

A Study on the Influence of E-Commerce Live Streaming on Consumer Repurchase Intentions

Yifei Chen¹, Feiyan Lu² & Siyu Zheng¹

¹ Jinling high school Hexi campus, Nanjing, Jiangsu, China

² School of Business, Nanjing University, Nanjing, China

Correspondence: Siyu Zheng, Jinling high school Hexi campus, Nanjing, Jiangsu, China. E-mail: 2080984627@qq.com

Received: August 23, 2020

Accepted: October 25, 2020

Online Published: November 27, 2020

doi:10.5539/ijms.v12n4p48

URL: <https://doi.org/10.5539/ijms.v12n4p48>

Abstract

The year 2019 witnessed an exponential growth of the e-commerce live streaming industry. Notably, competitions among live streamers have become increasingly fierce as more newcomers are marching in. To survive and thrive in the cut-throat market competitions, it is key for them to increase consumers' repeat purchase rate and win customer loyalty. This study uses empirical research methods to probe into the influence of e-commerce live streaming on consumer repurchase intentions. According to this study, perceived entertainment and perceived similarity have a positive impact on consumer repurchase intentions, and this relationship is partially mediated by consumer satisfaction. In addition, perceived product quality, perceived interactivity, and perceived professionalism have a positive and indirect effect on consumer repurchase intentions, and this relationship is fully mediated by consumer satisfaction.

Keywords: e-commerce live streaming, repeat purchase, consumer satisfaction

1. Introduction

Since Taobao Live started trial operation in 2016, e-commerce live streaming has been booming as webcast technologies are growing by leaps and bounds and venture capitalists are increasing their bet on the industry. With the rise of live streamers Li Jiaqi (nicknamed the "Lipstick King") and Viya (nicknamed the "Live Streaming Queen") in 2019, the whole industry experienced explosive development. That is why the year 2019 is considered as the first year of the e-commerce live streaming era. Statistics show that the market size of live streaming has skyrocketed to RMB 433.8 billion from RMB 19 billion three years ago, becoming a 100 billion-level emerging industry.

E-commerce live streaming is faring well, but the competition among live streamers is getting harsh as more and more people are cramming into the market. Top influencer Li Jiaqi once said in an interview that he cannot afford to take a rest even if he is sick, because "tens of thousands live broadcasts are made on Taobao each day. If I take a day off, my followers may turn to other live streamers." This illustrates that customer retention is the key for e-commerce live streamers to survive the fierce competition and secure a sustainable development. To retain customers is to increase customer stickiness and build customer loyalty. Customer loyalty is represented by repeat purchases, according to a study by Shankar et al. (2003).

Therefore, it is necessary and important to explore the influence of e-commerce live streaming on consumer repurchase intentions and the mechanism behind. On the one hand, the study can offer practical suggestions to help e-commerce live streamers enhance customer stickiness and customer loyalty. On the other hand, it can facilitate the sustainable development of e-commerce live streaming by improving the repeat purchase rate across the industry.

So what are the factors that can affect the repurchase intentions? By reviewing, sorting out, and summarizing the previous literatures, the authors found that most research on consumers' buying decisions made in e-commerce live streams focuses on either the live broadcasting scenario or streamers/key opinion leaders (KOLs). In terms of studies based on live broadcasting scenarios, Dan Mingxiao and Wu Feng (2018) believed that factors like the entertainment of live broadcasts and the promotional pricing under the circumstances pose a significant influence on consumer purchase intentions. Wang Xiujun, Wang Wen and Sun Nannan (2019) defined e-commerce live

streaming features as entertainment, discount, and interactivity, and discussed how these factors affect consumer intentions and behaviors by emotional and cognitive changes (the mediator) based on the S-O-R theory. With regard to studies centering on streamers/KOLs, Xiang et al. (2016) believed that KOLs' features such as professionalism and similarity influence consumer repurchase intentions by consumer satisfaction and other variables. Bansal and Voyer (2000) analyze the impact of the characteristics of professional, interactive on consumers' willingness to purchase; Thus, it can be concluded that the main features of the e-commerce live streaming scenario are entertainment and discount, and those of streamers include interactivity, professionalism, and similarity. In addition, Fang et al. (2016) pointed out that product quality is a key factor influencing consumer repurchase intentions. Therefore, product quality is also included in this study as the product factor.

Upon analysis, the study has determined the factors that affect consumer repurchase intentions in e-commerce live streams. But how do these factors influence consumer repurchase intentions? To this end, this study has retrospectively analyzed the literature about repeat purchase and continuous usage. Perceived value indirectly affects consumers' repeat purchase or continuous usage via the mediator of satisfaction, as revealed by studies of Patterson and Spreng (1997), and Chiu et al. (2005). Besides, Bhattacharjee (2001) pointed out in her research on information system that expectation confirmation, perceived entertainment, and perceived usefulness affect users' continuous usage intentions via the mediator of satisfaction. Based on these studies, it can be perceived that satisfaction is the key factor influencing consumer repurchase intentions and it often serves as a mediator to explain the mechanism behind. Therefore, consumer satisfaction has been used as the mediator in this study.

To sum up, this study probes into how e-commerce live streaming affects consumer repurchase intentions and what role consumer satisfaction plays in this process based on three factors: products (perceived product quality), e-commerce live streaming scenarios (perceived entertainment and perceived discount), and streamers (perceived interactivity, perceived professionalism, and perceived similarity).

This study is profound in two aspects: For starters, it is the first-ever theoretical study focusing on consumers' repurchase behavior in the e-commerce live streaming scenario, and it serves as a theoretical supplement to the existing research on repeat purchase and customer loyalty. Secondly, this study has expanded the theoretical perspectives of research on consumer behavior in the e-commerce live streaming scenario as it takes products factor, e-commerce live streaming scenarios, and streamers into account for the first time.

2. Theoretical Basis and Research Hypothesis

2.1 Theoretical Basis

The ABC model of attitudes is a theoretical model that describes how an attitude form. Every attitude has three components represented in the model: affect, behavior, and cognition, which are interlinked. According to Rosenberg and Hovland (1960), in the ABC model of attitudes, the affective component refers to the emotional reaction one has toward an attitude object, the behavioral component refers to the way one behaves when exposed to an attitude object, and the cognitive component refers to the beliefs and knowledge about an attitude object. In practice, researchers use hierarchical effect to interpret the interrelationship among the three components. The standard-learning hierarchy based on cognitive information processing is reflected as C-A-B, which means a consumer will establish beliefs (Cognition) and then feelings (Affect) about an attitude object, which are followed by the consumer's behavior. The low-involvement hierarchy based on the behavioral learning process consists of the order of C-B-A, which means a consumer bases their purchase decision on what they know as opposed to what they feel, that is, they establish feelings about a product after the purchase. The experiential hierarchy based on hedonism is defined by a processing order of A-B-C. In this scenario, the consumer is influenced to purchase based entirely on their feelings about a product, which is followed by cognition.

