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Article

# Whether e-commerce live streaming can increase consumers' repurchase intention—Based on behavioral cognitive theory

**Xiaochen Zhang[1], Nadzirah Rosli[2,*]**

[1] UKM-Graduate School of Business, The National University of Malaysia, Bangi, Selango 43600, Malaysia
[2] Faculty of Economics and Management, The National University of Malaysia, Bangi, Selangor 43600, Malaysia
*** Corresponding author:** Nadzirah Rosli, nadzirah.rosli@ukm.edu.my

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**Abstract:** Despite the current craze for e-commerce live streaming, its specific impact on consumer repurchase intentions and the underlying mechanisms remain insufficiently explored, creating a notable gap in existing research. The purpose of this study is to investigate the precise impact of e-commerce live streaming on consumers' repurchase intentions and to uncover the path through which this influence occurs. Drawing on behavioral cognitive theory, this paper employs a contextual experimental method to examine how e-commerce live streaming affects consumer repurchase behavior. The experimental results show that e-commerce live can significantly improve consumer repurchase intention, consumer loyalty and market order can positively regulate the effect of e-commerce live. This paper not only verifies the effectiveness of e-commerce live broadcasting, but also provides new ideas for brands and governments to strengthen the ability of e-commerce live broadcasting to "bring goods".

**Keywords:** China; live e-commerce; consumers; loyalty; repurchase intention

## 1. Introduction

The rise of e-commerce in China has profoundly changed consumer behavior. Since the birth of Alibaba in 1999, e-commerce has gradually broken through the constraints of traditional retailing and become the new engine of China's economic growth (Song et al., 2024). As shown in **Figure 1**, the national e-commerce development index has been climbing year by year, and the growth rate has been maintained at a high level.

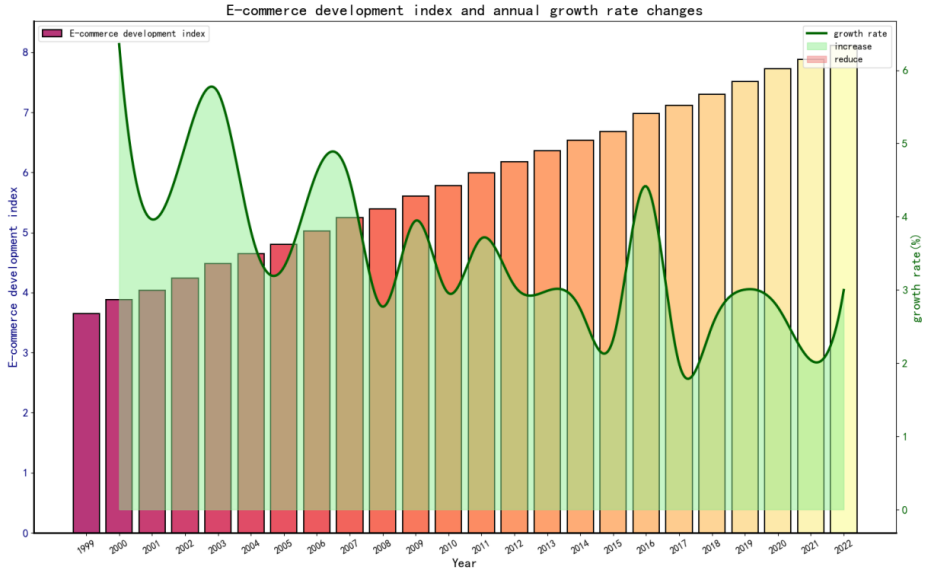


**Figure 1.** Trends in e-commerce development indices.

Entering the 21st century, the popularization of mobile Internet and the gradual improvement of payment and logistics systems have provided a solid foundation for the rapid expansion of the e-commerce industry. Just like a star blooming brightly in the deep night sky, e-commerce has been deeply rooted in the daily life of Chinese consumers with the changes in consumption habits and the continuous iteration of technology (Damiyana et al., 2024). According to the China Internet Network Information Center (CNNIC), China's online shopping users have exceeded the 800 million marks in 2023, and the scale of the e-commerce market is not only leading the world, but also gradually shaping the competitive pattern of global e-commerce.

As the market matures, however, consumer demand is undergoing a significant shift. While e-commerce platforms initially attracted consumers with an abundance of goods and transparent pricing, this transactional model alone no longer fully satisfies their evolving expectations. Consumers are increasingly seeking more than just functional products and competitive prices; they desire a more personalized and emotionally resonant shopping experience. This shift marks the rise of the "emotional economy[1]", where consumers now value the stories behind brands and products, as well as the experience they offer (Petruzzellis and Winer, 2023). In response to this change, e-commerce live streaming has emerged as a powerful new trend, captivating consumers with its unique blend of interactivity, engagement, and immersive experience, and further reshaping the way people connect with brands.

E-commerce live broadcast is not only a combination of technology and platform, it is more like a kind of "instant consumption art". Anchor through the product display and interactive communication, the original one-way information flow into a two-way or even multi-directional emotional flow. In this situation, consumers are not only buyers of products, but also participants in establishing emotional ties with anchors and brands. According to a research report by AiMedia Consulting, the transaction scale of China's live e-commerce market has exceeded one trillion yuan in 2023, and this market is expected to continue to maintain a growth rate of more than 20% in the next few years. Live e-commerce has become one of the most important ways for online shopping users to purchase goods. Along with the continuous growth of the scale of live e-commerce users in the future, the traffic pool of the live e-commerce industry will further expand. As shown in **Figure 2**, where the fold line represents the proportion of live e-commerce users to online shopping users, and the size of the bubble represents the number of live e-commerce users, it can be seen that the scale of live e-commerce users has shown a general trend of year-on-year increase.

