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## Why Viewers Contribute in Live Feed Broadcast

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#### **Abstract**

Live feed broadcast, as a new media, enables viewers to interact with broadcasters or other viewers during live video and co-create video with others. Facilitated by synchrony and mobility, the live feed broadcast is now available to anyone having a smart phone consequently leading to increased competition among broadcaster for viewers. The presence of viewers in one's live feed brings reputation as well as financial benefits to the broadcasters. Hence, the ease of broadcasting would increase competition and hence difficulty in viewer retention. Therefore, this study aims to investigate viewers' intention to actively participate in a live feed broadcast using a combination of socio-technical perspective and commitment-trust theory. The results reveal that social and technical features influence affective commitment and identification trust, which in turn affects the viewer co-creation behavior. The results will be useful for live feed broadcasters as well as platform providers. Theoretical and managerial implications are discussed.

**Keywords:** live feed broadcast, co-creation, socio-technical perspective, commitment-trust theory, social media functionality model

## Introduction

Live feed broadcast has become quite popular China and more than 200 broadcast platforms have emerged during the recent years. It has been integrated within the social media platforms (such as Sina Microblog and Zhihu) as well as e-business platforms (such as Tmall) to contribute to better experience of users. Most viewers participate in live feed broadcast using their mobile devices. Because of the ability to overcome temporal and spatial limitations, live feed broadcast is expected to grow with the growth in mobile technology. Although live feed broadcasters along with their viewers could be considered as an online community, they allow for synchronous and face-to-face communication which deliver more emotional information as compared to texts or emojis in an online community.

Live feed broadcast allows viewers to post their comments, give virtual gifts and signal approvals for

special moments during the broadcast, thus allowing for a co-creation experience (Bernstein et al., 2016). Broadcasters can also adjust their content based upon viewer's comments during the live broadcasts or interact with them thus contributing to better experience of viewers. Such presentation of comments to other viewers may also enhance interaction among the viewers. In addition, system allows viewers to signal approvals and give virtual gifts (those virtual gifts can be turned into cash through the platform) for special moments to the broadcaster during the live broadcast. A broadcaster's popularity may be determined by the approval signals or virtual gifts received by him/her, which may in-turn increase the identification of viewers, leading to high engagement in live feed broadcast. After the end of live broadcast, the recording may be saved for other viewers who may provide post-live comments. Thus, the saved broadcast is created by both the broadcaster and viewers. As co-creation is defined as a process of people's value creation together with a company, this study views interaction among broadcaster and viewers as co-creation behavior.

With the increase in bandwidth and easy accessibility to mobile computing devices, co-creation in live-feed broadcasts will become easier as one only needs a mobile device with a front camera as well as a broadcasting platform to broadcast a video. For broadcasters, live feed broadcast may be seen as a new tool to receive financial benefits from advertising or virtual gifts. Hence, when faced with the fierce competition, broadcasters may find it increasingly difficult to retain viewers. The objective of this study is therefore to examine the factors that influence viewer's participation in the live feed broadcast. Most of the studies have examined co-creation in terms of content/product creation, but not in terms of interaction in a live-feed broadcast community. This study fulfills this gap and emphasizes the value of interaction in live feed broadcast. The specific research question examined in this study is: Why do viewers continue to contribute in a particular broadcaster's live broadcast? This study examines the participation in live feed broadcast from the lens of socio-technical perspective. Socio-technical perspective has been widely used to study the appropriateness of new technology and the people's behavior who operate it (Pan and Scarbrough, 1998; Rohracher, 2001).

Among the factors that influence people's continuous intention, relationship quality has been recognized as a crucial mediator for user retention (Morgan and Hunt, 1994; Shen et al., 2014; Wang et al., 2016). The long-term relationship between the broadcaster and viewers may be developed upon viewers' positive experiences in the live broadcast, resulting in bonds with the broadcaster and high frequency of their participation in future (Wang et al., 2016). Thus, another research question that is examined in this study is: *How does relationship between a broadcaster and the viewers mediate the antecedents and relationship commitment*. We examine this research question using the lens of commitment-trust theory (Morgan and Hunt, 1994).

The rest of the paper is organized as follows. In the second section, we examine extant literature on commitment-trust theory and socio-technical perspective. In the third section, we propose the research model and research hypotheses. In the fourth section, we detail the research methodology and conduct data analysis. In the final section, we conclude with discussion of this study's findings, the implications, the limitations and future work.