In fact, the ABC model of attitudes is often used to study the buying behavior of consumers. Hsu et al. (2015) employed the model to discuss how credibility and consumer satisfaction affect consumer repurchase intentions.

Using the standard-learning hierarchy of the model (C-A-B) as the theoretical guidance, this study has established a research model where "perceived factors of products, e-commerce live streaming scenarios, and streamers influence consumer repurchase intentions by affecting consumer satisfaction". This study has established an ABC model by defining the perceived factors as cognition, consumer satisfaction as affect, and consumer repurchase intention as behavior.

2.2 Research Hypothesis

2.2.1 Repurchase Intentions and Factors of Products, E-Commerce Live Streaming Scenarios, Streamers

Perceived product quality is consumers' overall assessment of the product quality when they use the product. For

both online and offline merchants, product quality exerts an enormous influence on consumers' purchase intentions, and repurchase intentions in particular. If consumers have faith in the quality of one merchant's products, they may well buy again from the merchant. Many scholars have proved the impact of product quality on purchase or repurchase intentions. Ling et al. (2010) points out that product quality and shopping experience will positively affect consumers' willingness to buy. Kim (2008) noted that product quality has a positive effect on consumer repurchase intentions by dint of trust and satisfaction. Based on the above analysis, the authors propose the following hypothesis:

H1: Perceived product quality has a positive impact on repurchase intentions.

Perceived entertainment is the pleasure consumers gain from e-commerce live streams. In most cases, pleasant shopping experience will leave consumers a good impression, which will motivate them to buy again. Chang and Cheung (2001) validated this claim in their study on website users. They discovered that users will often visit the websites where they find pleasure. Lin et al. (2004) also pointed out that perceived entertainment is a reflection of users' intrinsic motivation and it positively influences their behavior. The research by Schmidt and Spreng (1996) on video websites shows that perceived entertainment has a positive effect on users' continuous usage intentions. Bouwman et al. (2006) held that entertainment plays a positive role in influencing consumers' buying decisions, which include repeat purchases. Based on the above analysis, the authors propose the following hypothesis:

H2: Perceived entertainment has a positive impact on repurchase intentions.

Most live stream shoppers believe they can enjoy special offers that are unavailable from other shopping channels, such as bigger discounts or more gifts. Thus, it can be seen that perceived discount also greatly affects consumers' buying decisions in e-commerce live streams, and repeat purchase is a kind of buying decision. According to the empirical research by Kim and Kramer (2006), perceived discount positively affects continuous usage intentions. Based on the above analysis, the authors propose the following hypothesis:

H3: Perceived discount has a positive impact on repurchase intentions.

Because of the high interactivity of e-commerce live streams, consumers can communicate and interact with live streamers in real time, closing their emotional gaps. Meanwhile, streamers can field consumers' questions about products, allaying consumers' concerns over uncertainties and enhancing their shopping experience. As a result, consumers become more glued to the streamers, which often leads to repeat purchases. This has been validated by many scholars. Research by Xue and Phelps (2004) suggests that people are more likely to be influenced by consumer attitudes which presented by consumer satisfaction in their interactions with opinion leaders than by information published on the platform. Based on the above analysis, the authors propose the following hypothesis:

H4: Perceived interactivity has a positive impact on repurchase intentions.

Based on the professional knowledge provided by streamers in e-commerce live broadcasts, consumers can have a full understanding of the relevant products, thus make their buying decisions with fewer uncertainties. That is to say, in e-commerce live streams, streamers' job is to use their knowledge about products to persuade consumers to make purchases. Research findings by Chan and Misra (1990) show that KOLs' professional knowledge will encourage consumers to make buying decisions. Bansal and Voyer (2000) pointed out that the professionalism of KOLs can add luster to their sales pitches, predisposing consumers to make quicker buying decisions. In essence, live streamers are KOLs in webcasts. Repeat purchase is also a buying decision. Based on the above analysis, the authors propose the following hypothesis:

H5: Perceived professionalism has a positive impact on repurchase intentions.

Perceived similarity is the similarity that consumers perceive with streamers in personality, style, taste, product preference, values, etc. As a saying goes, birds of a feather flock together. Ruef et al. (2003) concluded that individuals are innately more willing to spend time with like-minded people and accept them more easily. In e-commerce live streams, consumers tend to approve of and recognize streamers with some similar personal traits, so they are more inclined to be persuaded by these streamers to make purchase decisions. Gilly et al. (1998) confirmed that similarity has a positive effect on persuasiveness. According to the study by Xiang et al. (2016), similarity plays a positive role in forming quasi-social interaction, which has an indirect effect on repeat purchase intention. Based on the above analysis, the authors propose the following hypothesis:

H6: Perceived similarity has a positive impact on repurchase intentions.

2.2.2 Consumer Satisfaction and Factors of Products, E-Commerce Live Streaming Scenarios, and Streamers

Perceived product quality is consumers' overall assessment of the product quality when they use the product. Generally speaking, the higher a consumer's perceived product quality is, the better shopping experience and satisfaction they will have. Murgulets et al. (2001) found that customer satisfaction depends on the perceived quality of the product or service compared to the expected level, and if the perceived quality of the product or service is higher than the expected level, the degree of customer satisfaction and the customer's intention to repeat the purchase will be enhanced. Based on the above analysis, the authors propose the following hypothesis:

H7: Perceived product quality has a positive impact on consumer satisfaction.

Perceived entertainment is the pleasure consumers gain from e-commerce live streams. Generally, a consumer's pleasure in shopping is proportional to their satisfaction. Schlosser et al. (1999) examined the positive influence of perceived entertainment on satisfaction in her research on Internet advertising. Lin et al. (2004) also reached the same conclusion. Based on the above analysis, the authors propose the following hypothesis:

H8: Perceived entertainment has a positive impact on consumer satisfaction.

More often than not, in e-commerce live streams, consumers can enjoy more benefits than any other shopping channel can provide, such as higher discounts or more gifts. Consumers would be very satisfied with their shopping experience if they have perceived extra benefits a streamer provides. In a study on online food ordering by university students, Chen Zhengxiong and Lu Fang (2018) pointed out that perceived discount has a positive impact on consumer satisfaction. Peng Xiao (2016) drew a conclusion based on a study on online group buying that perceived discount positively affects consumer satisfaction. Based on the above analysis, the authors propose the following hypothesis:

H9: Perceived discount has a positive impact on consumer satisfaction.

