

The Formative Factors of Consumers' Purchase Intention of Live Broadcast under TPB Theory

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Abstract. As the core business model driven by the digital economy, the formation mechanism of consumers' willingness to buy live has been widely concerned by academia and industry. However, the existing research is still insufficient to explore the adaptability of planned behavior theory (TPB) in live scenes with both social and e-commerce attributes. Based on the theory of planned behavior, combined with the characteristics of high interaction and high immersion in the live broadcast scene, this paper systematically analyzes the connotation evolution and formation mechanism of the three core dimensions of behavior attitude, subjective norms and perceptual behavior control, and constructs a model of the formation factors of live broadcast purchase intention. The study found that the behavior attitude was positively driven by product information perception, anchor characteristics and on-the-spot experience; Subjective norms are shaped by the role of anchor vertical opinion leaders and the horizontal effect of group onlookers; Perceived behavior control is positively affected by the convenience of system technology, and negatively weakened by the perceived risk of consumers. According to this, the practical strategies are put forward from six aspects.

Keywords: Theory of Planned Behavior (TPB), Live-streaming E-commerce, Consumer Purchase Intention, Perceived Risk, Anchor Characteristics

1. Introduction

As the core business model driven by the digital economy, live e-commerce has greatly shortened the decision-making link of consumers by reshaping the relationship between "people, goods and markets". According to iResearch's statistics, the scale of China's live e-commerce market exceeded 4.9 trillion yuan in 2023. In this highly interactive and immersive virtual environment, understanding the underlying formation mechanism of consumers' purchase intention has important practical value for the formulation of platform rules and the transformation of business marketing.

The theory of planned behavior (TPB) was proposed by Ajzen, emphasizing that behavior attitude, subjective norms and perceived behavioral control are the three core antecedents driving behavioral intention [1]. In the traditional asynchronous e-commerce environment, consumers' decision-making is often a typical "search-compare" rational model. However, the high information density and real-time interactivity in the live broadcast context have spawned "social presence" and "flow experience" [2]. The empirical study shows that in vertical fields such as agricultural product

live broadcasts, the three dimensions of TPB show significant positive explanatory power on purchase intention [3]. This proves that TPB has good scenario applicability, but it must also introduce new environmental variables (such as interactivity, perceived risk, etc.) to disassemble the traditional dimensions in a finer granularity to adapt to the particularity of the live broadcast scenario [4]. Although TPB has been widely verified across contexts in the traditional consumption field, the live broadcast scenario has the dual attributes of social media and e-commerce [5]. Its multimodal information interaction and real-time community pressure have significantly evolved the connotation of each dimension of TPB. Therefore, the purpose of this study is to extend TPB in the live broadcast context, systematically analyze the formation factors of live broadcast purchase intention, and make up for the lack of theoretical applicability of existing studies in the composite context.

2. Formation mechanism of TPB dimensions in live broadcast scenario

2.1. Behavior and attitude: from product cognition to emotional resonance

2.1.1. Impact of product information

In the formation process of behavior and attitude, the objective information of products is the basis for consumers' rational evaluation. Although live shopping has the characteristics of entertainment and emotion-driven, consumers' final decision still highly depends on the cognitive judgment of product function, price and quality. The research on Xiaohongshu community e-commerce based on the theory of planned behavior shows that consumers' demand (the matching degree of products and their own needs) and trust have a significant positive impact on purchasing behavior [6]. This shows that when product information can accurately meet the needs of consumers, positive attitudes are easier to form. The accuracy and effectiveness of information transmission, such as the characteristics, uses and prices of live broadcast commodities, have a significant positive impact on the audience's purchase intention [7]. From the perspective of persuasion theory, information quality directly affects consumers' judgment of product value, and then shapes attitudes. In addition, a large-scale survey conducted by the Beijing Consumer Association in 2023 showed that 76.87% of consumers most valued the quality of goods and 64.11% valued the price when choosing live consumption. Xinhuanet's "live shopping with goods" survey also found that 50.53% of respondents chose live shopping because of its low price and 44.56% because of its good display effect. These data show that although the live broadcast scene emphasizes emotional interaction, rational information such as product quality, price and display effect is still the core pillar of behavior and attitude. When the live broadcasting room can provide clear, true and targeted product information, consumers' positive comments are significantly enhanced, and their purchase intention is also improved.

