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Building Streamers' Personal Brand Loyalty by the Brand Resonance Pyramid Model in Live Streaming Commerce

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Abstract

This study explores the issue of building streamers' personal brands from the brand resonance pyramid model. Brand loyalty brings benefits and lower viewers' wrong purchase decisions. Factors related to the context, streamers, and the community shape brand awareness and differentiate streamers' uniqueness. The uniqueness presented by streamers' credibility and the perceived value of live streamers' programs deepens viewers' emotional attachment toward the streamers. The close emotional attachment raises viewers' loyalty and then induces viewers to purchase the recommended products. Results from analyzing 1082 valid returned data collected by an online survey show the significant path from brand awareness, differentiation, emotional attachment, and loyalty to purchase intention. The atmospherics, streamer attractiveness, streamer admiration, and vicarious experience learning promote viewers' perceived credibility and distinct part of perceived value and then cultivate emotional attachment. The chained effects of emotional attachment, loyalty, and purchase intention are significant. Theoretical and managerial implications are also listed.

Keywords: Live Streaming Commerce, Brand Resonance Pyramid Model, Brand Loyalty, Atmospherics, Streamer Attractiveness, Streamer Admiration, Vicarious Experience Learning, Perceived Value, Perceived Credibility, Emotional Attachment

Introduction

Live streaming synchronously integrates real-time video and text-based chat rooms to allow users to participate in entertainment, social and commercial activities (Hilvert-Bruce et al., 2018; Zhang et al., 2020). In live streaming shows, streamers introduce products, demonstrate how to use these products, and interact with viewers. At the same time, both streamers and viewers could read all messages posted in the live streaming programs. The viewers could get overall information instantly, including product information, other viewers' opinion, and streamers' recommendation. The live streaming market has grown rapidly and is expanded from US\$30.29 billion in 2016, US\$42.60 billion in 2019, to US\$184.2 billion by 2027 (Grand View Research, 2020). Because of the growing live streaming market, many famous vloggers have become celebrities and produce attractive content to influence people to change their opinion, preference, perception, and even purchase decisions (Li et al., 2020). This trend also attracts retailers. For example, Amazon launched a live streaming shopping platform named Amazon Live in 2019. Instagram also launched a "Checkout" feature for a seamless shopping experience. Facebook (and Facebook Live) acquired a live shopping company called Packagd. Moreover, some luxury brands and H&M are trying to launch a live streaming platform as a retailing channel.

The prosperity of live streaming commerce attracts academic researchers' attention. Researchers explore viewers' watching intention (e.g., Chen & Lin, 2018; Lim et al., 2020), sharing information (e.g., Xu et al.,

2020), purchase intention (e.g., Cai et al., 2018; Park & Lin, 2020), impulse buying (e.g., Gong et al., 2020a), gifting (e.g., Guan, et al. 2019), customer engagement (e.g., Wongkitrungrueng & Assarut, 2018), and product brand equity (e.g., Hasim et al. 2020). The factors causing these behavioral outcomes could be classified into several facets, such as IT affordance and media richness (e.g., Hasim et al., 2020), motivation (Cai et al., 2018), interactivity (e.g., Hou et al., 2019; Kang et al., 2021), social interaction (e.g., Chen et al., 2019), parasocial interaction (e.g., Xu et al., 2020), streamers' characteristics and expertise (e.g., Hou et al., 2019), fitness (e.g., Park & Lin, 2020), perceived value (e.g., Wongkitrungrueng & Assarut, 2018), trust (Chen et al., 2021), brand-related factors (e.g., Liu et al., 2020; Teng et al., 2020), and relationship (Hou et al., 2020; Hu & Chaudry, 2020). Besides contextual and rational factors, researchers try to explain viewers' purchase intentions from the relationship between streamers and viewers. This research stream focuses on the brand endorsement of streamers. It explores products attitude and quality, emotional reaction and engagement (Ladhari et al., 2020), a match-up of streamers, products, lifestyle, and viewers (e.g., Park & Lin, 2020), or relationship management (e.g., trust, psychological distance, commitment) (Li et al., 2020).

Because of the exciting shopping environment, more and more streamers join this business and face fierce competition, but not all Internet celebrity streamers are successful. However, the live streaming commerce has a shortcoming: the return rate is very high. The reasons may come from viewers' temporary enthusiasm and engagement when watching the live streaming show. Viewers are easily affected by the atmospherics, streamers' performance, co-viewers' discussion, and purchasing behavior, and then impulsively place an order. Unfortunately, viewers suddenly regret purchasing, and they return the product after receiving it. This kind of behavior generates lots of loss for the seller and audience.

Because of fierce competition and high return rates, streamers could try to raise their human brand to maintain long-term viewers relationship. Hou et al. (2020) defined it as an "Internet celebrity streamer" who does not stick to one store or brand and could introduce a variety of products/services that are worth purchasing to his/her followers. This trend is growing, but literature seldom discusses this phenomenon from the sellers' points of view. We investigate this issue based on the brand resonance pyramid model. We propose that streamers' human brands could generate great influence because of a distinct brand identity and strengthen their competitive advantages. In addition, viewers having a close long-term relationship will not easily return purchased product streamers recommended.

