

Whether Sports Stars Promote the Commercial Value of Short-video Social Media Platform: A Study of Social Media

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Abstract: In recent years, social media, especially short-video platforms, can easily catch the public's attention. The media's publicity is essential in promoting sports stars' popularity and commercial value. During the rise of short-video social media platforms, their commercial value has caught more and more attention. The combination of sports stars, sports events, and social media makes commercial information highly disseminated. When entertainment stars repeatedly go against their public persona and the "Clear Action" focuses on the ecological rectification of the entertainment circle, businesses are more cautious in assessing the risks behind the commercial value of celebrity spokesmen. With the increased popularity of sports events, sports stars have come to the front of the marketing stage and become an alternative to entertainment stars. This study analyzes the commercial behaviors of sports stars on short-video platforms. By participating in commercial activities on short video platforms, sports stars will promote the development of the commercial value of short-video social media platforms. Sports stars make videos or live streams on short-video social media platforms, contributing to mutual benefit. Sports stars will develop their social image and make financial gains. For short-video social media platforms, their content structure will be enriched. Businesses will transfer the focus to a short video platform to get enough exposure.

Keywords: social media, sports star, commercial value, short-video platform

1. Introduction

With the influence of the post-epidemic era, social media, especially short-video platforms, have seen quick user growth. The entry of sports stars into the short-video platform brings excellent exposure to the platform. The combination of sports stars, sports events, and social media makes more people aware of sports information. Moreover, the combination of e-commerce and short-video platforms has broadened the income channels for current and former sports stars. Sports events and athletes can also benefit from high social media attention. The media's publicity plays an essential part in promoting sports stars' popularity and commercial value [1]. As The Times's benchmark, sports stars are responsible for passing on sports spirit. Because they are athletes, appearing on camera creates publicity for their sports events so that more people can know about and participate in sports. Compared with entertainment stars, the fans of sports stars are not just a single fan group. They have a broader mass base and higher national recognition. For traders forced on the younger generation, sports stars have brought a new definition of youth and beauty. The public image of sports stars is generally healthy and positive, which is more in line with the characteristics favored by young people.

In recent years, many scholars have studied this as a research topic. Karla McCormick has studied the Impact of athletic star power on product consumption [2]. Harriger Jennifer A, Thompson J. Kevin, and Tiggemann Marika have studied TikTok. The paper is called TikTok, TikTok, and the time is now: Future directions in social media and body image [3]. Amos, Holmes, and Strutton have studied Exploring the relationship between celebrity endorser effects and advertising effectiveness [4]. Lu Benjiang and Chen Zhenjiao have studied Live streaming commerce and consumers' purchase intention: An uncertainty reduction perspective [5]. Hui He has studied the development of e-commerce by web celebrity live webcast with goods [6]. Natalie T. Wood and Janée N. Burkhalter have studied Tweet. The paper is about a comparison between brand promotions in microblogging environments using celebrity and company-generated tweets [7]. According to the analysis of relevant papers, some papers lack data support, and only have theoretical analysis. The research scope of some papers is small, which affects the objectivity of the conclusions to some extent. Some papers have a single research method, only a single data analysis.

Sports stars, especially retired sports stars, get a certain amount of publicity and considerable income through live streaming. At the same time, sports stars can bring new capital and expand the influence of the short-video platform [8]. From the starting point of sports stars, this study explicitly analyzes the commercial behaviors of sports stars on short-video platforms. Unlike the previous analysis of the commercial behavior of stars, this paper focuses on a group of sports stars and explores the characteristics and influences of their commercial behavior. This paper can help remodel sports marketing in all respects. More and more merchants' marketing strategies transfer the pursuit of brand reputation from applicable conversion rate, which means that the underlying logic of sports marketing is also undergoing a profound qualitative change [9]. Previously, sports stars mainly made money in endorsements and were only responsible for promoting the brand's reputation. Now, sports stars will join the live-streaming team to demonstrate commercial value through sales statistics.