In e-commerce live streams, interactivity plays an important role in affecting consumers' buying decisions. The high interactivity of e-commerce live streams makes consumers feel like they are talking to streamers face-to-face. They can enjoy better services as streamers can field their questions about products in real time, thus improving their shopping satisfaction. The research on the relationship between interactivity and satisfaction is a well-trodden path. Yoo et al. (2012) demonstrated that interactivity has a positive impact on consumer satisfaction. Skadberg and Kimmel (2004) pointed out that under the interaction of computer-mediated communication, the user's purchasing experience can be enhanced, thus resulting in a higher degree of satisfaction with online shopping. Based on the above analysis, the authors propose the following hypothesis:

H10: Perceived interactivity has a positive impact on consumer satisfaction.

The professionalism of e-commerce live streamers is shown by how well they know about the products they are promoting, such as product properties and usage. It directly determines how consumers perceive the product information they provide, thereby affecting consumer satisfaction. Some scholars used empirical analysis to prove the point. Gilly et al. (1998) validated that the professionalism of word-of-mouth sender can reduce consumers' perceived risk, reduce consumers' concerns about products, and have a positive impact on consumers' attitudes represented by consumer satisfaction. Based on the above analysis, the authors propose the following hypothesis:

H11: Perceived professionalism has a positive impact on consumer satisfaction.

It is streamers who persuade consumers to make buying decisions in e-commerce live streams. If consumers believe that they have something in common with a streamer, they would pay closer attention to and nod greater recognition of the streamer, thus increasing the shopping satisfaction. The study by Xiang et al. (2016) attested to the positive effect of similarity on consumer satisfaction. Based on the above analysis, the authors propose the following hypothesis:

H12: Perceived similarity has a positive impact on consumer satisfaction.

2.2.3 Consumer Satisfaction and Repurchase Intentions

In a study on consumers' actual purchase behavior, Bolton and Drew (1991) found that satisfaction has a significant impact on the consumer behavior, which is represented by repurchase intention. In fact, many scholars, such as Thong et al. (2006), Kim (2010), have substantiated the considerable impact of consumer satisfaction on repeat purchases or continuous usage. Zhou and Tao (2011) noted that consumer satisfaction, as a prerequisite for customer loyalty, has an enormous impact on consumers' behavioral loyalty. When Cardozo (1965) put forward the concept of customer satisfaction, it shows that consumer satisfaction is an important factor affecting consumer repurchase intentions. Based on the above analysis, the authors propose the following

hypothesis:

H13: Consumer satisfaction has a positive impact on repurchase intentions.

2.2.4 Mediation Effect of Consumer Satisfaction

In the light of the standard-learning hierarchy of the ABC model of attitudes, Cognition influences Behavior through the mediation of Affect. In this study, cognition refers to the factors of products (perceived product quality), e-commerce live streaming scenarios (perceived entertainment and perceived discount), and streamers (perceived interactivity, perceived professionalism, and perceived similarity); affect is defined as consumer satisfaction; and behavior points to repurchase intentions. Therefore, based on the standard-learning hierarchy, perceived factors (C) influence consumer satisfaction (A), which further affects repurchase intentions (B). Based on the above analysis, the authors propose the following hypotheses:

H14: Consumer satisfaction mediates the relationship between perceived product quality and repurchase intentions.

H15: Consumer satisfaction mediates the relationship between perceived entertainment and repurchase intentions.

H16: Consumer satisfaction mediates the relationship between perceived discount and repurchase intentions.

H17: Consumer satisfaction mediates the relationship between perceived interactivity and repurchase intentions.

H18: Consumer satisfaction mediates the relationship between perceived professionalism and repurchase intentions.

H19: Consumer satisfaction mediates the relationship between perceived similarity and repurchase intentions.

2.3 Research Model

Based on the ABC model of attitudes (C-A-B) and the hypotheses proposed, the theoretical model for this study is shown as Figure 1.

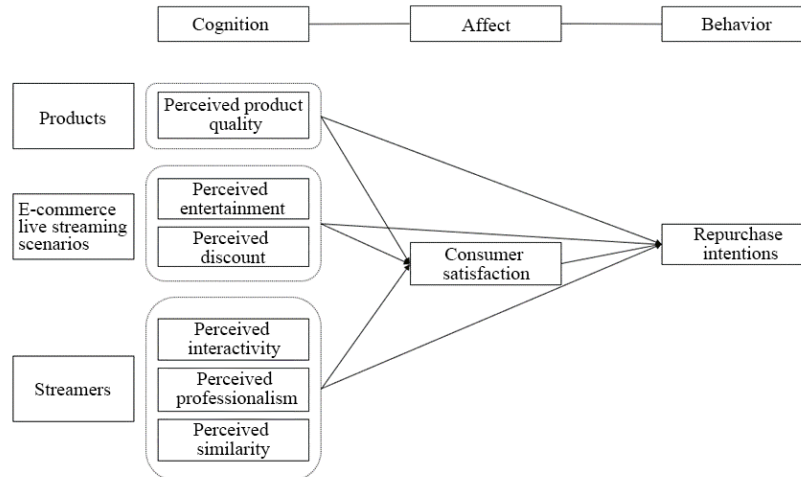


Figure 1. Theoretical model

3. Empirical Analysis

3.1 Definitions and Measurement of Variables

This study involves eight variables: perceived product quality, perceived entertainment, perceived discount, perceived interactivity, perceived professionalism, perceived similarity, consumer satisfaction, and repurchase intentions. The definitions and measurements of these variables are displayed in Tables 1 and 2 respectively.

Table 1. Variable definitions in different studies

Name	Code	Definition	Reference
Perceived product quality	PPQ	Consumers' overall assessment of the product quality	Brucks et al. (2000) and Kim (2008)
Perceived entertainment	PE	Consumers' perception of pleasure gaining from e-commerce live streams	Moon and Kim (2001)
Perceived discount	PD	Consumers' perception of benefits from e-commerce live streams	Xu Lian (2011)
Perceived interactivity	PI	Consumers' perception of real-time communication with streamers	Ghose and Dou (1998)
Perceived professionalism	PP	Consumers' perception of how well streamers know about the products they are selling, how much related professional knowledge they have, and how useful their information is for purchase decisions	Gilly et al. (1998) and Xiang et al. (2016)
Perceived similarity	PS	Consumers' perception of the similarity with streamers in personal traits such as personality, style, taste, product preference, and values	Xiang et al. (2016) and Rogers and Bhowmik (1970)
Consumer satisfaction	CS	Consumers' psychological assessment of their post-shopping experience compared with pre-shopping expectations	Oliver (1980)
Repurchase intentions	RI	Consumers' willingness to patronize the same live streamer in the future	Guo Bin (2019)

