

The Effect of Social Media Live-streaming Marketing on Consumers Engagement and Purchase Intention of Instant Noodle in China

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Abstract

Live-streaming on social media provides an innovative and interactive channel for companies to communicate with remote consumers, which is effective for product marketing. Live-streaming commerce in China has witnessed the most significant development and achievement. Previous researches have identified the positive effect of live-streaming on Chinese consumers' engagement and purchase act. However, less specific studies focus on particular product category and live-streaming platform. This research focuses on Douyin platform and instant noodle products in China. By applying Uses and Gratification Theory, this research explores the effect of Utilitarian Gratification (product information searching, perceived cost-effective deal), Hedonic Gratification (enjoyment, immersive experience) and Social Gratification (social interaction, consumer-streamer similarity). With online self-administered questionnaire, 248 valid data of Chinese consumers are collected for quantitative analysis. Final results illustrate that immersive experience, social interaction and consumer-streamer similarity positively impact consume engagement during live-streaming marketing of instant noodle on Douyin. While consumer engagement positively leads to purchase intention. Then, suggestions for instant noodle companies' live-streaming marketing strategy are presented. Finally, this research provides conducive understanding about the outcome of social media live-streaming marketing on consumers' engagement and purchase intention.

Keywords

Live-streaming Marketing; Instant Noodle; Douyin; Uses and Gratification Theory; Consumer Engagement.

1. Introduction

Live-streaming is generally associated with simultaneous video broadcasting and real-time communication[1]. Supported by social media software and digital technologies, live-streaming has been developed as a popular social media service for both consumers and marketers[2]. Consumers gets information in a real-time speed, while sellers communicates with various viewers simultaneously[3]. Conducting live-streaming through social media platforms provides companies a chance to positively influence individual purchase behavior[4]. Current data shows that China has reached a great size of live-streaming market with 700 billion Yuan in 2022 and over 70% online users, while the market size is expected to increase three times by 2026[5]. Therefore, much attention has been attracted on studying live-streaming commerce in China, exploring the reasons behind consumers' strong preference on shopping through live broadcasting. Yet, less literature is narrowed down to specific product.

2. Literature Review and Research Consumption

2.1. Live-streaming on Social Media

Live-streaming belongs to live media, Wang (2022) described live-streaming as a media format that provides constant video recording and real-time content broadcasting to remote audiences[3]. Combined with social media platforms, live-streaming is upgraded with real-time video broadcasting[6] and text chatting service. Social media live-streaming empowers viewers to influence content creation and achieve better social interaction[7]. According to Hou et al. (2019), live-streaming is available for any social media users to operate and watch video broadcasting, actively facilitating video content, real-time communication and online consumption at the same time[8]. Thus, social media live-streaming is an effective communication method for companies to reach and influence sizable consumers[9].

2.2. Live-streaming Commerce and Consumers' Behaviour

Live-streaming commerce is a combination of social live-streaming and online shopping service[10], which allows consumers and sellers to communicate synchronously[11]. According to Wongkitrungrueng and Assarut (2020), live-streaming can enhance viewers' trust on products and sellers, which facilitates active consumer involvement[12]. Park and Lin (2020) demonstrated that live visual contents of product in broadcasting can attract consumers' attention with deeper impression and trustworthiness, which further increases audiences' intention to make purchase[13]. Additionally, Lu and Chen (2021) identified that live-streamers eliminates customers' uncertainty during digital shopping experience[14]. Thus, live-streaming provides significant impact on attracting and retaining consumers[15].

2.3. Uses and Gratification Theory

Uses and Gratification theory (U&G theory) is originally designed to explore traditional mass media usage (e.g. television, radio). Referring to U&G theory, users prefer to select particular media under the consideration of which specific personal need can be satisfied via the media[16]. Previous literature has successfully expanded U&G theory into studying innovative media usage[17] and consumer behaviors[18]. Consumer gratification of media usage is generally divided into three aspects: utilitarian gratification, hedonic gratification and social gratification[19]. Utilitarian gratification includes information seeking, money saving and time reduction[12]. Relaxing[10], enjoyable[12] and exciting watching experience[19] represents hedonistic gratification. While individual identity and social interaction indicate consumers' pursuit towards social gratification[16].

2.4. Research Consumption

2.4.1. Effect of Utilitarian Gratification on Consumer Engagement

Utilitarian gratification is generally considered as the satisfaction of utilizing particular service to achieve individual goals, which also stands for several functional demands of consumers and is widely referred as "practical gratification"[19].

