

Research on the Influence of Weibo Marketing on Box Office of Films

A Case Study of the Top 20 Films in the Chinese Box Office Rankings in 2019

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ABSTRACT

In recent years, the film market in mainland China has developed rapidly, and the box office has increased year after year. In 2019, the total box office of the mainland Chinese film market was 64.1 billion yuan. How to market, promote and encourage viewers to consume is an important factor influencing whether a film can sell. Among the top 50 films released in mainland China in 2019, 48 films have opened official accounts on Weibo for marketing promotion, which shows the importance of Weibo marketing to film box office. This paper will take the top 20 films in Chinese domestic box office ranking in 2019 as the subjects to study what kind of marketing can have a positive impact on the film box office and promote the booming development of the film industry.

Keywords: Weibo, marketing, film box office

I. INTRODUCTION

In 2019, mainland China's overall box office closed at 64.1 billion yuan, with an increase rate of 5.6%. Mainland China's overall box office is only second to that of North America, and remains the world's second largest film market. The box office performance of a film is not only affected by the schedule, theme and other factors, but also depends on the success of the film marketing. By the beginning of 2019, Weibo has 430 million active users, which more than 50% of China's Internet users. In 2019, among the top 50 films in Chinese mainland box office ranking, 48 of which had official accounts, and were sold by official accounts on Weibo platform.

It can be seen from the above that the online marketing of theatrical films is essential, and the use of Weibo official accounts for marketing is also imperative, which is an indispensable part of the

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marketing of most films. The purpose of this paper is to study how the official account operates, what content is published, and how other factors on Weibo will affect the box office of the film. Against the background of box office growth slowing down, the possibility of box office growth is provided through marketing behavior, so as to influence the environment, promote the further development of China's film market, and provide power for the prosperity and development of China's cultural industry.

II. LITERATURE REVIEW

A. *The status quo of research on influencing factors of film box office*

In the late 1980s, American scholar Littman created an influential box office prediction model. In the following decades, based on this model, the box office prediction model developed by Google is considered to be the most accurate box office prediction model. According to the data, the accuracy rate of the model is more than 94%. [2]

At present, most of the Chinese domestic studies of box office focus on comprehensive research. However, with the rapid development of social media software, the number of articles on the impact of single social media on the box office has increased.

Liu Xuan [2] selected 176 films released in Chinese mainland in 2015 and 2016 as samples. Based on this, linear regression analysis was carried out to get the fact that there was a significant positive correlation between peak season, sequel, film type, number of days to be released, the number of douban comments, film name, the name of the leading roles of films, the average Baidu index during the film's release, the highest Baidu index in the first week of the film's release and the box office.

Zhang Bin and Liu Yaqi [3] selected the films that were shown in Chinese mainland from 2014 to 2018. They used word-of-mouth (score by the douban.com), the box office in the first week, ticket rates, the schedule and the star effect as the independent variables. Through the establishment of a linear regression analysis, the above variables were all influential on the film box office, and the two factors of the schedule and ticket rates were more obvious.

Yin Min [4] selected the top 10 films in the Chinese mainland box office ranking from 2015 to 2017 as samples. The analysis showed that director preference, actor preference, subject type, film expectation index, public influence, average fare and audience rating had a significant impact on film box office, and the film schedule also had certain influence on the box office.

Liu Zhixin [5] selected all the films released in Chinese mainland in 2018 as samples. The variables are film rating, director influence, actor influence, film investor, film schedule, film sequel and film production technology. After the establishment of linear regression equation and calculation, there is significantly positive correlation between the above variables and the film box office.

Hua Rui, Wang Senlin and Xu Yang [6] selected 252 films released from March 2015 to February 2016 for analysis. Through the econometric model, it is concluded that word-of-mouth, attention, schedule, the influence of directors and stars, and technology of special effects have a very significant impact, and the other variables also have an impact, but not as significant as the above variables.