Table 2. Variable measurement items in different studies

Name and code	Measurement item code	Measurement item content	Reference
Perceived product quality (PPQ)	Q1	The product I bought from the live streamer has good quality.	Brucks et al. (2000), Fang et al. (2016), Kim et al. (2012).
	Q2	I am satisfied with the quality of products I bought from the live streamer.	
	Q3	The quality of products purchased on the live streamer's channel meets my expectations.	
Perceived entertainment (PE)	Q4	I feel happy to shop from the live streamer.	Davis et al. (1989), Tsang et al. (2004), Moon and Kim (2001).
	Q5	I felt time passed quickly while I was shopping from the live streamer.	
	Q6	I think it is interesting to shop from the live streamer.	
Perceived discount (PD)	Q7	The live streamer offers great benefits such as big discounts and lots of gifts.	Berkowitz and Walton (1980), Liang and Huang (1998).
	Q8	I can enjoy higher discounts or more gifts from the live streamer than from other shopping channels.	
	Q9	I think shopping from the live streamer is more cost-effective than from other shopping channels.	
Perceived interactivity (PI)	Q10	I feel like having face-to-face communication with the streamer while shopping from him/her.	Chen and Lin (2018).
	Q11	I can interact with the live streamer via bullet comments while shopping from him/her.	
	Q12	The live streamer often interacts with the audience during live streams.	
Perceived professionalism (PP)	Q13	Equipped with extensive experience in using the products he/she is promoting, the live streamer can give me correct instructions on how to use the products.	Bickart and Schindler (2001), Bansal and Voyer (2000).
	Q14	The live streamer can help me buy the right product with his/her great knowledge about the product features and target users.	
	Q15	The live streamer knows well about product properties and usage. Thus, it is all right to use the products as he/she told me.	
Perceived similarity (PS)	Q16	I think the live streamer and I share similar product preferences.	Gilly et al. (1998).
	Q17	I think the live streamer and I have the same taste and style in products.	
	Q18	I think the live streamer and I see eye to eye on products.	
Consumer satisfaction (CS)	M1	Overall, I am satisfied with my experience in shopping from the live streamer.	Bhattacharjee (2001), Janda et al. (2002), Lee and Chung (2009).
	M2	Overall, I think my experience in shopping from the live streamer is good.	
	M3	I believe that shopping from the live streamer is a wise decision.	
Repurchase intentions (RI)	A1	I will buy from the live streamer again.	Parasuraman et al. (2005), Chiu et al. (2013), Janda et al. (2002)
	A2	I am willing to buy more from the live streamer.	
	A3	I think I may become a regular/loyal customer of the live streamer.	

3.2 Data Collection

After the preliminary design, the questionnaire for this study was not put into immediately use for data collection. Instead, it was tweaked through interviews with consumers who had shopped in e-commerce live streams before, a move that aims to ensure all measurement items are reasonable and easily understand. The questionnaire consists of two parts. The first part mainly aims to collect basic information of respondents, namely, gender, age, educational level, occupation, average monthly income, and average monthly online shopping frequency. In addition, this part contains two basic questions, namely, “Have you ever watched e-commerce live streams?” and “Have you ever bought anything in e-commerce live streams?” The second part is designed to survey consumer repurchase intentions in e-commerce live streams. With 24 measurement items in total, this part uses a 5-point Likert scale to measure the eight variables of this study.

After the questionnaire was finalized, the study progressed to the stage of data collection. For the convenience of distributing and collecting questionnaires under the cloud of the COVID-19 pandemic, the questionnaire was published on WJX.CN, an online questionnaire survey platform, to gather the data for empirical analysis. After that, the authors invited respondents via online channels such as QQ and WeChat to take the survey. In the end, a total of 534 questionnaires were collected.

Invalid questionnaires were deleted before the data analysis began. Some questionnaires were deemed invalid on the grounds that: 1) Respondents had the same answer to all the measurement items in the second part of the questionnaire where a 5-point Likert scale is employed; 2) respondents’ answers were inconsistent; 3) respondents gave a “no” answer to either of the two basic questions in the first part of the questionnaire; 4) respondents chose “< 1” for the sixth measurement item, i.e., average monthly online shopping frequency. Based on the above standards, 82 invalid questionnaires were deleted, leaving 452 valid ones in total. In other words, 84.64% of collected questionnaires are valid.

3.3 Descriptive Statistics

This study used descriptive statistics to analyze questionnaires in the light of respondents’ basic information, so as to sort out the valid samples. The statistic results are shown in Table 3.

Table 3. Basic information of valid questionnaire respondents

Item	Cohort	Count	Ratio
Gender	Male	179	39.60%
	Female	273	60.40%
Age	< 18	16	3.54%
	18–25	182	40.27%
	26–30	185	40.93%
	31–40	62	13.72%
	> 40	7	1.55%
Educational level	High school degree or below	91	20.13%
	Associate degree	135	29.87%
	Bachelor’s degree	140	30.97%
	Master’s degree or higher	86	19.03%
Occupation	Student	120	26.55%
	Public officer (civil servant or public institution staff member)	33	7.30%
	Employee	247	54.65%
	Self-employed people	28	6.19%
	Freelancer	2	0.44%
Average monthly income	Other	22	4.87%
	< RMB 1,000	32	7.08%
	RMB 1,000–3,000	64	14.16%
	RMB 3,001–5,000	97	21.46%
	RMB 5,001–8,000	203	44.91%
	RMB 8,001–12,000	49	10.84%
Average monthly online shopping frequency	> RMB 12,000	7	1.55%
	< 1	0	0.00%
	1–3	86	19.03%
	4–7	186	41.15%
	8–10	131	28.98%
	> 10	49	10.84%

As shown in Table 3, the respondents were predominantly women (60.40%), with a male-female ratio of about 4:6. Most of them were aged 18–25 and 26–30, accounting for 40.27% and 40.93% respectively. In terms of educational level, respondents who held an associate degree or a bachelor's degree account for 29.87% and 30.97% respectively. In addition, 54.65% respondents were employees and 44.91% earned RMB 5,001–8,000 a month. With regard to online shopping frequencies, 41.15% of respondents shopped 4–7 times a month and 28.98% did 8–10 times a month. Overall, the respondents were widely distributed.

3.4 Reliability and Validity Assessment

Taking full account of the reliability assessment measures in previous studies, the authors adopted Cronbach's alpha to assess the reliability of the sample data. The results are listed in Table 4. The Cronbach's alpha values of the overall questionnaire and various research variables are all higher than the acceptable minimum coefficient of 0.7. This means that both the questionnaire and the sample data are reliable in general.