2.1.2. Role of emotional experience

In addition to rational information, emotional experience in the process of live broadcast plays an increasingly important role in the formation of attitude. The live broadcast's real-time interaction, scene display and the host's personal charm jointly create a sense of "virtual presence", which makes consumers immersed and happy. In addition to rational information, emotional experience in the process of live broadcast plays an increasingly important role in the formation of attitude. The live broadcast's real-time interaction, scene display and the host's personal charm jointly create a sense of

"virtual presence", which makes consumers immersed and happy. In the hedonic information technology usage scenario, playfulness is the core factor driving users' behavioral intention. Sledgianowski and Kulbiwat conducted an empirical study on social networking sites, which showed that playfulness, critical mass of the group and trust can significantly affect users' use intention, and playfulness plays a particularly prominent role in driving entertainment use scenarios [8]. Corresponding to the live shopping scene, entertainment elements such as lottery, interactive games and plot presentation can also stimulate consumers' positive emotions, make them regard shopping behavior as part of leisure and entertainment, and then form a positive attitude towards live shopping. When introducing the technology acceptance model, Popular Science China pointed out that playfulness has a direct impact on willingness to use. In live shopping, entertainment elements (lottery, interactive games, and plot presentation) stimulate positive emotions and urge consumers to view shopping as a leisure activity, thus forming a positive attitude towards live shopping. When Guangming analyzed the psychology of live shopping, it pointed out that the entertainment and plot presentation of live selling can bring pleasure and stimulation to consumers, and it is easier to buy impulsively. The emotional expression and interaction ability in the anchor behavior characteristics indirectly affect the purchase intention by influencing the emotional resonance of consumers [9]. Emotional experience not only directly strengthens attitude, but also dilutes consumers' sensitivity to product defects, making positive attitude more stable. For example, when the anchor establishes an emotional connection with consumers through storytelling or values resonance, consumers' evaluation of the product is often higher than its objective attributes deserve. Therefore, designing infectious emotional clues in live broadcast marketing is an effective strategy to improve behavior and attitude.

2.1.3. Adjustment of anchor features

As the core subject of the live room, the anchor's personal characteristics play a key regulatory role in the formation of consumer attitudes. The popularity, professionalism and attractiveness of network anchors are significantly positively correlated with the audience's purchase intention [7]. This can be explained by the source credibility model in persuasion theory: high popularity and professionalism enhance the persuasiveness of information, while attraction brings emotional identity. In the study of Xiaohongshu, it is also found that the professionalism of platforms and anchors has a positive impact on purchase behavior [6]. The survey data of the Beijing Consumers' Association further showed that 48.54% of the respondents consumed because they liked the anchor and 41.68% because they trusted the anchor, which showed that the anchor characteristics even exceeded the product itself and became the dominant attitude. Xinhua reported that anchors attract consumers with their charm, build trust through high-frequency interaction and atmosphere, and then promote purchase. CNR's report on the ecological upgrading of live broadcasting also stressed that vertical anchors with professional as the core are rising. They rely on industry accumulation, rigorous selection, and continuous knowledge output to become "consumer consultants" trusted by consumers. The transformation from "Hawking" to "knowledge sharing" has made the moderating effect of anchor characteristics on consumer attitudes increasingly prominent, and even reconstructed the traditional attitude formation path. In the TPB framework, the anchor feature can be regarded as an important source of attitude and belief, shaping the overall attitude by influencing consumers' evaluation of products and shopping experience.