Attractive streamers, which could be key and powerful opinion influencers, must develop a unique streaming style that could present their own personality and specialty and unreplaceable credibility or reputation, which could present a fair and authoritative image (Xu et al., 2020). Based on the human brand of streamers, streamers could collect many fans and followers and guide them to make purchase decisions. Following the above line of discussion, we intend to answer the following research questions to propose a reasonable explanation for viewers' brand loyalty and purchase intention:

1. *Do viewers follow the ladder steps of the brand resonance pyramid model (brand awareness, differentiation, emotional response, and brand loyalty) to form human brand loyalty towards live streamers?*
2. *Do viewers transfer their human brand loyal to live streamers to purchase products/services that live streamers sell in the live streaming commerce?*
3. *What factors are important at each step of the brand resonance pyramid mode in live streaming commerce? We consider factors from the context of live streaming, viewers' perceived perceptual of live streamers, and viewers' experience learning in the live streaming community at the step of brand awareness. We consider live streamers' perceived credibility and perceived value at the step of differentiation and emotional attachment towards live streamers at the step of emotional responses.*

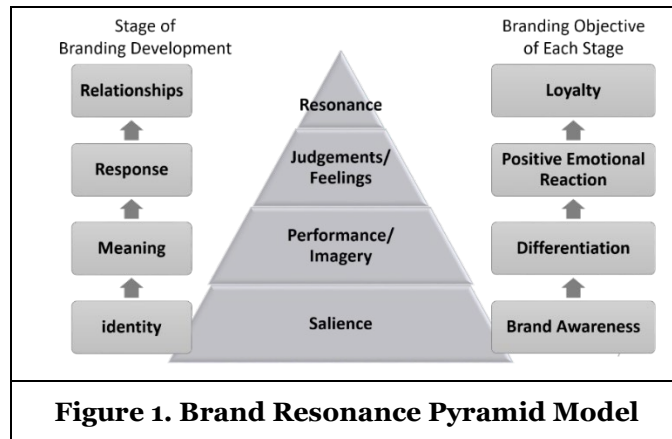
Literature Review and Hypotheses Development

This study investigates how to shape brand loyalty and purchase intention from live streamers' perspectives in live streaming commerce. We propose that live streamers can develop their human brand to cultivate loyal customers and improve their ability to persuade viewers to purchase products of any brand they recommend. Four sequential steps must be taken to achieve high brand loyalty based on the brand

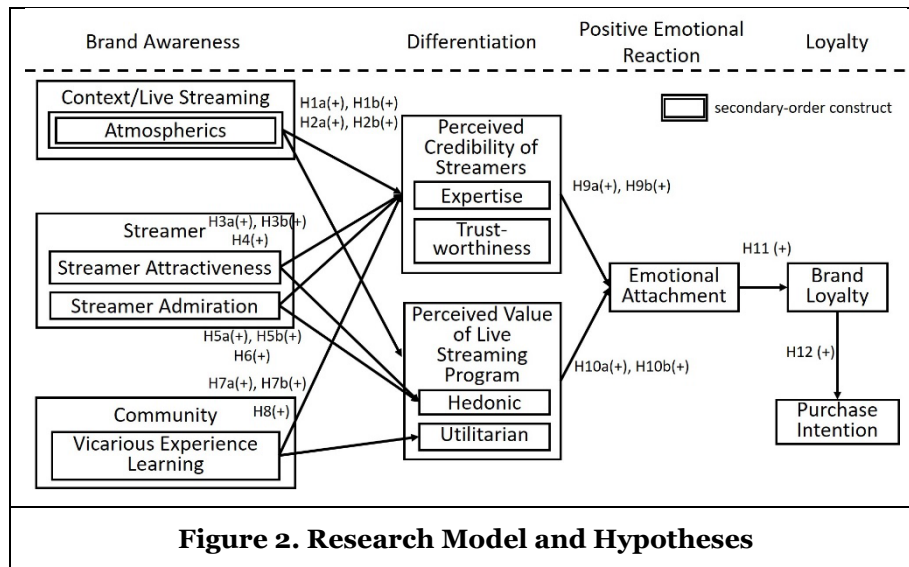
resonance pyramid model, including brand awareness, differentiation, positive emotional reaction, and loyalty, as shown in Figure 1. This research proposes different key factors in each step.

Brand Resonance Pyramid Model

The brand resonance pyramid model is a way to develop high brand equity (Keller, 2013). Consumers could have high brand loyalty by cultivating brand resonance. Consumers with high loyalty are usually willing to buy the brand's products/services, recommend it to others, and actively publicize the brand (Keller, 2013). When a brand has high brand loyalty in consumers' minds, the brand has high brand equity (Kotler & Keller, 2016). The increased brand equity could help consumers easily recognize products/services, accept new products/services, and repurchase them. The brand resonance model is shown in Figure 1. Dual routes could perform this model, including the rational route on the left side of the pyramid and the emotional route on the right side.



The first step, brand salience, aims to ensure customers can identify the brand by highlighting the brand's characteristics. This step builds brand awareness and lets consumers know who the brand is. The second step, brand performance/imagery, aims to leave the brand meaning in customers' minds based on consumers' experience of products/service performance and effectiveness and how well this brand meets consumer needs to establish a connection between brand associations and brand impression. The third step aims to establish an emotional connection to the brand based on customers' responses to their positive evaluation of it. The final step is shaping brand resonance and establishing a close, long-term, and loyal relationship. For example, streamers could be human brands and establish their brand resonance pyramid model. Following brand resonance, streamers could enhance their brand awareness by creating unique live streaming channels with high-quality, professional, trustworthy images. The live streaming programs on this channel could contribute to viewers' cognitive and emotional needs and make a meaningful association between viewers and streamers' brands. After repeatedly reinforcing viewers' emotional attachment to streamers' brands, the long-term loyalty relation could be finally established. Based on the uniqueness of streamers' human brand, viewers are willing to pay extra costs for this brand. This research proposes different key factors in each step, as shown in Figure 2.