## **Background Theory**

As discussed earlier, we use the lens of socio-technical perspective and commitment-trust theory to examine viewers' participation in a live feed broadcast. Socio-technical theory has been widely applied to examine factors of new technology which differentiate it from extant technologies and benefits the users gain from it (Pasmore et al., 1982). Thus, social factors and technical factors related to viewers' experience can be identified as antecedents to affective and behavioral components of commitment towards participation.

#### 2.1. Commitment-trust theory

Originally developed to explain successful relationship building with retailers, commitment-trust theory (Morgan and Hunt, 1994) emphasizes the mediating variables, relationship commitment and trust, to examine users' continuous behaviors. It focuses on the long-term relationship development between exchange entities (Li et al., 2006). Morgan and Hunt (1994) claimed that commitment and trust are key factors to successful relationship marketing among many other contextual factors contributing to relationship marketing. Because of the significant influence of long-term relationships with users on their evaluations or continuous behaviors (Tax et al., 1998), CTT, which explains the critical factors related to successful relationship, has been applied in many studies, such as in management (Goo and Huang, 2008); psychology (Chumpitaz Caceres and Paparoidamis, 2007); and consumer behavior (Wang et al., 2016). Recently, some researchers introduce CTT into the study of co-creation in social media (Shen et al., 2014; Hashim and Tan, 2015), because it is likely to give a better explanation why people continue to participate in community activities (Hashim and Tan, 2015). But those studies are still limited. Most of those studies focus on communities, such as crowdsourcing communities (Shen et al., 2014) or knowledge sharing communities (Uzunoglu and Kip, 2014; Hashim and Tan, 2015).

Further, relationship commitment and trust lead to cooperative behaviors that are conducive to the success of relationship marketing (Morgan and Hunt, 1994). Commitment-trust theory may be an appropriate theory for examining the co-creation behavior (Shen et al., 2014; Hashim and Tan, 2015), where two or more parties co-create. In the context of live feed broadcast, co-creation behavior refers to active participation including knowledge sharing, comments posting, approval signals or virtual gifts giving, that require interaction within a cooperative environment.

## 2.2. Socio-technical perspective

The socio-technical perspective was first developed to examine the effects of social and technical subsystems in organizations and their inter-relations (Scarbrough, 1995). According to Chen and Nath (2008), the technical subsystem relates to "the processes, task, and technology needed to transform inputs to outputs," and the social subsystem relates to people and the relationship among users (Bostrom and Heinen, 1977; Chen and Nath, 2008). It has been widely used to examine employee's behavior when new technology is adopted in an organization (Pan and Scarbrough, 1998), because the adoption of technology in an organization may require changes in social and institutional context (Rohracher, 2001). Thus, researchers emphasize the effect of the interaction of social factors and technical factors introduced by new technology on adopters' behaviors (Pan and Scarbrough, 1998).

This theory has also received a lot of attention in research on co-creation, particularly in organization (Pan and Scarbrough, 1998; Lin and Lee, 2006; Chen and Nath, 2008). For example, Chen and Nath (2008) identified social factors and technical factors related to mobile work systems leading to the cooperation among employees using mobile work systems. With the emergence of social media, coordination behavior is also extended to individuals beyond organizations (Füller et al., 2009). Gangi and Wasko (2016), for example, revealed the positive effect of users' experiences in social media derived from the social interactions and the technical feature on their future co-creation behaviors in communities. In this study, we extract social and technical factors from the social-media functionality model proposed by Kietzmann et al. (2012). This model describes users' experiences in a dynamic social media environment using socio-technical theory and consists of seven blocks, including identity, groups, relationships, reputation, presence, conversation, and sharing. According to Kietzmann et al. (2012), this model can be used to monitor the dynamic changes of community's needs with changes in social media technology. Since, viewer collaboration with the broadcaster in a live feed

broadcast is dynamic, this model is quite appropriate for identifying associated social and technical features.

## **Hypothesis**

Based on the above discussion, we present our research model in Figure 1.

## 3.1. Successful Relationship

Affective commitment relates to the fulfillment of one's psychological needs in a long-term relationship (Allen and Meyer, 1990), leading to one's desire to maintain the relationship (Mowday et al., 1979) and future participation (Hashim and Tan, 2015). The effect of affective commitment on repeat consumption may be due to its contribution on brand preference (Zeithaml et al., 1996). In this regard, a high level of affective commitment contributes to a viewer's likability and preference to a particular broadcaster, leading to future participation. Hence, we hypothesize:

H1: Affective commitment positively affects viewers' future active participation.

