 2019 to 2023, the four indicators of gross profit margin on sales, net profit margin on sales, average return on equity and net profit rate on total assets show the same trend. The profitability of the company in 2019, 2020 and 2021 showed a significant upward trend, which was affected by the epidemic. According to the 53rd Statistical report on the development of the Internet in China released by the China Internet Network Information Center, the average weekly online time of netizens reached 30.8 hours in March 2020, reaching an all-time peak. Then there was a downward trend.

3.1.2 Solvency analysis

The solvency of an enterprise is composed of long-term solvency and short-term solvency. The solvency index also reflects whether the company can develop stably and healthily. Short-term solvency is usually measured by current ratio and quick ratio, which reflects the relationship between the company's maturing debt and available current assets. Long-term solvency refers to the ability of a company to pay off its debts for more than one year, which is closely related to the company's profitability and capital structure. It is usually used to analyze and measure the long-term solvency of enterprises by such indicators as asset-liability ratio and equity multiplier.

(1) Short-term solvency

Huya Live as an Internet company with live broadcasting as the core, its current assets rarely involve inventory, so the current ratio and quick ratio are very similar. As can be seen from Table 3, the current ratio and quick ratio of Huya Live peaked in 2022 and declined to 3.77 in 2023. Generally speaking, a company with a current ratio of about 2 and a quick ratio of 1-1.5 indicates that it has a good short-term solvency. Although the current ratio and quick ratio of Huya Live in 2023 are lower than before, they are far more than 3, which proves that Huya Live has a good short-term debt repayment ability.

Table 3. Short-term solvency from 2019 to 2023

	2019	2020	2021	2022	2023
Current ratio	4.33	4.73	4.63	4.75	3.77
Quick ratio	4.33	4.73	4.63	4.75	3.77

Source: Choice

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(2) Long-term solvency

The asset-liability ratio of Huada shows a downward trend, and it is only 17.79% in 2023. It is generally believed that the appropriate asset-liability ratio is 40%-60%, and the equity multiplier should be 2-3, and in the past five years, the asset-liability ratio and equity multiplier of the company have been far below the appropriate standard. This shows that the debt repayment of Huya Live is guaranteed, but the too low asset-liability ratio also reflects that Huya Live has a low ability to use debt to obtain assets, which is somewhat too conservative.

Table 4. Long-term solvency from 2019 to 2023

	2019	2020	2021	2022	2023
Asset-liability ratio (%)	23.59	21.22	20.71	17.52	17.79
Equity multiplier	1.31	1.27	1.26	1.21	1.22

Source: Choice

3.1.3 Operational capacity analysis

An enterprise cannot do without the use of various assets in its business activities. When an enterprise has a strong ability to use assets, it can sell its products or services more quickly, thus generating greater profits. Due to the particularity of Huya live streaming industry, the proportion of fixed assets is not high. Therefore, this paper selects the turnover rate of current assets and the turnover rate of total assets to analyze the asset operation capacity of Huya.

Table 5. Operating capacity from 2019 to 2023

	2019	2020	2021	2022	2023
Turnover of current assets	0.97	1.00	0.98	0.82	0.75
Total assets turnover	90.98	114.14	130.35	65.74	26.51

Source: Choice

3.2. Huya Live Profit Model Non-financial Perspective Analysis

First of all, the significant decline in the profitability and operating capacity of Huya Live has been affected by the end. As can be seen from the financial information, the operation of Huya Live reached its peak during the epidemic. With the end of the epidemic, the resumption of work and school has resumed in an orderly manner, and the popularity of live streaming platforms has also declined.

Secondly, the severe competition in the live broadcasting industry is also an important factor in the bottleneck of Huya Live. Network broadcast is an industry with low entry threshold and low requirements for personnel, capital and technology. And China's law does not limit the number of live broadcast platforms, there are a lot of network broadcast platforms across the country, the relatively large including Huya, Douyu, Yingke, Sichuan pepper, KK live, six rooms, etc., Huya live, and these platforms are seriously homogenized. In addition, for live broadcasting platforms, anchors are extremely important resources. However, with the addition of video platforms Bilibili, Douyin, and creative service platform XiaoHongshu to the live streaming sector, it will inevitably erode the anchors and page views of Huya Direct Broadcast.

Finally, the profit model of Huya Live seems diverse, but the development is not mature enough. The above-mentioned platforms that have an impact on Huya Live broadcast have diversified profit models, not only providing videos or graphic guides, but also a special shopping section, and its live broadcast with goods is more mature than Huya Live broadcast.

3.3. Suggestions on Huya Live Profit Model

Huya live revenue sources rely too much on online live reward business, and live broadcast mainly relies on the game sector. In the long run, the imbalance of a single profit source will lead to higher operating costs of the platform, a decline in market share, and a weakening of the platform's anti-risk ability. Once there are adverse changes in external policies and competitive environment, it will bring serious threats to the survival of Huya Live.

First, on the basis of maintaining the original guild system, increase the number of anchors directly cultivated by the platform. The platform can not only rely on the standout anchors in the guild system, if the platform directly trains the potential anchors, it will save a lot of time and obtain greater benefits.

Second, increase advertising revenue. The way to increase advertising revenue should not be limited to directly advertising on the home page, but also through its popular anchors to cooperate with advertisers, to shoot vlog, live advertising and other ways to increase advertising revenue.

Third, develop live shopping. Huya Live is still mainly based on the "live + game" model, but cases such as Bilibili and Douyin show that enriching content can increase platform competitiveness. Therefore, Huya Live can develop live shopping and make special partitions for it, which helps to clearly distinguish live shopping and live network broadcasting and will not affect the user experience who only wants to watch live network broadcasting or just want to use live shopping.

4. Summary

Through the study of Huya live broadcast, the following conclusions can be drawn:

First, the network broadcast platforms represented by Huya Live broadcast all have the disadvantage of relatively single profit model. Although it has a lot of profit points, the network broadcast industry still needs to seek more diversified profit models and cannot simply operate in the "live + game" model, and mostly rely on the reward model. Taking Huya Live as an example, it is exploring various profit models such as "live +XX" and constantly strengthening advertising cooperation with game manufacturers, trying to increase the competitiveness of enterprises.

Second, the development of network broadcast has been more than ten years, although the industry barriers have gradually increased, many once-hot live broadcast platforms, such as Panda live, Tentacle live, etc. went bankrupt and were eliminated by the market. However, video platforms such as Bilibili and Douyin have also opened live streaming zones and used their strong funds to compete for talent. This requires the network broadcast platform to increase the diversity of its live content, such as increasing live shopping, outdoor live broadcast and other content.

Third, even after the live broadcast war, the competition for talent has not come to an end. The quality of anchors is an important factor in determining a network broadcast platform, so how to retain their own head anchors and attract high-quality anchors from other platforms to join, we need to formulate a reasonable strategy. Huya Live's guild system can help the platform to dig and cultivate new anchors, but to keep high-quality anchors, Huya Live needs to directly provide certain benefits, rather than rely on the guild system. For high-quality anchors on other platforms, the platform also needs to pay attention to observation and timely offer olive branches.

Today, the situation that Huya Live is facing can be described as the coexistence of challenges and opportunities, Huya Live needs to enrich the profit model, attract more talents, strengthen technical support, etc., to transform the crisis into an opportunity, ushering in better prospects and development.

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