

Research on the Influence of Social Media Platforms on Consumers' Purchase Intention

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Abstract. Since the increasing importance of social media online advertisement, the area has existed a large amount of research. The majority of the paper focuses on the effectiveness and content of online advertisements. However, the relationship between social media platforms and the effectiveness of online advertisement seems to be less concentrated in this area. This paper seeks to solve this issue in the online advertisement by providing a methodology and a way to measure and analyze the data. The methodology used in this paper is a survey. This paper focuses on two particular platforms, Bilibili and WeChat, and the comparison is made in three specific kinds of products, including electronic devices, food, and clothes. Assuming Bilibili and WeChat target different groups of people in different areas, this paper further provides suggestions to the enterprise. This paper also includes some suggestions for increasing the social media platform performance and boosting the consumers' purchase intention.

Keywords: Purchase intention; Marketing; Online advertisement; Social media Platform.

1. Introduction

1.1 Research background

With the development and the population of technology, the barrier to using the Internet is becoming lower, and access to the Internet is becoming easier. The Internet has become a way for people to socialize, realize, entertain, and all kinds of uses. According to data by Statista, by 2022, there will be 5 billion internet users and 4.65 billion social media users.[1]

Online advertising provides a new way for firms to increase their sales.

In this paper, the main focus is the advertisement posted on social media. In recent years, various social media have emerged. According to McClure et al.: "Social media provide an opportunity for businesses to participate and interact with potential consumers, encourage an increased sense of intimacy with consumers, and build relationships with potential consumers." [2] This indicates that social media is quite essential in increasing the sales of the company.

According to Louisa Ha, "The Interactive Advertising Bureau (2007) reported US online advertising revenue's growth from 1998's US\$1.8 billion to \$20 billion in 2007. The 10-fold increase signifies the importance of online advertising to the advertising and media industry. But also, the rapid advancement of technology in online advertising delivery and display formats requires researchers to help the media and advertisers to capitalize on the new medium and the society in understanding the increasing impact of the medium" [3]. This data has shown the continuous development in this industry and points out the potential research area.

This paper seeks to determine whether different platforms directly impact consumers' purchasing intention. This paper will mainly focus on two platforms.

The platforms that have been chosen are WeChat and Bilibili. This paper chooses these platforms because these two platforms all have a large number of users and lots of identical advertisements are posted on these two platforms simultaneously. This trait can help this paper better investigate the platform's impact. Introducing these two platforms will help the reader better understand these two platforms—WeChat was originally a messaging app, allowing its user to instantly transfer information to other users. As a social popular social media, but now with technological development, WeChat has been far more than that. Through the official account, mini-program, and video platform, WeChat can achieve all the daily activities people need. Through the data of the website business of

apps, in the first quarter of 2022, WeChat had 1.26 billion active users, and its annual revenue was about \$17.4 billion in 2021 [4]. Another app is a video platform called Bilibili, and it is also a quite popular video-sharing website. The video is mainly divided into cartoon, live, classroom, animation, music, and games. Besides that, Bilibili also includes the Member purchase and is also in charge of the operation of many games. According to Liu, by 2015, 75 percent of users were under 24 [5]. Both of these platforms can attract many businesses to post advertisements and have the potential to continue developing.

1.2 Literature review

The existing research mainly focuses more on the content market of the advertisement. According to Liu, the key literature is summarized around six themes: (1) online advertising effectiveness; (2) online advertising mechanisms; (3) creative elements in online advertising; (4) the role of context in online advertising; (5) online personalization; and (6) search advertising [6].

The area of the effect of the platform seems to be a less concentrated topic. This area is also important and meaningful for the online advertisement, as different platforms seem to attract people with different traits, such as age, gender, income level, education level, and so on. Posting the online advertisement accurately and precisely to the targeted consumer is also a key question for the enterprise. Discovering the relationship between these two elements will give the enterprise (firms or the producers) a better idea of maximizing the advertisement's effectiveness. Therefore, this paper seeks to determine whether the impact will change when the video advertisement is posted on different platforms. This means the relationship between the platform and the video advertisement's effectiveness.

1.3 Research framework

This research uses the methodology of the A-B testing to compare the difference between these two platforms. The data will be generated through the survey and the questionnaire. After that, the validity of the data will be tested, and the data will be analyzed through the independent T sample test. After that, there will be a session to discuss how to enhance the online advertisement performance. Finally, the conclusion and expected results. More details will be mentioned in the following sections.