Table 4. Reliability assessment results

Variable	Quantity of measurement items	Source of measurement items	Cronbach's alpha value
PPQ	3	Brucks et al. (2000), Fang et al. (2016), Kim et al. (2012).	0.870
PE	3	Davis et al. (1989), Tsang et al. (2004), Moon and Kim (2001).	0.837
PD	3	Berkowitz and Walton (1980), Liang and Huang (1998).	0.846
PI	3	Chen and Lin (2018).	0.781
PP	3	Bickart and Schindler (2001), Bansal and Voyer (2000).	0.845
PS	3	Gilly et al. (1998).	0.861
CS	3	Bhattacharjee (2001), Janda et al. (2002), Lee and Chung (2009).	0.891
RI	3	Parasuraman et al. (2005), Chiu et al. (2013), Janda et al. (2002)	0.865
Overall	24		0.904

Generally, a good questionnaire is subject to the content and construct validity test. In terms of content validity, all measurement items in this study come from scales that have been used and tested by scholars in previous studies and have been revised based on interviews before the questionnaire is finalized. Therefore, this questionnaire can be deemed to have established a good content validity. The construct validity consists of convergent validity and divergent validity. This study assesses the construct validity of the questionnaire by confirmatory factor analysis (CFA), and the results are shown in Tables 5, 6, and 7. Table 5 shows that the model fit indices are all within the range of recommended value, indicating a good fitting model. Table 6 illustrates a good convergent validity as the normalized factor loadings and composite reliability (CR) values all exceed 0.6 and the average variances extracted (AVE) are all higher than 0.5. Table 7 indicates a good divergent validity: Values on the diagonal line are the square root of AVE of various variables, which are all greater than the correlation coefficients between the variable and all other variables. Based on the above analysis, it can be concluded that the questionnaire is valid.

Table 5. CFA model fit indices

Fit index	Recommended value	Actual value	Model fit
Chi square/degree of freedom (DF) ratio	1–3	1.115	Ideal
RMSEA	< 0.08	0.016	Ideal
GFI	> 0.9	0.956	Ideal
CFI	> 0.9	0.996	Ideal
TLI	> 0.9	0.995	Ideal
IFI	> 0.9	0.996	Ideal

Table 6. Convergent validity results

Factor	Measurement item	Normalized factor loading	CR	AVE
PPQ	Q1	0.816	0.871	0.693
	Q2	0.798		
	Q3	0.881		
PE	Q4	0.779	0.839	0.634
	Q5	0.776		
	Q6	0.833		
PD	Q7	0.859	0.850	0.654
	Q8	0.771		
	Q9	0.793		
PI	Q10	0.711	0.782	0.545
	Q11	0.776		
	Q12	0.727		
PP	Q13	0.767	0.845	0.646
	Q14	0.790		
	Q15	0.852		
PS	Q16	0.844	0.861	0.675
	Q17	0.772		
	Q18	0.846		
CS	M1	0.883	0.897	0.743
	M2	0.835		
	M3	0.867		
RI	A1	0.821	0.866	0.683
	A2	0.794		
	A3	0.862		

Table 7. Divergent validity results

	RI	CS	PS	PP	PI	PD	PE	PPQ
RI	0.826							
CS	0.684	0.862						
PS	0.431	0.405	0.821					
PP	0.396	0.595	0.371	0.804				
PI	0.381	0.561	0.447	0.564	0.739			
PD	0.325	0.438	0.260	0.302	0.193	0.809		
PE	0.419	0.416	0.226	0.350	0.405	0.279	0.796	
PPQ	0.281	0.468	0.097	0.136	0.304	0.542	0.246	0.832

3.5 Hypothesis Examination

3.5.1 Path Examination

After the validation of the reliability and validity of the questionnaire, the authors used the structural equation modeling (SEM) with analysis of moment structures (AMOS) to test the research model, in a bid to provide a basis for determining whether the research hypotheses proposed are tenable. Test results in Tables 8 and 9 show the full model fit indices correspond to the recommended value, indicating that the model fits well with the data. In addition, the P value of eight out of the 13 paths is less than 0.05, indicating that these eight paths are significant. Moreover, the path coefficients of these eight paths are all positive. Therefore, H2, H6, H7, H8, H10, H11, H12, and H13 are tenable, whereas H1, H3, H4, H5, H9 are untenable.

Table 8. Full model fit indices

Fit index	Recommended value	Actual value	Model fit
Chi square/degree of freedom (DF) ratio	1-3	1.115	Ideal
RMSEA	<0.08	0.016	Ideal
GFI	>0.9	0.956	Ideal
CFI	>0.9	0.996	Ideal
TLI	>0.9	0.995	Ideal
IFI	>0.9	0.996	Ideal

Table 9. Parameter estimates of full model variable paths

Path	Non-standardized parameter value	Standard error	T value	P value	Standardized parameter value (path coefficient)
CS<---PPQ	0.298	0.057	5.265	< 0.001	0.291
CS<---PE	0.112	0.049	2.253	0.024	0.105
CS<---PD	0.079	0.056	1.401	0.161	0.078
CS<---PI	0.196	0.084	2.330	0.020	0.153
CS<---PP	0.388	0.063	6.178	< 0.001	0.360
CS<---PS	0.125	0.046	2.713	0.007	0.131
RI<---CS	0.633	0.074	8.542	< 0.001	0.636
RI<---PPQ	-0.050	0.064	-0.786	0.432	-0.049
RI<---PE	0.187	0.054	3.459	< 0.001	0.177
RI<---PD	0.009	0.060	0.144	0.886	0.009
RI<---PI	-0.109	0.091	-1.198	0.231	-0.085
RI<---PP	-0.071	0.071	-0.990	0.322	-0.066
RI<---PS	0.190	0.051	3.747	< 0.001	0.199

3.5.2 Mediation Effect Assessment

This study adopts bootstrapping to test the mediation effect of consumer satisfaction. The sampling was done 5,000 times and 95% confidence interval was chosen. The test results are shown in Table 10. Based on whether the 95% bootstrap confidence interval for each variable's indirect effect on repurchase intentions includes 0, it can be concluded that consumer satisfaction has a significant mediation effect on the relationship between PPQ/PE/PI/PP/PS and repurchase intentions. Thus, H14, H15, H17, H18, and H19 are tenable, whereas H16 is untenable due to the insignificant mediation effect it has on the relationship between PD and repurchase intentions. Furthermore, based on whether the 95% bootstrap confidence interval for each variable's direct effect on repurchase intentions contains 0, it can be concluded that consumer satisfaction fully mediates the relationship between PPQ/PI/PP and repurchase intentions, and that it partially mediates the relationship between PE/PS and repurchase intentions.

