Analysis The Influence of The Interactivity of E-commerce Live Broadcast on Consumers’ Purchase Intention

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Abstract. Due to the emergence of the new coronavirus epidemic, people's attention has been paid to online shopping, and the achievements of live broadcast e-commerce are particularly impressive. Different from the traditional window-based e-commerce, the live e-commerce is separated from the limitation of the shopping platform and embedded into the content platforms such as short videos. This paper mainly discussed the influence of interactive marketing on consumers' purchase intention. Starting from the concept of para-social interaction proposed by Horton and Wohl, this paper analysed the internal and external advantages and disadvantages of interactive marketing through SWOT method and gave corresponding development suggestions with Douyin as an example. This study concluded that the more para-social interaction, the more consumers trust the information provider, the more they can stimulate their purchase intention. Therefore, the interactive marketing model applied in Douyin platform has a significant positive impact on consumer purchase intention.

Keywords: Para-social interaction; Interactive marketing; Purchase intention; Live e-commerce.

1. Introduction

1.1 Research Background

Affected by the epidemic, people are less likely to go out to shop in brick-and-mortar stores, and they spend more and more time in home isolation, which also promotes the development of online shopping and online live broadcasting. E-commerce live broadcast is also developing rapidly under the epidemic. According to China Internet Network Information Centre data, as of June 2021, the number of online live broadcast users in China reached 638 million, accounting for 63.1% of the total netizens (China Internet Network Information Centre, 2021). Among them, the scale of e-commerce live broadcast users is 384 million, accounting for 38% of the total netizens (China Internet Network Information Centre, 2021). E-commerce live broadcast users account for only 60% of online live broadcast users, and there is still a lot of room for growth (China Internet Network Information Centre, 2021).

Previous studies have reported about the impact of short video content marketing on consumers' purchase intention, the impact of online Hanfu store interactive marketing on consumers' purchase intention, research on the influence of live broadcast interactive marketing of clothing brands on consumers' purchase intention and other related studies (Liu & Dong, 2022; Li, 2020; Zhang, 2020).

1.2 Research Gap

In the previous research, there are many studies on interactive marketing and live broadcast, but there is still very little interactive marketing in live broadcast. Due to the emergence of the epidemic and the rapid development of live-streaming e-commerce, people are increasingly shopping in live-
streaming. Will interactive marketing in live-streaming affect consumers' willingness to buy? It is only through strengthening research that better strategies can be found to make the business profitable, better occupy the market and attract more consumers to buy and consume. Therefore, this paper will strengthen the research on whether interactive marketing in live broadcast affects consumers' purchase intention.

1.3 Fill The Gap

The Introduction introduces the background of Douyin APP live broadcast e-commerce and explains the problems and research purpose of Douyin live broadcast e-commerce under the current background.

In the rest of this paper, it studies the influence of interactive marketing on consumers' purchase intention through the analysis of the live broadcast mode of Douyin APP. In this paper, the para-social interaction theory will be applied as a supporting framework to analyse the interaction process between interactive marketing behaviour and consumers. Based on the social background of the epidemic, most of the data came from the Douyin’s official website or public information filtered within three years. By analysing the development status of Douyin's user portraits and live broadcast e-commerce, the problems existing in its live broadcast e-commerce are found. The SWOT method will be employed to analyse the live e-commerce mode of Douyin and give the SWOT strategic choice to improve consumer purchase intention and discuss the future development of Douyin e-commerce.

2. Literature review

2.1 Definition and Development

The concept of Para-social Interaction (PSI) was first proposed by Horton and Wohl in 1956, which means that the media figures convey information to the audience through the media (Horton & Wohl, 2016). In this media environment, the audience will respond to the media figures as real people, which is different from the face-to-face communication in reality. Such a virtual interaction process is called Para-social Interaction. But for Horton and Wohl’s view that para-social interaction is an incomplete and abnormal process of interaction, Giles et al. put forward different views that Para-social interaction can be seen as a 'normal social activity' (Giles, 2002; Kumar & Benbasat, 2002).