Complete, accurate and timely information are more convincing for consumers and further influence people's engagement willingness[20]. While detailed and authentic knowledge of product have impact on increasing deeper engagement[21]. Since live-streaming provides streamers a real-time space to directly display and introduce the products, this study proposes hypothesis as H1:

H1: "product information searching" can influence consumer engagement.

Reduction of money and time is considered as another motivator for participate into online shopping through social media live-streaming[10]. Evidence from study on Chinese Market

indicates that live-streaming selling could provide lower price to consumers, and develop a financial connection with viewers[22]. Thus, this research proposes hypothesis as H2:

H2: “perceived cost-effective deal” can influence consumers engagement.

2.4.2. Effect of Hedonic Gratification on Consumer Engagement

Hedonic gratification refers to enjoyable or relaxing experience of media utilization[19].

Previous study has demonstrated that entertainment is the most common embodiment of consumers’ hedonic needs[23]. Ma (2021) declared strong relationship between enjoyment and attraction to consumers, which then contributes to consumers’ purchase intention[19]. Thus, this research proposes hypothesis as H3:

H3: “enjoyment” can influence consumers engagement.

Through live-streaming, viewers are able to watch streamers eat, wear or use products in person, experiencing a more vivid ‘touch’ with products[24]. Su (2019) demonstrated that immersive watching experience has significant contribution to higher consumer involvement and conversion[25]. Similarly, Sun et al. (2019) suggested that expected immersion into video live-streaming allows audiences to enjoy a more direct viewing and shopping experience[11]. Thus, the study hypothesizes that:

H4: “immersive experience” can influence consumers engagement.

2.4.3. Effect of Social Gratification on Consumer Engagement

Social gratification is related to social interaction, and previous research has found strong relationship among interpersonal communication, perceived presence and willingness to involve in live video broadcast[8].

During live-shopping experience, viewers are motivated to interact with remote broadcaster by sending screen bullets[27], where consumers can achieve real-time interaction with streamers and other audiences[19]. Since interaction control is defined as one leading attribute on live-streaming consumers’ behavior[16], the study hypothesizes as:

H5: “social interaction” can influence consumers’ engagement.

Streamer is one primary factor of live-streaming commerce, since direct visual similarity with anchors helps to eliminate consumers’ uncertainty about product fit[28]. Consumers apply visual similarity with streamers to identify individual fitness with the product, which is concluded as social identify that generates social value to live-streaming[29]. In addition to physical fit, psychological resonance with streamers can also positively attract consumers to engage[30]. Thus, this study hypothesizes:

H6: “consumer-streamer similarity” can influence consumer engagement.

2.4.4. Effect of Consumer Engagement on Purchase Intention

From the perspective of live-streaming marketing, higher consumer engagement has notable impact on purchase intention increase[11]. While social media fosters strong consumer-brand relationship with positive consumer engagement, and then effectively encourage consumers to make payment[31]. Finding about social media marketing supports that consumer engagement takes an important role of arousing individuals’ consumption willingness[32]. Therefore this study hypothesizes:

H7: “consumer engagement” can influence purchase intention.

3. Model Construction and Research Design

3.1. Research Model

Based on Uses and Gratification Theory, this study constructs a research theoretical model as shown in Figure 1 which contains assumptions proposed in previous chapter.

