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How livestreaming increases product sales: role of trust transfer and elaboration likelihood model

Chun-Der Chen[a], Qun Zhao [b] and Jin-Long Wang [c]

[a]Department of Business Administration, Ming Chuan University, Taipei, Taiwan; [b]College of Science &Technology, Ningbo University, Ningbo City, People's Republic of China; [c]Department of Information and Telecommunications Engineering, Ming Chuan University, Taipei, Taiwan

ABSTRACT

With the ever-increasing popularity of livestreaming commerce, understanding how livestreaming contributes to online consumption becomes crucial to social commerce. However, studies pertain to livestreaming commerce are still at a nascent stage. Based on the elaboration likelihood model and trust transfer theory, we aim to examine the underlying mechanism of how livestreaming influences consumers' trust building and purchasing intention. The determinants, process and consequences of trust are discussed. More than 545 experienced livestreaming commerce users participated in this study in China. Our findings show two different routes through which consumers' trust can be built and affect their purchase intention and willingness to pay more. We also verify the trust transfer effect exists from trust in the streamer to trust in product in livestreaming commerce. We hope this study will bring more insight into trust and the underlying mechanism of how livestreaming increases product sales.

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Livestreaming commerce; elaboration likelihood model; trust transfer theory; purchase intention; willingness to pay more

1. Introduction

Livestreaming commerce is a new form of social commerce, whereby real-time social interaction via livestreaming facilitates online product sales (Cai and Wohn 2019), such as Amazon's 'Style code Live' and 'Taobao Live'. Streamers (e.g. social influencers, celebrities, many self-employed sellers or ordinary people) showcase products, carry out demonstrations and offer special discounts to consumers during livestreaming. Consumers can interact with streamers and other viewers by submitting messages while watching. Meanwhile, they can also buy products without closing the live streams (Sentance 2019). Based on its real-time and entertaining nature, livestreaming commerce is becoming a playful, powerful and popular channel for online product sales that overcomes the drawbacks of asynchronous traditional online product sales (Chen et al. 2019; Sun et al. 2018).

Many e-commerce or social commerce websites – such as Amazon, Facebook, Instagram and Taobao.com – have added a 'livestreaming shopping' function to their platforms. A report of Research and Markets shows that global livestreaming market revenue reached USD 44 billion in 2018 and will grow to USD 70 billion by 2021 (Li et al. 2018a). In China, the continuous development of livestreaming commerce has attracted more than 200 platforms providing live streams to 400 million viewers (Moshinsky 2018). The Chinese livestreaming market will reach USD 15 billion at the end of 2020 (Chung, Song, and Lee 2017).

The ever-increasing popularity of livestreaming shopping has drawn much attention from practitioners and researchers (Sun et al. 2018). However, studies pertaining to livestreaming commerce are still at a nascent stage (Cai and Wohn 2019). There are mainly three research lines. The first research line focuses on users' motivation to shop via live streaming. Cai and Wohn (2019) and Cai et al. (2018) discuss users' motivation for using live streams. The second research line is about users' engagement in livestreaming commerce. Wongkitrungrueng and Assarut (2018) examine consumers' perceived value of livestreaming from the perspectives of their trust and engagement of livestreaming commerce. Sun et al. (2018) demonstrate that IT affordances significantly affect consumers' engagement in livestreaming commerce. The third research line observes actual behaviours using data collected from livestreaming platforms. For instance, based on data of livestreaming sellers on Facebook, Wongkitrungrueng, Dehouche, and Assarut (2020) use a mixed method to explore sellers' different marketing approaches and strategies in attracting and engaging customers. However,

CONTACT Qun Zhao zhaoqun@nbu.edu.cn zhaoqun1981@163.com College of Science &Technology, Ningbo University, No. 521, Baisha Road, Ningbo City, Zhejiang Province, People's Republic of China

just how livestreaming increases product sales is not known. Previous studies identify that trust is a key factor of online consumer behavior (e.g. Gefen 2000; McKnight, Cummings, and Chervany 1998). Li et al. (2018b) emphasise that trust in livestreaming differs from other online shopping scenarios because livestreaming commerce has its own characteristics such as real-time demonstration, interaction and persuasion. Hence, whether the role of trust in livestreaming commerce is different from that in other online commerce is worth exploring.

It is long established in information system (IS) research that trust is a strong predictor of trust-related behavior (McKnight 2002). It is an essential factor influencing online consumers' intended behaviours (Gefen, Karahanna, and Straub 2003; Gefen and Straub 2004; Lee, Kang, and McKnight 2017; Liang, Wu, and Huang 2019). Gefen and Straub (2004) point out that the failure of many online transactions is most often due to 'lack of trust.' In livestreaming commerce, Wongkitrungrueng and Assarut (2018) show that most products promoted via livestreaming channels are small brands from individual sellers in Southeast Asia. Thus buying products from individual sellers with an unknown brand during livestreaming is perceived as risky, as consumers are afraid of receiving a fake or low-quality product. Moreover, even some famous streamers have been seen to make fools of themselves while advertising products. For instance, one of the top live streamers in China, Li Jiaqi, meets his Waterloo when promoting a non-stick pan to millions of viewers, as they can see that the fried egg is firmly stuck to the pan. With the boom in livestreaming commerce, it would be interesting to find out how livestreaming helps to establish consumers' trust and increase product sales. The determinants, processes and consequences of trust in livestreaming commerce remain largely unexplored.

The contributions of this paper mainly include three aspects. First, we address the role of trust in livestreaming commerce by integrating two dual-process theories: elaboration likelihood model (Petty and Cacioppo 1981) and trust transfer theory (Stewart 2003) to understand how livestreaming increases product sales. This study provides a comprehensive view of trust in livestreaming commerce, including trust antecedents, trust transfer and trust performance. Second, previous studies mainly regard trust as a general concept (e.g. Kim and Park 2013). In this study, we differentiate trust into two categories, trust in product and trust in streamer. Moreover, we extend the trust transfer theory to the livestreaming commerce context. Many previous studies of trust transfer mainly focus on the perspectives of offline to online and online to mobile channels (e.g. Lee, Kang, and McKnight 2007; Kuan and Bock 2007). On our part, we demonstrate consumers' trust in streamers can be transferred to the streamers' recommended products. This could also be used to explain why livestreaming helps to increase product sales. Finally, we extend the findings of Wongkitrungrueng and Assarut's (2018) from discussing engagement to consumers' purchase intention and loyalty behavior demonstrated in livestreaming commerce. We believe this study will bring more insights into the area of existing livestreaming commerce research and practice.

2. Theoretical background and hypotheses

2.1 Livestreaming commerce

Livestreaming commerce is becoming a new channel for marketing wherein streamers open live streams to interact with consumers in real time (e.g. Chen and Lin 2018). The most attractive feature of livestreaming commerce is its real-time connection. During broadcasting, streamers not only show the characteristics of the product, introduce how to use it, but also interact with consumers in real time, such as conducting a customised demonstration according to consumers' requirements. With this feature, potential consumers gain a more comprehensive understanding of the product, making the product promotion more convincing and effective (e.g. Wongkitrungrueng and Assarut 2018). Previous research indicates that a great deal of product information is provided by streamers in a very short time, which can shorten consumers' decision-making path. Moreover, coupons and discounts are distributed to consumers during livestreaming, which will evoke their impulse purchases (Chen et al. 2019).

