

Research on Douyin as an E-commerce Platform Impacts the Buying Decisions of Users

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Abstract. With the drastic rise of the e-commerce model and pervasive online shopping behavior in this decade, the logistics and insights behind many social media and e-commerce platforms attract more attention and discussion. In China, among varied options of social media application, Douyin is the most distinctive social media application for e-business. Some researchers conducted studies about Douyin and recognized that impulse buying behavior is usually used to explain online purchases. And some researchers found that users' different desires and social needs result in the popularity of live streaming channels. However, not many pieces of research have focused on how Douyin, as a live streaming channel and an e-commerce platform, serves the user's purchase behavior differently. Therefore, this research analyzes these two significant features separately and explore the correlation between features and users' buying decision. The research method includes collecting data through the platform's official database and past journal articles. The study's findings prove that for live streaming services, product individualization and platform loyalty directly lead to purchasing decisions; for the feature of short video clips, the recommendation algorithm, and personalized content directly related to the longer screen time for users to be on Douyin. The possible explanation is that the more addicted the users to be on Douyin, the greater possibility of the action of purchase. However, this assumption still needs further investigation and proof.

Keywords: Douyin, E-commerce platform, Users, Buying decisions.

1. Introduction

1.1 Research background

The rise of the e-commerce industry provided consumers with a more convenient way of shopping and vendors with a cost-reduced selling channel that was different from traditional business models. Worldwide, e-commerce sales will exceed \$5 trillion for the first time, accounting for more than a fifth of retail sales. Despite slowing growth, total spending will surge past \$7 trillion by 2025 [1]. The E-commerce industry is developing at a drastic rate, and it has become gradually more permissive to people's everyday life. Therefore, more researchers are investigating the relationship between the e-commerce industry and associated societal phenomena. What interested the social scientists the most is consumers' shopping behaviors, which analyze the intentions and motivations behind the behavior. Among all the e-commerce platforms, Douyin is one of the most popular applications. Six hundred million of the 1.4 billion population in China are on Douyin daily, with 400 million daily searches for videos. Douyin has been popular among the younger generation (over 85 percent of users are below 30 years old) as they could spend hours swiping through 10-30 seconds videos [2]. Douyin started as a social media platform for users to post and share self-created content in the form of 15 seconds short videos. Then, the new unit of Douyin e-commerce was added to the platform, which attained significant growth in two years. Douyin's gross merchandise value (GMV) surged 320% year-on-year in the year ending in April as the company sold more than 10 billion products [3]. These data prove that it transformed Douyin into one of China's most prominent social e-commerce platforms. The advanced e-commerce features on Douyin aroused researchers' interest in discussing how people complete buying decisions on Douyin and what impacts the platform users' purchasing behavior on Douyin. E-commerce is the new product of this era with rapid development and ever-changing. The application of this research findings can serve as a guide for Douyin's official platform

to continue developing user-friendly features and provide insights for third-party sellers about the logistics of Douyin to improve the selling volume.

1.2 Literature review

Wongsunopparat and Deng proposed that factors including product individualization and platform loyalty significantly impact consumers' choices in purchase in the context of live-streaming e-commerce model [4]. Also, live streamers' public image significantly impacts consumer loyalty to the platform.

Yang and Ha investigate why people use Douyin and what motivations specifically impact purchasing decisions [5]. The researchers found that entertainment gratification is the most common motivation for people to spend time on Douyin, and the inspiration influencing the buying decision is the motive of socialization. The researchers demonstrate that the image of live streaming and the level of interactivity attract consumers to watch live streaming and make decisions while watching it.

Zhan, Zhang, and Wang studied live commerce and found the factors leading to consumers' impulse buying behavior [6]. Influencer characteristics impact consumers' perceived trust. Online comments affect the consumer's perceived value, and logistics service quality and promotional incentive information impact consumers' perceived trust. Consumers' perceived trust and perceived value impact impulse buying behavior.

The past research is dedicated to studying the live-streaming model and analyzing the purchasing behavior on the platforms. Douyin not only supports live commerce but also features the advertisement of products in the video. The current study will better involve business and psychological approaches to understand the intentions behind users' purchase behavior. The business approach will be used to analyze the live commerce model on Douyin with data gathered from surveys and questions. The psychological approach will be used to analyze the interactive features on Douyin with users' daily casual browsing through the application.

1.3 Research framework

Therefore, the findings conclude the general functionality of Douyin that impacts consumers' purchasing behavior. Consequently, it's influential to study the platform model and gain business insights from it to better serve as a guide for sellers to enhance their products' attractiveness and generate marketing tactics to encourage consumers' buying tendencies and choices.