B. Research status of the impact of Weibo marketing on cultural and entertainment industry

In Wang Jinhui's [7] "Research on the timeliness of the impact of Weibo on the box office of films", there is a significant correlation between the micro index of films and the box office of films at any time.

According to [8] Zhang Lin's "Marketing strategy of the film industry", the Weibo marketing content of the film is divided into four categories: film content, fan interaction, promotion activities and advertising, and it is suggested that hot topic marketing, word-of-mouth

marketing and fan interaction marketing should be emphasized in the marketing.

In Ding Ruihan's "Analysis of Weibo marketing strategy of variety show in 2018" [9], Weibo marketing of variety shows is divided into five types: viral marketing, nostalgic marketing, topic marketing, public welfare marketing and emotional marketing.

In Dai Weizhan's "Analysis on the marketing model of American Marvel Universe films based on the '4I' [10] principle of integrated marketing", it is pointed out that the Weibo marketing of films should grasp the interest points of fans in the content; on the basis of opening the Weibo official account of films, the main creators of films should open Weibo official accounts to interact with the audience, and attention should be paid to the publicity in the later stage as much as in the early stage.

In Li Qian's "Research on Weibo marketing of films: content analysis of 'The Mermaid'" [11], the author analyzed the content released by the Weibo official account of "The Mermaid", and concluded that the Weibo official account of film should focus on the early and late stage of film release, interact with film creator, and release more content with life perception.

III. RESEARCH DESIGN

A. Research methods

In this paper, the author uses content analysis method to construct the category construction, and counts the number of all samples under each category. Through the correlation analysis of the data obtained, the correlation between this category and the dependent variable of film box office is obtained. In this way, the influence and constraint of the film box office by Weibo marketing can be judged. This paper will use the case study method to conduct a detailed analysis of the Weibo official account of the films that have achieved great success at the box office in 2019, and make a detailed study on its operation mode, so as to provide an excellent template for Weibo marketing of film.

B. Research objects

The research objects of this paper are the Weibo official accounts of the top 20 films in box office rankings (from Maoyan Professional Edition) in mainland China in 2019. These 20 films are: "Ne Zha: Birth of the Demon Child" (@Nezha: Birth of the Demon Child), "The Wandering Earth" (@The Wandering Earth), "Avengers 4: Endgame" (@Marvel Studios), "My People, My Country" (@My People, My Country), "The Captain" (@The Captain), "Crazy Alien" (@Crazy Alien), "Pegasus" (@Pegasus), "The Bravest" (@The Bravest), "Better Days" (@Better Days), "Fast & Furious Presents: Hobbs & Shaw"

(@Universal Picture), "Spider-Man: Far from Home" (@ Spiderman series film), "The White Storm 2: Drug Lords" (@The White Storm 2), "Bumblebee" (@Bumblebee), "The Climbers" (@The Climbers), "Captain Marvel" (@Marvel Studios), "More Than Blue" (@More Than Blue), "Godzilla: King of the Monsters" (@Monster-Universe series films), "Alita: Battle Angel" (@20th-Century Fox Films), "Looking Up" (@Looking Up), "Sheep Without a Shepherd" (@Sheep Without a Shepherd). The research samples were all the official posts of these 20 films from the

beginning of the film promotion period to the offline period when the key expired. (see "Table I")

C. Category construction

In this paper, the posts released by the Weibo official accounts of films are mainly divided into four categories: release time, interactive attributes, number of topics, content attributes. In addition, the number of Internet celebrities' recommendation, film review reading, video playback and the total number of posts on Weibo were counted. (see "Table II")

TABLE I. CONSTRUCTION OF THE CATEGORY OF THE WEIBO OFFICIAL ACCOUNTS' RELEASE CONTENT

Categories	Variables	Explanation
Release time	More than one week before release One week before release The first week of release From the second week of the release to key expiration	Being divided according to box office income statistics over 30% of the box office of films comes from the first week of the release, and even some films reach 50%. Therefore, there will be two separate categories for the first week of the release and the week before the the release.
Interactive attributes	Audience Film creator Other accounts of internet celebrities not related to the film	The audience includes fan group accounts of internet celebrities, as well as accounts of celebrities and accounts of sina weibo super topic of films. Except for the above accounts of internet celebrities, all accounts of internet celebrities are "accounts not related to films".
Number of topics	General topic Sina weibo super topic	
Release form	Image Video Non-original content	