Behind this phenomenon is not only the result of technological innovation, but also a reflection of the deep-seated changes in consumer demand. E-commerce live broadcasting has profoundly changed consumers' shopping psychology and decision-making mode through its "immediacy" and "immersion", which is particularly important for the enhancement of consumers' willingness to repurchase (Li et al., 2024). According to the "2023 China E-Commerce Live Streaming Consumer Behavior Report", more than 60% of consumers said that their purchase decision after watching live streaming is not only based on product information and price, but also on the basis of trusting the anchor and the brand. The process of building this sense of trust is not just a short-term process, but an emotional connection that gradually deepens in constant interaction. According to the theory of behavioral cognition, the

consumer's willingness to repurchase is not a simple rational behavior, but in the repeated cognitive adjustment and emotional reinforcement in the formation of the "long-lasting drive".

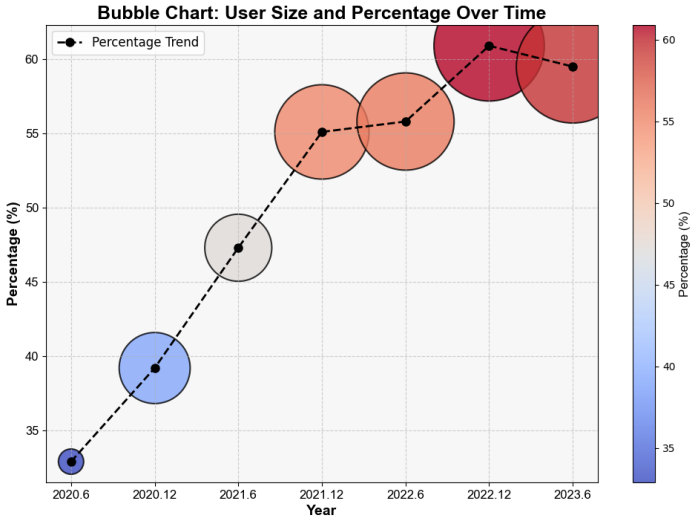


**Figure 2.** Live broadcast e-commerce user scale.

Although e-commerce live broadcast has brought many innovations to the consumption mode, its rapid development is also accompanied by a series of drawbacks that cannot be ignored. The possible problem of "false propaganda" during live broadcasting, and the behaviors of certain anchors exaggerating the effects of products and hiding product defects have become a widespread concern both inside and outside the industry. According to the "2023 China E-Commerce Live Streaming Industry Supervision Report", false propaganda and unfair competition are common on e-commerce live streaming platforms, which not only makes consumers deceived, but more seriously, this breakdown of trust may cause damage to the long-term image of the brand (Kopalle et al., 2023). Consumers' trust in the brand will be greatly affected after a negative shopping experience, which will directly lead to the decline of their future repurchase intention. The frequent phenomenon of "brushing" in live e-commerce has also caused the problem of information distortion. This kind of distrust destroys the transparency of the live e-commerce platform, which also makes consumers have a deeper sense of distrust in their subsequent purchase decisions. More seriously, these dishonest behaviors, if not effectively managed, will pose a threat to the sustainable development of the entire e-commerce live industry.

Therefore, with the rapid development of the e-commerce live broadcasting industry, the state's attention to the protection of consumer rights and interests and market regulation has been gradually strengthened. In recent years, the gradual improvement of relevant regulatory policies and laws and regulations aims to build a fairer and more transparent consumer environment. For example, the Measures for the Administration of Network Transactions issued by the State Administration of Market Supervision clearly requires e-commerce platforms to assume the responsibility of auditing and regulating the behavior of platforms and merchants; the Consumer Rights and Interests Protection Law strengthens the penalties for false advertisements, false propaganda and other behaviors to ensure that consumers' rights to know, to choose

and to fair trade are effectively safeguarded; at the same time, the implementation of the E-Commerce Law provides legal guidance for e-commerce platforms and the live broadcasting The implementation of the E-Commerce Law provides a legal basis for the compliance of the e-commerce platform and the live broadcasting industry, requiring live broadcasting platforms to be responsible for the goods and services they sell and to protect the basic rights and interests of consumers.

The gradual implementation of these policies provides consumers with more reliable protection of their rights and interests. Whether e-commerce live broadcast can effectively enhance consumers' willingness to repurchase must be further empirically verified in this policy environment. Especially in the process of e-commerce live broadcasting, whether consumers can continue to maintain trust in the brand, and whether they can effectively avoid the negative impact of false propaganda and other behaviors on the purchase decision, these issues need to be verified through more detailed experiments and data analysis.

Therefore, this study reveals how e-commerce live streaming affects consumers' repurchase intention in the context of policy regulation and market standardization through contextual experimental method. Through systematic analysis, this paper can provide optimization strategies for e-commerce platforms and brands, and countermeasure suggestions for the government. Ultimately, it will bring sustainable profit growth for e-commerce platforms by enhancing consumers' repurchase willingness, and promote the healthy development of the entire consumer ecosystem to realize steady economic growth. Therefore, the value of this study is not only limited to analyzing and verifying the ability of e-commerce live streaming, but also to provide useful suggestions and guidelines for the sustainable development of the e-commerce industry.