2. Method

2.1 Survey Method

The primary data for this paper are obtained from published journal articles that provided statistical data based on surveys and questionnaires. Yang and Ha reported that entertainment gratification was the most common motivation for people to spend time on Douyin, and socializing was the least common motivation. The motive of socialization on Douyin positively predicts consumers' purchase intentions regarding endorsed products [3]. At the same time, the users who scroll through Douyin experience different emotions based on the messages sent from the short video on Douyin. Optimizing the live broadcast's image can attract more consumers to consume through live broadcasts. Customer's purchasing decisions in live streaming E-commerce are influenced by platform loyalty. The platform loyalty directly connects to user experiences out from the platform. The broadcaster's image provides users with positive feelings and continuously attracts users' screen time, which means the purchase decision will be made in progress.

2.2 Content Analysis

The screen time that people spend on Douyin could be explained by psychological theory. Human beings' attention and focus are fragmented, and the feature of short video has been used this psychological aspect of human beings to attract users' attention continuously. Therefore, people could get new things in several seconds. The algorithm of Douyin will recommend short videos that users

prefer to watch or are interested in. Zhao mentioned that the more frequent the user uses Douyin, the more accurate the algorithm will be. This application design aims for users to use Douyin more frequently for longer. The more attractive the content is, the more likely users will interact with the short videos.

3. Result

Since the attributes of Douyin are both an e-commerce platform and a social media channel, after the analysis, the following research results about Douyin will be understood from the two viewpoints. The two major features of Douyin are live streaming services and creating short video clips. The research results will conclude what different factors about live streaming and viewing short video clips lead to the purchasing behavior of Douyin users.

Firstly, the results prove that the factors influencing consumers' purchasing behaviors in live streaming services include product individualization and platform loyalty. No significant effect was established between pricing, promotion, live streamers' public personas, and the level of engagement and purchasing behavior [4]. Even though the image of a live streamer didn't directly lead to consumer purchasing behavior, it was associated with platform loyalty. From the perspective of consumers, they have access to varied options of different e-commerce platforms. Vendors must be consistently attractive to consumers. Therefore, establishing platform loyalty is important for an application to survive in a competitive industry. Once the live streamer can successfully establish the bond with users, the platform loyalty will be built as time goes on—the platform loyalty symbols the user's preferred choice of certain platforms. Perceive trust and perceived value determine users' ability to stick with platforms and form platform loyalty. Perceived trust and perceived value significantly positively impact impulse buying behavior. Therefore, the better the users recognize the influencers' characteristics, the more perceived trust the users have about the person and the products. The platform loyalty will gradually increase during the interaction with live streamers. The mixed impacts of perceived trust and value displayed by live streamers predict the effectiveness of building platform loyalty. Thus, the higher the possibility that users will conduct the purchase behavior under the live streaming service on Douyin.

Secondly, regarding the short video clips, attributes of Douyin, the e-commerce model for short video clips will be users can easily click a product link inside the video. The creator of many short video clips will post interesting and unique short videos for certain products. The users will be first attracted by the video content and be curious about the product. Then, the Douyin users can click on the link, view the product, and ultimately complete the purchasing behavior. This is known as feed ads. Brands can use short videos of 5-60 seconds that appear as native ads on Douyin's feed. Brands may swiftly accomplish their marketing objectives since these ads have a high visual impact and seamlessly blend into the stream [7]. Douyin addiction became a pervasive phenomenon among Chinese Douyin users. Research conducted among high school students in Shanghai demonstrates that 35.71% spent between one and two hours daily on Douyin. 28.57% of respondents spent between two and three hours daily on Douyin [8]. The statistics provide insight into the excessive amount of time people spend on Douyin and viewing the short video clips. The more time people spend viewing the videos, the higher the possibility they will have an addiction to Douyin. The findings indicate that the algorithms of Douyin are designed to attract users to stay on the platform for a longer time. The official platform decides what to display for each user, and the filtering algorithms will be more accurate as the longer the time that the user is logged and stays on Douyin. This forms a closed loop. It's reasonable to say that the longer the users continuously view the content that interests them, the more likely they will be curious about the product appearing in the feed ads. Thus, the more likely the users will click on the link and the higher possibility of purchasing the feed ads and the video link. The psychological framework of stimulus-organism-response (SOR) can be employed to understand how users make purchase decisions through the attribute of short video clips. The SOR framework offered a useful lens for comprehending the social presence mechanism for impulsive purchasing and

proposes that specific environmental factors cause particular behavioral outcomes by upsetting a person's emotional and cognitive states. [9]. Viewing video content that interests the Douyin users serves as the stimulus in this progress, resulting in changes in an individual's emotional states. These emotional states can be divided into pleasure/displeasure and arousal/sleepiness [10]. The findings indicate that the emotional arousal states directly related to the online impulse buying behavior and short-form video feature influence addiction by activating the user's perceived enjoyment and feeling of withdrawal [11]. The takeaway from this algorithm and analysis is that the short video content needs to be personalized, and vertical content meets the individual needs.