According to Morgan and Hunt (1994), the positive effect of trust on relationship commitment is the central premise included in commitment-trust theory. There has been a lot of studies validating the positive influence (Li et al., 2006; Vatanasombut et al., 2008).

Identification trust is defined as trust to member developed due to mutual understanding and shared identity that enable members' cooperation and create collective strengths (Panteli and Sockalingam, 2005). It helps to develop a reliability and socially acceptance virtual environment for members' involvement and contribution (Ind and Schultz, 2013; Shen et al., 2014; Wang et al., 2016). According to Yang et al. (2009), the trust in other members not taking any unexpected behaviors may stimulate one's cooperate with others for mutual benefits. Hence, we hypothesize:

H2a:Identification trust positively affects viewers' future active participation.

H2b: identification trust positively affects viewers' affective commitment to the broadcaster and other viewers.

#### 3.2. Social factors

According to Kietzmann et al. (2012), social factors include entity, relationship, presence and reputation attached to social media experience. Further, a positive experience affects relationship development (Hashim and Tan, 2015). Hence, we expect those social factors have positive influence on successful relationship.

#### 3.2.1. Self-expressiveness

Self-expressiveness as a subjective state related to identity experience in activities has been confirmed to result in a high level of happiness and well-being (Waterman, 1993). In this regard, the emotional benefit a viewer can receive from a long-term relationship with the broadcaster when he/she perceive strong self-expressiveness, which may lead to high willingness of a viewer to maintain the relationship (Allen and Meyer, 1990) and further make commitment to the entity (Tuskej et al., 2013).

Tyler (2001) has found that trust can be developed from identity-based source as it increase members' belief that others will not harm them. It is easier to trust an entity with the intrinsic consistency with oneself, such as interest, shared value, identity (Coleman, 1990), which may contribute to one's self-identity (Xie et al., 2014). The relationship between expressiveness and identity-based trust has been examined by Xie et al. (2014) in the context of brand community as it helps to prevent consumers from using inappropriate brand with threats to their identity. Hence, we hypothesize:

H3a: Self-expressiveness perceived by viewers positively affects their affective commitment to the broadcaster and/or other viewers.

H3b: Self-expressiveness perceived by viewers positively affects their identification trust to the broadcaster and/or other viewers.

#### 3.2.2. Self-congruence

Following the definition of Ahn et al. (2011), self-congruence refers to the cognitive match/mismatch between a viewer's self-concept and others' image. Recent researches emphasize the relationship between self-congruence and post-consumption variables such as loyalty (Kressmann et al., 2006), satisfaction (Ekinci et al., 2008). Thus, a viewer's self-congruence with the broadcaster and/or other members may benefit his/her evaluation of the broadcast and satisfaction with the experience (Ekinci et al. 2008), leading to emotional attachment to the broadcaster and members (Hashim and Tan, 2015). In addition, the relationship between favorable experience with the object and trust in that object has been confirmed by many researchers (Kramer and Tyler, 1996). Hence, we hypothesize:

H4a: Self-congruence perceived by viewers positively affects their affective commitment to the the broadcaster and/or other viewers.

*H4b:* Self-congruence perceived by viewers positively affects their identification trust in the the broadcaster and/or other viewers.

#### 3.2.3. Co-presence

The presence is characterized by the closed feedback loop and real-time interaction in a live feed broadcast which helps viewers perceive a sense of being together and chatting in the real-world (Kraut et al., 2002). Co-presence relates to psychological connection of minds in developing a sense of being together (Bulu, 2012; Nowak, 2001). A high level of psychological connection contributes to emotional attachment (Thomson, 2006), leading to affective commitment (Bulu, 2012; Hashim and Tan, 2015). In addition, the sense of belonging implies shared value, goals and interest (Bulu, 2012). Mutual understanding and shared identity contribute to the development of identification trust (Panteli and Sockalingam, 2005). Thus, we hypothesize:

H5a: Co-presence perceived by viewers positively affects their affective commitment to the broadcaster and/or other viewers.

H5b: Co-presence perceived by viewers positively affects their identification trust to the broadcaster and/or other viewers.