## 2. Theoretical analysis and research hypotheses

### 2.1. Live e-commerce and consumers' willingness to repurchase

Traditional economics and marketing tend to view consumers as rational choosers, believing that their purchase decisions are based on external factors such as price and functionality. However, the perspective of behavioral cognitive theory is more complex, emphasizing that consumer decisions are equally cognitively and emotionally driven, especially in complex situations where emotional factors often determine the consumer's final choice (Chatterjee et al., 2023).

In e-commerce live, the consumer's purchase behavior is not only based on the price or function of the product, but also under the guidance of the anchor, and the brand has a deep emotional resonance. This emotional resonance is the biggest difference between live e-commerce and traditional e-commerce (Li et al., 2024). The biggest charm of the live broadcast is that it breaks the barrier between consumers and goods, the shopping experience into an "emotional transaction[2]". E-commerce live broadcast through the anchor and consumer real-time interaction, creating a high degree of consumer participation in the shopping environment. Through real-time interaction and communication, consumers get more product information and real use experience, and then psychologically form trust in the brand, establishing a "psychological contract" with the brand (Lefkeli et al., 2024). This contract not only

allows consumers to feel the brand's "temperature", but also makes them "repurchase motivation" in future shopping decisions.

In addition, e-commerce live streaming enhances the stability of consumers' knowledge of product information to a certain extent. In traditional e-commerce, consumers often need to search for product information on their own, and there is the problem of asymmetric information. In the live broadcast process, the anchor answers consumers' questions in a direct and immediate way, and shows the actual effect of the product in a timely manner, which greatly reduces the cognitive burden on consumers. According to the behavioral cognitive theory, the less cognitive uncertainty consumers have in the decision-making process, the easier the formation of repurchase intention (Chatterjee et al., 2023). Therefore, the immediate feedback provided by live streaming significantly enhances consumers' trust, which in turn increases their likelihood of repurchase. Based on this, the hypothesis is proposed:

H1: E-commerce live streaming can significantly increase consumers' repurchase intention.

## 2.2. Moderating effects of consumer loyalty

From the perspective of behavioral cognitive theory, consumers' loyalty determines their cognitive response and emotional investment when facing live e-commerce broadcasts, which in turn regulates the process of forming their repurchase intention (Ou et al., 2022). Consumers with higher loyalty have lower cognitive bias when receiving live broadcast information. High-loyalty consumers have already established a strong sense of trust in the brand or merchant, and this trust makes it easier for them to accept and internalize the product information in the live broadcast. In contrast, less loyal consumers are likely to be more skeptical and less receptive to information, resulting in a weaker boost in repurchase intent. Thus, loyalty plays a key role in reducing cognitive uncertainty and influences consumers' cognitive acceptance of live content.

Loyalty also influences emotional identification, which is a key factor in the cognitive acceptance of live content. Consumers with high brand loyalty often feel a stronger emotional attachment to the brand, which facilitates their emotional resonance with the live streaming host or anchor. This emotional connection enhances their engagement with the broadcast and fosters a deeper sense of identification with the brand, further increasing the likelihood of repurchase behavior. According to Jain et al. (2024), this emotional identification not only strengthens the consumer's attachment to the brand but also makes them more likely to view the live content as credible and valuable. In contrast, consumers with lower loyalty lack this emotional foundation, leading to weaker emotional responses during the live streaming process. Without this emotional connection, the potential for transforming the emotional stimuli from the broadcast into repurchase behavior is diminished, thus reducing the overall effectiveness of live streaming in driving repurchase intentions (Lu and Chen, 2021).

Loyalty also has a significant impact on trust. Consumers with higher loyalty usually trust the brand more, resulting in lower purchase decision costs and a smoother decision-making process in live e-commerce broadcasts (Jain et al., 2024). On the

contrary, low loyalty consumers lack trust in the brand and may be skeptical of recommendations in live streaming, increasing the uncertainty of purchase decisions, which in turn affects repurchase intention. Based on this, the hypothesis is proposed:

H2: Consumer loyalty plays a significant positive moderating role.

### 2.3. Regulatory effects of the market order

From the perspective of behavioral cognitive theory, consumer decision-making is not only influenced by personal emotional and cognitive responses, but also significantly affected by the external market environment. The normality of the market order can influence consumers' trust in live e-commerce and the formation of repurchase intention. A perfect market order can reduce consumers' cognitive uncertainty. In e-commerce live streaming, information asymmetry tends to increase consumers' decision-making risk, which in turn affects their repurchase intention (Merlo et al., 2024). However, in a standardized market environment, consumers are able to judge the authenticity of product information more clearly, and merchant credibility is effectively guaranteed. Behavioral cognitive theory states that the less cognitive uncertainty consumers have when making decisions, the lower the resulting decision anxiety. A standardized market order reduces the cognitive burden of consumers by guaranteeing information transparency, thus increasing their intention to repurchase (Zhou et al., 2018).

In addition, the core of live e-commerce lies in building trust through the interaction between anchors and consumers, and a well-regulated market order provides a basic guarantee for such trust. In a regulated market, merchants and platforms must comply with consumer protection laws and regulations, which enhances consumers' trust in merchants, especially when faced with instant sales in live streaming (Martinsons, 2008). Increased consumer trust further drives repurchase intent. In contrast, in an environment with a poorly regulated market order, consumers are prone to skepticism about product quality and other aspects of the product, and the lack of trust weakens their repurchase intentions.

A well-organized market also influences repurchase intentions by enhancing consumers' sense of security. Consumers can feel a sense of transactional security in an organized market, which makes them more assured in the decision-making process. Behavioral cognitive theory states that consumers' sense of security can significantly reduce the psychological cost of their purchase decisions, thus promoting repurchase behavior (Lee and Xiong, 2024). Based on this, the hypothesis is proposed:

H3: Market order plays a significant positive regulatory role.