There are three types of livestreaming commerce (Wongkitrungrueng, Dehouche, and Assarut 2020). The first is the livestreaming function embedded in e-commerce websites (e.g. Amazon, Taobao) and mobile apps (e.g. Shopshops). The second type is social media platforms, such as Facebook and Instagram, integrating commercial activities (Sun et al. 2018). The third type is a platform which originally provided livestreaming services integrating online commerce activities. Twitch is a gaming broadcasting platform not designed for product sales. Nowadays, streamers can put up some links which lead to e-commerce websites on their channels to encourage viewers to buy (Cai et al. 2018).

Livestreaming is very popular in China as an effective and low-cost marketing tool. It first emerged in 2014 when Chinese fashion e-commerce platform Mogujie started to use it to sell apparel to young female shoppers.

Nowadays, almost all e-commerce platforms are launching livestreaming functions. In China, Taobao Live is the biggest livestreaming commerce platform, where more than 80% of livestreaming commerce takes place (Statista 2020). Furthermore, according to a report by Accenture, 70% of Gen Z consumers in China prefer to buy products via social media, which is much higher than the global average (i.e. 40%) (Cheng and Yang 2020).

Sellers can create their own product demonstration for their followers, while brands often collaborate with social influencers or celebrities to promote their products. Some top streamers in China have millions of viewers when broadcasting. Viya, for example, who has more than 9 million followers, reached a record of RMB 353 million (USD 51 million) in sales during Alibaba's Singles' Day on Taobao Live (Sentance 2019). Moreover, during the pandemic lockdown, farms in remote regions use live streams to sell fruits and agricultural products to consumers thousands of miles away (Hao 2020).

2.2 Elaboration likelihood model (ELM)

The ELM (Petty and Cacioppo 1981) is a dual-process theory that explains how the process of persuasion affects an individual's attitude change through two different information processing routes: central and peripheral. The degree of elaboration effort individuals spend on information processing will affect which route they choose (Petty and Cacioppo 1981; Petty and Cacioppo 1986). In 1986, Petty and Cacioppo provided a general framework for organising, categorising and understanding the basic processes underlying the effectiveness of persuasive communications. According to the ELM framework, argument quality and source credibility represent the central route and peripheral route, respectively (Petty and Cacioppo 1986). Argument quality refers to a strong and persuasive argument embedded in the information. If a person has high elaboration likelihood, it means that he /she has greater ability, motivation and invests more cognitive effort to elaborate the message. Consequently, this person will take the central route and think carefully regarding issue-relevant arguments and merits of information in a message to form their own opinions. For instance, before they decide to buy a vacuum cleaner, some consumers spend more time and effort to collect product-related functional specifications prior to purchase, and carefully evaluate whether the product is better than standard specifications, whether the price is reasonable, and if the functions meet their needs.

In contrast, not everyone has ability or time to process information of products or services. Source credibility means that the source of the message is perceived to be believable, credible and trustworthy. Petty and Cacioppo (1984) demonstrate expertise or attractiveness of a message source has a greater impact on persuasion under condition of low involvement. Thus a person who has low elaboration likelihood tends to use peripheral cues to determine information, due to the lack of ability, motivation or time to scrutinise messages to inform their own attitude (Petty and Cacioppo 1984). At this time, they are more likely to take the peripheral route and use heuristic cues or other credible resources to inform their own attitude, then make decisions (Bhattacherjee and Sanford 2006). For instance, if an acquaintance endorses this message as correct, then people are likely to depend on that cue to make a decision.

Unlike other theories in IS research involving fixed variables, such as TAM which employs usefulness, ease of use and behaviour intention to examine users' acceptance of a new technology, theories such as ELM only stipulate a process and do not mandate fixed factors in the frameworks (Tam and Ho 2005). Therefore, researchers should consider the distinct characteristics of the research context to further identify specific variables to measure. Prior studies apply ELM to product advertising (e.g. Trampe et al. 2010), social media (e.g. Zha et al. 2018), information technology (e.g. Bhattacherjee and Sanford 2006), crowdfunding (e.g. Allison et al. 2017), etc. Several variables have been investigated, including research from Allison et al. (2017) indicating that product quality, brand and usefulness are central route factors that positively relate to crowdfunding performance. Zhou (2012) uses information quality and service quality as the central route. Based on ELM and the findings of previous studies, product quality and brand awareness – which involve more of consumers' cognitive efforts – are chosen as the main triggers of the central route. Furthermore, according to Cheng, Gu, and Shen (2019) and Fulmer and Gelfand (2012)'s findings, we evaluate the antecedences of trust from three aspects: trustee characteristics, other members' characteristics, and shared characteristics between trustor and trustee. Liang, Wu, and Huang (2019) suggest value similarity as a peripheral route trigger in crowdfunding. Thus, in this study, perceived product knowledge of streamers, other members' endorsement and value similarity are chosen as main triggers of the peripheral route which could help potential consumers to make quick decisions.

2.3 Trust establishment and trust transfer theory

Trust is a very important and multidimensional factor influencing consumers' online behaviour (Gefen, Karahanna, and Straub 2003; Gefen and Straub 2004). Stewart (2003) suggests two types of trust building mechanisms:

cognitive-based trust and transference-based trust. To establish online consumers' trust, Kim, Ferrin, and Rao (2008) propose a framework and divide important determinants of online consumers' trust into four aspects: (1) cognitive-based: information quality, privacy protection; (2) affective-based: word of mouth, third-party certification; (3) experienced-based: past experience, familiarity; and (4) personality-oriented: individual's disposition of trust. Furthermore, Liang, Wu, and Huang (2019) divide backers' trust into cognitive-based trust and affective-based trust in crowdfunding. In livestreaming commerce, Wongkitrungrueng and Assarut (2018) evaluate consumers' trust in livestreaming commerce to include trust in product and trust in streamer. 'Trust in product' refers to consumers' belief that the product will meet the intended expectations, such as the appearance and functions as claimed. 'Trust in streamer' refers to consumers' belief that the streamer is trustworthy, and not cheating their audience.

We follow Kim, Ferrin, and Rao (2008)'s trust building framework and integrate Wongkitrungrueng and Assarut (2018)'s view of trust in this study. In general, establishing consumers' cognitive-based trust of an object involves cognitive reasoning (Kim 2008). For instance, direct use, evaluation and interaction of the website will help form consumer's self-cognitive trust in the website (e.g. Chen and Dibb 2010). Similarly, consumers who have ability to process product-related information during livestreaming will establish their cognitive-based trust in the product.

However, if consumers are not familiar with the product or they don't have time or ability to elaborate product information, based on ELM and Kim, Ferrin, and Rao (2008)'s framework, they will use peripheral cues (e.g. streamers' reputation, word of mouth) to form their affective-based trust. Park and Lin (2020) suggest that streamers provide a variety of contents that affect consumption behaviour based on the reliability established through continuous communication with viewers. As suggested by Wongkitrungrueng and Assarut (2018), we use 'trust in streamer' to measure consumers' affective-based trust and explore how it influences their purchase intention and loyalty behaviours. Finally, past transaction experience and disposition to trust are chosen to represent experienced-based trust and personality-oriented trust, respectively (Kim et al., 2008).