Step 1: Brand Awareness

Brand awareness could be achieved by strengthening the uniqueness of streamers and live streaming programs. This study considers factors of setting up a distinct live streaming program from three aspects of the context, a streamer and the social community. This study includes live streaming atmospherics as contextual factors, streamer attractiveness, stream admiration as streamer-related factors, and vicarious experience learning as societal factors. This study pays attention to viewers' perception of contextual atmospherics because contextual atmospherics could differentiate the uniqueness of one streamer from others. This study pays attention to the learning effect towards products/service knowledge because the viewers' objective of joining a live streaming program is to fulfill some needs, such as product knowledge or other experiences.

Context: Live Streaming Atmospherics

Web atmospherics refers to the wittingly designing for managing environments of the websites, and it could induce users' positive affect and cognition and then increase favorable consumers' responses towards the web environments (Dailey, 2004; Koo & Ju, 2010). Rayburn & Voss (2013) defined web portals' atmospherics as providing users with efficacy, ease of navigation, entertainment, and high website information quality. Live streaming atmospherics provides users with an environment where they can easily follow streamers' presentations, acquire appropriate products/service information, see all responses between streamers, viewers, and co-viewers, and enjoy the program. Web atmospherics were classified into informativeness, navigation, organization, and entertainment (e.g., Hsieh et al., 2014). The other research stream classified web atmospherics into informativeness and effectiveness, which could help users achieve their objectives on web pages (Gao & Bai, 2014). Eroglu et al. (2003) proposed that the informativeness and effectiveness of the information contained on the websites are related to facilitating shopping goals achievement, while site entertainment is related to consequential to the completion of the shopping task. This study pays attention to informativeness, effectiveness, and entertainment because streamers could only control the live streaming programs' informativeness, information quality and effectiveness, and fun. Viewers could easily alter the way of navigation and organization of programs by themselves in live streaming commerce.

Lee & Kim (2019) showed that high mobile app atmospherics leads to users' positive effects and increase users' favorable responses. If viewers perceive high atmospherics in the live streaming show, they will have positive responses and gratification towards the content that the live streamer presented in this program. Because informativeness and entertainment of atmospherics could promote viewers' positive affect and cognition and favorable response, we propose that perceived value (positive affect and cognition) and perceived credibility (favorable response) could be increased. Perceived credibility includes sources' reliability and trustworthiness (Rogers & Bhowmik, 1970; Sokolova & Kefi, 2020). So, we consider

streamers' expertise and trustworthiness as perceived credibility in this study. Hence, we propose the following:

H1a: Viewers' perceived atmospherics (informativeness, effectiveness, and entertainment) of a live streamer's show in live streaming commerce is positively associated with viewers' perceived expertise towards this streamer.

H1b: Viewers' perceived atmospherics (informativeness, effectiveness, and entertainment) of a live streamer's show in live streaming commerce is positively associated with viewers' perceived trustworthiness towards this streamer.

H2a: Viewers' perceived atmospherics (informativeness, effectiveness, and entertainment) of a live streamer's show in live streaming commerce is positively associated with viewers' perceived hedonic value towards the programs of this streamer.

H2b: Viewers' perceived atmospherics (informativeness, effectiveness, and entertainment) of a live streamer's show in live streaming commerce is positively associated with viewers' perceived utilitarian value towards the programs of this streamer.

Streamer: Streamer attractiveness and admiration

We propose streamers' attractiveness and admiration could be the main factors of streamers. We think viewers' good impression of streamers depends on an overall evaluation of the image, presentation, conversion, lifestyle, and so on. Attractiveness and admiration are the outcomes of the overall evaluation.

Xu et al. (2020) indicated that streamer attractiveness is a critical stimulus in live streaming commerce, which could induce viewers' positive perception of the content of live streaming programs. They think that attractive streamers, being a charming actor, could provide viewers with fantastic experiences and a feeling of enjoyment and, in turn, increase viewers' engagement in the live streaming program (Xu et al., 2020). Streamer attractiveness is defined as viewers' perception of streamers' personality, appearance, and talent when joining a live streaming channel (Ha & Lam, 2017). An attractive streamer could easily be convinced about product information usefulness in live streaming commerce or influence viewers' opinions and evaluation (Joseph, 1982; Xu et al., 2020). Source attractiveness is an affection for the source and directly influences the message's effectiveness (Singer, 1983). Previous studies reveal the positive effect of streamers' attractiveness on perceived credibility, brand attitude, and purchase intentions (Park & Lin, 2020; Sokolova & Kefi, 2020). Hence, we propose the following:

H3a: Viewers' perceived attractiveness towards a live streamer in live streaming commerce is positively associated with viewers' perceived expertise towards this streamer.

H3b: Viewers' perceived attractiveness towards a live streamer in live streaming commerce is positively associated with viewers' perceived trustworthiness towards this streamer.

H4: Viewers' perceived attractiveness towards a live streamer in live streaming commerce is positively associated with viewers' perceived hedonic value towards the programs of this streamer.

Admiration towards an object could increase people's intimacy, trust, and emotional commitment (Rudd et al., 2012). Online influencers could persuade viewers who admire them to follow their recommendations (Sokolova & Kefi, 2020). Gong et al. (2020a) pointed out that viewers may have a sense of admiration toward streamers when watching live streaming shows. Admiration from the field of psychology could also be considered in the field of management and represents a uniquely human emotion (Haidt & Seder, 2009). Admiration means that an individual shows respect to someone or something deemed worthy of praise (Schindler et al., 2013). Hence, we propose the following:

H5a: Viewers' perceived admiration towards a live streamer in live streaming commerce is positively associated with viewers' perceived expertise towards this streamer.