## 3. Research methodology

The paid Likert 5-point scale questionnaire was used as the primary data collection instrument in this study to ensure the reliability and validity of the data obtained. Likert scales, as a commonly used psychological and sociological survey instrument, are widely used to measure the extent of respondents' attitudes, opinions, or behaviors towards specific statements. In this study, the five levels of the scale, ranging from "strongly disagree" to "strongly agree", cover different perceptions and attitudes of respondents towards the impact of e-commerce live streaming on their

intention to repurchase, thus capturing in more detail the psychological reactions and behavioral tendencies of consumers. behavioral tendencies.

The paid questionnaire was also adopted, which on the one hand enhances the respondents' motivation to participate and improves the representativeness and completeness of the data; on the other hand, it can also effectively control the potential sample bias and ensure the quality of the collected data and the diversity of the samples. In order to enhance the reliability and validity of the questionnaire, the study not only conducted a preliminary pre-survey, but also revised and optimized the questionnaire through cognitive pre-testing to ensure the accuracy and consistency of the questionnaire measurement.

After the data collection was completed, the study used the analysis of variance (ANOVA) method for statistical analysis. ANOVA, as a commonly used statistical method, can effectively compare the differences in means between different groups and reveal the potential relationships between variables. In this study, ANOVA is mainly used to verify the direct effect of e-commerce live streaming on repurchase intention, and is also able to explore the mechanism of moderating variables such as loyalty and market order.

## 4. Experiment 1: The impact of e-commerce live streaming on consumers' willingness to repurchase

### 4.1. Experimental design

The main purpose of Experiment 1 is to test the impact of e-commerce live streaming on consumers' repurchase intention, and this paper adopts a one-way between-groups experimental design (brand-side selling method: e-commerce live streaming vs. non-e-commerce live streaming) to test H1.

The selection of university students was based on the assumption that they are a representative group of younger, tech-savvy consumers who are active in e-commerce and familiar with live streaming platforms. This age range was chosen to align with the target demographic for most e-commerce live streaming platforms, which tend to attract younger, digitally engaged consumers. The sample was selected using a convenience sampling method, where participants were recruited from university campuses, ensuring they were familiar with online shopping and e-commerce live streaming. Participants were required to have previous experience with live-streamed e-commerce broadcasts, as this would ensure they were able to provide relevant feedback and responses during the experiment.

While the sample size is sufficient for statistical analysis, it is important to acknowledge several limitations. The sample is not fully representative of the general population, as it consists primarily of university students. This demographic may have a higher level of familiarity with e-commerce live streaming and digital platforms than older or less tech-savvy consumers, which could introduce a bias toward more favorable attitudes and behaviors toward live streaming. Additionally, university students may not fully represent other consumer segments, such as working adults or retirees, whose purchasing behaviors and attitudes toward live-streamed content may differ significantly.

Referring to the study of Wells et al. (2011), this paper focuses on the impact of e-commerce live streaming on consumers' repurchase intention by simulating a real online shopping scenario and developing an experimental situation in which consumers purchase online through an e-commerce platform. For the control group, i.e., the non-e-commerce live streaming group, participants will visit the e-commerce platform, but instead of watching the live streaming instead, they will only view the detail page of a shower gel. The page includes basic information such as the product's picture, description, price, and reviews, but there is no live interactive function, so consumers can only make a choice through the regular product display; for the experimental group, i.e., the e-commerce live streaming group, participants will watch an anchor-led e-commerce live stream through the e-commerce platform. The anchor will introduce product features and usage scenarios, and answer questions raised by consumers during the live broadcast. Participants can interact with the anchor during the live broadcast. Other contents are the same as the control group.

For variable measurement, the questionnaires in this paper all use a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree). The measurement of live e-commerce refers to the study of Wang et al. (2013) which consults whether subjects can perceive interaction and empathy during live e-commerce. Consumers' willingness to buy was measured by Darley and Smith (1993), which included three questions such as "I am willing to buy this product". Specific questionnaires can be found in the **Appendix**.

## 4.2. Experimental procedures

In order to exclude the interference of external factors on the experimental results as much as possible, this experiment takes college students as the experimental sample to ensure the internal consistency of the sample. The relatively consistent consumption behavior of the college student group can reduce the interference of background differences on the experimental results and enhance the reliability of the experiment. In addition, the college student group generally uses the e-commerce platform frequently and is sensitive to emerging consumption trends, so it can better reflect the actual impact of live e-commerce on repurchase intention. Taking school college students as the survey object has a good sample representativeness, which can support the hypothesis testing of this study (Eckerd et al., 2021).

Before the formal experiment, this study recruited 30 college students for the pre-experiment (16 males and 14 females, aged between 18–28 years old), randomly divided the subjects into two groups by drawing lots, showed the experimental materials to each group of subjects, asked the subjects to complete the relevant measurement questions according to the experimental materials, and finally recorded the demographic characteristics of the subjects such as gender and age. Finally, the demographic characteristics of the subjects such as gender and age were recorded. The results of ANOVA are shown in **Table 1**. The results show that the manipulation of this experiment on live e-commerce was successful, indicating that the experimental context was developed reasonably.