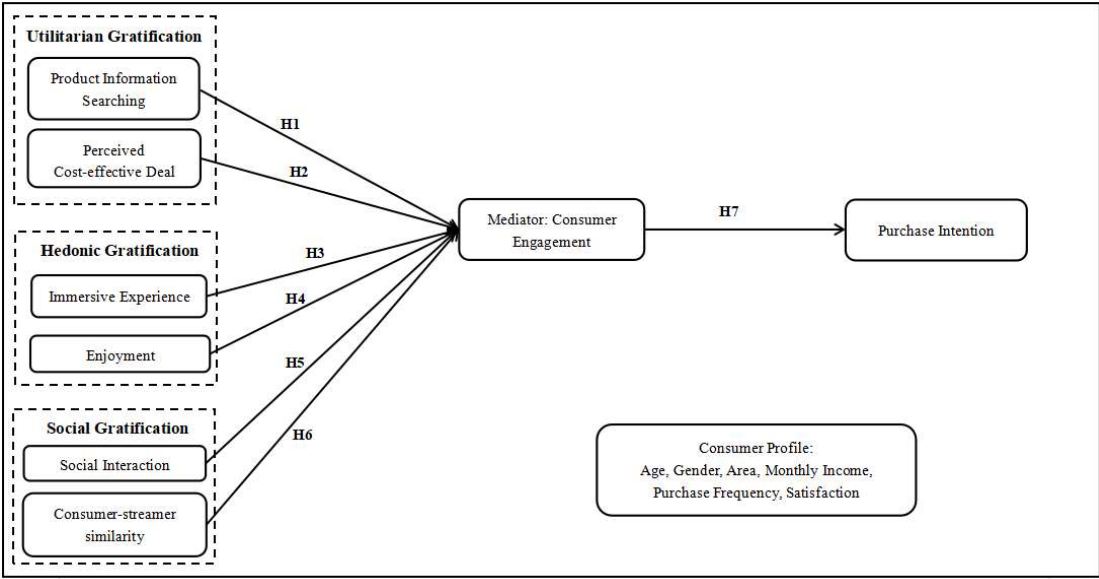


Figure 1. Conceptual Model

3.2. Research Design

This paper designs an online questionnaire to collect data from targeted consumers. The online questionnaire is delivered through WeChat with expected survey period from 20th July 2023 to 15th August 2023.

3.2.1. Questionnaire Design

Table 1. Key Constructs and Measurement Items

Construct	Secondary construct	Survey Item	Source
Utilitarian Gratification	Product Information Searching	PIS1:I can get more information of product from live-streaming shopping (e.g. brand, product display, price, discounts)	Gao et al., 2021; Cai & Wohn, 2019
		PIS2:Live-streaming gives me more accurate and detailed introduction about the product (e.g. cooking method, product specifications, purchase process)	
	Perceived cost-effective deal	PCD1:Price of instant noodle in live-streaming are lower PCD2:More free gifts like food samples are presented in the live-streaming PCD3:There are more available coupons provided in the live-streaming	Hu & Chaudhry, 2020
Hedonic Gratification	Enjoyment	E1:It is an relaxation of watching live-streaming to introduce instant noodle E2:Watching the streamer taste the instant noodle gives me the sense of pleasure	Wongkitrungrueng & Assarut, 2020
	Immersive experience	IE1:Video live-streaming makes me feel like being in real offline store IE2:I can almost feel like eating the instant food myself when streamer is tasting and describing the product	Zheng et al., 2022
Social Gratification	Social interaction	SI1:Screen bullet function of live-streaming provides me with more direct communication with streamer and other consumers SI2:I feel more comfortable of talking about the product with remote people through live-streaming	Ming et al., 2021;Xiaoyu et al., 2020
	Consumer-streamer similarity	CS1:Similar preference of instant noodle from with streamers is more convincing (e.g flavor preference, brand emotion) CS2:Similar personal profile with streamers increase my confidence on the product	Wongkitrungrueng & Assarut, 2020
Consumer engagement		CE1:I always attend live-streaming show of instant noodle when it appears on Douyin CE2:I actively chat with streamers and other consumers during the watching CE3:I actively follow the streamer for more live-streaming show	Zheng et al., 2022
Purchase Intention		PI1:I tend to purchase instant noodle through live-streaming show of my favourite brand PI2:I purchase instant noodle from live-streaming without considering brand reference PI3:I am willing to buy instant noodle from live-streaming in the future	Morwitz et al., 2007

The questionnaire consists of three parts. In the first section, participants will be informed with brief introduction of research project. Secondly, the questionnaire outlines specific questions from demographic aspect, aiming to identify value demographic factors (gender, age, residential city). Final section presents detailed questions related to research model, which provides accurate data to test the effect of live-streaming marketing on consumers purchase intention.

In order to quantitatively measure related variables, this questionnaire applies 5-points Likert scale options, which extends from “1 = strongly agree” to “5 = strongly disagree”. Unlike 7-point Likert scale, 5-point scale is easier for consumers to understand and increase the rate of response[33].

3.2.2. Sample Strategy

The questionnaire will be uploaded and distributed through the biggest social media application in China --- WeChat[34], inviting people who has live-streaming shopping to complete. It is completely voluntary for each sample individual to engage into the survey. While, the sample size is expected to reach at least 150 valid responses.

4. Data Analysis

291 responses are received from target consumer sample, whereas 248 responses are valid for data analysis with missing and abnormal responses eliminated. The sample size exceeds 200, which is suggested as reasonable for examining structural regression model[35].

4.1. Frequency Analysis

As shown in Table 2, 139 participants purchases instant noodle through live-streaming on Douyin, accounting 56% of the total participants. While the left 109 people claimed they have never experienced live-streaming shopping of instant noodle.