2. Method and Hypothesis

The method used in this paper is survey and secondary data from these two platforms, which will be fully explained in this section. The hypothesis of this paper will also be illustrated in this section.

2.1 Hypothesis

The paper aims to determine the effect of the same online advertisement on different platforms and its impact on consumer purchasing intention. This is the hypothesis of this paper

H1: In clothes advertising, video advertising positively impacts consumers' purchase intention on both platforms.

H2: In food advertising, video advertising positively impacts consumers' purchase intention on both platforms.

H3: In electronic device advertising, video advertising positively impacts consumers' purchase intention on both platforms.

Coming to a more advanced hypothesis, which is a comparison between these two platforms,

H4: Bilibili tends to impact the consumers' purchasing intention of electronic devices significantly.

H5: WeChat tends to impact consumers' purchasing intention for clothes significantly.

H6: Bilibili tends to impact the consumers' purchasing intention in the food significantly.

H7: Bilibili tends to impact the younger consumers' purchase intention more than WeChat.

2.2 Method

The method this paper uses is a combination of an analysis of the secondary data of the platform, as well as a survey. Detailier, the paper will choose a wide range of different categories of goods. Mainly focus on these three types: food, clothes, and electronic devices. The video content on both WeChat and Bilibili will be the same, and the product price will also be the same to get a more accurate result. The secondary data includes the video's number of views, the number of likes, the sales volume of the video for the product, and the comments below the video (especially about the product).

The survey part of the paper will analyze around 200 people in total. The questionnaire will collect three main categories: demographical information, their purchasing habits, and their preference for the two platforms. Their age, gender, income level, and education level will be collected for the demographic information to analyze each platform's demographic traits. Collecting this information could help this paper determine the traits of the people who favor specific platforms. The purchasing traits of the consumer will include questions about their past purchasing behavior and the frequency of the purchasing. The purchasing habit of the consumer might affect the relationship between these two variables. Therefore, the different levels of frequency will be categorized and analyzed differently. In this way, the effect of the external variables will be minimized. For the preference of the platform, the part of the data gathered will be ordinal data, as for the preference part, the method of ranking the likeness of the platform on a scale of 1 to 5 will be used. Generally, the question will be, "On a scale from 1 to 5, to what extent are you willing to recommend this product after seeing the online advertisement?"

The questionnaire will be finished offline. Participants will be randomly assigned to 2 groups; one will watch the advertisement on Bilibili while the other will watch the one on WeChat. A more detailed process is that 200 people will be gathered offline and grouped randomly. Both groups will be asked to watch the app's picture and home page belonging to their group (Bilibili and WeChat group), and then they will watch the advertisement on that application. After that, they will be asked to finish a questionnaire about the information mentioned in the previous paragraph.

3. Expected Results

In this part of the paper, the methodology will be used to test the validity and reliability of the generated data. And the method that will be used to analyze the data and the expected results will be provided in the section.

3.1 The Validity and Reliability of The Results

Some research details will be provided first to ensure the validity and reliability of the generated data. Firstly, between-subjects design has been chosen instead of within-subjects design. The reason is that first, a clearer and more significant comparison of the text and picture and video advertisements will be shown. And it is easier to measure and control the variables. Secondly, between-subjects design work more efficiently compared to a within-subjects design. Two distinct groups can go on survey simultaneously, which means it takes less time and is more feasible. However, the between-subjects design can hardly balance the demographic difference. And Individual differences might influence performance. The methodology of A-B testing can eliminate this, and the individual difference will be averaged out through the process. The aim is to have an equal number of people in each group, which is 100 per group, and restricted randomization will be used to achieve this. Secondly, a lab experiment will be used during the survey. As the previous section mentioned, 200 people will be gathered in the same room offline and randomly assigned. They must fill out a questionnaire on paper, and then they can leave. A lab experiment has a higher internal validity due to the control of the variables, which means that the manipulation of X is the only reason for changes in Y.

Next, the methodology for testing the reliability and validity of the data will be mentioned. The first step is that the invalid or meaningless data will be eliminated, which includes those who do not answer seriously (e.g., the answers to three or four consecutive variables are the same) and leave a lot blank in the questionnaire. After that, Cronbach's Alpha will be used to check the reliability and validity of the generated data. The value of Cronbach's Alpha should be greater than 0.7.