In this study, we also want to verify whether trust transfer effect exists between trust in the streamer and trust in their recommended product. It is an important issue because most products in livestreaming commerce are small brands without recognisable brand names (Wongkitrungrueng and Assarut 2018). Based on trust transfer theory (Stewart 2003), one's trust in a known target can transfer to an unknown target. The reason for trust transfer is because one realises that a certain target is related to the item he/she trusts, such as similarity and proximity. Based on this inference, the consumer tends to trust the target. Many previous studies demonstrate that consumers' trust in an offline context can be transferred to their trust in online contexts, such as for mobile payment (Lee, Kang, and McKnight 2007) and online shopping behaviour (Kuan and Bock 2007). In this study, we want to find out whether consumers' trust in streamers can be transferred to their recommended products.

3. Research model and hypotheses

Based on ELM, online trust building mechanism, and trust transfer theory, this study examines the antecedent, process and performance of trust in livestreaming commerce. Figure 1 depicts the proposed conceptual framework.

3.1 Product-related triggers: perceived product quality and brand awareness

Perceived product quality refers to consumers' subjective perception or judgement of the overall excellence or superiority of a product (Chinomona, Okoumba, and Pooe 2013). People often use technical and performance characteristics to measure a tangible product (Toivonen 2012). Previous studies indicate that product quality is an important factor affecting consumers' trust and willingness to buy (Li, Hess, and Valacich 2006). In this study, when consumers perceive the product is of good quality and are satisfied with the characteristics and performance of the product based on their cognitive process, they are more likely to trust the product.

H1: Perceived product quality relates positively to consumer's trust in product.

A brand is the name, trademark and package design of products or services that sets them apart from their competitors (Aaker 1991). Brand awareness means consumers' cognitive illustration of a brand and includes consumers' familiarity with and recognition of a brand (Keller 2003). Previous studies state that the more familiar consumers are with a brand, the higher the brand awareness, which will increase their trust in the product (e.g. Smith and Wheeler 2002). Macdonald and Sharp (2000) indicate that brand awareness has a significant effect to build consumers' trust and purchase intention of a product or services. In this study, products with a sound brand name are used to mean that consumers are more likely to have heard of or know about the

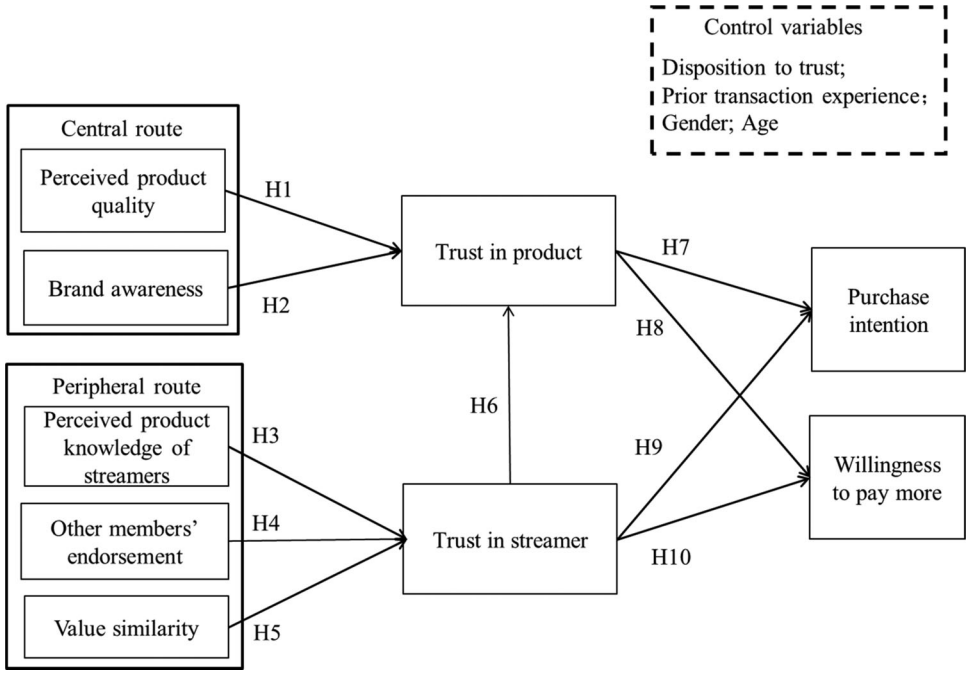

Figure 1. Conceptual model.

brand. Basically, a well-known brand will provide high-quality products to maintain a good reputation. Therefore, if the products recommended by streamers have high brand awareness, consumers are more likely to trust the product.

H2: Brand awareness relates positively to consumer's trust in a product.

3.2 Affect-related triggers: perceived product knowledge of streamers, other viewers' endorsement and value similarity

Perceived product knowledge of streamers refers to viewers' perception of the depth of streamers' product knowledge, including whether the streamers have an in-depth understanding of the product and can answer viewers' questions about the product in time during live streams (Agnihotri, Rapp, and Trainor 2009). Szymanski (1988) recognises that a knowledgeable seller is more likely to enhance consumers' trust and can more effectively meet customer needs. Moreover, if consumers possess more product knowledge helping them evaluate the product's quality, their perceived product performance risk may be reduced, increasing their purchase intention (Suh and Chang 2006). In this study, if live streamers have product-related expertise, are sufficiently knowledgeable, and can answer various questions during livestreaming, the level of trust from consumer to streamer will increase.

H3: Perceived product knowledge of streamers relates positively to consumers' trust in the streamers.

Chen and Lin (2018) indicate that personal endorsement is affective factor rather than cognitive. Thus, we introduce other members' endorsement into this study. This refers to viewers' agreement with or approval of the information disseminated by the streamer. Typically, positive comments, likes, recommendations and becoming a fan are used to show members' attitude toward a trustee (Cheng, Gu, and Shen 2019). We use three items to measure this variable (Lim et al. 2006), which are: (a) I feel this streamer has been recommended by many other viewers; (b) the testimonials on the streamer are attractive to me; (c) the testimonials on the streamer are useful to me. Many theories (i.e. TRA) have demonstrated that social influence or word of mouth is an important way of strengthening consumers' trust. In this study, the reactions of other members in the community may also have great influence to form consumers' trust in a streamer. Hsu, Chuang, and Hsu (2014) demonstrate that satisfied customers' positive endorsement can strengthen potential customers' trust in vendors. Thus, influenced by other members in the live stream, we believe that consumers will form trust towards the streamer more easily.

H4: Other members' endorsement is positively related with consumers' trust in the streamer.

Value similarity is a shared belief that people feel they have similar goals, interest, values, behaviours or lifestyle

(Morgan and Hunt 1994). Sociologists show that in social relationships, people tend to connect with others like them and are more willing to communicate among each other (Johnson and Grayson 2005). Previous studies find that value similarity has a positive effect on trust. When discussing the relationship between buyers and sellers, Doney and Cannon (1997) find that when consumers perceive a seller having many similarities with themselves, this will better help consumers build trust in the seller. In the online context, value similarity also positively affects the trust building process (Cheng, Gu, and Shen 2019). This study mainly evaluates the value similarity between potential consumers and the streamer. If consumers perceive a high level of value similarity with a streamer, they are more likely to form positive attitudes towards the streamer.