This paper is to analyze the commercial behaviors of sports stars on short-video platforms. Then it evaluates the influence of sports stars with their "celebrity effect" on the commercial value of short-video social media platforms. The study methods include a case study and quantitative analysis. Ten athletes were selected for the study, with accounts on TikTok and more than 200,000 followers. The study provides a new direction for the commercial development of a short-video platform. Nowadays, short-video platform has some problems, like homogenization of live broadcast content, serious fraud of live broadcast data, and product quality and so on [10]. When sports stars join the short-video platform, they can teach sports skills, analyze hot issues, or make some videos related to daily life. Other formats, such as lively Internet chat rooms and live matches, also provide more dimensional channels for their content creation. This can enrich the content structure of the platform and attract more merchants to join, increasing the commercial value of the platform.

2. Methods

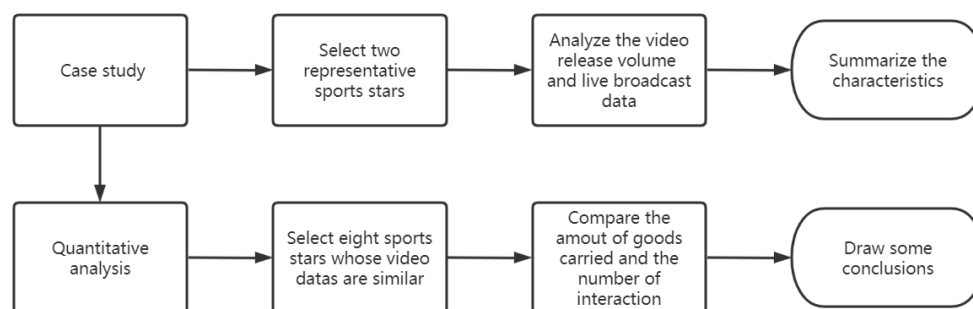


Figure 1: The overview of research process.

As shown in Figure 2, the study methods include a case study and quantitative analysis. The case analysis method, which is known as the case analysis method or typical analysis method, is a scientific analysis method that conducts thorough and careful research on representative things (phenomena) to gain a comprehensive understanding. Quantitative analysis refers to scientific research to determine the quantity of a certain aspect of things. This is a research method and process to express problems and phenomena with quantity and then analyze, test, and explain to obtain significance. The case study mainly focuses on two representative sports stars, analyzing their video and live broadcast data on the TikTok platform and summarizing their respective characteristics. This study selected two sports stars who have some influence on TikTok -- Sun Yang and Yang Wei. On the other hand, quantitative analysis mainly focuses on eight sports stars with similar data on the TikTok platform, comparing their amount of goods and interaction. The subjects were Zhou Yang (speed skating), Xue Ming (volleyball), Li Xiaoshuang (gymnastics), Jiao Anjing (marathon), Xu Tian Longzi (swimming), Bao Chunlai (badminton), Wang Liping (race walking) and Yang Jiayu (race walking). Their fans are between 200,000 and 700,000, and the number of videos is relatively frequent, which has a certain research value. The experimental dataset is obtained from TikTok and search sites. To obtain data on TikTok, this paper queries the selected account (shop window, number of live broadcasts, number of likes, and number of video releases on the personal page).

3. Experiment Results and Analysis

3.1. Analysis of Basic Data Comparison

Table 1: Basic data comparison.

	The number of fans	Number of live broadcasts (As of 3.3)	The number of videos released (As of 3.3)
Sun Yang	3.970 million	47	81
Yang Wei	1.627 million	151	204

The experiment is divided into two parts: the number of live broadcasts (as of 2023.3.3) and the number of videos posted (as of 2023.3.3). The number of fans shows that both have millions of followers on TikTok. They have a huge fan base. The number of live broadcasts shows that Yang Wei's live broadcast is higher and more frequent—the number of videos released shows that Yang Wei's number is higher. As shown in Table 1, the number of fans of Yang Wei is similar to that of Sun Yang, but there are more data on Yang Wei regarding the number of live broadcasts and videos released.