#### 3.2.4. Social visibility

The concept of social visibility as a subjective perception focuses on the public presence of group members rather than the group as a whole (Marouf ,2008). The significant influence of social visibility on the formation of relationship has been examined in previous studies (Veloutsou and Moutinho, 2009), which shows that social visibility can be related to the decision to involve in a particular social group. Further, the sense of belong to a particular group increases the investment people want to make and contributes to the willingness to develop a long-term relationship (Read et al., 2003) as individual in a group is willing to create and maintain the social conditions (Tyle, 2001). Also according to Yang and Kent (2014), the greater is the media presence of members as perceived by a viewer, the greater is the frequency with which he/she may interact with those members, leading to an increased trust as interaction increase the knowledge of others and reduces uncertainty. Thus, we hypothesize:

H6a: Social visibility perceived by viewers positively affects their affective commitment to the broadcaster and/or other viewers.

H6b: Social visibility perceived by viewers positively affects their identification-based trust to the broadcaster and/or other viewers.

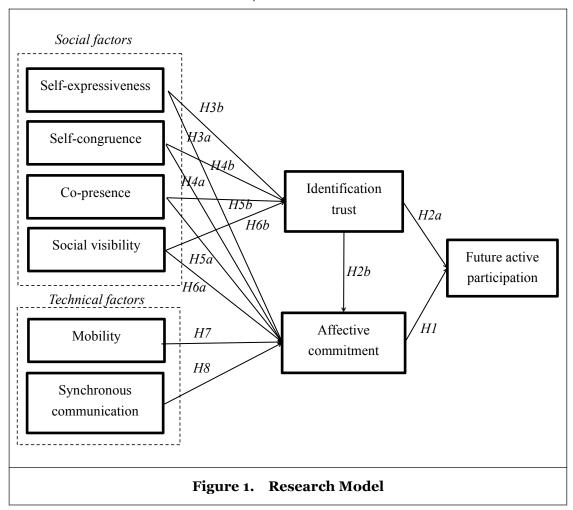
#### 3.3. Technical factors

In this paper, mobility refers to the ability to watch the live video and interact with the broadcaster or other viewers ubiquitously and seamlessly (Wu et al., 2016). As most viewers participate in the live broadcast through their mobile computing devices, mobility is a key factor influencing viewers' evaluation of the broadcast (Wu et al., 2016). Also high evaluation of users' experiences significantly affects affective commitment (Hashim and Tan, 2015). Thus, we hypothesize:

H7: Mobility perceived by viewers positively affects their affective commitment to the broadcaster and/or other viewers.

Synchrony of communication is defined as the degree to which teams coordinate in the same space and time in a virtual environment (Montoya-Weiss et al., 2001), and includes real-time feedback (Kitamura, 1990). Synchronous communication supported by the new technology in live feed broadcast is one of the key factors which makes it different from other social media and online co-creation environments (Bernstein et al., 2016). Real-time feedback in a synchronous communication increases users' satisfaction (Yarris et al., 2011), which in turn contributes the formation of long-term relationship (Hashim and Tan, 2015). Thus, we hypothesize:

H8a: Synchronous communication supported by the live broadcast positively affects viewers' affective commitment to the broadcaster and/or other viewers.



## Methodology

We used a questionnaire-based survey to empirically test our research model.

#### Instrument and sample

The items of constructs in this paper were adapted from previous studies. The items on

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self-expressiveness were adapted from Pedersen and Nysveen (2003) and Morrison and Johnson (2011), the items for self-congruence were adapted from Sirgy and Su (2000), three items on social visibility were adapted from Jurisic and Azevedo (2011), two items for mobility were adapted from Wu et al. (2016), and the items for synchronous communication were adapted from Montoya-Weiss et al. (2001). Successful relationship relates to commitment and trust (Morgan and Hunt, 1994). The items on identification trust and affetive commitment were based on Hashim and Tan (2015). Three items measuring the future active participation were also adapted from Zhang et al. (2015). All items were measured on seven-point Likert scales. Then we used back translation to ensure the consistency of English version and Chinese version. All participants in this paper were recruited online. Only those participants who had experience using live feed broadcast were asked to participate in the survey. After we removed those with similar values for all questions, 399 valid responses were left.

#### Results

## 5.1. Reliability and Validity

The value of the Kaiser-Meyer-Olkin (KMO) statistic of sample data was 0.964, which illustrates that it was appropriate to conduct principal components analysis. We then conducted measurement model test and the results were shown in Table 1 and Table 2.