TABLE II. OTHER RELEVANT VARIABLES IN FILM SECTOR OF WEIBO PLATFORM

Categories	Variables	Explanation
Word-of-mouth	Internet celebrities' recommendation level	The film section of weibo developed a piece of data on film word-of-mouth, invited more than two hundred professional movie critics to score, and finally got a recommendation percentage, which is similar to the film scoring mechanism.
Quantity	Total number of posts on Weibo	Total number of official posts by the film
The popularity	Film review reading	The two indicators reflect the popularity of films on weibo to a certain extent.
	Video playback	

IV. ANALYSIS ON THE INFLUENCE OF WEIBO MARKETING ON FILM BOX OFFICE

A. Analysis on the content of the official posts of films

1) *Release time:* As can be seen from "Fig. 1", even the two variables, such as the week before the release and the first week after the release, have a high proportion, reaching 17.9% and 20.5% of the total number of posts on Weibo, respectively. The publicity cycle of a film is as short as three months, or as long as half a year, and the number of posts on Weibo in these two weeks together accounts for nearly 40% of the total during the whole promotion period of films. Combined with the objective fact that 30% of the box office comes from the first week of release, the week before the release and the first week of release are the peak period of film promotion and marketing in Weibo, which is a critical period.

According to the proportion, it is frequently posted on the Weibo official account in a week or more before the release of the film. This time period covers most of the publicity period of the film, from the film's finalization and even from the start of the project to the week before the film is released. The period from the second week of release to the expiration of the key is basically ignored by most films. Generally, the key expiration time limit of imported films is 30 days, while that of domestic films is 45 days. If a film with good box office and high popularity successfully applies to the national film administration for key expiration extension, it will be calculated separately. In general, this time period is about three weeks or four weeks, and the time period of the key expiration extension is about one month to three months. During this period, the number of posts sent by the Weibo official account of the film was mostly less than that in the first week of the release, and there was no significant difference between the number of posts sent by the Weibo official account and the week before the release.

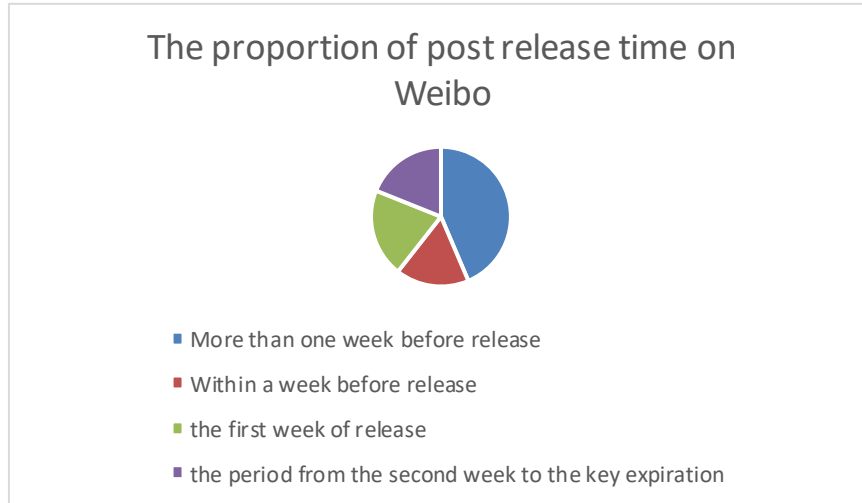


Fig. 1. Scale drawing of release time.