H5: Value similarity is positively related to consumers' trust in a live streamer.

3.3 Trust transfer: trust in streamer to trust in product

McKnight (2002) claims that trust transfer is an important mechanism in building consumers' trust. Based on the trust transfer theory, Stewart (2003) states that trust in a known entity or context can be transferred to unknown target when they are related. Cheng, Gu, and Shen (2019) indicate that consumers' trust in social group members can positively affect their trust in their recommended social commerce app. Park and Lin (2020) demonstrate that consumers' positive attitude toward streamers will be transferred to their endorsed products. In this study, if consumers have indeed placed trust in the streamers, they are more likely to form their trust in the product promoted by the streamers.

H6: Consumer's trust in the streamer is positively related to consumer's trust in the product.

3.4 Trust performance: purchase intention and willingness to pay more

Previous studies document the positive relationships between trust and favourable behaviours (e.g. purchase intention and loyalty) in marketing literature (e.g. Morgan and Hunt 1994; Gefen, Karahanna, and Straub 2003; Lee, Kang, and McKnight 2007; Liang, Wu, and Huang 2019). Keh and Xie (2009) show that trust, commitment and customer identification mediate the effect of corporate reputation on customers' purchase intention and willingness to pay a price premium. Based on ELM, Liang, Wu, and Huang (2019) find both cognition-based and affect-based determinants increase funders' trust, which further affect their funding intention and actual outcome. In this study, consumers may employ a central route (i.e. trust in product) or peripheral route (i.e. trust in streamer) to form their trust, which may affect their purchase intention and loyalty behaviour.

H7: Consumer's trust in the product relates positively to purchase intention.

H8: Consumer's trust in the product relates positively to willingness to pay more.

H9: Consumer's trust in the streamer relates positively to purchase intention.

H10: Consumer's trust in the streamer relates positively to willingness to pay more.

3.4. Control variables: disposition to trust, past transaction experience, gender and age

Previous studies indicate that dispositional trust is the most important determinant when consumers face unfamiliar circumstances. For instance, Gefen, Karahanna, and Straub (2003) find that consumers' dispositional trust primarily affects their trust in the seller and online purchase intention. Regarding consumers' past transaction experience, Yoh et al. (2003) demonstrate that consumers' online shopping behaviour is significantly influenced by their past Internet experience. Ranganathan and Jha (2007) validate that past online shopping experience is a more effective determinant of consumers' purchase intention than all other factors in the research model. Furthermore, previous studies have found that consumers' behavioural intention in a new system may vary depending on personal factors (e.g. gender, age) (Gefen, Karahanna, and Straub 2003; Venkatesh and Morris 2000). Hence, in this study, we choose the four factors of disposition to trust, past transaction experience, gender and age as control variables.

4. Methodology and research design

4.1 Instrument

The scale items measuring the constructs are developed from prior studies and we adapt them to the livestreaming commerce context. Specifically, items measuring brand awareness (BA) are modified from Ke, Chen, and Su (2016). The measurement of perceived quality (PQ) comes from the scale of Wu and Jang (2013). Measurements of trust in product (TP) and trust in online streamer (TS) are adapted from Gefen, Karahanna, and Straub (2003). The measurement of value similarity (VS) is developed from Liang, Wu, and

Huang (2019). To measure product knowledge (KN), items from Suh and Chang (2006) are used. User endorsement (ED) items are adapted from Lim et al. (2006). Measurement for purchase intention (PI) and willingness to pay more (WPM) come from the scale of Zhao, Chen, and Wang (2016). The measurement of dispositional trust (DISP) is developed from Liang, Wu, and Huang (2019). Items measuring prior transaction experience (PEX) are modified from Yoon, Hostler, and Guo (2013). All the items follow a 7-point Likert scale format rating from 'strongly disagree' (1) to 'strongly agree' (7).

4.2 Sample and data collection

Sample data is collected from livestreaming commerce users in China. China has become the world's largest livestreaming market, attracting more than 400 million users watching live streams (Moshinsky 2018). Almost all the e-commerce and social commerce websites in China enable livestreaming service to increase product sales. Given the large number of shoppers and the booming livestreaming market, it is representative to investigate users of livestreaming commerce in China.

An online questionnaire is administered to collect data. In order to ensure that respondents have experience in livestreaming commerce, the questionnaire begins with a screening question (Do you use any livestreaming commerce platforms? Yes/No). We list some livestreaming commerce platforms as examples to make it easy for the audience to understand the term of 'livestreaming commerce'. Only respondents who answered 'Yes' are considered valid for the study. Finally, we received 545 valid questionnaires. Table 1 illustrates the demographics of the 545 respondents, showing that 60% are female and 40% are male. We notice that 47% of respondents are between 21 and 30 years old and 64% of them have bachelor's degrees. The majority of the respondents (70%) have joined the livestreaming audience for more than half a year and 68% of participants indicate that they watch livestreaming commerce more than 5 times per week. We find 46% of our participants spend more than RMB200 per month on livestreaming commerce.

Table 1. Sample characteristics (N = 545).

Item	Frequency	Percentage
Gender		
Male	218	40
Female	327	60
Age		
Under 20	55	10
21–30	255	47
31–40	169	31
41–50	44	8
Above 51	22	4
Education		
Middle school	11	2
High school	98	18
Bachelor	349	64
Master degree or more	87	16
Occupation		
Students	300	55
Employed	196	36
Unemployed	38	7
Others	11	2
How long have you watched livestreaming		
<less than 6 months	164	30
6 months to a year	245	45
More than a year	136	25
Frequency of watching livestreaming per week		
<5 times	174	32
6–10 times	234	43
>10 times	137	25
Money spent on livestreaming commerce per month		
<200 RMB	294	54
201–1000 RMB	169	31
>1000 RMB	82	15

4.3 Non-response bias and CMV

We estimate non-response bias by comparing the early respondents with the late respondents (Armstrong and Overton 1977). First, based on the timestamp, we divide the sample into four quartiles. Then, T-test is used to compare the medium of the first and the last quartile of respondents. We find no significant differences. Hence, non-response bias is not serious in this study. The common method bias (CMV) may affect the validity of the results, as the data are collected from a single source at a single point in time (Podsakoff et al. 2003). Both procedural control and statistical analysis are used to test CMV. In order to reduce respondents' evaluation apprehension, the order of questions are counter balanced and demographic questions are put at the end of the questionnaire. Statistically, Harman's one-factor test is used to detect whether there is a CMV. According to the results of Harman's one-factor test, CMV is not significant in this study due to the fact that there is no single factor that could explain more than 50% of the variance.

5. Data analysis and results

Partial Least Squares (PLS) method is used to examine the measurement and structural model mainly for three reasons. First, covariance-based structural equation modelling (CB-SEM) requires a much stricter assumption of the data's normal distribution than PLS-SEM dose (Shiau, Sarstedt, and Hair 2019). We use a convenience sampling method to collect data which might cause data distribution lack of normality. Second, PLS-SEM is a better choice than CB-SEM for a complex research model (Hair et al. 2019). In this study, the research model is relatively complex, with nine constructs and

ten hypotheses, two dependent variables and four control variables. Third, PLS-SEM is more suitable for studies when the research objective is exploratory research (Gefen et al. 2011). Since ELM doesn't have a fixed set of factors for argument quality and source credibility, this study extends ELM to livestreaming commerce and explores the underlying mechanism of consumers' trust building in a new context. Hence, we consider SmartPLS 3.0 as an appropriate SEM method to examine our research model.