3.2. Analysis of Live-broadcast Data Comparison

Table 2: live-broadcast data comparison.

	goods	window	Good reputation with goods	goods effect	Maximum number of people online
Sun Yang	Beauty and skin care products and daily necessities	109	4.88	More than 154,000 fans are buying from ta, and more than 100,000 recommended products have been sold	The highest online 70,000 people, the cumulative number of viewers more than 7 million
Yang Wei	Food, sports and daily necessities	60	4.74	More than 181,000 fans are buying from ta, and more than 100,000 pieces of recommended goods have been sold	More than 18,000 people were online at the same time

As shown in Table 2, Sun Yang's goods focus on beauty, and Yang Wei's goods focus on life. Judging from the number of goods in the window, Sun Yang has more type of goods than Yang Wei. Compared to many anchors, two sports stars with goods effect, word-of-mouth, and online number are very good. Although the number of people who live stream by Yang Wei is lower than Sun Yang's, the merchandise sales of Yang Wei's window are better. More than 181,000 fans bought the products from Yang's window. It can be seen from the above data that Sun Yang's audience of goods is more concentrated in the female group, and the kinds of goods are more extensive. Yang Wei's window with goods effect is better. The fan purchase rate is higher.

Sun Yang has made significant achievements in the field of swimming. In recent years, in addition to fighting courageously in the competition, Sun Yang participated in the variety show, which gave his image great exposure. The choice of live broadcast is an effective means to realize his social fame successfully. For him, it is easy to flow realization with the support of his reputation and professional team. When merchants see such a famous sports star participating in the live broadcast, they will inevitably expect his live broadcast effect to give him more excellent product discounts. At the same time, because of Sun Yang's large fan base, the choice of goods will be more extensive. The products are not limited to the field of sports but are more focused on the field of life and beauty.

Yang Wei has also taken part in variety shows since retiring. A "Dad, Where are we Going?" for him to bring great exposure laid his national recognition and reached in the second spring of his career. At the same time, he posts videos frequently on short video platforms and tries to live stream. Yang Wei is different from Sun Yang in its products. Yang Wei chooses products that are more focused on life. This is related to his audience on the one hand and his social image on the other hand.

3.3. Analysis of Eight Sports Men's Basic Data Comparison

Table 3: Eight sports men's basic data comparison.

	The number of fans	Number of videos posted (as of 3.8)	Number of videos posted (as of 3.8)	Total likes	Nearly two months data best video content
Zhou Yang (speed skating)	638,000	Daily life	169	5.671 million	Interaction with Wang Meng
Xue Ming (volleyball)	274,000	Sports	194	1.178 million	Sports students pose for photos (Interactive Creation by Athletes)
Li Xiaoshuang (gymnastics)	789,000	Sports	108	1.974 million	New Year routine
Jiao Anjing (marathon)	604,000	Sports	570	8.342 million	8 Warm-up moves to share before running
Xu Tian Longzi (swimming)	295,000	Sports	228	480,000	Trimester swimming
Bao Chunlai (badminton)	447,000	Sports	188	1.405 million	Play badminton with passers-by
Wang Liping (race walking)	358,000	Sports	683	2,175 million	Share a photo when she won
Yang Jiayu (race walking)	439,000	Sports	163	4,416 million	Special step brand cooperation advertising

As shown in Table 3, the eight sports stars mainly released sports-related videos from the video content. It has to do with the characteristics of sports stars. They are athletes, so they are more comfortable shooting sports-related videos. The data of the best video content in the last two months shows that the content of the video is also related to sports. It helps to highlight the difference between sports stars and other stars. They take advantage of their status as athletes to release sports-related videos, which will be more professional and lay the groundwork for sports products.

3.4. Analysis of Eight Sports Men's Live-broadcast Data Comparison

Table 4: Eight sports men's live-broadcast data comparison.

	The number of goods in the window	Number of live broadcasts (In the last year)	Whether sell goods in video
Zhou Yang		7	No
Xue Ming		16	No
Li Xiaoshuang	256	113	Yes (Sportswear, footwear and sporting goods)
Jiao Anjing	83	790	Yes (Daily necessities, sports related supplies mainly)
Xu Tian Longzi		161	No
Bao Chunlai			No
Wang Liping	145		Yes (Sportswear, footwear and equipment)
Yang Jiayu	33		Yes (Sportswear and footwear)

As shown in Table 4, half of the sports stars have goods on display in the window. The number of live broadcasts shows that the difference between the number of live broadcasts of sports stars is huge. An extra note is that Jiao Anjing broadcasts 760 live shows a year. Live broadcasting occupies a large part of Jiao Anjing's work. Video goods are mainly sports, which are related to the identity of the athletes. The positive state in the video can bring filter addition for sports products. When users watch this type of video, they are more likely to buy sports products in the video.