TABLE III. CORRELATION ANALYSIS ON WEIBO PUBLISHING TIME OF AND BOX OFFICE

Pearson (correlation)	
	box office
More than one week before release	0.450*
Within a week before release	0.412
the first week of release	0.364
the period from the second week to the key expiration	0.685**

^a. *p<0.05 ** p<0.01

From the "Table III", it can be seen that among the variables, such as more than one week before release, within a week before release, the first week of release, and the period from the second week to the key expiration, there is a significant positive correlation between box office and more than one week before the release. There was no correlation between the box office and the week before the release. There was no correlation between the box office and the first week. There is a significant positive correlation between box office and the period from the second week of release to the key expiration.

Thus, it can be seen that the week before the release and the first week of release are the time for all kinds of film to make the publicity and marketing. But at this stage, the proportion of doing marketing on Weibo is almost the same. With the full impact in these two weeks, it is required to pay more attention to the early publicity and later storage. In the early stage of publicity, it is better to find more ways to attract the attention of potential audience, and increase publicity efforts. The most important thing is that it should not relax after the first week of the box office peak period and continue to pursue the success, so as to promote the box office to a new height.

2) *Interactive objects*: It can be seen from "Fig. 2" that when choosing the interactive objects, the most popular one on the official account of the film is to interact with the creators, while other accounts of Internet celebrities are slightly inferior to that with the creators. Interaction with the audience is the least, and most films do not choose to mainly interact with the audience. Among them, it can be seen that the interaction frequency of several films is quite different from that of other films. For several blockbusters, their main creators rarely open Weibo official accounts, the proportion of interaction between official account and main creators is far lower than that of other films.

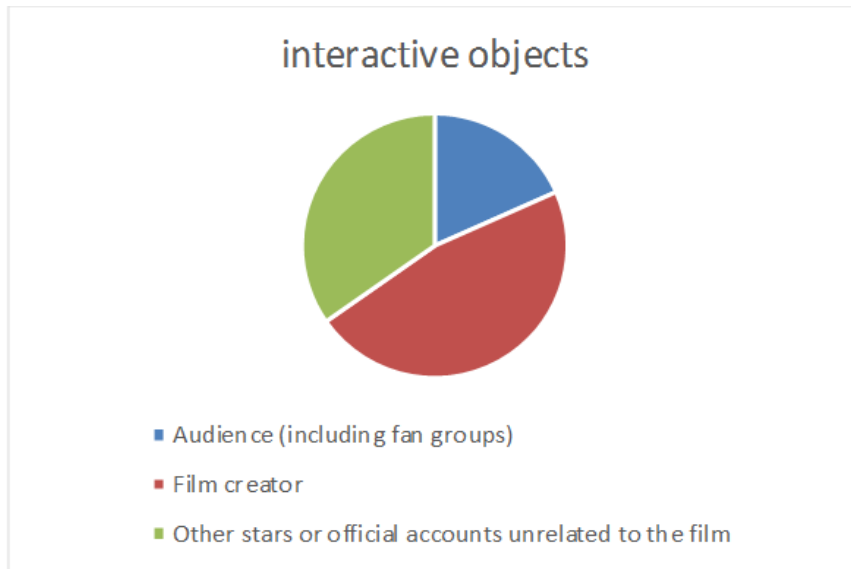


Fig. 2. Scale drawing of interactive objects of the Weibo official account of films.

TABLE IV. ANALYSIS OF THE CORRELATION BETWEEN THE INTERACTIVE OBJECTS OF THE WEIBO OFFICIAL ACCOUNT OF FILM COMPANIES AND THE BOX OFFICE

Pearson (correlation)	
	box office
with audience (including fan groups)	0.606**
with creators	0.024
with other stars or official accounts not related to the film	0.519*

a. * p<0.05 ** p<0.01

From the above "Table IV", the relationship between the box office and the audience (including fan groups), the leading actor, director, and other stars unrelated to the film or official accounts can be analyzed. It can be seen that there is a significant positive correlation between the box office and audience (including fan groups). There is no correlation between box office and the main creator. There is a significant positive correlation between the box office and other celebrities or official accounts unrelated to the film.