H5b: Viewers' perceived admiration towards a live streamer in live streaming commerce is positively associated with viewers' perceived trustworthiness towards this streamer.

H6: Viewers' perceived admiration towards a live streamer in live streaming commerce is positively associated with viewers' perceived hedonic value towards the programs of this streamer.

Community: Vicarious experience learning

Vicarious experience learning indicates that an individual learns from observing others' or a model's behaviors and outcomes they experienced (Gioia et al., 1985). Vicarious experience learning is a learning process and could come from streamers and other viewers in the live streaming environment. The first refers to a streamer's shopping experience for purchasing and using the same product by demonstrating the celebrity's own consumption experience of using products (Chen et al., 2019). The other refers to all conversation messages that happened in real-time from streamers and co-viewers, such as questions, personal needs, and from co-viewers' experience, as well as streamers' answers, opinions, and consumption experiences (Li et al., 2020). Live streaming vicarious experience learning could give viewers unhidden, authentic, visible, complete information about the consumption experience.

Literature reveals that vicarious experience learning increases personal knowledge of products/services (Li et al., 2020). The vicarious experience learning could increase customers' perceived reliability towards celebrities/streamers and increase product value (Wongkitrungrueng & Assarut, 2018). When customers choose products that other consumers have bought, they may obtain above-average advantages in the context of social commerce (Chen et al., 2021). Ye & Fang's (2013) study confirmed that eWOM and purchase history records of previous customers reflect sellers' credibility and reputation. Hence, we propose the following:

H7a: Viewers' perceived vicarious experience learning in live streaming commerce is positively associated with viewers' perceived expertise towards this streamer.

H7b: Viewers' perceived vicarious experience learning in live streaming commerce is positively associated with viewers' perceived trustworthiness towards this streamer.

H8: Viewers' perceived vicarious experience learning in live streaming commerce is positively associated with viewers' perceived utilitarian value of this streamer programs

Step 2: Differentiation

This step aims to distinguish own brand from others. The brand has to emphasize the brand's efficacy and how well the brand satisfies the needs of the consumer and then provide the consumer with an intangible association based on some special meanings which could present this brand. Accordingly, this study includes perceived credibility and perceived value to represent the consumers' perceived uniqueness towards the human brand, i.e., the streamers.

Perceived credibility: Expertise and Trustworthiness

Researchers defined source credibility in live streaming commerce as the level of effectiveness towards the messages delivered by streamers and proposed, which is determined by streamers' trustworthiness and expertise (Erdogan, 1999; Park & Lin, 2020). Trustworthiness indicates viewers' perception of the streamers' reliability, integrity, and honesty (Erdogan, 1999). Expertise indicates viewers' perception of the streamers' profession and knowledge (Erdogan, 1999). If streamers' performance is professional, trustworthy, honest, and knowledgeable, viewers tend to have a positive attitude and higher intentions (Sokolova & Kefi, 2020). Wang (2007) stated that credibility is an antecedent of building guanxi, a close, committed relationship. Emotional attachment, which indicates a psychological state of emotional connection with co-viewers and streamers, is similar to swift guanxi. Hence, we propose the following:

H9a: Viewers' perceived expertise of a live streamer is positively associated with viewers' emotional attachment towards this streamer in live streaming commerce.

H9b: Viewers' perceived trustworthiness of a live streamer is positively associated with viewers' emotional attachment towards this streamer in live streaming commerce.

Perceived value: Hedonic and Utilitarian value

Perceived value is an individual's perceived overall valuation of particular objects or activities based on a cost-benefit trade-off (Zeithmal, 1988). In live streaming, Chen & Lin (2018) defined perceived value as the total benefits viewers perceive from watching live-stream media, such as pleasure, enjoyment, a close

relationship with homophily, or the enhancement of personal knowledge. The perceived value comprises hedonic and utilitarian values (e.g., Hsu & Lin, 2016). Singh et al. (2020) indicated that perceived value combined with convenience, function, monetary, and entertainment enhance continuous usage intention of live stream service. Viewers perceive high value if their needs are fulfilled at their expected level (Chen et al., 2021). If viewers could receive high benefits from watching streaming programs, they tend to increase the frequency and closeness of communication. Through intensive interaction, viewers could gradually deepen their attachment to the streamers and their programs and shape a strong affective bond (Chen et al., 2021). However, we propose that a closer relationship should be first achieved before reuse intention when users have a high valuation on service. The higher the value perceived, the closer would be the long-term relationship and emotional impact (Zhuang et al., 2010). Wongkitrungrueng & Assarut's study (2018) showed that customers' perceived value positively correlates with viewers' engagement in live streaming commerce. Hence, we propose the following:

H10a: Viewers' perceived hedonic value of a live streamer is positively associated with viewers' emotional attachment towards this streamer in live streaming commerce.

H10b: Viewers' perceived utilitarian value of a live streamer is positively associated with viewers' emotional attachment towards this streamer in live streaming commerce.

Step 3: Positive Emotional Reaction

This step aims to shape viewers' positive attitudes and perceptual feelings by evaluating streamers' trustworthiness, expertise, and value. This step focuses on positive emotional responses toward the streamers' human brand.