5.1 Measurement model

We assess the reliability of each construct using Cronbach's α, composite reliability (CR) and average variance extracted (AVE). Table 2 shows the results. Cronbach's α for all constructs are higher than 0.74, and with the CR is between 0.85 and 0.92, with AVE above 0.66, suggesting a satisfactory level of reliability. Regarding discriminant validity, Table 3 shows the results. The lowest square root of AVE is 0.81 which is larger than the correlation between any pair of constructs (Chin 1998). Furthermore, Henseler, Ringle, and Sarstedt (2015) suggest Heterotrait–Monotrait Ratio (HTMT) as an alternative approach to assess discriminant validity. As shown in Table 4, the highest HTMT value is 0.819, thus, the discriminant validity of all constructs is fulfilled satisfactorily (less than 0.9). Furthermore, Appendix B shows the correlation matrix of all the variables, including demographic variables.

Table 2. Reliability and convergent validity analysis

Constructs and items	Mean	SD	Cronbach's α	AVE	C.R.
Brand awareness	4.41	1.408	0.874	0.665	0.908
Perceived quality	4.19	1.131	0.869	0.792	0.920
Product knowledge	4.27	1.109	0.812	0.724	0.887
Other members' endorsement	4.73	1.058	0.804	0.716	0.883
Value similarity	4.29	1.132	0.738	0.656	0.851
Trust in product	4.36	1.012	0.828	0.744	0.897
Trust in live streamer	4.51	1.002	0.873	0.797	0.922
Purchase intention	4.00	1.162	0.792	0.706	0. 878
Willingness to pay more	4.25	0.952	0.853	0.778	0.912

In addition, we calculate the standardised root mean square residual (SRMR = 0.069). According to Henseler, Ringle, and Sarstedt (2015), SRMR is a model fit measure for PLS-SEM. If the value is less than 0.08, the model is considered to have a good fit. Hence, our model satisfies the requirement. We also check multicollinearity through variation inflation factor (VIF). All of these measurements were lower than 3.12 (see Appendix A), which is below than the threshold value of 5, suggesting the collinearity in the research data is not a problem (Hair et al. 2019).

5.2 Structural model

To estimate path coefficient significance, a bootstrapping technique with a resample size of 5000 is used in this study. Figure 2 illustrates the result of the structural model analysis, including path coefficients and R^2. Solid lines indicate significant relationships. Overall, eight hypotheses are supported. However, H2 and H9 are not supported.

Further, R^2 values are used as another important indicator of path model predictive power. In this study, about 52% of the variance of trust in streamer is explained by perceived product knowledge of streamers, value similarity and other members' endorsement (R^2 = 0.517). Approximately 52% variance of trust in product is explained by perceived product quality, brand awareness, and trust in streamer. Moreover, 52% of the variance of purchase intention is explained by trust in product and streamer, disposition of trust, prior transaction experience, gender and age, 35% of willingness to pay more is explained by trust in product and streamer.

5.3 Hypothesis testing and mediation effects

According to the antecedents of trust in product, we find perceived product quality has a positive effect on trust in product (β = 0.209***, t-value = 4.550), however, the

Table 3. Fornell–Larcker criterion results.

Construct	BA	ED	VS	PI	KN	PQ	TP	TS	WPM
BA	**0.816**								
ED	0.544	**0.846**							
VS	0.332	0.462	**0.810**						
PI	0.543	0.498	0.431	**0.840**					
KN	0.468	0.573	0.376	0.559	**0.851**				
PQ	0.631	0.601	0.398	0.583	0.629	**0.890**			
TP	0.475	0.631	0.406	0.625	0.543	0.555	**0.863**		
TS	0.481	0.647	0.525	0.527	0.550	0.541	0.661	**0.893**	
WPM	0.527	0.494	0.421	0.651	0.509	0.566	0.564	0.522	**0.882**

Notes: (1) Diagonal elements in bold are the square root of AVE; (2) VS: value similarity; BA: brand awareness; ED: other members' endorsement; PI: purchase intention; KN: perceived product knowledge of streamers; PQ: perceived product quality; TP: trust in product; TS: trust in live streamer; WPM: willingness to pay more.

Table 4. HTMT results.

Construct	BA	ED	VS	PI	KN	PQ	TP	TS	WPM
BA									
ED	0.635								
VS	0.413	0.591							
PI	0.650	0.611	0.560						
KN	0.558	0.690	0.479	0.692					
PQ	0.720	0.705	0.498	0.705	0.760				
TP	0.552	0.758	0.518	0.767	0.657	0.650			
TS	0.553	0.760	0.655	0.628	0.637	0.620	0.799		
WPM	0.610	0.585	0.532	0.819	0.606	0.657	0.668	0.604	

Notes: VS: value similarity; BA: brand awareness; ED: other members' endorsement; PI: purchase intention; KN: perceived product knowledge of streamers; PQ: perceived product quality; TP: trust in product; TS: trust in live streamer; WPM: willingness to pay more.

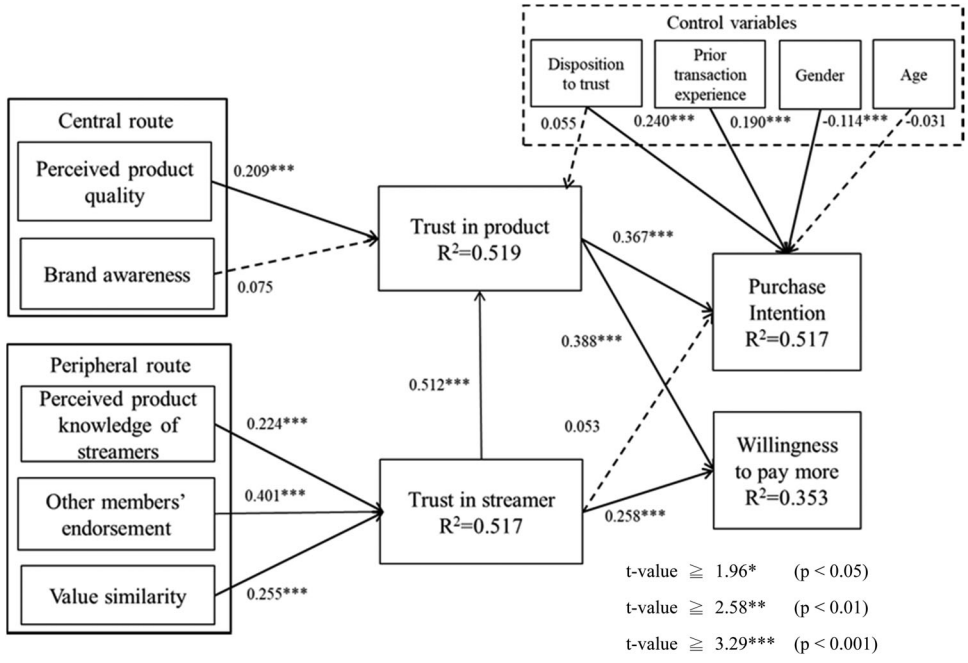

Figure 2 Results of path analysis.

effect of brand awareness (β = 0.075, t-value = 1.612) does not, supporting H1 but not H2. All the relationships between perceived product knowledge of streamers (β = 0.224***, t-value = 5.870), other members' endorsement (β = 0.401***, t-value = 11.452), value similarity (β = 0.255***, t-value = 7.232) and trust in streamer are significant (supporting H3, H4 and H5). As hypothesised, trust in streamer is shown to lead to trust in product (β = 0.512***, t-value = 10.842), supporting H6.