To sum up, no amount of interaction with celebrities who have many fans as their main creators will not be decisive for the box office. It can be understood that these fans of the creator will contribute to the film box office anyway, and the most important thing is to open up a larger audience group. More interactions with different audiences can increase "a sense of closeness to the people", and can also form a word-of-mouth effect based on the praise of the audience. At the same time, interacting with other "Internet celebrities" is also very important.

3) *Number of topics*: Sina Weibo super topic is a relatively new feature of Weibo. However, it is limited to a certain star or a certain thing, most of the topics used by the official account of the film are ordinary topics. The number and usage rate of Sina Weibo super topic are extremely low. Even some official account of the film did not use a Sina Weibo super topic throughout the entire propaganda cycle. The topic usage rate is still very high. Almost Weibo official account will post with topics, and these topics will be repeated in Weibo. It can be said that there are only a handful of Weibo without topics. (see "Table V")

TABLE V. STATISTICS ON THE NUMBER OF TOPICS USED BY WEIBO OFFICIAL ACCOUNT OF FILMS

Films	The number of topics used by weibo official account of films	
	General topic	Sina Weibo super topic
"Ne Zha: Birth of the Demon Child"	13	4
"The Wandering Earth"	17	4
"Avengers 4: Endgame"	2	0
"My People, My Country"	24	0
"The Captain"	70	2
"Crazy Alien"	42	3
"Pegasus"	27	10
"The Bravest"	41	1
"Better Days"	14	2
"Fast & Furious Presents: Hobbs & Shaw"	2	0
"Spider-Man: Far from Home"	7	0
"The White Storm 2: Drug Lords"	7	0
"Bumblebee"	5	0
"The Climbers"	84	1
"Captain Marvel"	3	0
"More Than Blue"	5	0
"Godzilla: King of the Monsters"	12	0
"Alita: Battle Angel"	4	0
"Looking Up"	13	3
"Sheep Without a Shepherd"	40	0
Total	432	30

TABLE VI. CORRELATION ANALYSIS BETWEEN THE NUMBER OF TOPICS USED BY FILM OFFICIAL ACCOUNT AND BOX OFFICE

Pearson (correlation)	
	box office
General topic	0.009
related Sina Weibo super topics	0.296

^{a.} * p<0.05 ** p<0.01

From the "Table VI", the correlation between the box office and the general topic and the correlation between the box office and related Sina Weibo super topics are studied. It can be seen that there is no correlation between the box office and the general topic. There is no correlation between box office and related Sina Weibo super topics. The number of topics does not have much impact on the box office. The most important aspect of the topic should be popularity. Since it is not possible to count the popularity of each topic one by one, this conjecture cannot be confirmed for the time being. But what is certain is that it is not that the more topics are used or created, the higher the box office will be.

4) *Release form*: In terms of release forms, non-original Weibo accounts for the largest proportion. The vast majority of non-original content is realized by reposting. Forwarding also means interacting with the forwarded. From this point of view, the film official account still pays great attention to the benefits of interaction.

Release forms

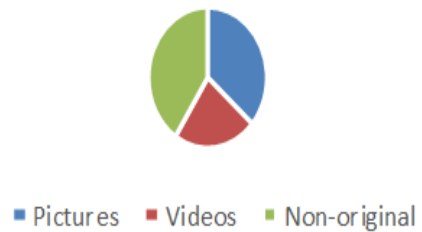


Fig. 3. Proportion of release forms of film official account.

Pictures and videos are second. The pictures mainly include photos, road show photos of creators, posters and other materials. The proportion of videos is not high. Generally, the video content released is foreshow, interesting sidelights of road shows and other activities. When the video material itself is more limited than the picture material, the lowest proportion is justified.