With the development of communication media, the definition of Para-social Interaction has changed, and its unidirectionality is developing towards bidirectionality, but it is merely limited to opening some two-way communication channels. Gu and Gao, domestic scholars, proposed that although the distance between media figures and audiences was narrowed and there was a chance for smooth communication, media figures could not respond to them one by one, and this interaction was still a single process (Gu & Gao, 2020).

Based on the above point of view, this paper defines Para-social Interaction as: one side to implement some purpose, through the performance of media figures in television, Internet and other media, the content presented to the other side of the one-way, non-real face-to-face interaction.

On the basis of the theory proposed for the first time, Kweon and Cho studies the four dimensions of para-social interaction in TV media programs: emotion, connection, reflection, and socialization (Kweon & Cho, 2009). Perse & Robin’s research shows that the audience will map the real way of interpersonal communication to the role of the media, and the role yields the same trust and understanding as the real interpersonal process (Perse & Robin, 1989). In addition, Turner’s study found that homophily is an important feature of para-social interaction from the perspective of individual self-esteem, that is, the audience prefers people with similar behavioural characteristics to have a positive impact on para-social interaction (Turner, 1993).

Stever and Lawson and Gu chose para-social interaction as the theoretical framework to study the interaction between celebrities or Vloggers and fans (Gu & Gao, 2020; Stever & Lawson, 2013). Wang et al. attributed the interaction between users and AI products to para-social interaction (Wang
Para-social interaction is often applied to audiences and interactive processes that cannot be fully communicated with them. The research object of this paper is interactive marketing behaviour and consumers, and the interaction process is highly like the above research. Therefore, para-social interaction is selected as the theoretical support in this paper.

2.2 Important Results

Interactive marketing can fully mobilize the purchase desire of buyers, when the original network purchase mode slowly cannot meet the purchase needs of customers, unable to reflect the value of goods in various directions, the key role of interactive marketing is reflected. The full-scene e-commerce model launched by Douyin is exactly what customers need most. The characteristic of mobile e-commerce interactive marketing is to ensure consumer trust and freedom. Give consumers the choice of transaction to prevent information leakage. Each consumer can independently choose the goods and sellers on the platform according to their own needs and preferences, as well as the interactive information and interactive location of the platform. Free choice has gradually become one of the advantages of the interactive marketing mode of mobile e-commerce. And consumers can also use the "network face-to-face" form of direct communication with customer service, customer service can also timely solve problems for customers, fully give consumers freedom (Wang, 2021).

Interactive marketing to a large extent can improve the enthusiasm of customers to buy. When customers only see the picture of the product and hesitate, they will open the store's broadcast room or watch relevant short videos to make them better understand the product and make a decisive purchase. Parboteeah represents the attractiveness of visual images, videos and other forms of visual expression (Parboteeah et al., 2009). Liu Zixi and Meng Fei and other scholars believe that when the visual presentation effect of the live broadcast room is excellent, users are more likely to pay attention to the more useful information and enhance the enjoyment value of shopping (Liu, 2018; Meng, 2018). In the model of the influence of live interaction of clothing brands on consumers' purchase intention, the first hypothesis is that the visual effect factors of clothing brands significantly positively affect consumers' purchase intention (Yang et al., 2021). Responsiveness is also the behaviour expected by consumers during live streaming interactions. Lin Xu and Zhou Xuan believed that consumers would have better viewing experience and enhanced trust in businesses if their social needs were timely responded to in live broadcast (Lin, 2018; Zhou, 2015). Bao Dunian believes that in virtual trading communities, the content quality and detail level of posters' information will affect the intensity of social interaction perceived by visitors (Bao, 2010). Chen Yang proposed that comprehensive product information can enhance consumers' subjective cognition and consumption intention of the product (Yang, 2013).