2.2. Subjective norms: social pressure and group influence

2.2.1. The opinion leader role of the anchor

Subjective norms refer to the social pressure that individuals perceive when making decisions. In live broadcast e-commerce, as opinion leaders, the anchor's recommendation behavior constitutes an important source of regulation. In live broadcast e-commerce, as opinion leaders, the anchor's recommendation behavior constitutes an important source of regulation. When combining the TPB research, Popular Science China pointed out that the impact of subjective norms on the willingness to use social networks has been confirmed by many studies. Pelling and white applied the theory of planned behavior to the study of young people's social networking site use behavior earlier, and systematically verified the explanatory effect of three dimensions of attitude, subjective norms and perceived behavior control on online behavior intention [10]. Although Baker and white initially found that subjective norms had no direct and significant effect on adolescents' willingness to use social networks, after the subsequent introduction of community norms, the impact of subjective norms became significant [11]. In the live broadcast scenario, the opinion of the anchor actually forms a "community norm" -- the fan group regards the anchor's recommendation as a code of conduct based on the recognition of the anchor. Xinhua data shows that 21.05% of consumers choose to listen to the anchor's recommendation. When the anchor clearly states that "this product must be bought" or "exclusive discount for the live room", consumers will feel a strong pressure to comply. This pressure comes from the parasocial relationship between the anchor and fans, which makes the impact of norms more direct than traditional shopping scenarios. In addition, when the anchor himself has a high social reputation or professional authority, his recommendation behavior has a more significant role in the standardization of consumer behavior.

2.2.2. Crowd effect

In addition to the anchor, other audiences in the live studio also constitute the source of subjective norms. Elements such as the real-time rolling comment area, the display of the number of people who have purchased, and the countdown to the limited-time rush purchase jointly create a "crowd onlooker" atmosphere. Guangming.com article pointed out that when the comment area shows that they buy products or express their love, consumers will feel a sense of belonging and group identity and hope to be consistent with others. This herd mentality was further amplified under the marketing strategy of time and limit. The survey of Xinhuanet found that 29.12% of consumers are impulse shoppers, and a large part of them are affected by group dynamics. The report of the Beijing Consumers' Association also mentioned that the content of online grass planting is highly hidden, and consumers are easy to learn from others' experience, so it is difficult to identify the real situation, which reflects the penetration of group opinions into individual norms. In the TPB framework, the impact of such temporary groups can be classified as a descriptive norm, that is, the signal of "what most people are doing". When consumers see that "XX pieces have been robbed" or "XX people are buying", their subjective regulatory pressure increases significantly, thus promoting the formation of purchase intention.

2.2.3. Penetration of social relations

In addition to the anchors and temporary groups, the recommendations of consumers' real social relationships (such as friends, family members and colleagues) will also penetrate into the live

purchase scene. The essence of "community+e-commerce" platforms such as Xiaohongshu is to use a social relationship chain to drive consumption. Mainstream impact (social impact) is identified as one of the influencing factors [6]. When consumers receive live links shared by friends or see relatives and friends recommend a product on social platforms, the pressure of subjective norms will increase significantly. Such norms derived from intimate relationships are often more persuasive than strangers' recommendations, because they are related to interpersonal relationship maintenance and trust transmission. In live broadcast e-commerce, such mechanisms as order matching and gift sharing make use of this relationship specification. Therefore, the sources of subjective norms can be divided into vertical authority (anchor) and horizontal relationship (Social Network), which interact with purchase intention in different situations. Word of mouth and social sharing within the community further magnified the impact of social relations on purchase decisions.

2.3. Perceived behavior control: convenience and risk perception

2.3.1. Impact of operational convenience

Perceived behavior control reflects an individual's perception of the resources and obstacles required by behavior. Live e-commerce has greatly facilitated the purchase process at the technical level: one-click order, multiple payment methods, intelligent customer service, quick return and exchange, etc., reducing the perceived difficulty of consumers' behavior. When explaining TPB, Popular Science China pointed out that the susceptibility of behavior control has a significant direct effect on the willingness to use. In the live broadcast scene, even if consumers are driven by strong attitudes and norms, if the operation is cumbersome or there are many process barriers (such as the need to jump to multiple pages and complex registration), their perceived behavior control will be weakened, thus inhibiting the transformation from intention to behavior. Xinhua reported that the shorter communication chain and decision-making time between live broadcasts make it easier for consumers to make purchase decisions. The core of this convenience design is to improve perceptual behavior control. In addition, the algorithm recommendation and personalized interface of the platform also reduce the search cost of consumers and enhance the sense of control. When consumers perceive that "the purchase behavior is easy to complete", the conversion rate of their purchase intention to the actual purchase behavior is significantly improved.