Emotional attachment

Emotional attachment refers to a bond built and an emotional feeling-laden bond between individual and other members of a community (Ladhari et al., 2020). Customer engagement is similar to emotional attachment and is defined as an emotional connection between customers and brands (Moliner et al., 2018) in literature. Streamers could be treated as human brands, and viewers could strongly attach to a streamer or a celebrity with strong feelings of affection, love, or passion when this human brand could fulfill viewers' needs (Ladhari et al., 2020).

Emotional attachment is a predictor of enhancing customers' purchase decisions (Bagozzi et al., 1999), loyalty (Lim et al., 2015), and continuous usage (Hu & Chaudhry, 2020). The positive relationship between emotional attachment and behavioral engagement, such as loyalty, popularity, and brand purchase likelihood is also confirmed in the context of live streaming (e.g., Hilvert-Bruce et al., 2018; Kowalczyk & Pounders, 2016; Ladhari et al., 2020). Hence, we propose the following:

H11: Viewers' emotional attachment to a live streamer is positively associated with viewers' brand loyalty towards this streamer in live streaming commerce.

Step 4: Loyalty

Viewers will convert their emotional response to intense and active loyalty at this step. Streamers could maintain a close and long-term relationship with viewers if they could lead viewers to follow the ladder to this stage. In addition, this study considers the transfer effect between human brand loyalty and product purchase intention even though a streamer is represented as a retailing channel, as a spokesperson of product endorsement, or as an own extended product brand. Brand loyalty could last long and always lead consumers to purchase products of this specific brand (Oliver, 1999). Loyal consumers could bring companies large profits and market share because of customers' frequent repurchasing, more volume purchasing, and positive word-of-mouth communication (Ahmad, 2011). Brand-loyal customer usually tends to buy a product with the same brand, and not easy to change to buy other brands (Liu et al., 2020). Hence, we propose the following:

H12: Viewers' brand loyalty towards a live streamer is positively associated with viewers' purchase intention of products/services this streamer recommended in live streaming commerce.

Research Design

We conducted an online survey with a compliant self-administrative web-based questionnaire for data collection in the context of Facebook, YouTube, and Instagram. We provided monetary incentives to encourage respondents' participation. We designed screening questions to ensure that only respondents with experience in live streaming commerce could answer the questionnaire. We eliminated duplicate or unqualified responses after checking the data. The instrument of constructs are developed based on pre-validated measurements in literature and are revised by using live streaming or live streamers in the statements to fit our research context. The number of measurement items and sources in each construct are shown in Table 1.

A pretest was conducted to pursue the feasibility of data collection and the content validity of the instrument. Following the results of the pretest, we revised the wording and ordering arrangement of measurement items. The process of the questionnaire works as follows: (1) experience of watching online streaming programs and purchasing products endorsed in online streaming programs; (2) perception of one dedicated online streamer and watching this streamer's programs; (3) affective attachment, loyalty and purchase intention towards this streamer and recommended products; (4) demographics. To increase the validity of returned data, we arranged one question for testing respondents' concentration and some items for soliciting qualified respondents.

One thousand and eighty-two returned data were included in the data analysis. All respondents have experience watching online streaming programs and purchasing products sponsored by live streamers. Respondents are comprised of 36.9% male and 62.8% female. Over 80% of respondents watch online-streaming programs 1-5 times per week and take 30 minutes to 2 hours per time. Almost 80% of respondents buy products sponsored by streamers 1-10 times and spend 100-1000 NTD per time. This result indicates that respondents are all experienced in watching programs and purchasing products in an online-streaming context.

Data Analysis and Results

Measurement Model

The measurement model is assessed by SmartPLS 4. Atmospherics is a reflective-reflective high-order construct. We conducted a repeated-measure method for testing it. We deleted six items because of high cross loadings, including three items in three sub-dimensions of informativeness, effectiveness, and entertainment, one in purchase intention, and two on loyalty. The reliability and convergent validity of data comply with the criteria, as shown in Table 1. The composite reliability and average extracted variance (AVE) and ρ_A are above the threshold suggested by Bagozzi & Yi (1988) and Dijkstra and Henseler (2015): 0.7, 0.5, and 0.7, respectively. The factor loadings of the remaining items are all above the acceptable level of 0.7 and significant ($p < 0.001$), ranging from 0.717 to 0.894. The discriminant validity also complies with the criteria, following Fornell & Lacker's (1981) criterion and HTMT. Table 2 shows the results of the discriminant validity. The Heterotrait-Monotrait ratio (HTMT) value is all smaller than 0.9, ranging from 0.514 to 0.869. There is no collinearity bias because all the VIF value is below 5, as shown in Table 1. Hair et al. (1995) suggested that the VIF value of measurement items should be below 10 to be free from multicollinearity. The common method bias will be free if the VIF value of constructs is smaller than or equal to 3.3, suggested by Kock (2015). The VIF value of all constructs, ranging from 1 to 3.288, indicates no common method bias in this study.