Table 2. Frequency Analysis of purchase history

Characteristics	Frequency	Percentage%
Purchase History		
Yes	139	56
No	109	44

Table 3. Frequency Analysis of demographic variables

Characteristics	Frequency	Percentage%
Gender		
Female	96	69.1
Male	42	30.2
Prefer not to say	1	0.7
Age		
18-24	58	41.7
25-34	26	18.7
35-44	10	7.2
45-54	45	32.4
City		
First Tier City	31	22.3
Second Tier City	31	22.3
Third Tier City	31	22.3
Forth Tier City and below	46	33.1
Monthly Income		
3000-5000	69	49.6
5000-10000	57	41.0
Above 10000	13	9.4

From table 3, it can be seen that live-streaming shopping of instant noodle is mainly utilized by female consumers (69.1%), while the other two gender groups only account 30.9% in total. Moreover, younger live-streaming users (18-24) actively consume instant noodle (41.7%), while people aging from 25 to 44 contribute less transaction volume with around 26% proportion. People from forth tier city and below consume the most instant noodle through live-streaming of Douyin (33.1%). In terms of monthly income, the majority of target consumers earn less than 10k Yuan per month, where 49.6% people’s monthly salary is less than 5k Yuan and 41% people earn more than 5k Yuan.

4.2. Reliability and Validity Analysis

Table 4 details Cronbach Alpha Value of each construct, including specific secondary construct of three main independent variables and two dependent variables. Results of each construct are located between 0.7 and 0.9, indicating that the 5-point Scale designed for each variables has reached the common reliability level[36] and all constructs can be reserved in the designed research model.

In Table 5, the value of KMO is 0.835, which is suggested as reasonable validity (KMO = 0.5) for survey with the size between 100 and 200 responses[37]. Meanwhile, the significance value of Bartlett’s Test is less than 0.001, proving the setting of independent variables are qualified for next regression analysis. Similarly, the validity test on dependent variables (purchase intention) and mediating variable (customer engagement) shows both designed indicators can be kept for regression analysis. Since the KMO value reached 0.842, while sig. of Bartlett’s Test is < 0.001 (See Table 6 and Table 7).

Table 4. Reliability Analysis of measurements scale

Variables	Construct	Cronbach Alpha Value	Secondary Construct	Cronbach Alpha Value
Independent Variables	Utilitarian Gratification	0.851	Product Information Searching	0.794
			Perceived Cost-effective Deal	0.859
			Enjoyment	0.792
	Hedonic Gratification	0.850	Immersive Experience	0.854
			Social Interaction	0.822
	Social Gratification	0.847	Consumer-streamer Similarity	0.843
Dependent Variables	Consumer Engagement	0.847		
	Purchase Intention	0.721		

Table 5. KMO Test and Bartlett’s Test of Independent variables

KMO		0.835
Bartlett’s Test of Sphericity	Approx. Chi-Square	361.119
	df	15
	Sig.	<0.001

Table 6. KOM Test and Bartlett’s Test of Mediating variables

KMO		0.702
Bartlett’s Test of Sphericity	Approx. Chi-Square	183.583
	df	3
	Sig.	<0.001

Table 7. KOM Test and Bartlett’s Test of Dependent variables

KMO		0.645
Bartlett’s Test of Sphericity	Approx. Chi-Square	92.157
	df	3
	Sig.	<0.001

4.3. Regression Linear Analysis and Hypotheses Test

Results in Table 8 indicates there exists certain relationship between independent variables and consumer engagement, since the p value (sig. < 0.001) is further less than 0.05. Following F value is 39.66 and is large enough to support the fact that this regression model can significantly explain collected data. Thus, data of people with live-streaming shopping experience of instant noodle can be used to test the relationship between items related to independent indicators and consumer engagement. Additionally, adjusted R square equals 0.627, indicating that 62.7% of variation in consumer engagement can be explained by the research model.

Table 8. Multiple Regression Analysis Result of Research Model

Results of Research Model Analysis	
Adjusted R Square	0.627
Research Model sig.	<0.001
F ratio	39.660

Table 9. Multiple Regression Analysis Result of Variables

Results of Variables					
Variables	Standardized Coefficients Beta	P Value	Tolerance	VIF	Hypotheses Test
Product Information Searching	-0.052	0.464	0.534	1.871	H1: “product information searching” can influence consumer engagement (Rejected)
Perceived Cost-effective Deal	0.127	0.054	0.631	1.586	H2: “perceived cost-effective deal” can influence consumers engagement (Rejected)
Enjoyment	0.097	0.199	0.476	2.100	H3: “enjoyment” can influence consumers engagement (Rejected)
Immersive Experience	0.199	0.011	0.460	2.176	H4: “immersive experience” can influence consumers engagement (Accepted)
Social Interaction	0.443	<0.001	0.514	1.945	H5: “social interaction” can influence consumers’ engagement. (Accepted)
Consumer-streamer Similarity	0.170	0.017	0.550	1.818	H6: “consumer-streamer similarity” can influence consumer engagement. (Accepted)