3.5. Analysis of Number of Registered Athletes and Commercial Value

Table 5: Number of registered athletes.

Sports event	Total members (million)
Basketball	19.7
Soccer	27.2
Swimming	8.4
Pingpong	3.5
Athletics	2.1

The data in the table are based on the 2020 Sports Work Report of the Chinese Sports Association. By the end of 2020, there were about 1.216 million registered professional athletes in China, including about 722,000 men and 493,000 women.

As shown in Table 5, the large number of registered professional athletes is from football and basketball, but the small number of registered athletes is from swimming, table tennis and athletics. Football and basketball have many participants and a wide social influence. But in the International stage, the performance of football and basketball is not very good. In terms of swimming, table tennis and athletics, they have very good performances in the world arena.

Table 6: China Sports Value List 2020 Chinese athletes communication influence.

China Sports Value List 2020 Chinese athletes communication influence	
First	Zhu Ting
Second	Yi Jianlian
Third	Wu Lei
Fourth	Zhang Changning
Fifth	Malone
Sixth	Millet Ai Ling
Seventh	Xu Jiayu
Eighth	Su Bingtian
Ninth	Guo Ailun
Tenth	Zhou Qi

Sports can be divided into popular sports and strong sports. Popular sports consist of football and basketball. Strong sports consist of swimming, table tennis, and athletics. As shown in Table 6, four players go in for football and basketball. Take basketball player Yi Jianlian, for example. In List One, his communication influence ranks second. Nowadays, Yi Jianlian has endorsed 11 brands, including sports brands, insurance endorsement, banking, milk powder, and beer. It means that Yi Jianlian's influence is all-around. Yi Jianlian won the CBA All-Star vote seven times as a basketball player. His excellent performance on the basketball court gives him a good social image and high social

recognition. This can significantly enhance his commercial value. It is essential to notice that exposure coverage differs for individual and team events. This is a factor that the business judges the commercial value of sports events or athletes.

Table 7: China Sports Value List 2020 most watched Chinese sports team.

China Sports Value List 2020 most watched Chinese sports team	
First	Chinese women's volleyball team
Second	Chinese table tennis team
Third	Chinese men's football team
Fourth	Chinese men's basketball team
Fifth	Chinese mountaineering team
Sixth	Chinese figure skating team
Seventh	Chinese swimming team
Eighth	Chinese track and field team
Ninth	China Women's Basketball team
Tenth	Chinese shooting team

As shown in Table 7, two of the top three are team events. Take basketball as an example, and there have CBA&NBA League—and basketball mainstream projects. Businesses will make more investments in basketball. At the same time, niche and strong sports tend to have a head athlete, such as Sun Yang in swimming and Su Bingtian in athletics. Through their outstanding individual performance in the competition, they promote the public's understanding of the project and enhance their commercial value. The increased exposure to the event enhances the commercial value of the ordinary athlete. However, time is a factor that influences athletes' commercial value. When the sport has not achieved a breakthrough for a long time, the commercial value of ordinary athletes will decrease to a certain extent.

4. Discussion

This study has the following discussion during the case study and quantitative analysis.

4.1. The Effect of Sports Stars' Live-streaming

According to the analysis of live-broadcast data comparison, Sun Yang and Yang Wei perform well in the live streaming. The study concludes that the effect of sports stars' live-streaming is better. Sports stars have their celebrity effect. Users see sports stars live. They should click in. While sports stars' social image and reputation are generally better, users will believe their rhetoric more and buy products [11].

4.2. Athlete's Characteristics

Both Sun Yang and Yang Wei made good achievements in sports. At the same time, they stayed active on the short-video platform. This study concludes that sports stars' video content and live-streaming products are closely related to their status as athletes. Sports stars tend to carry sports products. Business is to see this point for sports stars to provide targeted products so that the sales of products will be more ideal.

4.3. The Social Image or Label of Sports Stars

Compared with stars in other fields, sports stars' social image or label is more suitable for a single category of goods. The whole country recognizes that sports stars have real strength and can pass on the positive energy of sports spirit celebrities. Sports stars represent the spirit of sport and a good image, and the country vigorously promotes the spirit of champions. The cost of sports stars is much cheaper than celebrity endorsement, and the money saved can be invested in other parts of the product. Sports stars belong to rare resources, which are more differentiated as a brand endorsement of the company [12].