Constructs (Source)	Items	Factor Loading	p-value	Variance inflation factor (VIF.)	Cronbach's alpha	Composite reliability	The average variance extracted (AVE)
Atmospherics_ Informativeness (Gao & Bai, 2014)	Atm_infor1	0.866***	0.000	1.974	0.836	0.901	0.753
	Atm_infor2	0.885***	0.000	2.087			
	Atm_infor3	0.852***	0.000	1.833			

Atmospherics_ Effectiveness (Gao & Bai, 2014)	Atm_Effec2	0.813***	0.000	1.802	0.842	0.894	0.678
	Atm_Effec3	0.825***	0.000	2.070			
	Atm_Effec4	0.849***	0.000	2.181			
	Atm_Effec5	0.807***	0.000	1.743			
Atmospherics_ Entertainment (Gao & Bai, 2014)	Atm_Entert1	0.825***	0.000	2.188	0.829	0.886	0.661
	Atm_Entert2	0.792***	0.000	1.755			
	Atm_Entert3	0.823***	0.000	1.831			
	Atm_Entert4	0.811***	0.000	1.917			
Streamer Attraction (Xu et al., 2020)	Streamer_Attr1	0.803***	0.000	1.704	0.822	0.883	0.654
	Streamer_Attr2	0.850***	0.000	2.083			
	Streamer_Attr3	0.839***	0.000	1.982			
	Streamer_Attr4	0.737***	0.000	1.496			
Steamer Admiration (Gong et al., 2020b)	Streamer_Admir1	0.777***	0.000	2.505	0.895	0.918	0.614
	Streamer_Admir2	0.788***	0.000	2.006			
	Streamer_Admir3	0.778***	0.000	2.127			
	Streamer_Admir4	0.802***	0.000	1.990			
	Streamer_Admir5	0.772***	0.000	2.202			
	Streamer_Admir6	0.786***	0.000	2.153			
	Streamer_Admir7	0.780***	0.000	2.176			
Experience_ Learning (Ju & Cho, 2020; Li et al., 2021)	Experience_Learn1	0.804***	0.000	1.931	0.852	0.891	0.576
	Experience_Learn2	0.781***	0.000	2.039			
	Experience_Learn3	0.721***	0.000	2.127			
	Experience_Learn4	0.776***	0.000	1.698			
	Experience_Learn5	0.752***	0.000	1.905			
	Experience_Learn6	0.717***	0.000	1.827			
Trustworthiness (Gong & Li, 2017)	Source_Trust1	0.843***	0.000	1.554	0.887	0.922	0.747
	Source_Trust2	0.886***	0.000	2.123			
	Source_Trust3	0.857***	0.000	2.576			
	Source_Trust4	0.871***	0.000	2.344			
Expertise (Gong & Li, 2017)	Source_Expert1	0.829***	0.000	1.890	0.868	0.91	0.717
	Source_Expert2	0.852***	0.000	2.140			
	Source_Expert3	0.856***	0.000	2.206			
	Source_Expert4	0.850***	0.000	2.170			
Hedonic Value (Hsu & Lin, 2016)	PV_Hedo1	0.852***	0.000	1.824	0.841	0.904	0.759
	PV_Hedo2	0.882***	0.000	2.165			
	PV_Hedo3	0.879***	0.000	2.081			
	PV_Utili1	0.840***	0.000	2.026	0.864	0.908	0.71
	PV_Utili2	0.847***	0.000	2.127			

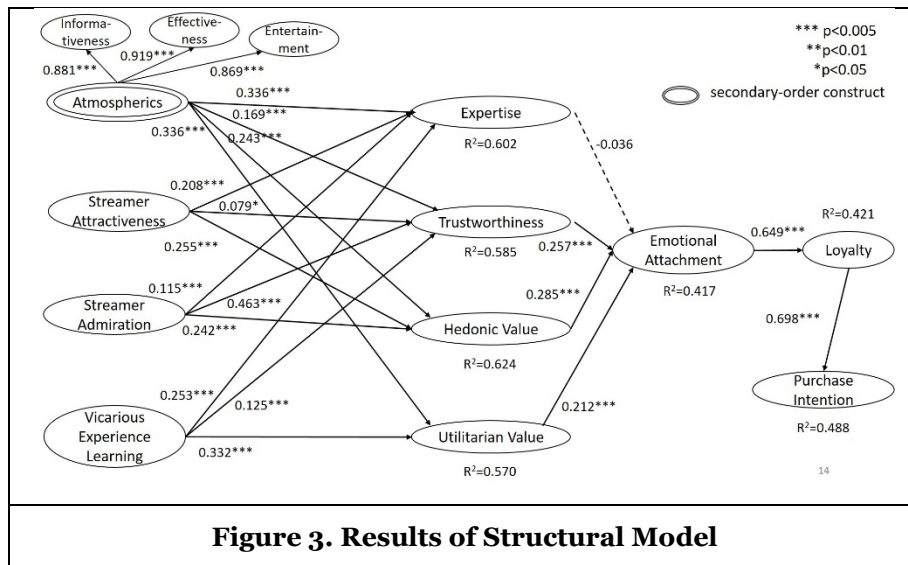
Utilitarian Value (Hsu & Lin, 2016)	PV_Utili3	0.863***	0.000	2.267			
	PV_Utili4	0.821***	0.000	1.903			
Emotional Attachment (Li et al., 2021; Lim et al., 2020)	Emot_Atta1	0.746***	0.000	1.777	0.897	0.919	0.618
	Emot_Atta2	0.789***	0.000	2.265			
	Emot_Atta3	0.744***	0.000	1.917			
	Emot_Atta4	0.808***	0.000	2.297			
	Emot_Atta5	0.804***	0.000	2.733			
	Emot_Atta6	0.822***	0.000	3.004			
	Emot_Atta7	0.786***	0.000	2.226			
Loyalty (Lim et al., 2015)	Brand_Loyal2	0.874***	0.000	1.468	0.722	0.878	0.782
	Brand_Loyal4	0.894***	0.000	1.468			
Purchase Intention (Part & Lin, 2020)	Purch_Int1	0.870***	0.000	1.994	0.834	0.9	0.75
	Purch_Int2	0.872***	0.000	1.982			
	Purch_Int3	0.857***	0.000	1.832			
Table 1. Reliability, Convergent Validity, and Collinearity							

