Internet Live Broadcasting Information System Construction for Domain-Specific Knowledge and Susceptibility to Interpersonal Influence

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Abstract. Drawing on social identity theory and susceptibility to interpersonal influence theory, the study examine the influence of fans’ susceptibility to interpersonal influence on their buying intention during Internet Live Broadcasting, and the influence of domain-specific knowledge and social identity on susceptibility to interpersonal influence. By describing how fans’ personal characteristics determine their susceptibility to interpersonal influence, we built a mechanism explaining why fans may buy the product recommended by the Internet Live Broadcasting. We conducted an online survey to test the model. The findings may help sponsors of the Internet Live Broadcasting to turn more and more fans into consumers.

1. Introduction

According to iResearch (2018), the size of the Internet Live Broadcasting market will reach 5 billion in 2019 China, 37.0% of platform users are willing to watch the release of new products, 27.0% of users will increase the probability of purchasing products recommended by their favorite anchor, and 33.2% will watch, but not necessarily buy [1]. Its rapidly growing number of users and the strong communication influence attracts companies to conduct marketing activities in the Internet Live Broadcasting. However, few academic studies investigate the Internet Live Broadcasting users’ buying behavior.

To fill these gaps, we use social identity theory and susceptibility to interpersonal influence theory to investigate the impact of domain-specific knowledge, social identity and susceptibility to interpersonal influence on fan buying behavior in the Internet Live Broadcasting. In particular, the study tries to answer the following questions: (1) how domain-specific knowledge and social identity influence susceptibility to interpersonal influence; (2) how susceptibility to interpersonal influence influences fan buying behavior; and (2) to what extent does susceptibility to interpersonal influence mediate the relationships between domain-specific knowledge and social identity and fan buying behavior. This application of the susceptibility to interpersonal influence perspective is novel and creative in e-marketing. Results from this study will help to determine key variables that determines fan buying behavior, which have important managerial implications for marketing in the Internet Live Broadcasting.
2. Conceptual framework

2.1. Susceptibility to interpersonal influence
Consumer susceptibility to interpersonal influence is defined as ‘the willingness to conform to the expectations of others regarding purchase decisions’ [2]. The susceptibility to interpersonal influence includes two types in terms of normative and informational influence [3]. When people pay attention to group norm to avoid rejection by the group, they tend to be sensitive to normative influence. When they want to collect information to make right decisions, they are more likely to be influenced by informational influence. Buying behavior is a socialization process in which consumers acquire skills, knowledge and attitudes from others to make buying decision consistent with social values [4]. The process is mainly completed through family upbringing, social influence, observation and imitation, etc. The root of socialization of buying behavior is the susceptibility of consumers to interpersonal influences [4]. In the context of Internet Live Broadcasting, fans hope to form and enhance their personal image by following the opinions of anchors, so they are more likely to acquire and use the products recommended by the anchors when they had higher susceptibility to interpersonal influence.

Hence, we hypothesize:
H1: Susceptibility to normative influence positively influences fan buying behavior.
H2: Susceptibility to informational influence positively influences fan buying behavior.

2.2. Social identity
Consumers’ susceptibility to interpersonal influence is a trait that described an individual’s desire to conform to social norms, to be influenced by others and to identify with groups. Social identity refers to an individual’s self-concept derived from perceived membership of a social group [5]. When a fan of an anchor perceived high social identity with the fans group, the fan tend to behave consistent with the group norm to show his love toward the anchor [6]. Therefore, fans with significant social identity are sensitive to the normative influence and more likely to buy the product recommended by the Internet Live Broadcasting.

Thus, we hypothesize:
H3: Social identity positively influences susceptibility to normative influence.
H4: Social identity positively influences fan buying behavior.

2.3. Domain-specific knowledge
Knowledge is defined as a fluid mix of framed experience, important values, contextual information and expert insight that provides a framework for the evaluation of new experiences and information [7]. Domain-specific knowledge is a typical type of knowledge embedded in an individual’s understanding to specific fields [8]. In the context of Internet Live Broadcasting, our study defined domain-specific knowledge as fans’ experience, familiarity and expertise in buying and using the products that the Internet Live Broadcasting recommended. When fans have lots of domain-specific knowledge about the product, they are more confidence in making decisions by themselves, but not depend on the anchors’ opinions. Although the fans are not easily influenced by informational influence, they will make buying decisions more quickly without hesitating, because they think they have the ability to make the right decision.

Thus, we hypothesize:
H5: Domain-specific knowledge negatively influences susceptibility to informational influence.
H6: Domain-specific knowledge positively influences fan buying behavior.
3. Method

3.1. Subjects and Procedure
We adopted Sojump (www.wjx.cn) to conduct a formal survey using the snowball random sampling method. During 3 months, we collected 295 samples who admitted to be fans of the Internet Live Broadcasting. Descriptive analysis of the samples shows that the proportion of men and women in the survey is relatively balanced, with 47.8% female; the proportion of 18 ~ 29 years old is the highest, reaching 63.7%; In terms of academic qualifications, 79.63% have a college degree or above.