2.3 Summary

Para-social Interaction (PSI) refers to media personalities communicating information to the audience through the media, and the audience in this media environment will respond to the media personalities as real people, as opposed to face-to-face communication in the real world. With the development of communication media, the definition of para-social Interaction has also changed, and its unidirectional development is becoming two-way. However, only part of two-way communication channels has been opened. In this paper, para-social Interaction is defined as a one-way, non-face-to-face Interaction in which one party presents content to the other party through the performance of media figures on television, the Internet, and other media to achieve a certain purpose.

Interactive marketing can fully mobilize the purchase desire of buyers, when the original network purchase mode slowly cannot meet the purchase needs of customers, unable to reflect the multi-dimensional value of goods, the key role of interactive marketing can be reflected.

Interactive marketing to a large extent can also improve the enthusiasm of customers to buy.

Responsiveness is also the behaviour expected by consumers during live streaming interactions.

When the visual presentation of the live broadcast room is excellent, users are more likely to pay attention to the more useful information and enhance the enjoyment value of shopping.
If consumers' social needs are timely responded to during live broadcast, they will have better viewing experience and enhance their trust in merchants.

In the virtual trading community, the content quality and detail degree of posters' information will affect the intensity of social interaction perceived by visitors.

Comprehensive product information can enhance consumers' subjective cognition and consumption intention of the product.

3. Method

3.1 Research Design

This paper utilizes the research method of qualitative analysis and conducts a SWOT analysis for Douyin e-commerce live broadcast. Qualitative research means that researchers obtain people's views and feelings on a certain thing or phenomenon by consulting many literature materials, that is, through continuous exploration, in-depth, meticulous, and long-term research, and analysis, to extract an objective and comprehensive understanding (Liao, 2008). Qualitative research has more human experience than quantitative research. The main research in this paper is whether interactive marketing in live broadcast affects consumers' purchase intention. Through qualitative research, the researchers can better perceive, understand, and analyse consumers' sense of experience (Wang & Ji, 2018). Through SWOT analysis, researchers can better focus on Douyin e-commerce live broadcast, and analyse the advantages, disadvantages, opportunities, and threats of Douyin e-commerce live broadcast. Using this method can conduct a comprehensive and systematic analysis of the situation of Douyin e-commerce live broadcast to formulate a development strategy that can make the company profitable, better occupy the market, and attract more consumers to buy and consume according to the research results.

In the previous research, there has been an e-commerce online live broadcast marketing model through SWOT analysis, so as to figure out how to solve the problems existing in the standardization of online live broadcast marketing, and propose solutions and development strategies, analyse e-commerce through SWOT. The live broadcast economy of the platform, and countermeasures and suggestions, etc., so this paper also analyses the live broadcast of Douyin e-commerce based on SWOT (Xu, 2021; Du, 2021).

3.2 Data Collection

Douyin e-commerce live broadcast mainly refers to introducing products to customers through live broadcast on the Douyin platform and stimulating consumption through various forms of marketing and the effect of Internet celebrities (Gai & Cui, 2022). In April 2020, Douyin signed Luo Yonghao for 60 million yuan, and entered the live broadcast e-commerce track with a high profile, and Douyin e-commerce entered the development period (IResearch, 2021). In June 2020, Byte regarded e-commerce as a strategic business, formally established a first-level business department named "e-commerce", and officially released the "Douyin E-commerce" brand (IResearch, 2021). In April 2021, at the first Douyin E-commerce Ecological Conference, Douyin E-commerce President Kang Zeyu first proposed the concept of "interested e-commerce" (IResearch, 2021). According to the latest data released by Douyin e-commerce on January 6, 2022, as of December 31, 2021, on the Douyin e-commerce platform, the monthly average of more than 180 million short videos was released, and the monthly average exceeded 49.8 billion live broadcasts (IResearch, 2021). The visits, the monthly average exceeds 138.2 billion interactive contents, the search volume in December 2021 exceeds 5.5 billion, and the cumulative purchase of products by users throughout the year exceeds 11.7 billion (IResearch, 2021).
3.3 SWOT Analysis