	A_Info	A_Eff	A_Ent	St_At	St_Ad	Exp_L	Tru	Exper	PV_H	PV_U	Em_At	Loy	P_Int
A_Info	0.868												
A_Eff	0.747	0.824											
A_Ent	0.636	0.683	0.813										
St_At	0.654	0.662	0.696	0.808									
St_Ad	0.638	0.649	0.616	0.742	0.784								
Exp_L	0.655	0.654	0.604	0.683	0.719	0.759							
Tru	0.603	0.636	0.502	0.640	0.736	0.637	0.864						
Exper	0.637	0.680	0.598	0.683	0.657	0.685	0.712	0.847					
PV_H	0.608	0.637	0.662	0.722	0.701	0.680	0.664	0.682	0.871				
PV_U	0.641	0.652	0.577	0.642	0.687	0.685	0.696	0.691	0.726	0.843			
Em_At	0.456	0.451	0.443	0.511	0.653	0.582	0.569	0.489	0.585	0.573	0.786		
Loy	0.542	0.536	0.504	0.597	0.676	0.622	0.598	0.571	0.644	0.623	0.649	0.884	
P_Int	0.597	0.608	0.511	0.608	0.718	0.645	0.720	0.657	0.676	0.729	0.661	0.698	0.866
Table 2. Discriminant Validity – Fornell-Larcker													

Note 1: A_Info: Atmospherics_Informativeness; A_Eff: Atmospherics_Effectiveness; A_Ent: Atmospherics_Entertainment; St_At: Streamer Attraction; St_Ad: Steamer Admiration; Exp_L: Experience_Learning; Tru: Trustworthiness; Exper: Expertise; PV_H: Hedonic Value; PV_U: Utilitarian Value; Em_At: Emotional_Attachment; Loy: Loyalty; P_Int: Purchase Intention

Hypotheses Testing

The structure model is analyzed by SmartPLS 4. The results show almost only H3a, H3b, and H11a are unsupported and other relationships are significant, as shown in Figure 2. The R-square of perceived expertise, trustworthiness, hedonic value, and utilitarian are all greater than 0.5, ranging from 0.570-0.624. It shows that the five antecedents strongly affect expertise, trustworthiness, hedonic value, and utilitarian value, which could differentiate online streamers from others. Atmospherics mainly increase perceived expertise towards online streamers and utilitarian value towards online streaming programs. Streamer attractiveness primarily increases audiences' perceived hedonic value toward online streaming programs, but streamer admiration enhances perceived trustworthiness toward online streamers. Audiences' experience increases increase their perceived utilitarian value towards online streaming programs. Perceived trustworthiness, hedonic value, and utilitarian value have similar effects on improving audiences' emotional attachment to online streamers, and their explanatory power is summed at 0.417. The sequence effects from emotional attachment and loyalty to purchase intention are all greater than 0.6, and the values of R-square are 0.412 and 0.488, respectively. We checked the value of SRMR (Standardized Root Mean Square Residual) for assessing the model fit of the full model because Henseler et al. (2014) suggested SRMR is a good indicator of model fit. The SRMR of this model is 0.046, which is acceptable based on the criterion, smaller than 0.08, proposed by Hu and Bentler (1999). The NFI is 0.812, which is below but close to the criterion of 0.9. So, the assessment of model fit could be acceptable. The mediating effects of exogenous variables on purchase intention indicate that trustworthiness, hedonic value, utilitarian value, and emotional attachment are important mediators for shaping the viewers' loyalty and purchase intention. The results are shown in Table 3. The brand resonance model is an ascending series of steps for brand building. The mediating effects could demonstrate a similar process of brand building.



	Mediation Effects (**p<0.05)
Atmospherics -> Trustworthiness -> Emot_Attach -> Loyalty -> Pur_Intention	0.020**
Atmospherics -> PValue_Hedonic -> Emot_Attach -> Loyalty -> Pur_Intention	0.031**
Atmospherics -> PValue_Utili -> Emot_Attach -> Loyalty -> Pur_Intention	0.032**
Streamer_Attract -> PValue_Hedonic -> Emot_Attach -> Loyalty -> Pur_Intention	0.033**
Streamer_Admir -> Trustworthiness -> Emot_Attach -> Loyalty -> Pur_Intention	0.054**
Streamer_Admir -> PValue_Hedonic -> Emot_Attach -> Loyalty -> Pur_Intention	0.031**
Experience_Learn -> Trustworthiness -> Emot_Attach -> Loyalty -> Pur_Intention	0.015**

Experience_Learn -> PValue_Utili -> Emot_Attach -> Loyalty -> Pur_Intention	0.032**
Trustworthiness -> Emot_Attach -> Loyalty -> Pur_Intention	0.117**
PValue_Hedonic -> Emot_Attach -> Loyalty -> Pur_Intention	0.129**
PValue_Utili -> Emot_Attach -> Loyalty -> Pur_Intention	0.096**
Emot_Attach -> Loyalty -> Pur_Intention	0.453**
Table 3. Mediation Effects	

Discussion and Implication

Conclusions

Based on the brand resonance pyramid model, this study investigates viewers' loyalty toward live streamers and purchase intention in live-streaming commerce. Four main findings are drawn.