**Table 1.** Pre-experiment.

| statistic | broadcast live | not broadcast live |
|---|---|---|
| *M* | 3.733 | 2.133 |
| *SD* | 0.594 | 0.743 |
| $F(1, 28)$ | 42.442 ($P < 0.001$) | |

We recruited college students from all over China to participate in the experiment, which started in September 2023 and ended in January 2024 (To ensure timeliness, the next experiments were carried out successively from February 2024 to May 2024), and gave cash prizes to college students who participated in the experiment and submitted valid questionnaires, and finally recruited 101 college students (45 males and 56 females, aged between 18–34 years old) to participate in the experiment and recovered the questionnaires through the credano platform. Although the sample size of 101 college students (45 males and 56 females, ages 18–34), while it may not be considered large, the combination of the statistical properties of ANOVA and the analysis of efficacy ensures the relevance of the experimental results. ANOVA is suitable for smaller sample sizes with significant effects, especially when e-commerce live streaming has a large impact on repurchase intention, and smaller samples can still provide stable results. In addition, the efficacy analysis confirms that the 101 samples have sufficient statistical efficacy at the set significance level to support valid conclusions. In order to ensure the validity of the data, we set up test items in the questionnaire, such as "This is an attention test question, please fill in strongly disagree", and if the subjects chose the wrong option, it means that they did not read the experimental materials carefully, and the corresponding questionnaire will be marked as invalid and will be excluded during the data analysis (Abbey and Meloy, 2017). On this basis, we used the lottery method to randomly divide the subjects into two groups, in order to let the subjects fully understand the experimental situation, the subjects were asked to fully integrate into the experimental situation, combined with their own online shopping experience, choose the option closest to the true feelings of the heart, and complete the relevant questions within the specified time.

## 4.3. Analysis of experimental results

Since some subjects did not pass the attention test, this paper finally collected 90 valid questionnaires (36 males and 54 females, aged between 18–34 years old) after eliminating 11 invalid questionnaires, with a valid questionnaire return rate of 89.1%. Among them, the sample capacity of the two groups of experimental situations is $N_{broadcast\ live} = 45$ and $N_{not\ broadcast\ live} = 45$, respectively.

In this paper, ANOVA is used to test the effect of e-commerce live broadcasting on consumers' repurchase willingness. The results, as shown in **Table 2**, show that the repurchase intention is stronger when subjects learn about the product through e-commerce live streaming compared to just browsing web information without live interaction. Therefore, H1 is verified.

**Table 2.** Formal experiments.

| statistic | broadcast live | not broadcast live |
|---|---|---|
| *M* | 3.385 | 2.622 |
| *SD* | 0.623 | 0.597 |
| *F*(1, 88) | 35.150 ($P < 0.050$) | |

## 5. Experiment 2: Testing the moderating effect of consumer loyalty

The main purpose of Experiment 2 is to test the moderating effect of consumer brand loyalty on the relationship between e-commerce live streaming and consumer repurchase intention, and this paper adopts a 2 (brand-side selling method: e-commerce live streaming vs. non-e-commerce live streaming) × 2 (consumer loyalty: high vs. low) between-groups experimental design to test H2.

### 5.1. Experimental design

In order to measure the consumer loyalty of differentiated brands, this experiment requires a pre-test experiment. In order to exclude the influence of factors such as differences in subjects' needs and familiarity on the findings of the study, this paper, based on interviews and research and with reference to the design of previous studies, and based on the criteria of repeat purchase behavior, brand advocacy, emotional attachment, perceived brand value and customer retention metrics, four brands can be initially screened for pre-test experiments, namely Dove, Lux, Johnson's Baby and Safeguard. These four brands are more common in daily life and the subjects are familiar with them. At the same time, these brands have audience differences and varying consumer loyalty, providing a rich dimension of comparison for the study. We recruited 50 university students (21 males and 29 females, aged between 18 and 25 years old) to participate in this pre-test to assess their consumer loyalty to the above four brands. The measure of brand loyalty was based on the study of Guest (1944), which included six questions, such as "Which of the following four brands do you prefer? The results are shown in **Table 3**. In this paper, based on the value of the *M*-statistic, Dove and Safeguard are selected as the brands with high and low loyalty, respectively.

**Table 3.** Pre-test experiments.

| statistic | Dove | LUX | Johnson | Safeguard |
|---|---|---|---|---|
| *M* | 4.071 | 3.643 | 3.476 | 2.238 |
| *SD* | 0.592 | 0.539 | 0.729 | 0.673 |

The variables measured in the next experiment, e-commerce live streaming and consumer repurchase intention were the same as in Experiment 1, and brand loyalty was the same as in the pre-test experiment.

### 5.2. Experimental procedures

We recruited 60 university students to participate in this pre-test (25 males and 35 females, aged between 18 and 30 years old), randomly divided the subjects into 4

groups by lottery, presented the experimental materials to each group, and asked the subjects to complete the relevant measurement questions according to the experimental materials, and finally recorded the demographic characteristics of the subjects, such as gender and age. The ANOVA results are shown in **Table 4**. The results indicate that the manipulation of e-commerce live streaming and brand loyalty in this experiment was successful, indicating that the experimental context was developed reasonably.