Table 10. Results of consumer satisfaction mediation effect assessment

Independent variable	Effect	Standardized effect size	Bootstrap standard error	95% bootstrap confidence interval	
				Lower confidence limit	Upper confidence limit
PPQ	Gross effect	0.136	0.070	-0.007	0.273
	Direct effect	-0.049	0.069	-0.196	0.082
	Indirect effect	0.185	0.041	0.118	0.281
PE	Gross effect	0.244	0.056	0.135	0.378
	Direct effect	0.177	0.051	0.082	0.298
	Indirect effect	0.067	0.032	0.006	0.143
PD	Gross effect	0.058	0.073	-0.085	0.211
	Direct effect	0.009	0.067	-0.121	0.148
	Indirect effect	0.050	0.041	-0.028	0.138
PI	Gross effect	0.012	0.078	-0.186	0.206
	Direct effect	-0.085	0.073	-0.302	0.069
	Indirect effect	0.097	0.041	0.032	0.246
PP	Gross effect	0.163	0.074	0.019	0.331
	Direct effect	-0.066	0.074	-0.234	0.079
	Indirect effect	0.229	0.046	0.154	0.358
PS	Gross effect	0.282	0.056	0.161	0.380
	Direct effect	0.199	0.053	0.090	0.289
	Indirect effect	0.083	0.032	0.021	0.147

3.5.3 Model Modification

The insignificant paths in the initial model were removed and the indices of the modified model are listed in Tables 11 and 12. The modified model is good-fitting as all paths are significant and all path coefficients are positive. The research model constructed after the empirical testing is shown as Fig.2.

Table 11. Modified model fit indices

Fit index	Recommended value	Actual value	Model fit
Chi square/degree of freedom (DF) ratio	1-3	1.153	Ideal
RMSEA	<0.08	0.018	Ideal
GFI	>0.9	0.960	Ideal
CFI	>0.9	0.995	Ideal
TLI	>0.9	0.994	Ideal
IFI	>0.9	0.995	Ideal

Table 12. Parameter estimates of modified model variable paths

Path	Non-standardized parameter value	Standard error	T value	P value	Standardized parameter value (path coefficient)
CS<---PPQ	0.339	0.045	7.482	< 0.001	0.332
CS<---PE	0.126	0.049	2.542	0.011	0.118
CS<---PI	0.162	0.081	2.012	0.044	0.126
CS<---PP	0.408	0.060	6.749	< 0.001	0.378
CS<---PS	0.146	0.045	3.253	0.001	0.152
RI<---PE	0.158	0.051	3.079	0.002	0.150
RI<---PS	0.167	0.046	3.667	< 0.001	0.174
RI<---CS	0.539	0.054	9.954	< 0.001	0.543

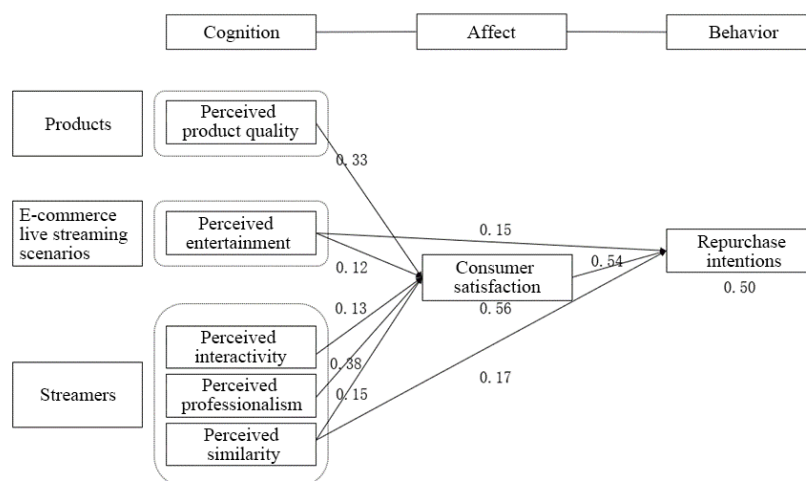


Figure 2. Research model after empirical testing

3.5.4 Hypothesis Testing Results

Based on the empirical analysis, the hypothesis testing results are presented in Table 13.

Table 13. Hypothesis testing results

Hypothesis code	Hypothesis	Testing result
H1	Perceived product quality has a positive impact on repurchase intentions.	Untenable
H2	Perceived entertainment has a positive impact on repurchase intentions.	Tenable
H3	Perceived discount has a positive impact on repurchase intentions.	Untenable
H4	Perceived interactivity has a positive impact on repurchase intentions.	Untenable
H5	Perceived professionalism has a positive impact on repurchase intentions.	Untenable
H6	Perceived similarity has a positive impact on repurchase intentions.	Tenable
H7	Perceived product quality has a positive impact on consumer satisfaction.	Tenable
H8	Perceived entertainment has a positive impact on consumer satisfaction.	Tenable
H9	Perceived discount has a positive impact on consumer satisfaction.	Untenable
H10	Perceived interactivity has a positive impact on consumer satisfaction.	Tenable
H11	Perceived professionalism has a positive impact on consumer satisfaction.	Tenable
H12	Perceived similarity has a positive impact on consumer satisfaction.	Tenable
H13	Consumer satisfaction has a positive impact on repurchase intentions.	Tenable
H14	Consumer satisfaction mediates the relationship between perceived product quality and repurchase intentions.	Tenable
H15	Consumer satisfaction mediates the relationship between perceived entertainment and repurchase intentions.	Tenable
H16	Consumer satisfaction mediates the relationship between perceived discount and repurchase intentions.	Untenable
H17	Consumer satisfaction mediates the relationship between perceived interactivity and repurchase intentions.	Tenable
H18	Consumer satisfaction mediates the relationship between perceived professionalism and repurchase intentions.	Tenable
H19	Consumer satisfaction mediates the relationship between perceived similarity and repurchase intentions.	Tenable

4. Discussion

4.1 Conclusion and Suggestion

This study probes into how e-commerce live streaming affects consumer repurchase intentions and what role consumer satisfaction plays in this process based on factors of products (perceived product quality), e-commerce live streaming scenarios (perceived entertainment and perceived discount) and streamers (perceived interactivity, perceived professionalism, and perceived similarity). The authors reach the following conclusions based on the empirical analysis results:

- 1) In terms of products, perceived product quality positively and indirectly affects consumer repurchase intentions, and consumer satisfaction fully mediates this relationship.
- 2) In terms of e-commerce live streaming scenarios, perceived entertainment has a significant positive effect on consumer repurchase intentions, and consumer satisfaction partially mediates this relationship. Perceived discount has no influence on consumer repurchase intentions.
- 3) In terms of streamers, perceived interactivity and perceived professionalism positively and indirectly affect consumer repurchase intentions, and consumer satisfaction fully mediates this relationship. Perceived similarity has a significant positive effect on consumer repurchase intentions, and consumer satisfaction partially mediates this relationship.