The relationships between trust in product and purchase intention (β = 0.367***, t-value = 7.372) and willingness to pay more (β = 0.388***, t-value = 8.063) are significant. Hence, H7 and H8 are supported. We find the relationship between trust in streamer and purchase intention (β = 0.053, t-value = 0.972) is not significant. Hence, H9 is not supported. The relationship between trust in streamers and willingness to pay more (β = 0.258***, t-value = 4.873) is significant. Therefore, H10 is supported.

Moreover, disposition to trust as a control variable has a positive effect on consumers' trust in product; however, it has no direct association with purchase intention. Regarding other control variables, we find consumer's prior transaction experience and gender have a positive effect on their purchase intention; however, age doesn't have significant effect on consumers' purchase intention. Table 5 shows the results of path analysis.

Mediation effects can be divided into partial and full mediation effects (Cheung and Lau 2008). PROCESS macro is used for mediation analysis (Hayes 2009). The summary of the mediation effect is shown in Table 6. We find trust in product (TP) and trust in streamer (TS) partially mediate the central route triggers and peripheral route triggers with purchases intention (PI) and willingness to pay more (WPM). For instance, PQ on PI is 0.505 (t-value=16.946) and PQ on WPM is 0.519 (t-value = 16.026). We find TP partially mediates the

Table 5. Results of path analysis.

Hypothesis	Coefficient	*t*-value	Supported
H1: Perceived product quality->Trust in product	0.209	4.550***	Yes
H2: Brand awareness->Trust in product	0.075	1.612	Not Supported
H3: Perceived product knowledge of streamers->Trust in streamer	0.224	5.870***	Yes
H4: Other members' endorsement->Trust in streamer	0.401	11.452***	Yes
H5: Value similarity-> Trust in streamer	0.255	7.232***	Yes
H6: Trust in streamer->Trust in product	0.512	10.842***	Yes
H7: Trust in product ->Purchase intention	0.367	7.372***	Yes
H8: Trust in product ->Willingness to pay more	0.388	8.063***	Yes
H9: Trust in streamer ->Purchase intention	0.053	0.972	Not supported
H10: Trust in streamer -> Willingness to pay more	0.258	4.873***	Yes

* $p < 0.05$; **$p < 0.01$;*** $p < 0.001$.

Table 6. Results of the mediating effect test.

	Total effect		Direct effect		Indirect effect		
						Bootstrap 95% CI	
Path	β	*t*-value	β	*t*-value	β	LLCI	ULCI
PQ→TP→PI	.505	16.946	.301	9.428	.204	.155	.262
PQ→TP→WPM	.519	16.026	.338	9.341	.182	.130	.246
BA→TP→PI	.406	14.988	.240	9.027	.166	.127	.211
BA→TP→WPM	.423	14.480	.272	9.062	.151	.111	.199
KN→TS→PI	.475	15.647	.328	9.627	.146	.106	.189
KN→TS→WPM	.459	13.615	.286	7.601	.173	.125	.224
ED→TS→PI	.421	13.149	.225	5.702	.196	.142	.251
ED→TS→WPM	.445	12.986	.237	5.609	.208	.140	.274
VS→TS→PI	.517	11.112	.257	5.106	.260	.199	.323
VS→TS→WPM	.539	10.780	.259	4.803	.279	.213	.349
TS→TP→PI	.469	14.434	.168	4.188	.301	.229	.380
TS→TP→WPM	.497	14.276	.246	5.485	.250	.187	.322

LLCI = Lower limit of confidence interval, ULCI = Upper limit of confidence interval.

impact of PQ on PI [direct effect = 0.301 (*t*-value = 9.428)]; [indirect effect = 0.204 (LLCI = 0.155, ULCI = 0.262)]. Furthermore, PQ not only increases WPM directly (direct effect = 0.338, *t*-value = 9.341), but also creates indirect impact trough TP (indirect effect = 0.182; LLCI = 0.130, ULCI = 0.246).

6. Discussion and implications

This study applies dual-process theories to investigate how livestreaming increases product sales and consumers' loyalty. Based on ELM and trust transfer theory, an integrated trust-based model is proposed, and an empirical analysis is done. Our findings show two different routes through which consumers' trust can be built to affect their purchase intention and willingness to pay more. Here we discuss several findings derived from our study, including theoretical and managerial implications.

6.1 Discussion of findings

This study demonstrates that trust plays a critical role in consumers' purchase intention and loyalty behaviour in livestreaming commerce, which is consistent with prior online trust-based research studies (e.g. Gefen 2000; Lim et al. 2006). There are two different types of trust in this study: trust in streamer and trust in product. The results show that trust in product and trust in streamer have different effects on influencing consumers' purchase intention and loyalty behaviour. Consumers' trust in product positively affects their purchase intention and willingness to pay more, supporting H7 and H8. However, concerning the effect of consumers' trust in streamer, we find it has a positive effect only on willingness to pay more, not on consumers' purchase intention, supporting H10, but not H9.

There are a few possible reasons for H9 not being supported in this study. First, according to Table 6, we find trust in product partially mediates the effect of trust in streamer on purchase intention. The total effect of trust in streamer on purchase intention is 0.469 (*t*-value = 14.434). Trust in streamer increases the indirect effect of purchase intention [indirect effect = 0.301(LLCI = 0.229, ULCI = 0.380] through trust in product. Trust in streamer also influences purchase intention [direct effect = 0.168 (*t*-value = 4.188)] directly. That is, the indirect effect is about twice that of the direct effect. Hence, the partial mediation of trust in product may lead to H9 not being supported. Moreover, the result of mediation testing also confirms that the trust transference effect exists in livestreaming commerce, from trust in streamer to trust in product.

Second, the results for H9 may also be affected by a moderating variable such as occupation. We find that trust in streamer had a significant positive impact on students' purchase intention ($\beta = 0.452^{***}$, *t*-value = 5.884), whereas no significant impact was detected for the non-student group (β = 0.031, *t*-value = 0.401). Hence, to stimulate students' willingness to buy in livestreaming commerce, we suggest that attractive, reliable streamers are more likely to attract young people to buy the recommended products.

Considering the overall model, we find consumers' purchase intention is mainly influenced by consumers'

trust in product ($\beta = 0.367^{***}$, t-value = 7.372). Regarding the antecedents of trust in product, both trust in streamer ($\beta = 0512^{***}$, t-value = 10.842) (H6) and perceived product quality ($\beta = 0.209^{***}$, t-value = 4.550) (H1) have positive effects on consumers' trust in product. Interestingly, trust in streamer has more than twice the effect of product quality on trust in product ($0.512 > 0.209$). In view of this, we suggest that streamers should not only focus on the quality of the products, but also pay more attention to enhance consumers' trust in themselves.