2.3.2. Role of information adequacy

Information sufficiency refers to the completeness of the information consumers need to obtain for decision-making in the live broadcast. When the live broadcast room can provide detailed product specifications, use effects, composition analysis, quality certification and other information, consumers will feel that the control of shopping results will be enhanced, so as to strengthen the control of perceptual behavior. The importance of accurate and effective information transmission [7]. The survey of the Beijing Consumers' Association shows that the quality of goods (79.21% worried) and false publicity (69.29% worried) are the most worried problems of consumers. If the information is not sufficient, consumers will feel "no bottom", that is, the sense of control will be reduced. Therefore, responsible anchors should provide transparent and multi-dimensional information to eliminate information asymmetry. The vertical anchors reported by CNR (such as Cao Miya's in-depth analysis of ingredients, strict selection of fabrics for Tangyuan, and businessmen's explanation of clothing technology) build consumer trust through professional information output, which essentially improves the control of consumers' perceptual behavior. When

consumers think that "I have enough information to make the right decision", their purchase intention increases significantly.

2.3.3. Adjustment of risk perception

Risk perception is an important inhibitory factor of perceived behavior control. Common risks in live shopping include inconsistent product quality, inflated prices, after-sales difficulties, privacy disclosure, etc. When consumers perceive high risk, even if the operation is convenient and the information is sufficient, they will reduce their sense of behavioral control because of worrying about the negative consequences. Guangming pointed out that impulsive consumption is often accompanied by regret, guilt and other emotions, and frequent occurrence may lead to functional damage. The data reported by the Beijing Consumers' Association clearly shows that quality, false publicity and after-sales are the core concerns of consumers. Therefore, risk perception plays a regulatory role in TPB: a high level of risk perception will weaken the positive impact of perceived behavioral control on intention, and even directly inhibit purchase intention. The practical implication is that the live broadcast platform needs to reduce the risk perception and strengthen the control belief of consumers by means of authentic product guarantee, no-reason return, insurance service, and open consumer evaluation. When consumers perceive that they can easily return even if they buy the wrong product, their perceived behavioral control is significantly enhanced.

2.4. Interaction of three dimensions

The three dimensions of TPB do not operate in isolation in the live broadcast scenario, but have significant interaction effects. Popular Science China mentioned in the review that when community norms enter the regression model, the impact of subjective norms weakens, indicating that there is a substitution relationship between different dimensions. In the live broadcast, a strong positive attitude (such as high trust in the anchor) may cause consumers to ignore the pressure of subjective norms. Perceptual behavior control (such as the extremely simple order process) may also make up for the lack of attitude and norms, and promote impulse buying. Anchor behavior characteristics often act on attitudes, norms and perceptual control at the same time, forming multiple paths [9]. For example, the professionalism of anchors not only enhances consumers' positive attitude towards products (cognitive path), but also generates normative pressure through fans' identity (SOCIAL path), while reducing operational uncertainty through clear explanations (control path). There is a positive synergy between the three dimensions: the more positive the attitude, the stronger the normative pressure, the more sufficient the sense of control, and the stronger the purchase intention; At the same time, the weakness of one dimension can be compensated by other dimensions. This interaction means that the live broadcast marketing strategy needs system design, rather than a single dimension optimization. For example, transparency of product information (enhanced attitude) combined with time-limited rush purchase (enhanced specification) and one-click order (enhanced control) can generate the strongest purchase driving force.