Based on these conclusions, the study proposes five suggestions for live streamers on how to increase consumers' repeat purchase rates and foster customer loyalty:

Carry out a strict product selection process and strengthen the quality control review. Streamers have to be careful about the products they are promoting and be steadfast against shoddy goods at the very beginning. Once they have selected the products, they should keep paying great attention to the product quality in the long run.

Create an interesting and appealing live streaming environment. Featured by scenario-based selling, e-commerce live streams need to be enlivened by specific scenarios. Therefore, streamers should select different scenarios for different themes to enhance user stickiness and foster customer loyalty.

Develop innovative interactions with consumers. Streamers should have a higher awareness of interaction with consumers during live streams, as interactions can help them better understand and meet consumers' needs, thus increasing consumers' sense of participation and empathy. As to how to interact with their audience, streamers

can put questions to consumers by, among other things, holding prize-giving quizzes. In addition, VR technology can be good empowerment for interactions with consumers.

Enhance professional knowledge about products and strive to be an industry expert. Streamers should make great efforts in acquiring the necessary knowledge related to the products they are marketing, including potential product problems and corresponding solutions.

Gain insights into consumer groups and create an attractive public persona. Streamers should have an in-depth analysis of consumer groups they are targeting, in a bid to understand their basic characteristics such as personality, style, taste, product preferences, and values. Based on these findings, streamers should craft a charming public persona that suits their own characters and maintain their public image.

4.2 Limitation and Future Research

While this research provides theoretical and managerial implications, it also has certain limitations, to be further studied and improved. First of all, this study focuses on factors of products, e-commerce live streaming scenarios, and streamers. It is a pity that there is no survey on the product category in the questionnaire design. Female consumers tend to be more interested in the live broadcast of beauty make-up and dressing, and male consumers are more interested in the live broadcast of science and technology or online games. In future research, we can start with different product categories and measure the effect of the live streaming of e-commerce on consumers' repeated purchase intention. Secondly, for individual characteristics (sex, age, income, etc) as well as streamers' characteristics (such as popularity), we can try to test the moderating effect of these factors, in-depth study of the demographic variables in addition to live e-commerce on the impact of consumer repeated purchase intention differences.

References

- Bansal, H. S., & Voyer, P. A. (2000). Word-of-Mouth Processes within a Services Purchase Decision Context. *Journal of Service Research*, 3(2), 166–177. <https://doi.org/10.1177/109467050032005>
- Berkowitz, E. N., & Walton, J. R. (1980). Contextual Influences on Consumer Price Responses: An Experimental Analysis. *Journal of Marketing Research*, 17(3), 349–358. <https://doi.org/10.1177/002224378001700308>
- Bhattacharjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *Mis Quarterly*, 25(3), 351–370. <https://doi.org/10.2307/3250921>
- Bickart, B., & Schindler, R. M. (2001). Internet forums as influential sources of consumer information. *Journal of Interactive Marketing*, 15(3), 31–40. <https://doi.org/10.1002/dir.1014>
- Bolton, R. N., & Drew, J. H. (1991). A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes. *Journal of Marketing*, 55(1), 1–9. <https://doi.org/10.1177/002224299105500101>
- Bouwman, H., Carlsson, C., Molina-Castillo, F. J., & Walden, P. (2006). Barriers and drivers in the adoption of current and future mobile services in Finland. *Telematics and Informatics*, 24(2), 145–160. <https://doi.org/10.1016/j.tele.2006.08.001>
- Brucks, M., Zeithaml, V. A., & Naylor, G. (2000). Price and brand name as indicators of quality dimensions for consumer durables. *Journal of the Academy of Marketing Science*, 28(3), 359–374. <https://doi.org/10.1177/0092070300283005>
- Cardozo, R. N. (1965). An Experimental Study of Customer Effort, Expectation, and Satisfaction. *Journal of Marketing Research*, 2(3), 244–249. <https://doi.org/10.1177/002224376500200303>
- Chan, K. K., & Misra, S. (1990). Characteristics of the Opinion Leader: A New Dimension. *Journal of Advertising*, 19(3), 53–60. <https://doi.org/10.1080/00913367.1990.10673192>
- Chang, M. K., & Cheung, W. (2001). Determinants of the intention to use Internet/WWW at work: A confirmatory study. *Information & Management*, 39(1), 1–14. [https://doi.org/10.1016/S0378-7206\(01\)00075-1](https://doi.org/10.1016/S0378-7206(01)00075-1)
- Chen, C.-C., & Lin, Y.-C. (2018). What drives live-stream usage intention? The perspectives of flow, entertainment, social interaction, and endorsement. *Pergamon*, 35(1), 293–303. <https://doi.org/10.1016/j.tele.2017.12.003>
- Chiu, C.-M., Fang, Y.-H., Cheng, H.-L., & Yen, C. (2013). On online repurchase intentions: Antecedents and the moderating role of switching cost. *Human Systems Management*, 32(4), 283–296. <https://doi.org/10.3233/HSM-130796>