We adapted existing validated scales into our survey instrument. After a separate pretest using focus group interviews, we refined the questionnaire. All items use seven-point Likert scales (1 = strongly disagree, 7 = strongly agree). Firstly, participants had to list an anchor of the Internet Live Broadcasting that they liked most. Then participants were told that the anchor recommended a product. In the context, the participants completed the survey questionnaire.

4. Analysis and results

4.1. Measurement Reliability and Validity
The confirmatory factor analysis (CFA) using AMOS 23.0 shows that the model fit the data reasonably well because all the values fell within the acceptable ranges [9] (x²/df = 1.711; GFI = 0.909, CFI = 0.957, AGFI=0.880, NFI=0.904, RMSEA = 0.049). The factor load is above 0.60 and the average extraction variance (AVE) of all constructs is above 0.5, which indicates that the constructs in this study have good aggregation validity. The CRs values are above 0.7 threshold, and the squared correlation doesn’t exceed the average AVE. It represents acceptable discriminant validity for the constructs of our study. Thus, all the indicators above suggest strong evidences of the construct reliability (see Table 1).

| Construct and Source | Operational Measures of Construct | SFLa | Citation |
|----------------------|----------------------------------|------|----------|
| Model Fit Indexes: χ²/df = 1.711; GFI = .909, CFI = .957, AGFI=.880, NFI=.904, RMSEA = .049 |
| Domain-specific knowledge AVE=.649 CR=.880 |
| 1 | 1.874 |
| 2 | .839 |
| 3 | .755 |
| 4 | .746 |
| Social identity AVE=.688 CR=.898 |
| 1 | .886 |
| 2 | .866 |
| 3 | .834 |
Susceptibility to normative influence  
AVE=.693  
CR=.871

Susceptibility to informational influence  
AVE=.679  
CR=.864

Fan buying behavior  
AVE=.668  
CR=.889

4.2. Structural equation modeling (SEM) analysis
The study ran structural equation modeling (SEM) analysis to test the theoretical model [9]. As indicated in Table 2, Goodness-of-Fit Index showed as following: GFI = 0.908, NFI = 0.902, CFI = 0.949, TLI = 0.939, RMSEA = 0.058. The result shows that the linkages from domain-specific knowledge, social identity and susceptibility to normative and informational influence to fan buying behavior is significant achieved at a level of .001, and linkages from social identity to susceptibility to normative influence are statistically significant at a level of .001. However, the correlation between domain-specific knowledge and susceptibility to informational influence is reported to be positive and statistically insignificant. The result shows that social identity are partially mediated by susceptibility to normative influence on fan buying behavior, while domain-specific knowledge directly influence fan buying behavior without mediation effect by susceptibility to informational influence.

Table 2. SEM model of fan buying behavior.

| Parameter | Parameter Estimates |
|-----------|---------------------|
|           | SEM Estimate  | Standard Error | T Value C.R. | Standardized Value |
| DSK → SII | 0.052    | 0.062           | 0.835  | 0.048   |
| S1 → SNI  | 0.711*** | 0.081           | 8.764  | 0.592   |
| DSK → FBB | 0.285*** | 0.072           | 3.991  | 0.332   |
| S1 → FBB  | 0.381*** | 0.109           | 3.498  | 0.319   |
| SNI → FBB | 0.249*** | 0.065           | 3.803  | 0.025   |
| SII → FBB | 0.395*** | 0.058           | 6.792  | 0.496   |

Goodness-of-Fit Index
$x^2 = 328.460$ (df = 192), GFI = 0.908, NFI = 0.902, CFI = 0.949, TLI = 0.939, RMSEA = 0.058

NOTE
SNI = Susceptibility to normative influence
SII = Susceptibility to informational influence
DSK = Domain-specific knowledge
SI = Social identity
FBB = Fan buying behavior

** p< 0.05; *** p < 0.001
4.3. Discussion
The data analysis results supported the H1, H2, H3, H4 and H6, but rejected H5. The SEM analysis showed that both susceptibility to normative and informational influence directly determined fan buying behavior. Fans who are sensitive to interpersonal influence are more likely to buy the product recommended by anchors of the Internet Live Broadcasting. The results also showed that social identity is partially mediated by susceptibility to normative influence on fan buying behavior. Fans’ social identity has both direct and indirect influence on their buying behavior. However, domain-specific knowledge only directly influence fan buying behavior, it has no significant relationship with susceptibility to informational influence. Fans who are expertise about the recommended product are not easily influence by anchors. Their buying decisions are made by themselves.

5. Conclusion
In the context of the Internet Live Broadcasting, an anchor’s fans’ perceptions of domain-specific knowledge, social identity and susceptibility to normative and informational influence decide their buying behavior, and the susceptibility to normative influence are determined by social identity. These findings provide clear evidences that in the Internet Live Broadcasting, two types of fans are easily to be turned into consumers. One type of fans are who obtain lots domain-specific knowledge. They have ability to make quick and right buying decisions. The other type of fans are who have high loyalty to the anchors. They trust the anchors and want to buy the products anchors recommended. Those neither experts nor loyalists fans need the sponsor to spend more time and money to persuade, which are not beneficial to companies.

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