Table 1. Measurement model testing results							
Construct	Indicator	Loading	Cronbach's α	CR	AVE		
Self-expressiveness	eness SEE1 0.853						
	SEE2	0.850	0.777		0.691		
	SEE3	0.790					
Self-congruence	SEC1	0.884		0.925			
	SEC2	0.847	0.892		0.554		
	SEC3	0.853			0.754		
	SEC4	0.891					
Social Visibility	SOV1	0.936	0.950	0.930	0.0=0		
	SOV2	0.929	0.850		0.870		
Co-presence	COP1	0.874	0.506	0.883	0.500		
	COP2	0.903	0.850 0.736 0.782 0.705		0.790		
Mobility	MOB1	0.891	0.700	0.901	0.820		
	MOB2	0.920	0./82		0.820		
Synchronous	SYC1	0.868	0.505	0.051	0.550		
Communication	SYC2	0.889	0.705	0.871	0.772		
Affective Commitment	AFC1	0.920	0.806	0.011	0.905		
	AFC2	0.910	0.800	0.911	0.837		
<b>Identification Trust</b>	n Trust IDT1 0.779						
	IDT2	0.883	o.836	0.891	0.651		
	IDT3	0.812			0.671		
	IDT4	0.830					
Future Active Participation	FAP1	0.876		0.913			
	FAP2	0.881	0.858		0.778		
	FAP3	0.889					

Table 2. Discriminant validity									
Construct	Inter-Construct Correlations of the AVEs								
	SEE	SEC	SOV	COP	MOB	SYC	AFC	IDT	FAP
SEE	0.831	0	0	0	0	0	0	0	0
SEC	0.677	0.868	0	0	0	0	0	0	0
SOV	0.612	0.678	0.933	О	О	0	0	0	О
COP	0.692	0.630	0.540	0.889	0	0	0	0	О
MOB	0.640	0.525	0.467	0.588	0.906	0	0	0	О
SYC	0.650	0.608	0.578	0.595	0.606	0.879	0	0	О
AFC	0.684	0.698	0.644	0.639	0.594	0.601	0.915	0	О
IDT	0.694	0.713	0.638	0.685	0.538	0.570	0.740	0.819	0
FAP	0.709	0.630	0.574	0.678	0.682	0.557	0.721	0.734	0.882

Notes: SEE: Self-expressiveness; SEC: Self-congruence; SOV: Social Visibility; COP: Co-presence; MOB: Mobility; SYC: Synchronous Communication; AFC: Affective Commitment; IDT: Identification Trust; and FAP: Future Active Participation

## 5.2. Hypotheses testing results

Figure 2 summarizes the results of the structural model test conducted using PLS approach. According to Figure 2, 60.9% variance in future active participation is explained by the research model as well as 66.1% variance in affective commitment and 64.3% variance in identification trust. This implies that the commitment-trust theory and socio-technical perspective provide useful insights into the active participation in live feed broadcast.

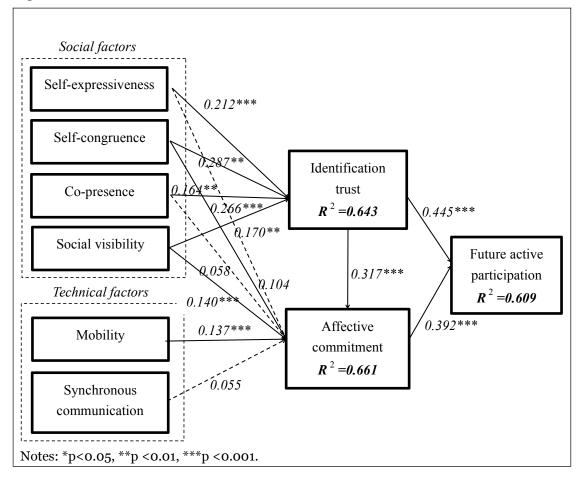


Figure 2. Structural model testing results

## 5.3. Mediation testing results

According to the research model, affective commitment and identification trust mediate the relationship between active participation in live feed broadcast and social and technical factors. A mediation analysis has been conducted and results were summarized in Table 3.