Moreover, consumers' willingness to pay more is more influenced by trust in product than trust in streamer ($0.388 > 0.258$). These findings are consistent with Petty and Cacioppo (1986), who show that cognitive cues through central route have more effective influence on consumers' attitude persuasion. Hence, if consumers trust the product, coupled with the recommendation of a trusted anchor, they may spend more money on the product, and these will increase their repurchase rate.

Regarding the antecedents of trust in streamer, we find that all the three factors (i.e. perceived product knowledge of streamers, other members' endorsement and value similarity) have significant effects on consumers' trust in the streamer, supporting H3, H4 and H5. These results confirm the findings of Liang, Wu, and Huang (2019) and Lim et al. (2006). Liang, Wu, and Huang (2019) indicate that funders' trust is more likely to be affected by fundraiser's expertise and a shared value similarity. In this study, other members' endorsement ($\beta = 0.401^{***}$, t-value = 11.452) (H4) has the largest effect size, while value similarity ($\beta = 0.255^{***}$, t-value = 7.232) (H5) is second and perceived product knowledge of streamers ($\beta = 0.224^{***}$, t-value = 5.870) (H3) is the third highest factor ($0.401 > 0.255 > 0.224$). This means that when consumers feel the streamer has a deep understanding of the product, comments from other members are positive and they have similar shared value or interests with streamers, their willingness to buy is increased.

Moreover, brand awareness is found to have no significant effect on consumers' trust in product ($\beta = 0.075$, t-value = 1.612) (H2). There are two possible reasons. One possible reason is the characteristics of products in livestreaming. Wongkitrungrueng and Assarut (2018) indicate that, in Asian livestreaming commerce, most products are small brands and sellers are customer-to-customer sellers. Thus consumers may have never heard of these small brands and their trust toward the unknown brand product is low. Another possible explanation may involve a moderating effect, such as gender. We found that brand awareness had a significant positive impact on female consumers' trust in product ($\beta = 0.173^{***}$, t-value = 2.963^{**}), whereas no significant impact was detected for males ($\beta = 0.047$, t-value = 0.323).

Finally, we verified that the trust transfer effect exists in livestreaming commerce, from consumers' trust in streamer to trust in product ($\beta = 0.512^{***}$, t-value = 10.842), which further influences their purchase intention and loyalty behaviour. The more consumers trust in the streamer, the more they trust in the product recommended in live streams. This finding is consistent with Park and Lin (2020), who state that consumers' positive attitude toward a celebrity will be transferred to the endorsed product. In this study, the transference effect's influence on consumers' purchase intention is about 0.187 ($0.512 \times 0.367 = 0.187$) and about 0.198 ($0.512 \times 0.388 = 0.198$) on willingness to pay more. Hence, this finding also explains why real-time social interaction can increase product sales. With the help of livestreaming, streamers can provide personalised demonstrations and answer potential consumers' questions more efficiently and effectively, which can reduce consumers' uncertainty and increase their trust and purchase intention (Chen et al. 2019).

6.2 Theoretical contribution

Our findings provide several contributions to the literature. First, we propose a comprehensive research model and demonstrate that trust is indeed a critical factor in explaining consumers' purchase intention and willingness to pay more in livestreaming commerce. This is consistent with previous studies illustrating that trust is indispensable in an online shopping context. Second, this study extends ELM to livestreaming commerce to understand consumers' trust building process. We apply ELM to study different trust antecedents (i.e. cognitive-based trust and affective-based trust) and find that factors associated with cognitive-based trust carry more weight than affective-based trust. This means that, when deciding whether to buy a product, potential consumers tend to consider the product quality more seriously. This is useful information for streamers about how to introduce products. These findings also enrich our knowledge of the underlying trust-building process in livestreaming commerce. Third, our framework extends prior research such as Wongkitrungrueng and Assarut's (2018) study which analysed factors of consumers' engagement in livestreaming commerce. This study goes beyond consumers' engagement and considers their purchase intention and loyalty behaviour. By considering multiple dimensions of trust, our findings reveal that both the central route and peripheral route can enhance consumers' purchase intention and loyalty behaviour. Finally, we demonstrate that the trust transfer effect exists in livestreaming commerce. What we find interesting is that, in our study, consumers' trust in streamer could transfer to their trust in

product; however, this contradicts the findings of Wongkitrungrueng and Assarut (2018). In their study, consumers' trust in product has a significant effect on their trust in streamers. The reason could be the differences in livestreaming content. However, as mentioned in their study, they mainly focus on examining live streams of fashion products; thus results might be different from those of utilitarian products (i.e. automobile parts or furniture). More studies should be done in future to add more perspective to trust transfer literature.

6.3 Managerial implications

Our findings show that consumers' trust in a product is the most important determinant of their purchase intention. To increase consumers' trust in product, we find that trust in streamer and perceived product quality are the major factors. We suggest that live streamers should choose and control the quality of the product themselves before livestreaming, which will decrease the probability of providing problematic products and increase consumers' trust in livestreaming products. More importantly, sellers should also pay more attention to enhance consumers' trust in the streamers. The findings of this study could explain that good quality products collaborating with famous streamers can create sales miracles in livestreaming commerce. For instance, Li Jiaqi, a top live streamer in China, once sold more than 15,000 lipsticks in five minutes on Taobao Live (Wang 2019).

Furthermore, we find different genders have different trust building mechanisms. For females, product quality and brand awareness are the two important determinants of their trust in the product, while males focus on mainly the product quality. Thus, during livestreaming, a streamer should evaluate the characteristics of viewers and then follow a suitable livestreaming strategy. If most viewers are female, streamers should not only emphasise the good quality of the products, but also stress the brand of the products. For instance, value propositions or brand stories are said to evoke consumers' familiarity and connection with the brand, which further increases female consumers' trust and purchase intention.

This study also verified that consumers' trust in streamer can be transferred to trust in product, which further influences consumers' purchase intention and loyalty behaviour. That is, the higher the consumers' trust in streamer, the higher their trust in product. In this study, regarding consumers' continuous buying from a streamer, we find that both trust in product and trust in streamer affect their willingness to pay more. Moreover, trust varies according to different occupations. Students are more likely to be persuaded by a streamer, compared with non-students. We therefore suggest that streamers' attractiveness – including their expertise, interests, and physical appearance – are important to increase young consumers' trust and loyalty behaviour.

6.4 Limitations and future research

Several limitations should be acknowledged in this study. First, convenience sampling is used to collect data. Future studies could use other methods, such as sampling from a platform's consumer database, which may provide a more accurate picture of users' behaviour. Second, we mainly discuss Chinese users' attitudes and their behaviour towards livestreaming commerce. Hence, future studies should extend research scope to other contexts to offer a more inclusive understanding of livestreaming commerce. Third, the product types may vary. Future studies could test the research model based on different product types such as search vs. experience goods and utilitarian vs. hedonic goods. Furthermore, in livestreaming commerce, some streamers collaborate with merchants to sell products, while other sellers broadcast their own products. Future studies should compare the difference effect between streamers who endorse their own product and those who broadcast for other brands.