4. Discussion

After analyzing the two primary features of Douyin, the live streaming service and short video clips, the findings indicate that a key term for e-commerce business owners to keep in mind is that personalization. From the side of live streaming services, product individualization and platform loyalty impact users' purchase behavior. The suggestion for future marketing plans would be that the seller can think of how to make the live streaming attractive to the users. The possible ways to improve the attractiveness would be how to make their product can be easily differentiated from the products in the same category. Also, the live streamer who promotes the product should establish the perceived value and perceived trust among the users to develop a bond with them. Then, the live streamer can directly help increase platform loyalty. In general, making marketing plans evolve around these two factors can effectively boost the purchase decisions of users under the live streaming business model on Douyin. For the short video clips feature, the psychological framework of stimulus-organism-response (SOR) is employed to understand the Douyin mania and Douyin addiction directly related to the personalized content due to the recommendation algorithm of Douyin. The recommendation algorithm uses big data to predict users' needs and desires. The customized content of short video clips can meet individual needs, significantly impacting users' screen time spent on the platform. This is where the feed ads come in and plays a role. To make the effectiveness of the feed ads the largest, the short video content creator can think of how to offer a personal touch and attract the users' attention. Adding to that, the business owner for the live streaming service can consider how to establish the bond with the users better and consider several aspects, including personality attractiveness and interactivity, to form emotional connections with the users. The successful marketing plan can consider the above suggestions to use the Douyin platform to achieve desired marketing goals.

4.1 Suggestions on live streaming e-commerce

First, it is key to build high-quality services based on consumer experience for anchors, suppliers, and platforms.

As the anchors, they should build personal IP and enhance my brand image as a host. Control the content output with strictness, create unique labels, and highlight distinction; Closely follow consumer demand, and use yourself as a "instrument" to satisfy the users desire; Maintain an active and sticky fan base; Focus on the interests of consumer groups. Anchors should supervise and strictly control the quality of goods. This has greatly increased the requirements for suppliers, and only high-quality goods can be better launched live and have greater development space.

At the same time, e-commerce platforms should also strengthen information security management in all aspects, strictly control the quality of anchors, and assist consumers in safeguarding their legitimate rights and interests. Before live broadcasting, anchors should also preview the commodities on the day of their live broadcasting to facilitate consumers to predict and ensure that fans of the live broadcasting room are more consumers of corresponding commodities to build a better e-commerce platform.

4.2 Suggestions to consumers

For consumers, blind consumption should be avoided. E-commerce live streaming is full of various temptations. After anticipating the live streaming products, consumers should base on their actual needs, consider whether they need them, and make rational purchases instead of blindly following orders. Consumers can learn about the live broadcast preview in advance and know whether there are products they need instead of blindly waiting in the live broadcast room, which eventually leads to a waste of time and no products they need.

4.3 Solution for developing personalized e-commerce marketing strategies

Finally, live streaming E-commerce enterprises should develop personalized e-commerce marketing strategies, improve platform functions, and meet the needs of consumption upgrading. Promotional discounts only boost sales in the short term, which runs counter to the idea of building a brand and creating a long-term brand premium effect. In live broadcast marketing, merchants should strengthen the display of differentiated features of products and brands, weaken the strong psychological correlation between promotion and price, and make personalized live broadcast e-commerce marketing strategies. Meanwhile, it is necessary to deepen the application and promotion of 5G network, VR technology, and artificial intelligence in the live streaming e-commerce industry, constantly improve platform functions, innovate the interaction between users and users and between users and anchors, enhance user engagement, and improve user conversion rate and re-purchase rate.

5. Conclusion

By studying the purchase path and influencing factors of users' consumption decisions, this paper aims to understand the influence of product attributes and purchase psychology. In addition, user scenarios on consuming decisions might aid the e-commerce industry enhance the efficiency of e-commerce platforms and enhance purchase transformation.

The embedded features on Douyin provide an opportunity for sellers to build an interactive, connected, and personalized bond with the users. These are to make an impression in the mind of Douyin users and better promote purchasing behaviors. The current study provides a more precise theoretical framework for readers, sellers, and users to understand the two significant features of Douyin separately. It is to see how short video clips and live streaming services influence the user's purchasing behavior and decisions. The possible future research goal based on the abovementioned assumption is that personalized products and content quickly lead to Douyin addiction, and the addiction can directly impact purchasing behavior. However, there is different online shopping habit between men and women. Future research can emphasize how gender differences result in varied online shopping patterns.

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