**Table 4.** Pre-experiment.

| statistic | broadcast live | not broadcast live | high loyalty | low loyalty |
|---|---|---|---|---|
| *M* | 4.200 | 2.050 | 4.139 | 2.283 |
| *SD* | 0.596 | 0.592 | 0.812 | 0.630 |
| *F*(1, 58) | 196.414 ($P < 0.001$) | | 97.815 ($P < 0.001$) | |

As in Experiment 1, we recruited college students from all over China and provided cash rewards for those who participated in the experiment and submitted valid questionnaires, and finally recruited 181 college students (79 males, 102 females, aged 18–32) to participate in the experiment and collect questionnaires through the credano platform. In order to ensure the validity of the data, we set up a test item in the questionnaire, such as "This is an attention test question, please fill in the strongly disagree", if the subject chooses the wrong item, it means that he/she has not read the experimental materials carefully, and the corresponding questionnaire will be marked as invalid, and it will be excluded from the data analysis process. On this basis, we randomly divided the subjects into four groups by drawing lots. We asked the subjects to fully integrate into the experimental situation, combine their own online shopping experience, choose the option that is closest to their true feelings, and complete the relevant questions within the specified time.

## 5.3. Analysis of experimental results

Since some subjects did not pass the attention test, this paper finally collected 164 valid questionnaires (67 males and 97 females, aged between 18–32 years old) after excluding 17 invalid questionnaires, and the recovery rate of valid questionnaires was 91.1%. Among them, the sample sizes of the four groups of experimental situations were $N_{broadcast\ live\text{-}high} = 43$, $N_{broadcast\ live\text{-}low} = 40$, $N_{not\ broadcast\ live\text{-}high} = 41$, and $N_{not\ broadcast\ live\text{-}low} = 40$, respectively.

The first step of this paper adopts ANOVA to test the effect of e-commerce live broadcasting on consumers' repurchase willingness. The results are shown in **Table 5**. The results show that e-commerce live streaming can significantly enhance consumers' repurchase intention.

**Table 5.** Experiment 2 main effects.

| statistic | broadcast live | not broadcast live |
|---|---|---|
| *M* | 3.361 | 2.930 |
| *SD* | 0.599 | 0.638 |
| *F*(1, 162) | 19.940 ($P < 0.050$) | |

In the second step, this paper uses two-factor ANOVA to test the moderating effect of consumer brand loyalty on the relationship between e-commerce live streaming and consumer repurchase intention. In this paper, two-factor ANOVA was conducted with consumer repurchase intention as the dependent variable and e-commerce live streaming and consumer brand loyalty as fixed factors. The results show that the interaction term between e-commerce live streaming and consumer brand loyalty is significant ($F(1, 160) = 4.060$, $P < 0.050$), indicating that the moderating effect of consumer brand loyalty on the relationship between e-commerce live streaming and consumer repurchase intention is significant.

The specific results are shown in **Table 6**. In the case of high loyalty, e-commerce live streaming can enhance consumer repurchase intention. In the case of low loyalty, e-commerce live streaming can also enhance consumers' repurchase intention. However, the effect of e-commerce live streaming to enhance consumers' repurchase intention is stronger when loyalty is high. Therefore, H2 is validated.

**Table 6.** Experiment 2 moderating effects.

| statistic | loyalty | broadcast live | not broadcast live |
|---|---|---|---|
| *M* | | 3.450 | 2.829 |
| *SD* | high | 0.608 | 0.633 |
| *F*(1, 82) | | 20.978 (*P* < 0.050) | |
| *M* | | 3.267 | 3.033 |
| *SD* | low | 0.581 | 0.635 |
| *F*(1, 78) | | 2.940 (*P* < 0.100) | |

The moderating effect of consumer brand loyalty on the relationship between e-commerce live streaming and consumer repurchase intention is shown in **Figure 3**.

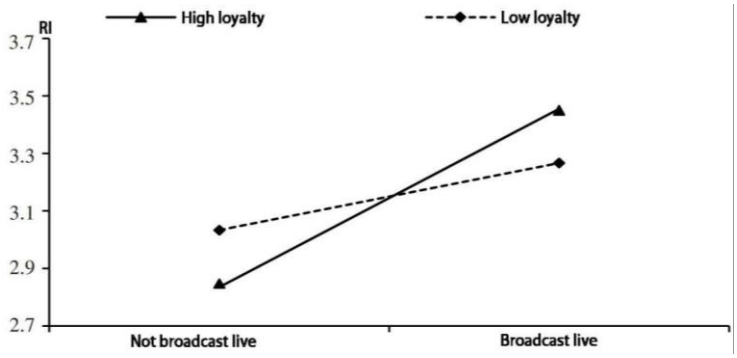


**Figure 3.** Experiment 2 moderating effect.

## 6. Experiment 3: Testing the regulatory effects of the market order[3]

### 6.1. Experimental design

The main purpose of Experiment 3 is to test the moderating effect of market order on the relationship between e-commerce live streaming and consumers' repurchase intention, and this paper adopts a 2 (brand-side selling method: e-commerce live streaming vs. non-e-commerce live streaming) × 2 (market order: high vs. low) between-groups experimental design to test H3.

This paper refers to the pre-test results of the four brands mentioned above in Experiment 2, and selects LUX shower gel for the experimental design mainly based on the following considerations: First, for consumers, the brand loyalty of LUX shower gel is moderate, and the selection of this product for the experimental design can circumvent the possible influence of brand loyalty on the experimental results. Secondly, shower gel is common in consumers' daily life and is well known and understood by the general consumer group.

In this paper, we refer to the research of Pavlou and Gefen (2004) to manipulate the market order from the aspects of competition mechanism, authentication mechanism, information feedback mechanism, payment security mechanism and after-sale security mechanism. In order to better present the differences between the mechanisms of market order, each mechanism was presented to the subjects in the form of "yes" and "no", so that the subjects could have a more intuitive feeling. Other variables were manipulated as in the previous experiment.