- Chiu, C. M., Hsu, M. H., Sun, S. Y., Lin, T. C., & Sun, P. C. (2005). Usability, quality, value and e-learning continuance decisions. *Computers & Education*, 42(5), 399–416. <https://doi.org/10.1016/j.compedu.2004.06.001>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>
- Fang, J., George, B., Shao, Y., & Wen, C. (2016). Affective and cognitive factors influencing repeat buying in e-commerce. *Electronic Commerce Research and Applications*, 44–55. <https://doi.org/10.1016/j.elerap.2016.08.001>
- Ghose, S., & Dou, W. Y. (1998). Interactive functions and their impacts on the appeal of Internet Presence Sites. *Journal of Advertising Research*, 38(2), 29–43.
- Gilly, M. C., Graham, J. L., Wolfinger, M. F., & Yale, L. J. (1998). A dyadic study of interpersonal information search. *Journal of the Academy of Marketing Science*, 26(2), 83–100. <https://doi.org/10.1177/0092070398262001>
- Hsu, J. S.-C., Lin, T.-C., Fu, T.-W., & Hung, Y.-W. (2015). The effect of unexpected features on app users' continuance intention. *Electronic Commerce Research and Applications*, 14(6), 418–430. <https://doi.org/10.1016/j.elerap.2015.06.003>
- Janda, S., Trocchia, P. J., & Gwinner, K. P. (2002). Consumer perceptions of Internet retail service quality. *International Journal of Service Industry Management*, 13(5), 412–431. <https://doi.org/10.1108/09564230210447913>
- Kim, B. (2010). An empirical investigation of mobile data service continuance: Incorporating the theory of planned behavior into the expectation-confirmation model. *Expert Systems with Applications*, 37(10), 7033–7039. <https://doi.org/10.1016/j.eswa.2010.03.015>
- Kim, C., Galliers, R. D., Shin, N., Ryoo, J.-H., & Kim, J. (2012). Factors influencing Internet shopping value and customer repurchase intention. *Electronic Commerce Research and Applications*, 11(4), 374–387. <https://doi.org/10.1016/j.elerap.2012.04.002>
- Kim, H. M., & Kramer, T. (2006). The moderating effects of need for cognition and cognitive effort on responses to multi-dimensional prices. *Marketing Letters*, 17(3), 193–203. <https://doi.org/10.1007/s11002-006-5928-2>
- Kim, S. H. (2008). Moderating effects of Job Relevance and Experience on mobile wireless technology acceptance: Adoption of a smartphone by individuals. *Information & Management*, 45(6), 387–393. <https://doi.org/10.1016/j.im.2008.05.002>
- Lee, K. C., & Chung, N. (2009). Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective. *Interacting with Computers*, 21(5), 385–392. <https://doi.org/10.1016/j.intcom.2009.06.004>
- Liang, T.-P., & Huang, J.-S. (1998). An empirical study on consumer acceptance of products in electronic markets: A transaction cost model. *Decision Support Systems*, 24(1), 29–43. [https://doi.org/10.1016/S0167-9236\(98\)00061-X](https://doi.org/10.1016/S0167-9236(98)00061-X)
- Lin, C. S., Wu, S., & Tsai, R. J. (2004). Integrating perceived playfulness into expectation-confirmation model for web portal context. *Information & Management*, 42(5), 683–693. <https://doi.org/10.1016/j.im.2004.04.003>
- Ling, K. C., Chai, L. T., & Piew, T. H. (2010). The effect of Shopping Orientations, Online Trust and Prior Online Purchase Experience toward Customers' Online Purchase Intention. *International Business Research*, 3(3), 63–76. <https://doi.org/10.5539/ibr.v3n3p63>
- Moon, J.-W., & Kim, Y.-G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management*, 38(4), 217–230. [https://doi.org/10.1016/S0378-7206\(00\)00061-6](https://doi.org/10.1016/S0378-7206(00)00061-6)
- Murgulets, L., Eklöf, J., Dukeov, I., & Selivanova, I. (2001). Customer satisfaction and retention in transition economies. *Total Quality Management*, 12(7), 1037–1046. <https://doi.org/10.1080/09544120120096215>
- Oliver, R. L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research*, 17(4), 460–469. <https://doi.org/10.1177/002224378001700405>
- Parasuraman, A., Zeithaml, V. A., & Malhotra, A. (2005). E-S-QUAL—A multiple-item scale for assessing electronic service quality. *Journal of Service Research*, 7(3), 213–233.

<https://doi.org/10.1177/1094670504271156>

- Patterson, P. G., & Spreng, R. A. (1997). Modelling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, services context: An empirical examination. *International Journal of Service Industry Management*, 8(5), 414–434. <https://doi.org/10.1108/09564239710189835>
- Rogers, E. M., & Bhowmik, D. K. (1970). Homophily-Heterophily: Relational Concepts for Communication Research. *The Public Opinion Quarterly*, 34(4), 523–538. <https://doi.org/10.1086/267838>
- Rosenberg, M. J., & Hovland, C. I. (1960). Cognitive, affective, and behavioral components of attitudes. *Attitude Organization and Change*, 1–14.
- Ruef, M., Aldrich, H. E., & Carter, N. M. (2003). The Structure of Founding Teams: Homophily, Strong Ties, and Isolation among U.S. Entrepreneurs. *American Sociological Review*, 68(2), 195–222. <https://doi.org/10.2307/1519766>
- Schlosser, A. E., Shavitt, S., & Kanfer, A. (1999). Survey of Internet users' attitudes toward Internet advertising. *Journal of Interactive Marketing*, 13(3), 34–54. [https://doi.org/10.1002/\(SICI\)1520-6653\(199922\)13:3<34::AID-DIR3>3.0.CO;2-R](https://doi.org/10.1002/(SICI)1520-6653(199922)13:3<34::AID-DIR3>3.0.CO;2-R)
- Schmidt, J. B., & Spreng, R. A. (1996). A Proposed Model of External Consumer Information Search. *Journal of the Academy of Marketing Science*, 24(3), 246–256. <https://doi.org/10.1177/0092070396243005>
- Shankar, V., Smith, A. K., & Rangaswamy, A. (2003). Customer satisfaction and loyalty in online and offline environments. *International Journal of Research in Marketing*, 20(2), 153–175. [https://doi.org/10.1016/S0167-8116\(03\)00016-8](https://doi.org/10.1016/S0167-8116(03)00016-8)
- Skadberg, Y. X., & Kimmel, J. R. (2004). Visitors' flow experience while browsing a Web site: Its measurement, contributing factors and consequences. *Computers in Human Behavior*, 20(3), 403–422. [https://doi.org/10.1016/S0747-5632\(03\)00050-](https://doi.org/10.1016/S0747-5632(03)00050-)
- Thong, J. Y. L., Hong, S.-J., & Tam, K. Y. (2006). The effects of post-adoption beliefs on the expectation-confirmation model for information technology continuance. *International Journal of Human-Computer Studies*, 64(9), 799–810. <https://doi.org/10.1016/j.ijhcs.2006.05.001>
- Tsang, M. M., Ho, S.-C., & Liang, T.-P. (2004). Consumer Attitudes toward Mobile Advertising: An Empirical Study. *International Journal of Electronic Commerce*, 8(3), 65–78. <https://doi.org/10.1080/10864415.2004.11044301>
- Xiang, L., Zheng, X., Lee, M. K. O., & Zhao, D. (2016). Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction. *International Journal of Information Management*, 36(3), 333–347. <https://doi.org/10.1016/j.ijinfomgt.2015.11.002>
- Xue, F., & Phelps, J. E. (2004). Internet-facilitated consumer-to-consumer communication: the moderating role of receiver characteristics. *International Journal of Internet Marketing and Advertising*, 1(2), 121–136. <https://doi.org/10.1504/IJIMA.2004.004016>
- Yoo, J., Arnold, T. J., & Frankwick, G. L. (2012). Effects of positive customer-to-customer service interaction. *Journal of Business Research*, 65(9), 1313–1320. <https://doi.org/10.1016/j.jbusres.2011.10.028>
- Zhou, T. (2011). Examining the critical success factors of mobile website adoption. *Online Information Review*, 35(4), 636–652. <https://doi.org/10.1108/14684521111161972>

Copyrights

Copyright for this article is retained by the author, with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).