Table 3. Mediation analysis (DV = Future Active Participation)							
Independent	Mediators	IVs -> MVs	MVs -> DVs	IVs -> DV			
variables	(MVs)			Before controlled	After controlled		
SEE	IDT	0.719***	0.749***	0.714***	0.365**		
SEC	ACM	0.748***	0.804***	0.624***	0.051ns		
	IDT	0.702***	0.749***		0.196*		
SOV	ACM	0.766***	0.804***	0.649***	0.079ns		
	IDT	0.715***	0.749***		0.231***		
COP	IDT	0.758***	0.749***	0.704***	0.323***		
MOB	ACM	0.618***	0.804***	0.683***	0.303***		
SYC	ACM	0.631***	0.826***	0.565***	0.101*		

Notes: 1.SEE: Self-expressiveness; SEC: Self-congruence; SOV: Social Visibility; COP: Co-presence; MOB: Mobility; SYC: Synchronous Communication; AFC: Affective Commitment; IDT: Identification Trust; and FAP: Future Active Participation. 2. \*p<0.05, \*\*p<0.01, \*\*\*p<0.001, ns: not significant

### **Discussions**

This research proposed antecedents of future active participation in live feed broadcast based on commitment-trust theory and the socio-technical perspective. We focus on the relationship between viewers and broadcasters as well as other members. The results show that the two perspectives are appropriate for explaining viewers' intention to active participate in the broadcasters' live broadcasts in future. Though the research model results revealed the insignificant influence of synchronous communication on affective commitment, the results of mediation analysis indicate the mediated effect of affective commitment on the relationship between synchronous communication and active participation is significant. Hence, the insignificant impact on affective commitment may be due to that synchronous communication is a technical fundamental of viewers' experience in live feed broadcast. The effect of synchronous communication may be full mediated by other social factors and technical factors.

However, the insignificant impacts of self-expressiveness and co-presence on affective commitment are in consistent with the findings of Morgan and Hunt (1994), who has proposed KMV model of relationship marketing in their study. According to the KMV model, the effects of five antecedents (relationship termination costs, relationship benefits, shared values, communication opportunistic behavior) on five outcomes (acquiescence, propensity to leave, cooperation, functional conflict and uncertainty) are mediated by relationship commitment and trust, and trust positively affects commitment. In this model, communication positively affects trust while there is no direct effect of communication on relationship commitment. According to previous studies, self-expressiveness and co-presence are closely associated with communication (Elaluf-Calderwood et al., 2005), leading to the significant effect on trust and insignificant impact on affective commitment.

#### 6.1. Theoretical contributions

Our research makes the following theoretical contributions. Firstly, our study discloses the co-creation behavior in a new phenomenon, live feed broadcast. Second, we extend the application of commitment-trust theory and socio-technical perspective in a new phenomenon, live feed broadcast. Third, we examined the mediation effect of affective commitment and identification trust on the relationship between viewers' live broadcast experience and future active participation. Forth, we proposed seven constructs particularly for understanding viewers' experience in live feed broadcast.

## 6.2. Practical implications

Live feed broadcast as an emerged media has been accepted by lots of mobile internet users in China. Recently, live feed broadcast is not only used by broadcasters but also used by other content providers, such as TV program providers, due to the strong interaction supported by live feed broadcast. The current research examines how to build a successful relationship with viewers and increase their willingness to active participate, which may offer live broadcast providers the following suggestions.

First, our results highlight the importance of identification trust and affective commitment. As the application of live feed broadcast is widespread, content providers who are new to use live feed broadcast need some suggestions to stimulate viewers' active participation. Regarding affective commitment, content providers should enhance emotional connections with viewers. For example, the broadcasters should thank viewers' virtual gift giving in real time and express their care to viewers. Second, the seven antecedents proposed in this paper may help to build successful relationships with viewers. For example, content providers of live feed broadcasts should make their content positioning clear and promote their live broadcasts to segmentation viewers, which may enhance viewers' expressiveness and self-concept congruence between broadcasts and viewers.

#### Limitation

The results of this study should be interpreted in the background of its limitations. First, the current research only examines viewers' intention to participation rather than actual behavior. The potential effect on actual behavior of continuous participation remains unclear. Future research can employ laboratory experiments or observation studies to examine viewers' actual behaviors. Second, this research focuses on the live broadcasts of broadcasters rather than live broadcasts of all kinds of content providers. Future research can verify our research model in the other kind of content providers' live broadcast, such as TV program. Third, the types of live feed broadcasts' content are not considered in our study, which may moderate the effects on viewers' intention. For example, viewers of education live broadcast may consider the information value provided by broadcaster more than others. Future research can investigate its moderation effect on viewers' active participation intention.