As for the measurement of the variables, the live broadcast of e-commerce and consumers' willingness to repurchase are the same as that of Experiment 1. The measurement of market order refers to the study of Fang et al. (2014), which contains "I think that the qualification and entry conditions for sellers are very strict, and the sellers who are able to conduct live e-commerce sales are strong", "I think that the information of sellers displayed on the marketplace is real and effective", "I think the sellers' information displayed on the marketplace is true and effective, and I can make a correct judgment on the quality of products based on the information displayed on the platform".

## 6.2. Experimental procedures

We recruited 60 university students to participate in this pre-test (28 males and 32 females, aged between 18 and 24 years old), randomly divided the subjects into 4 groups by lottery, presented the experimental materials to each group, and asked the subjects to complete the relevant measurement questions according to the experimental materials, and finally recorded the demographic characteristics of the subjects, such as gender and age. The ANOVA results are shown in **Table 7**. The results indicate that the experimental context was developed reasonably.

**Table 7.** Experiment 2 moderating effects.

| statistic | broadcast live | not broadcast live | High market order | Low market order |
|---|---|---|---|---|
| *M* | 3.750 | 2.167 | 3.917 | 2.008 |
| *SD* | 0.487 | 0.606 | 0.551 | 0.531 |
| $F(1, 58)$ | 124.335 ($P < 0.001$) | | 186.623 ($P < 0.001$) | |

## 6.3. Analysis of experimental results

The formal experimental procedure was the same as the previous experiment, and 180 college students were recruited to participate in the experiment (83 males and 97 females, aged between 18 and 30 years old). Since some subjects failed the attention test, after excluding 20 invalid questionnaires, 160 valid questionnaires were collected (67 male and 93 female, aged 18–30), with a return rate of 88.9%. The sample sizes

of the four experimental scenarios were $N_{broadcast\ live—High\ market\ order} = 40$, $N_{broadcast\ live—Low\ market\ order} = 40$, $N_{not\ broadcast\ live—High\ market\ order} = 39$, $N_{not\ broadcast\ live—Low\ market\ order} = 41$.

The first step is to test the effect of e-commerce live streaming on consumers' repurchase intention through ANOVA. The results are shown in **Table 8**. The results show that e-commerce live streaming significantly enhances consumers' repurchase intention.

**Table 8.** Experiment 3 direct effects.

| statistic | broadcast live | not broadcast live |
|---|---|---|
| *M* | 3.338 | 2.988 |
| *SD* | 0.705 | 0.528 |
| *F*(1, 158) | 12.662 (*P* < 0.050) | |

In the second step, a two-factor ANOVA was used to test the moderating effect of market order on the relationship between e-commerce live streaming and consumers' repurchase intention, and the results showed that the interaction term between e-commerce live streaming and market order was significant ($F(1, 156) = 4.124$, $P < 0.050$), indicating that the moderating effect exists significantly. Specific results, as shown in **Table 9**, in the case of low market order, e-commerce live streaming or not has little effect on the willingness of fee payers to repurchase. However, in the case of high market order, e-commerce live streaming can significantly enhance consumers' repurchase intention. Therefore, H3 is verified.

**Table 9.** Experiment 3 moderating effects.

| statistic | Market order | broadcast live | not broadcast live |
|---|---|---|---|
| *M* | | 3.558 | 3.111 |
| *SD* | high | 0.821 | 0.821 |
| *F*(1, 77) | | 8.732 (*P* < 0.05) | |
| *M* | | 3.016 | 2.957 |
| *SD* | low | 0.821 | 0.821 |
| *F*(1, 79) | | 0.247 (*P* > 0.010) | |

The moderating effect of market order on the relationship between e-commerce live streaming and consumer repurchase intention is shown in **Figure 4**.

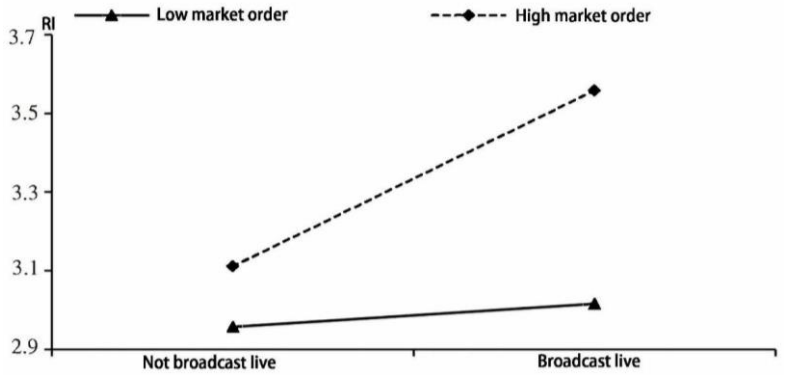


**Figure 4.** Experiment 3 moderating effect.

# 7. Conclusions and recommendations

## 7.1. Implications of the conclusions

In the context of the continuous development of e-commerce and the more mature live streaming with goods mode, this paper is based on the behavioral cognitive theory and adopts the contextual experimental method to explore the influence mechanism of e-commerce live streaming on consumers' repurchase intention. The experimental results show that e-commerce live broadcast can significantly enhance consumers' repurchase intention. In addition, consumer loyalty and market order serve as key moderators that further drive the marginal increase in the effectiveness of live e-commerce broadcasting. Highly loyal consumers have stronger emotional identification in live streaming, higher information acceptance, and more stable repurchase intentions. The regulated market order further optimizes the effect of live e-commerce by reducing information asymmetry, improving transaction transparency and enhancing consumer trust.