TABLE VII. ANALYSIS OF THE CORRELATION BETWEEN THE FILM RELEASE FORM ON WEIBO AND THE BOX OFFICE

Pearson (correlation)	
	box office
image	0.590**
video	0.074
non-original	0.640**

^{a.} * p<0.05 ** p<0.01

According to "Table VII", the correlation between the box office and the three items of picture, video, and non-original content is studied. It can be seen that there

is no correlation between box office and video. Both pictures and non-original releases have a significant correlation with the box office. The most noteworthy part of the official release on Weibo is the non-original link, which means that what is most needed is to strengthen interaction. Increasing the frequency of interaction with the audience and the "Internet celebrities" is the most important aspect of Weibo marketing. In addition, posting stills, road show photos,

emoticons and other pictures is also very beneficial to the Weibo marketing of films.

B. Analysis of other variables

In this part, four variables will be selected, namely, the recommendation degree of "Internet celebrities", the number of video views, the number of film reviews, and the total number of posts on Weibo to analyze the correlation.

TABLE VIII. CORRELATION ANALYSIS OF OTHER VARIABLES OF FILM AND BOX OFFICE

Pearson (correlation)	
	box office
the recommendation degree of "Internet celebrities"	0.672**
the number of video views	0.226
the number of film reviews	0.569**
the total number of posts on Weibo	0.525*

a. * p<0.05 ** p<0.01

From the above "Table VIII", the correlation between the recommendation degree of "Internet celebrities", the number of video views, the number of film reviews and the total number of posts on Weibo is studied. It can be seen that there is a significant positive correlation between the box office and the recommendation degree of "Internet celebrities". There is no correlation between box office and Weibo video views. There is a significant positive correlation between box office and Weibo film reviews. There is a significant positive correlation between the box office and the total number of posts on Weibo.

In summary, among other variables, the degree of recommendation of "Internet celebrities" and the number of film reviews have the most influence on film box office. These two variables represent the word-of-mouth of the film to a certain extent. The degree of recommendation of "Internet celebrities" is the only indicator on the Weibo platform that reflects the quality and word-of-mouth of films. By comparing the p values of the above four items, it can be found that the recommendation degree of "Internet celebrities" has the strongest correlation with the box office, followed by the number of reviews that reflect the popularity of the film and the word-of-mouth of the film to some extent. These two items reflect that word-of-mouth marketing is the most important part of film marketing on Weibo platform. In order to be more popular, it is very important for films to pay attention to the word-of-mouth effect. The total number of posts on Weibo also shows a certain degree of correlation. This also shows that the selling situation is closely related to the enthusiasm of marketing. Although it does not necessarily mean that the more posts on Weibo, the higher the box office, but without any marketing actions, Weibo operations go with the flow, and it is bound to not rise to the next level in the box office of the film itself.

V. CONCLUSION

According to the above research, it can be concluded that paying attention to the positive effects of word-of-mouth and learning to use the tap water effect of audiences and fans' plots to bring out the rhythm of word-of-mouth is the most important part of Weibo marketing for a film that needs to be strengthened. How to build the word-of-mouth of a film is an urgent problem to be solved in Weibo marketing. The film needs to interact and communicate with the audience more, and it can even extract what the audience said as a Weibo topic to build momentum for the word-of-mouth of films. In Weibo marketing, it should be noted that the official account should take interaction as the priority to expand its popularity and influence.

In addition to interaction with fans, interaction with other celebrities can also form a word-of-mouth effect. These celebrities may not have actually watched the film, but they have contributed to the success of the film. Those worthy of marketing are some well-known film critics on Weibo, who have a very high voice. In the part of word-of-mouth marketing, the use of naval forces to a certain extent is also required depending on the situation. However, it is necessary to pay attention to the problem of degree. If the films continue to use too much navy with poor quality, it is easy to cause backlash.

Finally, creating topics requires intensive cultivation. A post on Weibo with a topic tag can have greater exposure and be seen by more people. However, when conducting topical publicity, the effect of publicity cannot be formed by using topics blindly. On the contrary, too many topics will cause the problems, such as too scattered perspectives and failure to focus on propaganda. It is suggested to put the main force of publicity on several topics, create hot topics, and allow potential audiences to see these high-volume, high-

traffic topics, which will have a very good publicity effect.

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