#### References

- Ahn, T., Y. Ekinci and G. Li. 2011. "Self-congruence, functional congruence, and destination choice." Journal of Business Research (66:6), pp. 719-723.
- Allen, N. J. and J. P. Meyer. 1990. "The measurement and antecedents of affective, continuance and normative commitment to the organization." *Journal of Occupational Psychology* (63:1), pp. 1-18.
- Bernstein, J. H., K. B. Beykpour, G. J. Davies, T. J. Hansen, A. K. Khoshnevissan, N. V. Rocine and A. W. Wasserman. 2016. Live video stream sharing. U.S. Patent Application: 562.
- Bulu, S. T. 2012. "Place presence, social presence, co-presence, and satisfaction in virtual worlds." *Computers & Education* (58:1), pp. 154-161.
- Chen, L. and R. Nath. 2008. "A socio-technical perspective of mobile work." *Information Knowledge Systems Management* (7:1), pp. 41-60.
- Chumpitaz Caceres, R. and N. G. Paparoidamis. 2007. "Service quality, relationship satisfaction, trust,

- commitment and business-to-business loyalty." *European journal of marketing* (41:7/8), pp. 836-867.
- Coleman, J. 1990. "Foundations of Social Theory." Cambridge, MA: Belknap.
- Di Gangi, P. M. and M. Wasko. 2016. "Social Media Engagement Theory." *Journal of Organizational and End User Computing* (28:2), pp. 53-73.
- Ekinci, Y., P. Dawes and G. Massey. 2008. "An extended model of the antecedents and consequences of consumer satisfaction for hospitality services." *European Journal of Marketing* (42:1/2), pp. 35-68.
- Füller, J., H. Mühlbacher, K. Matzler and G. Jawecki. 2009. "Consumer Empowerment Through Internet-Based Co-creation." *Journal of Management Information Systems* (26:3), pp. 71-102.
- Goo, J. and C. D. Huang. 2008. "Facilitating relational governance through service level agreements in IT outsourcing: An application of the commitment–trust theory." *Decision Support Systems* (46:1), pp. 216-232.
- Hashim, K. F. and F. B. Tan. 2015. "The mediating role of trust and commitment on members' continuous knowledge sharing intention: A commitment-trust theory perspective." *International Journal of Information Management* (35:2), pp. 145-151.
- Jurisic, B. and A. Azevedo. 2011. "Building customer-brand relationships in the mobile communications market: The role of brand tribalism and brand reputation." *Journal of Brand Management* (18: 4/5), pp. 349-366.
- Kietzmann, J. H., B. S. Silvestre, I. P. McCarthy and L. F. Pitt. 2012. "Unpacking the social media phenomenon: towards a research agenda." *Journal of Public Affairs* (12:2), pp. 109–119.
- Kitamura, K. 1990. "Interactional Synchrony: A Fundamental Condition for Communication." Senri Ethnological Studies.
- Kramer, R. M. and T. R. Tyler. 1996. "Trust in organization: Frontiers of theory and research." London: Sage Publications.
- Lin, H.-F. and G.-G. Lee. 2006. "Effects of socio-technical factors on organizational intention to encourage knowledge sharing." *Management decision* (44:1), pp. 74-88.
- Marouf, F. E. 2008. "The Emerging Importance of "Social Visibility" in Defining a Particular Social Group and Its Potential Impact on Asylum Claims Related to Sexual Orientation and Gender." *Yale Law & Policy Review* (27:1), pp. 47-106.
- Mayes, L. C. and J. E. Swain. 2005. "Interaction synchrony and neural circuits contribute to shared intentionality." *Behavioral & Brain Sciences* (28:5), pp. 697-698.
- Montoya-Weiss, M. M., A. P. Massey and M. Song. 2001. "Getting it together: temporal coordination and conflict management in global virtual teams." *Academy of Management Journal* (44:6), pp. 1251-1262.
- Morgan, R. M. and S. D. Hunt. 1994. "The commitment-trust theory of relationship marketing." *Journal of Marketing*, pp. 20-38.
- Morrison, K. R. and C. S. Johnson. 2011. "When what you have is who you are: Selfuncertainty leads individualists to see themselves in their possessions." *Personality and Social Psychology Bulletin* (37:5), pp. 639-651.
- Nowak, K. 2001. "Defining and differentiating copresence, social presence and presence as transportation." *the 4th International Workshop on Presence*, Philadelphia, PA.
- Pan, S. L. and H. Scarbrough. 1998. "A socio-technical view of knowledge sharing at Buckman Laboratories." *Journal of knowledge management* (2:1), pp. 55-66.
- Panteli, N. and S. Sockalingam. 2005. "Trust and conflict within virtual inter-organizational alliances: a framework for facilitating knowledge sharing." *Decision Support Systems* (39:4), pp. 599–617.