3.3.1 Strengths

The remarkable development of Douyin e-commerce in the past two years shows the great potential of the "short video live + e-commerce" model of interest e-commerce. The profit margins of traditional e-commerce platforms are gradually being squeezed by short video and live streaming e-commerce platforms such as Douyin and Kuaishou. In 2019, Douyin's GMV surpassed Taobao. In 2020, Douyin cut off all external links of third-party platforms and increased the proportion of stores on its own platform to more than 95%. In 2021, Douyin's GMV will increase to 3.2 times that of the same period. In 2022, it will be upgraded to all-interest e-commerce. Douyin's huge user base and unique advantages of short video platform has pushed Douyin e-commerce to a position that can compete with traditional e-commerce platforms (China Internet Network Information Center, 2021). "E-commerce of interest is of great significance in providing products more in line with consumer needs and accelerating the development of the industrial chain, bringing new space for the consumer side to look forward to," said Director of the Research office of Economics and Sociology of Science and Technology at the Chinese Academy of Social Sciences. For consumers, interest e-commerce can meet their potential consumer needs. Douyin first proposed the concept of interest e-commerce, which has achieved very good results until now (Wang, 2020). Interest e-commerce is interactive marketing in the specific operation of a good use. In the process of interaction with the audience, let the audience improve the purchase desire, increase the interest in watching.

The biggest advantage of Douyin's e-commerce interests is the platform itself. Douyin shows its unique advantages from the graphic search e-commerce platform from four aspects: user insight, intelligent optimization, scene original and first-person, and prime time through short videos. User insight relies on algorithms to push users' favourite content and let them participate in it. This aspect reflects the feature of interactive marketing to ensure consumer trust and enables users to pay attention to e-commerce live broadcast in real time, which can greatly shorten the relationship between e-commerce anchors and consumers. Intelligent optimization refers to Douyin's personalized recommendation. Scene native and first-person first-perspective display and content scene construction are more intimate and easier to trigger emotional resonance of users. Prime time is the control of live broadcast duration and release time. It can be found that these four aspects are inseparable and interact with each other. The four aspects work together to form a good complement and promote a virtuous cycle of new content generation, new user participation and new trend update, while skilfully inserting e-commerce factors into it, thus achieving the explosive growth of E-commerce performance in the short term (Lin, 2021).

3.3.2 Weaknesses

The chaotic environment of low-quality live broadcast reduces the consumption intention of some users. Scripted content leads to low user loyalty. The quality of anchors needs to be improved. Recently, Yu Minhong, president of New Oriental, led teachers to open the live broadcasting service. The high quality of teachers is in sharp contrast to some low-quality anchors.

The homogenization of live broadcast leads to insufficient feedback of communication effect. Many e-commerce livestream propaganda methods and livestream content are seriously homogenized with no difference, poor feedback from users and lack of in-depth social interaction led to poor performance in bringing goods.

The quality of live broadcast interactive content needs to be improved. Many e-commerce anchors' interactive content lacks the interaction with consumers, and consumers can only participate in the discussion in the form of message barrage. In this case, anchors still do not pay attention to consumers' messages, and the weakening of user stickiness will lead to the weakening of consumers' stickiness to live broadcast rooms and brands.

Interactive marketing content is disconnected from merchandise marketing. To satisfy consumers' temporary entertainment psychology, many companies give up the market positioning of the product itself and choose appropriate interactive content. There is a lack of convergence between the product
and the marketing propaganda content, and consumers cannot perceive the effective information of the product. There are also some direct broadcast rooms in the interaction of rigid product advertising, but such marketing means in the consumer psychological penetration is not strong (Lin, 2021).