1. Results of the hypotheses test and mediating effects demonstrate the significant paths of the brand resonance pyramid model. The brand awareness from the streamers, context, and streaming programs facilitates viewers to identify the differences between live streamers. The uniqueness of live streamers induces viewers' positive emotional reactions, and the positive emotional attachment raises their loyalty toward the live streamers. In the end, loyal viewers are willing to purchase the recommended products by the live streamers.
2. Components of brand awareness from the streamers, context, and streaming programs exert variant influences on identifying streamers' uniqueness. The R-square of expertise, trustworthiness, hedonic value, and utilitarian value are all larger than 0.5 and show the great influence of streamers, context, and live streaming programs related factors.
 - (1) Keeping streamers' images and persona is very important. Viewers could differentiate streamers from other competitors in their expertise and trustworthiness by live streamers' specific attractions and viewers' admiration. Viewers could also increase their fun of watching live streaming programs.
 - (2) Streamers' capability of running atmospherics of live streaming programs, including informativeness, effectiveness, and entertainment, is vital to improving streamers' credibility and the usability and enjoyment of following streamers' programs. Among three sub-dimensions, the effectiveness of content in making purchasing decisions is crucial.
 - (3) Viewers' vicarious experience learning from streamers' demonstration of recommended products when watching programs facilitates viewers' trustworthiness and expertise toward the streamers and their rational evaluation of utilitarian value. Viewers could learn how, when, and where to use the recommended products to increase their confidence in the streamers.
3. Only trustworthiness, hedonic, and utilitarian values positively influence viewers' emotional attachment. The emotional attachment presents viewers' liking and love for the streamers and their programs. Live streamers' expertise can't induce their emotional attachment. It may be because the streamers' expertise could be appreciated, but it couldn't arouse the viewers' love.
4. The series path of emotional reaction, loyalty, and purchase intention are robust because of the large path coefficient (>0.6) and R-squared (40%). The power of explained variance on expertise, trustworthiness, hedonic value, and utilitarian value are all great (>50%). It indicated that the antecedents we consider in this study are critical to improving distinct building identification.

Academic Implication

According to these findings, there are several academic implications.

1. This study shows the appropriate application of the Brand Resonance Pyramid Model in cultivating human brand loyalty in the literature. The Brand Resonance Pyramid Model is usually applied in

studies of the marketing area. The live streamers could build their personal brands and exert long-term influences on the viewers instead of temporary arousal excitement and impulsive purchases, which may quickly extinguish the audience's enthusiasm. Building streamers' own brands could maintain the popularity of live streaming programs, exert personal influence on viewers' purchase decisions, and increase personal brand equity.

2. This study presents that the influence of curation, planning, and management of live streaming shows is an important means to attract viewers' attention. However, the influence of streamers' charm is not the most essential factor. Literature usually focuses on the characteristics of streamers and emphasizes their influence on behavioral outcomes, such as Xu et al. (2020) and Gong et al. (2020a).
3. This study shows the insignificant effect of expertise on emotional attachment, contrary to past studies. Hou et al.'s study (2019) shows the association of expertise of behavioral outcomes in live streaming. The primary considerations are whether the streamers are trustworthy and whether the demonstration of using recommended products in the streaming programs is fun and valuable.
4. The research model was developed following each step's branding objective (Figure 1). Results reveal the chained effects of emotional attachment, brand loyalty, and purchase intention in live streaming commerce. It implies that a well-designed live streaming program aims to accumulate viewers' emotional attachment to the live streamers. And then, no matter what the streamer sells, human brand loyal audiences will buy it. Live streamers could build up their own human brand. Then they could introduce, evaluate, and recommend various useful products with diversified brands to their followers in the live streaming show and then generate their own brand value.

Managerial Implication

Our findings lead to suggestions for live streamers.

1. Building on a human brand could generate many benefits because of high viewer loyalty. In marketing, building customer loyalty is especially important to raising brand equity. Live streamers could follow the steps of building a human brand to increase viewers' lifetime value and influence viewers' purchasing decisions.
2. The streamers could create good atmospherics of live streaming programs to induce viewers' positive perceptions. During the live streaming program, the streamers could try to introduce various scenarios for demonstrating information and usage of products impressively. The impressive performance could deepen viewers' memory and information about the recommended product. For example, live streamers could run exciting live streaming programs to introduce the product information funnily. Viewers could remember most of the product information and have a good attitude toward the products in an enjoyable circumstance. In this way, viewers could easily differentiate the streamer from others.
3. The streamers could try to keep their unique brand images of live streaming programs or themselves in viewers' minds for a long time, such as trustworthy, funny, humor, caring, convincing, or helpful guys. It doesn't have to be a good-looking appearance or figure but has to demonstrate the streamers' admiration. Viewers may gradually engage in following the streamers' programs and interacting with the streamers through long-term communication. Accordingly, viewers usually appreciate it and love to share it with whatever live streamers do. Viewers perform as proactive broadcasters of the live streamers.

Limitations and Future Research

The finding of this study should be applied in other fields carefully because of two limitations. The first is the scope of generalizability. This study didn't consider the specific features of different products and services. For example, the style and performance of live streaming programs for recommending luxury products differ from those for fresh foods. The finding is only suitable for the general condition, such as commodities most people can afford. Researchers could explore this issue by considering variant types of products/services to advance our understanding in this field. The second limitation is that only emotional attachment is included at the stage of responses in the Brand Resonance Pyramid Model. However, we argue that emotional factors are more important to brand loyalty than rational factors and should be paid

more attention to. Researchers could consider rational and emotional factors simultaneously in the future to compare their relative importance.

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