3. Conclusion and enlightenment

3.1. Research conclusion

Based on the theory of planned behavior, this paper explores the formation factors of purchase intention of live broadcast under TPB. The model is summarized as shown in Figure 1:

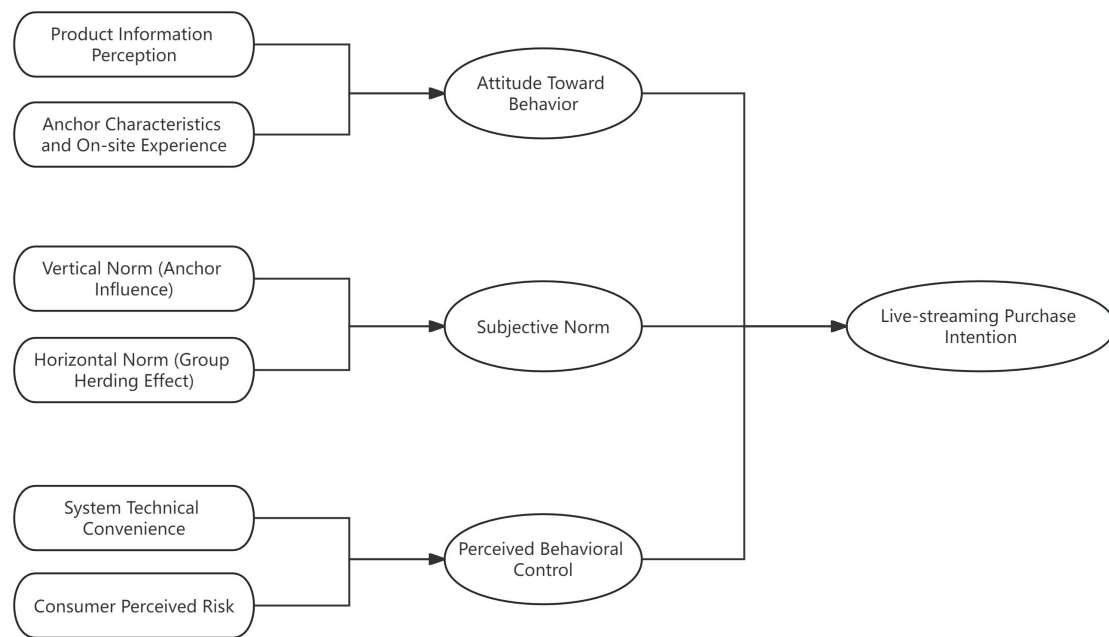


Figure 1. Formative factor model of purchase intention of live broadcast

In the graphic model, consumers' willingness to buy live broadcasts is directly determined by three factors: attitude toward behavior, subjective norms and perceived behavioral control. Among them, behavioral attitude is positively affected by product information perception, anchor characteristics and on-the-spot experience; Subjective norms are positively driven by vertical norms (the influence of anchors) and horizontal norms (Group onlookers). Perceived behavior control is positively affected by the convenience of system technology, but is weakened by consumer perceived risk (negative effect). The three factors work together to form the decision-making tendency of whether users are willing to buy in the live broadcast.

In general, TPB theory has good applicability in live broadcast scenarios, but it needs to expand the connotation of each dimension in combination with live broadcast characteristics (such as the host role, real-time interaction, and group dynamics). In particular, the anchor role has penetrated into all three dimensions of attitude, regulation and control from the traditional external variables, and has become an integrated element to explain the purchase intention of live broadcast.

3.2. Practical enlightenment

Based on the above conclusions, the following strategic suggestions are put forward for live broadcast e-commerce practitioners:

From the perspective of consumers' trust in the anchor, cultivate the professional quality and sincere image of the anchor. From "Hawking" to "knowledge sharing", build long-term trust through in-depth industry knowledge, personal testing experience, and continuous high-quality content output. Data show that nearly half of consumers consume because they love and trust anchors. The professionalism and credibility of anchors are the core of attitude formation.

From the perspective of consumers' understanding of products, optimize the presentation of product information and enhance information transparency. During the live broadcast, multi-dimensional and visual product information (such as composition analysis, physical display, and use evaluation) should be provided to reduce information asymmetry and consumers' risk perception. At the same time, price advantage and display effect are used to attract price-sensitive consumers.

From the perspective of consumer conformity psychology, the use of a group interaction mechanism to design effective social norms clues. Strategies such as limited-time discounts, collective order matching, online number display, and rolling broadcast of user evaluation can strengthen the crowd-onlooker effect and stimulate conformity. At the same time, it should encourage social sharing and order matching activities, and use social relations to enhance subjective norms.