4.4. Beneficial Cooperation Manually

The study concludes that sports stars live has excellent advantages. For example, Sun Yang and Yang Wei, who have many fans, first bring a wide range of products. Moreover, at the same time, each focuses on meeting the needs of different groups—a good image and a good reputation recognized by fans. Fans buy at a high rate, and businesses can be more assured of selling goods to sports stars. Sports stars have significant social influence when joining TikTok, posting videos, or selling goods. No matter whether sports stars, businesses, or TikTok, they can all gain some profits from it. So sports stars can promote the development of the commercial value of short videos on social media platforms.

5. Conclusion

This study analyzes sports stars' commercial behaviors and performance on short-video platforms through case studies and quantitative analysis. It concludes that sportsmen can effectively develop the platform's commercial value. In future studies, the study will be optimized from three aspects. 1) Expand data sources. The social media studied included TikTok, Kuaishou, and Weibo. Kuaishou and Weibo are social media with huge user groups, which will provide more data support for the research results. 2) Enrich the research objects. Commentators on sports events also belong to the field of sports. Many commentators on sports events were athletes before they started working as commentators. According to the survey, the participation of sports commentators in live broadcasting has a certain scale and influence. Taking the commentators of sports events as the research object can provide more dimensional thinking. 3) Extended data collection time. The duration of this study is short, and the range of data collected is small. Extending the data collection time can improve the rationality of the research results.

References

- [1] Keran Zhao et al. *Understanding Characteristics of Popular Streamers on Live Streaming Platforms: Evidence from Twitch.tv[J]*. *Journal of the Association for Information Systems*, 2021, 22(4).
- [2] Karla McCormick. *Impact of athletic star power on product consumption[J]*. *International Journal of Sports Marketing and Sponsorship*, 2018, 19(3) : 306-326.
- [3] Harriger Jennifer A. and Thompson J. Kevin and Tiggemann Marika. *TikTok, TikTok, the time is now: Future directions in social media and body image[J]*. *Body Image*, 2023, 44 : 222-226.
- [4] Amos and Holmes and Strutton. *Exploring the relationship between celebrity endorser effects and advertising effectiveness[J]*. *International Journal of Advertising*, 2008, 27(2) : 209-234.
- [5] Lu Benjiang and Chen Zhenjiao. *Live streaming commerce and consumers' purchase intention: An uncertainty reduction perspective[J]*. *Information & Management*, 2021, 58(7).
- [6] Hui He. *The development of e-commerce by web celebrity live webcast with goods[J]*. *E3S Web of Conferences*, 2021, 253 : 02031-.
- [7] Natalie T. Wood and Janée N. Burkhalter. *Tweet this, not that: A comparison between brand promotions in microblogging environments using celebrity and company-generated tweets[J]*. *Journal of Marketing Communications*, 2014, 20(1-2) : 129-146.

- [8] Cai Rongxuan and Li Yurun and Ma Chang. *The Research on the Audiences' Psychological Under the Influence of Live Streaming of Stars on Douyin Platform ---Take Jia Nailiang as an Example*[C]. Chongqing, China, 2022.
- [9] Ye, Ding Yu et al. *A Study on the Influence Factors of Complex Users' Purchase Intention of Live Commerce - Taking Chinese Douyin Live Commerce Users as an Example* -[J]. *한국과학예술포럼학회*, 2021, 39(4).
- [10] Wu Hanyi. *Research on the marketing strategy of Tik Tok live broadcast with goods*[J]. *The Frontiers of Society, Science and Technology*, 2022, 4.0(7.0).
- [11] Gao Shiran. *Research on the Positive Influence of Short Video on Public Opinion Dissemination of Social Hot Events—A Case Study of “Beijing Winter Olympics”*[J]. *Academic Journal of Humanities & Social Sciences*, 2022, 5.0(9.0).
- [12] Ming Luo and Fan Sima. *Research on the Online Marketing Strategy and the Trend of Developing of “Internet Celebrity Live Broadcast” for Shoes and Clothes Enterprises*[J]. *The Frontiers of Society, Science and Technology*, 2020, 2.0(13.0).