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No potential conflict of interest was reported by the author(s).

ORCID

Qun Zhao http://orcid.org/0000-0003-3033-5410
Jin-Long Wang http://orcid.org/0000-0001-9240-5600

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Appendix A. Scales and measures

Construct	Items	Factor loading	VIF	Scale reference
Brand awareness (BA)	BA1: I know this brand.	0.812	2.255	Ke, Chen, and Su (2016)
	BA2: I have an opinion about this brand.	0.841	2.369	
	BA3: I am familiar with this brand.	0.844	2.193	
	BA4: I know what this brand stands for.	0.763	1.719	
	BA5: I can recognise this brand in the product class.	0.815	2.004	
Perceived product quality (PQ)	PQ1: I think this product can satisfy my demands.	0.836	1.878	Wu and Jang (2013)
	PQ2: I think the quality of this product appears as advertised.	0.909	2.691	
	PQ3: I think the total performance of this product is excellent.	0.923	2.890	
Perceived product knowledge of streamers (KN)	KN1: I feel this streamer is very knowledgeable about the product.	0.769	1.558	Suh and Chang (2006)
	KN2: If I want to purchase the product today, I would need gather very little information in order to make a wise decision.	0.895	2.008	
	KN3: I feel confident about the streamer's ability to judge the product quality.	0.884	1.986	
Other members' endorsement (ED)	ED1: I feel this streamer has been recommended by many other viewers.	0.872	1.791	Lim et al. (2006)
	ED2: The testimonials on the streamer are attractive to me.	0.805	1.695	
	ED3: The testimonials on the streamer are useful to me.	0.860	1.722	
Value similarity (VS)	VS1: The streamer and I have similar values.	0.822	1.516	Liang, Wu, and Huang (2019)
	VS2: The streamer and I have similar interests.	0.799	1.419	
	VS3: The streamer and I are similar in many ways.	0.809	1.465	
Trust in product (TP)	TP1: This product gives me a feeling of trust.	0.855	1.798	Gefen, Karahanna, and Straub (2003)
	TP2: I have trust in this product.	0.869	2.010	
	TP3: This product gives me a trustworthy impression.	0.864	1.895	
Trust in streamer (TS)	TS1: This streamer gives me a feeling of trust.	0.900	2.384	Gefen, Karahanna, and Straub (2003)
	TS2: I have trust in this streamer.	0.889	2.310	
	TS3: This streamer gives me a trustworthy impression.	0.890	2.295	
Purchase intention (PI)	PI1: I will consider livestreaming shopping as my first shopping choice.	0.843	1.644	Sun et al. (2019)
	PI2: I intend to purchase products or services through live streams.	0.802	1.592	
	PI3: I expect that I will purchase products or services through live streams.	0.873	1.920	
Willingness to pay more (WPM)	WPM1: I will remain a customer to purchase product from live streams even if the price is increased slightly.	0.939	3.120	Zhao, Chen, and Wang (2016)
	WPM2: I will remain a customer and continuously purchase new products from live streams.	0.925	3.011	
	WPM3: I will remain a customer prior to purchase products from live streams even if the price at other alternative outlets is slightly lower.	0.773	1.420	
Disposition to trust (DISP)	DISP1: I generally trust other people.	0.622	1.289	Liang, Wu, and Huang (2019)
	DISP2: I generally have faith in humanity.	0.799	1.724	
	DISP3: I feel that people are generally reliable.	0.807	2.668	
	DISP4: I generally trust other people unless they give me reasons not to.	0.895	1.466	
Prior transaction experience (PEX)	PEX1: Based on my experience, I am satisfied with the transaction processing in livestreaming shopping.	0.926	2.231	Yoon (2010)
	PEX2: I am satisfied with the product bought from livestreaming channel.	0.930	2.624	
	PEX3: On the whole, I am satisfied with livestreaming shopping.	0.924	2.807	

Appendix B. Correlation matrix of variables.

	BA	ED	VS	PI	KN	PQ	TP	TS	WPM	DISP	PEX	GEN	AGE	EDU	STU	EMP	UnEm	LONG	FRE	SPE
BA	1																			
ED	0.544**	1																		
VS	0.332**	0.462**	1																	
PI	0.543**	0.498**	0.431**	1																
KN	0.468**	0.573**	0.376**	0.559**	1															
PQ	0.631**	0.601**	0.398**	0.583**	0.629**	1														
TP	0.475**	0.631**	0.406**	0.625**	0.543**	0.555**	1													
TS	0.481**	0.647**	0.525**	0.527**	0.550**	0.541**	0.661**	1												
WPM	0.527**	0.494**	0.421**	0.651**	0.509**	0.566**	0.564**	0.522**	1											
DISP	0.403**	0.390**	0.266**	0.500**	0.261**	0.411**	0.357**	0.364**	0.494**	1										
PEX	0.458**	0.542**	0.421**	0.588**	0.637**	0.591**	0.630**	0.662**	0.613**	0.482**	1									
GEN	-.128**	-.115**	−0.069	-.241**	-.087*	-.135**	-.149**	-.095*	-.183**	-.158**	-.142**	1								
AGE	−0.009	0.029	−0.014	−0.010	0.012	0.042	0.013	0.009	0.021	0.035	0.031	−0.017	1							
EDU	0.031	0.002	−0.042	−0.003	0.010	−0.012	−0.006	−0.009	0.001	0.032	−0.009	0.044	-.087*	1						
STU	-.084*	−0.006	0.009	−0.048	−0.057	−0.015	−0.032	0.002	−0.009	−0.019	−0.026	0.000	−0.002	−0.013	1					
EMP	0.038	−0.017	−0.017	0.010	0.011	−0.025	0.007	−0.035	0.001	−0.042	−0.025	0.005	−0.018	0.055	-.829**	1				
UnEm	0.083	0.061	0.016	0.056	.093*	0.074	0.043	0.058	0.023	0.082	0.077	−0.003	0.018	−0.041	-.303**	-.205**	1			
LONG	−0.020	−0.069	0.048	0.017	−0.049	-.089*	−0.013	−0.002	0.039	−0.055	−0.042	0.062	−0.038	−0.026	0.002	0.016	0.009	1		
FRE	−0.046	−0.031	−0.030	−0.061	−0.025	−0.071	−0.039	−0.009	−0.061	−0.071	−0.043	0.019	0.077	−0.047	0.070	−0.034	−0.023	0.004	1	
SPE	0.021	0.045	0.021	−0.002	−0.038	−0.002	0.054	0.047	0.015	0.021	−0.007	0.019	0.003	-.090*	0.014	−0.056	0.076	0.004	0.029	1

Note: (1) * $p < 0.05$; ** $p < 0.01$;*** $p < 0.001$. (2) VS: value similarity; BA: brand awareness; ED: other members' endorsement; PI: purchase intention; KN: perceived product knowledge of streamers; PQ: perceived product quality; TP: trust in product; TS: trust in streamer; WPM: willingness to pay more; DISP: disposition to trust; PEX: past transaction experience; GEN: gender; AGE: age; EDU: degree; STU: student; EMP: employed; UnEm: unemployed; Long: how long have you used livestreaming commerce; FRE: Frequency per week. SPE: money spent per month.