- Pedersen, P. E. and H. Nysveen. 2003. Usefulness and self-expressiveness: extending TAM to explain the adoption of a mobile parking service. *Proceedings of the 16th Electronic Commerce Conference*.
- Read, B., L. Archer and C. Leathwood. 2003. "Challenging cultures? Student conceptions of 'belonging' and 'isolation' at a post-1992 university." *Studies in Higher Education* (28:3), pp. 261-277.
- Rohracher, H. 2001. "Managing the Technological Transition to Sustainable Construction of Buildings: A Socio-Technical Perspective." *Technology Analysis & Strategic Management* (13:1), pp. 137-150.
- Scarbrough, H. 1995. "Blackboxes, hostages and prisoners." Organization studies (16:6), pp. 991-1019.
- Shen, X.-L., M. K. O. Lee and C. M. K. Cheung. 2014. "Exploring online social behavior in crowdsourcing communities: A relationship management perspective." *Computers in Human Behavior* (40), pp. 144-151.
- Sirgy, M. J. and C. Su. 2000. "Destination image, self-congruity, and travel behaviour:toward an integrative model." *Journal of Travel Research* (38), pp. 340-352.
- Tax, S. S., S. W. Brown and M. Chandrashekaran. 1998. "Customer Evaluations of Service Complaint Experiences: Implications for Relationship Marketing." *Journal of Marketing* (62:2), pp. 60-76.
- Thomson, M. 2006. "Human brands: Investigating antecedents to consumers' strong attachments to celebrities." *Journal of marketing* (70:3), pp. 104-119.
- Tuskej, U., U. Golob and K. Podnar. 2013. "The role of consumer-brand identification in building brand relationships." *Journal of Business Research* (66), pp. 53–59.
- Tyler, T. R. 2001. "Why Do People Rely on Others? Social Identity and the Social Aspects of Trust."
- Uzunoglu, E. and S. M. Kip. 2014. "Brand communication through digital influencers: Leveranging blogger engagement." *International Journal of Information Management* (34), pp. 592–602.
- Veloutsou , C. and L. Moutinho. 2009. "Brand relationships through brand reputation and brand tribalism" *Journal of Business Research* (62:3), pp. 314-322.
- Wang, W.-T., Y.-S. Wang and E.-R. Liu. 2016. "The stickiness intention of group-buying websites: The integration of the commitment—trust theory and e-commerce success model." *Information & Management* (53:5), pp. 625-642.
- Waterman, A. S. 1993. "Two conceptions of happiness: contrasts of personal ex-pressiveness (eudaimonia) and hedonic enjoyment." *Journal of personality and social psychology* (64:4), pp. 678 691.
- Wu, T., Y. Lu, X. Gong and S. Gupta. 2016. "A Study of Active Usage of Mobile Instant Messaging Application: An attachment theory perspective." *Information Development*.
- Xie, Y., R. Batra and S. Peng. 2014. "An Extended Model of Preference Formation Between Global and Local Brands: The Roles of Identity Expressiveness, Trust, and Affect." *Journal of International Marketing* (23:1), pp. 50-71.
- Yang, A. and M. Kent. 2014. "Social media and organizational visibility: A sample of Fortune 500 corporations." *Public Relations Review* (40:3), pp. 562-564.
- Yang, S., H. Lee and S. Kurnia. 2009. "Social capital in information and communications technology research: Past, present and future." *Communication of the Association for Information Systems* (25:1), pp. 183-122-.
- Zeithaml, V. A., L. L. Berry and A. Parasuraman. 1996. "The behavioural consequences of service quality." *Journal of Marketing* (60:2), pp. 31-46.
- Zhang, H., Y. Lu, B. Wang and S. Wu. 2015. "The impacts of technological environments and co-creation experiences on customer participation." *Information & Management* (52:4), pp. 468-482.