As shown in Table 9, H1, H2 and H3 are rejected from the research model, since p values of each corresponding variable fail to show as < 0.05 (Product Information Searching: p = 0,464; Perceived Cost-effective Deal: p = 0.054; Enjoyment: p = 0.199). While, immersive experience, social interaction and consumer-streamer similarity have great power on consumer’s involvement of live-streaming promotion of instant noodle (Immersive Experience: p = 0.011;

Social Interaction: $p < 0.001$; Consumer-streamer Similarity: $p = 0.017$). Thus, H4, H5, H6 are considered as accepted.

Moreover, Social Interaction produces strongest impact on consumer engagement with Beta of 0.443, while Consumer-streamer Similarity has the lightest power with Beta of 0.170.

Finally, Table 10 indicates that consumer engagement is related with purchase intention, since P-value is significantly less than 0.001, while F is 111.577. Adjusted R Square clarifies that 44.5% of purchase can be interpreted by consumer engagement. Therefore, H7 is considered as valid.

Table 10. Simple Regression Analysis Result of Variables

Results of Simple Linear Regression			
Adjusted R Square	0.445		
sig.	<0.001		
F ratio	111.577		
Variables	Standardized Coefficients Beta	P Value	Hypotheses Test
Consumer Engagement	0.670	<0.001	H7: “consumer engagement” can influence purchase intention (Accepted)

5. Discussion

5.1. Utilitarian Gratification and Consumer Engagement

Result of regression linear analysis shows neither product information searching nor perceived cost-effective deal have relationship with consumer engagement, which is contrary to the findings of previous researches. Previous study proves that general consumers of live-streaming commerce are persuaded to response more to the streamer under the influence of sufficient and clear product-related information[20]. While this specific study on instant noodle product shows different result that comprehensive introduction of product is unable to encourage consumers to participate more into the live show on Douyin.

Similarly, perceived cost-effective deal fails to impact consumers' engagement, since regression results is insignificant on revealing the connection between these two variables. Extant study stated that consumers participate into live-streaming commerce with the aim of bearing less economic cost[10]. While this research on consumers of instant noodle product gives contradictory response that cost-effective deal lacks attraction for people to engage into live-streaming marketing activity.

5.2. Hedonic Gratification and Consumer Engagement

Suggested by regression analysis between enjoyment and consumer engagement, consumers think it is incorrect that involving in live-streaming show of instant noodle can bring them relaxation and pleasure. While existing findings of live-streaming commerce proves a positive relationship between enjoyment and consumer engagement[23]. However, this specific research on live-streaming of instant noodle display inconsistent findings with general study of live-streaming commerce.

While immersive experience is tested to be related with consumer engagement, which is similar to recent study[24]. This research believes that immersive participation into live-streaming about instant noodle promotion is effective on consumers' willingness of engaging.

5.3. Social Gratification and Consumer Engagement

Regression analysis supports the fact that social interaction like bulletin and communication with other consumers have positive impact on consumer engagement. Moreover, consumers of instant noodle in this research consider similar preference and background as motivators of involving into live-streaming promotion on Douyin. This finding is consistent with studies on previous study of live-streaming and consumer engagement[14].

5.4. Consumer Engagement and Purchase Intention

This paper found positive connection between consumer engagement and purchase intention, while consumer engagement provides mediating effect between consumers' motivations and final purchase intention. Consistent with previous researches[32], positive engagement into live-streaming on social media contributes to active consumption decision among consumers.

6. Conclusion

The aim of this research is to identify the effect of social media live-streaming marketing on consumer engagement and purchase intention, which specifically focuses on instant noodle marketing through live-streaming on Douyin. Based on Uses and Gratification Theory, this research developed a model with two levels of independent variables. Results of regression analysis proves that immersive experience (Hedonic Gratification), social interaction and consumer-streamer similarity (both Social Gratification) are positively effective on consumers' engagement. While enjoyment (Hedonic Gratification), product information searching and perceived cost-effective deal (both Utilitarian gratification) have no effect on consumer engagement. Finally, this research defined the significantly positive relationship between consumer engagement and purchase intention.

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