3.2 Analysis of the data

As the data has not been generated yet for this part of the research, only the research method will be mentioned instead of real data in this section. An Independent T-test will be used to get a result.

For the analysis of the secondary data, the secondary data includes the number of views of the video, the number of likes of the video, the sales volume of the video for the product, and the comments below the video (especially about the product). These data will be compared between both WeChat and Bilibili. For the comments, a word cloud will be used to get a key idea about what are the main trends.

Besides that, another word cloud will be created to help the firm design the advertisement better. As in the questionnaire, the question "What kind of information would you consider when you buy this kind of product?", "What kind of information in the advertisement affects how much you like this product?" and "What parts of the app attract you the most". Details of this will be mentioned in the next section, which is the conclusion section.

3.3 The Expected Results

The expected results are exactly the same as the hypothesis.

Expected results 1: In clothes advertising, video advertising positively impacts consumers' purchase intention on both platforms.

Expected results 2: In food advertising, video advertising positively impacts consumers' purchase intention on both platforms.

Expected results 3: In electronic device advertising, video advertising positively impacts consumers' purchase intention on both platforms.

The validity can be checked for the first three expected results compared with the previous academic papers. According to Michael Pütter (2017): "The changing technological era has led to increased activity in social network platforms like Facebook, YouTube, and Twitter, all of which have created mechanisms through which consumers can develop rapport and create interactions with brand-specific content" [7]. The results of the research are exactly the same as the expected results.

The advanced hypothesis works the same for the expected results.

Expected results 4: Bilibili tends to impact the consumers' purchasing intention in electronic devices significantly.

Expected results 5: WeChat significantly impacts consumers' purchasing intention for clothes.

Expected results 6: Bilibili tends to impact the consumers' purchasing intention in the food significantly.

Expected results 7: Bilibili tends to impact the younger consumers' purchase intention more than WeChat.

Since this area is a less concentrated topic, it is hard to find other literature to compare to check the validity of the results.

4. Discussion

As in the previous section, the expected results suggest that the advertisement positively impacts consumers' purchase intention. However, these two platforms seem to have different effects on different products.

There are two ways to enhance the social media platforms, and firstly, it is to specialize more in the targeted consumer. For example, Bilibili tends to attract younger consumers, and they can develop

this trait more and attracts younger consumers. This has both advantages and disadvantages. Something good is that they can have a large market share on the younger consumers, while the specialization might lose the other age group—this need to be determined by more specific data and projections. According to Ki Joon Kim (2014): “specialist smartphones and applications induce greater trust in advertisements and an increased purchase intention toward the advertised products than generalist smartphones and applications” [8]. The principle might also work the same for the specialization of the platforms, which means it positively affects the purchasing intention. Besides, “The lab results show that more trusted retailers can increase the perceived usefulness of their ads through a combination of high depth and narrow breadth of personalization without eliciting increased reactance or privacy concerns. On the other hand, banners with higher depth for less trusted retailers are not perceived as more useful, but instead trigger increased reactance and privacy concerns, regardless of their breadth of personalization” [9].

The other way to improve the social media platforms is to choose an alternative plan, which is to try to balance all traits of the consumers. For example, WeChat can try to balance all age groups of users. As WeChat has a large range of age group users. Same as the previous method, it also has pros and cons. It can help WeChat gain more users in the age group they lack, while it might also cause a loss in the other age group. Also, this needs to be determined by more specific data and projections.

It seems like more arguments favor the side of specialization.

5. Conclusions

In this section, the paper will provide more suggestions to the enterprise based on the expected results and include some topics that can be further researched in the future.

5.1 Suggestions

According to the expected results, online advertisement positively impacts the electronic, food, and clothes sector. Therefore, the enterprise should increase the number of online advertisements in these sectors. And also, the enterprise should post their advertisement on different platforms as their target consumer differs. For example, if the target is the young producer, they should post on the platform of Bilibili instead of WeChat according to the expected results. “Click-Through Rate (CTR) of an ad can be averagely improved as high as 670% by properly segmenting users for behaviorally targeted advertising in a sponsored search” [10]. Therefore, choosing and arranging the targeted advertisement and consumer is quite important to increase sales

5.2 Further research topics

This paper gives the methodology of testing the relationship between the platform and the advertisement’s effectiveness. The further research topic based on this could be a survey and check whether the hypothesis and the expected results are true or not as well as figure out more relations.

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