3.3.3 Opportunities

This year, Douyin launched the concept of global interest e-commerce, comprehensively upgrading the interest e-commerce to build a new model of full scene with goods. Wei Wenwen, president of Douyin E-commerce, and her team found in the survey that consumers' interest stimulated by short video content can promote short-term transformation, and their interest will also be extended and sustained, and be naturally absorbed by more scenes. In addition, "interest e-commerce" can be extended from content to more fields to meet the needs of users in diversified scenarios. Interactive marketing as a support in diversified scenarios will develop into a larger, interactive upgrade to interest, and play a greater role in the field of multiple scenarios. At the same time, Douyin platform also provides new auxiliary support to “e-commerce newcomers”. For example, in terms of products, it continues to strengthen the construction of short videos, live broadcasts and other content scenes. Strengthen product construction in stores, malls, search, and other centralized scenarios, so as to meet consumers' active search and repurchase and other discovery shopping needs and bring more exposure opportunities for products. In terms of products, Douyin platform improves the products of e-commerce compass, Doudian, Douyin e-commerce supply chain cloud warehouse, Juliang Baiying and Choicheng Alliance to help merchants make operational decisions and improve operational efficiency. Use products to maintain interactive marketing, ensure the quality of interaction, and promote the rapid development of interest e-commerce.

3.3.4 Threats

At present, Douyin has laid out its e-commerce layout to help regional economic development with precise implementation. In recent years, Douyin e-commerce has launched a series of support plans for industrial belts and small and medium-sized businesses across the country, and some clothing, shoes and bags, fresh food and beauty enterprises have opened new development paths. Thanks to the continuous efforts of Douyin platform and e-commerce businesses, the multi-real estate economy has developed rapidly. For users to build a bigger stage, trill electricity released on June 9, industrial growth plan, announced that it will make full use of high-quality resources, it is the country's industrial cluster, makes the top belt, systematic and scale to support the belt and small and medium-sized businesses, and further enhance product awareness, support regional economic development. It is also a great opportunity for future development, revitalizing the local economy, expanding the layout of e-commerce, and injecting new vitality into Douyin with the emergence of more self-owned platform merchants. The interactive marketing will go to each city, and the interaction and characteristic industries will be integrated, and the influence of interactive marketing will be expanded.

At present, the global economy is affected by the novel coronavirus pandemic, and the transformation of the real economy to the Internet economy has become a trend, and more and more enterprises have begun to deploy e-commerce live streaming. And interaction is an important part of live broadcast. More and more companies are starting to focus on interactivity, on consumers' shopping mentality, making it a lot more important.

4. Result and discussion

Overall, the biggest advantage of Douyin live e-commerce is the huge flow of convergence in its platform and the positioning of 'interest e-commerce' which is different from the traditional e-commerce platform. At the same time, there are also problems such as low quality, homogenization, and insufficient supervision of live broadcast. It has also been supported by policy. Although Kuaishou's live broadcast e-commerce is the main competitor, Douyin has much room for development.
Douyin utilizes 'short video live + e-commerce' to achieve interactive marketing, which promotes consumers' purchase intention. In the first year of the introduction of the concept of 'ecommerce of interest, the GMV of the company was 3.2 times that of the same period, selling more than 10 billion items (China Internet Network Information Centre, 2021). The success of Douyin's interactive marketing stems from its content distribution algorithm matching the user's personal characteristics, which derives the interest e-commerce model. In the future development of live broadcast e-commerce, the paper should continue to maintain the advantages of its algorithm technology and improve the conversion rate through more efficient host team and more novel live content. For low-quality live content, Douyin should first improve the basic rules and regulations of its platform and prohibit touching the content of the network high-voltage line. However, in view of its daily and life-oriented positioning bias, sensitive content should not be one size fits all to destroy the user's experience of content freedom. Secondly, it is necessary to guide the anchor man to create meaningful content through official operating products, rather than blindly attracting attention by wiping the ball and vulgarity. At the same time, the current policy and social environment orientation provide certain development space. In Chinese society, the implementation of decision-making in response to policy calls is the key to success. Douyin's biggest rival is Kuashoushui's corresponding segment and Xiaohongshu's 'content community + ecommerce' model. Douyin's sales are concentrated in the daily consumption sector, while Kuashoushui’s makeup sector is better. At present, the MAU of Douyin has exceeded 700 million, and the user group continues to sink (China Internet Network Information Centre, 2021). It is necessary to standardize the product link and ensure the quality of goods while maintaining large traffic.