From the perspective of consumers' shopping process, simplify the purchase process and provide reliable after-sales guarantee. One-click order, multiple payment methods, no reason to return, genuine insurance and other measures can significantly improve consumers' perceived behavior control. The combination of pre-sales detailed explanation and after-sales active follow-up can not only enhance the sense of control, but also reduce the risk perception.

From the perspective of the consumption system mechanism, pay attention to three-dimensional collaborative design. For example, through professional explanations, it can improve attitude and perceptual control at the same time, and use the fan community to strengthen subjective norms, forming a joint driving mechanism of "attitude → norm → control". The short board of one dimension can be made up by strengthening other dimensions, but the systematic overall design effect is the best.

From the perspective of consumption safety, the government and platforms should strengthen supervision. It will severely punish acts such as false publicity and unqualified quality, promote a transparent evaluation system and complaint rights protection channels, create a safe and credible shopping environment for consumers, and reduce risk perception from the institutional level, so as to promote the sustainable development of live broadcast e-commerce.

4. Conclusion

Aiming at the composite scenario of live e-commerce with both social and e-commerce attributes, this paper explores the formation factors of consumers' purchase intention of live broadcast based on the theory of planned behavior (TPB), which makes up for the deficiency of the applicability of traditional TPB theory in the live broadcast context. The core research conclusions are as follows:

TPB theory still has good applicability in live broadcast scenarios, but it needs to expand the connotation of each dimension in combination with the characteristics of live broadcast multimodal interaction and real-time community pressure. The anchor role has penetrated from the traditional external variables into the three core dimensions of attitude, norms and control, and has become an integrated element to explain the purchase intention of live broadcast.

The three dimensions of TPB are not isolated, but have significant interaction and synergy effects. The shortcomings of a single dimension can be made up by other dimensions, and the multi-dimensional joint design can produce the optimal purchase-driven effect.

Future research can further incorporate situational variables such as social presence and flow experience unique to the live broadcast scene, and expand the cross-situational applicability verification of the model in vertical category live broadcasts and different user groups.

References

- [1] Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- [2] Chen, Y., Lu, Y., & Wang, B. (2022). How live streaming affects purchase intention in social commerce: An IT affordance perspective. *Internet Research*, 32(4), 1149-1173.

- [3] Yang, Z. (2024). Research on the influence mechanism of consumers' purchase intention in agricultural products e-commerce live broadcast -- Based on the theory of planned behavior. *Chinese Business Theory*, (10), 75-80.
- [4] Liang, G., Wu, Z., & Wu, D. (2021). Research on the influencing factors of "e-commerce live broadcast" on college students' online consumption behavior based on the theory of planned behavior. *Modernization of Shopping Malls*, (19), 6-9.
- [5] Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471-499.
- [6] Wu, X., Cai, S., Chen, X., Yang, X., Liu, H., & Chen, Y. (2020). Research on the business model of Xiaohongshu community+e-commerce based on consumer survey. *Logistics Engineering and Management*, 42(1), 140-143.
- [7] Zeng, L., & Huang, D. (2021). What dominates the online live shopping willingness: A study on the influencing factors of the live shopping audience's purchase intention from the perspective of persuasion theory. *News and Writing*, (7), 50-57.
- [8] Sledgianowski, D., & Kulviwat, S. (2009). Using social network sites: The effects of playfulness, critical mass and trust in a hedonic context. *Journal of Computer Information Systems*, 49(4), 74-83.
- [9] Sun, S. (2025). Research review on the impact of anchor behavior characteristics of e-commerce live room on consumers' purchase intention. *e-Commerce Review*, 14(11), 460-467.
- [10] Pelling, E. L., & White, K. M. (2009). The theory of planned behavior applied to young peoples use of social networking websites. *Cyber Psychology & Behavior*, 12(6), 755-759.
- [11] Baker, R. K., & White, K. M. (2010). Predicting adolescents' use of social networking sites from an extended theory of planned behaviour perspective. *Computers in Human Behavior*, 26(6), 1591-1597.