In previous studies, Liu concluded that the content presentation of live broadcast forms will enhance the enjoyment value of consumers, while in the live broadcast of clothing brands, visual effects significantly stimulate consumers' positive purchase intention (Liu, 2018). Lin Xu and other scholars clarify that the interactive communication of live broadcast will make consumers have better experience and trust (Lin, 2018). Bao Dun-a states that publishers' content quality and product detail will affect consumers' perceived social interaction intensity (Bao, 2010). These findings confirm this conclusion: the content of Douyin live e-commerce is based on the influence of the host and the content creativity of the team to enhance the enjoyment value; in areas like clothing sales, live broadcast can be more suitable for consumers' immediate needs, show more detailed and vivid product information, and stimulate consumers' willingness to purchase. The more detailed the content quality and product information provided by the anchor and team, the more para-social interaction, and the more consumers trust the transaction.

5. Conclusion

This paper studies the transformation of Douyin and puts forward relevant suggestions on the weaknesses and threats of Douyin, hoping to help enterprises in the field of e-commerce make full use of their own advantages to achieve better respond when facing changing demands of market and consumers, accelerate the concept of social e-commerce marketing model transformation theory, and promote the sustainable development of social e-commerce. In addition, this paper reviews relevant literature and verifies the practicability of 4C marketing theory through the combined application with SWOT model. However, this theory has some insurmountable defects. A successful enterprise should not only see the needs of the consumers, but also pay attention to its competitors, or it is easy to over-rely on consumers and lose its own direction. Therefore, further improvements should be made to the 4C marketing theory to guide the strategic choice of enterprises comprehensively.

Although this paper takes Douyin as an example to analyze the enterprise transformation and provide several optimization suggestions in order to facilitate the sustainable development of similar enterprises and the whole e-commerce field, there are still some limitations. On one hand, this paper is based on the author's own summary and analysis, which may be subjective, and is personal views
and assessments; On the other hand, this paper mainly focuses on a series of changes during the epidemic, so it has certain limitations in the time period.

This paper is mainly in the context of the epidemic, based on the Para-social interaction theory, to analyse and discuss "whether interactive marketing in Douyin e-commerce live broadcast will affect consumers' purchasing intention", using SWOT to analyse the advantages and disadvantages of Douyin e-commerce live broadcast. And it is concluded that the "short video live broadcast + e-commerce" interactive marketing model adopted by Douyin can boost consumers' willingness to purchase and puts forward relevant strategic suggestions to facilitate corporate profits. Douyin should continue to maintain the advantages of its algorithm technology in the future, formulate and improve rules and regulations, purify the network platform, and guide anchors to create meaningful content. The most important thing is that in the future, the anchors, and teams of Douyin live broadcast need to provide more detailed product information and enhance para-social interaction, so that consumers can trust this transaction relationship more and stimulate consumers' willingness to buy.

Taking Douyin e-commerce live broadcast as an example, this paper constructs a new theoretical framework. Starting from the background of the epidemic, it combines the theory of Para-social interaction with SWOT analysis and analyses the advantages and disadvantages of Douyin e-commerce live broadcast and put forward suggestions for the development of e-commerce live broadcast in the future. Under the influence of the epidemic, in the future, more and more users will enter the online live broadcast for shopping. Through the research of this paper, it can be concluded that interactive marketing boosts consumers' purchase intention, and it also provides reference opinions for the future development of e-commerce live broadcasts.

This paper also has many shortcomings. This paper only employs SWOT analysis as an analysis tool, and it has certain limitations to analyse the single enterprise of Douyin. In future research, more analysis tools can be applied to analyse online live broadcast e-commerce more comprehensively, and to provide more comprehensive suggestions and development measures for the development of live broadcast e-commerce.

References