From a broader socio-economic level, behind e-commerce live streaming to enhance consumers' repurchase intention is not just a change in individual consumer behavior, it also has far-reaching socio-economic implications. The increase in repurchase intention means that the consumer market is active, which is important for boosting domestic demand and promoting consumption. With the enhancement of consumers' brand identity, live e-commerce not only helps to promote short-term consumption growth, but also cultivates long-term consumer loyalty, helps the sustainable development of brands, and further promotes the structural transformation and upgrading of the entire retail industry. Therefore, live e-commerce is not only a new way for enterprise marketing, but also a new driving force for economic growth.

Based on behavioral cognitive theory, this study comprehensively analyzes the mechanisms by which e-commerce live streaming influences consumers' repurchase intention, making a significant contribution to fill the research gap on consumer repurchase motivation in the marketing field. The study proposes a new perspective that considers consumer loyalty and market order as key moderators that enhance the impact of live streaming, linking emotional engagement and trust to long-term consumption behavior. In addition, the study extends the understanding of e-commerce live streaming beyond individual consumption behavior, emphasizing its broader socio-economic impacts, including its role in stimulating domestic consumption, fostering brand loyalty, and driving structural transformation in the retail sector. The study emphasizes the potential of live streaming as a powerful tool for marketing and sustainable economic growth.

While this study provides valuable insights into the influence of e-commerce live streaming on consumers' repurchase intentions, it is important to acknowledge several limitations. First, the sample in this study is limited to university students, which may not fully represent the broader consumer population. The findings might not be generalizable to older consumers or those with varying levels of experience with e-commerce. Second, the study primarily relies on a contextual experimental method, which, while effective in understanding immediate consumer responses, does not capture long-term behavioral patterns that may emerge over time. Additionally, while

the research explores the role of consumer loyalty and market order as moderators, other potential variables—such as the type of product, brand image, or the platform used—were not fully explored, which could also influence the outcomes.

Future research could address these limitations by expanding the sample to include a more diverse demographic and conducting longitudinal studies to observe the long-term effects of e-commerce live streaming on consumer behavior. Additionally, further exploration into other moderating factors, such as product category or platform-specific characteristics, could provide a more comprehensive understanding of how live e-commerce influences repurchase intentions across different contexts. Finally, research could delve deeper into the underlying psychological processes, such as trust-building and emotional engagement, and how these mechanisms evolve over time in shaping consumer loyalty and market behaviors. These perspectives will help refine the theoretical framework of behavioral cognitive theory in the context of e-commerce live streaming and provide more actionable insights for both brands and policymakers.

## 7.2. Recommendations for countermeasures

For the government, it is necessary to strengthen the regulation of market order and enhance market transparency. The government should increase the market order supervision of the e-commerce live broadcast industry to ensure that platforms and merchants follow laws and regulations and provide true and transparent information. During the live broadcast, merchants are required to clearly display the actual functions and effects of their products to avoid dishonest behavior such as false propaganda. The government can ensure that consumers are provided with accurate information by setting up a specialized regulatory body or introducing a third-party certification body to regularly audit the content of live e-commerce broadcasts. Through this series of measures, the information asymmetry in the market can be reduced and consumer trust can be enhanced, thus promoting repurchase intentions. In addition, the government should strengthen compliance checks on e-commerce live streaming platforms to protect consumer rights and further build a healthy, fair and transparent market environment.

The government should actively promote the integration of live e-commerce with the local economy to drive domestic demand growth. One practical approach is to support local specialty brands and small and medium-sized enterprises (SMEs) in leveraging e-commerce live streaming platforms to expand their market reach. Policy support is crucial in facilitating the adoption of live e-commerce by these businesses, particularly in enhancing their brand visibility and consumer engagement. For example, the government could offer financial subsidies, tax incentives, or other forms of support to encourage SMEs to use live streaming as a means of product promotion, fostering increased brand awareness and consumer trust. Furthermore, establishing cooperative partnerships between local brands and e-commerce platforms can create a seamless integration of online and offline channels, boosting the exposure of regional products and increasing their market presence. By adopting these measures, the government can stimulate local economic activity, accelerate consumption growth, and foster the upgrading of consumer preferences. More importantly, these initiatives

would contribute to the transformation and optimization of regional economic structures, ensuring sustainable development and long-term growth in the local economy.

For enterprises, they should seize the opportunity of e-commerce live broadcasting to enhance brand exposure. Brands should make full use of e-commerce live broadcasting as an emerging channel, seize its great advantages, and increase marketing investment in the live broadcasting platform. Through well-planned live broadcasts, brands can quickly increase awareness and expand market share. In addition, brands can flexibly adjust live content and product recommendations based on real-time viewer feedback and purchase data to accurately reach target consumer groups. Through this kind of real-time interaction and precision marketing, brands can not only quickly increase sales, but also establish a wider brand influence through live e-commerce, quickly open the market and obtain sustainable commercial growth.

In addition, enterprises should deeply explore emotional resonance and build brand loyalty like Fenty Beauty. Brands should utilize the interactivity and immediacy of e-commerce live streaming to strengthen their connection with consumers through an emotionally driven approach. E-commerce live streaming provides a unique opportunity for brands to establish a deep emotional bond with consumers, and brands can give their brands unique emotional value by telling brand stories and showcasing product concepts. During the live broadcast, consumers are not only buying products, but also communicating emotionally with the brand. By establishing such emotional resonance, brands are able to enhance consumer identification and loyalty, which in turn boosts repurchase intent. In the long run, emotional marketing will help brands create strong consumer stickiness and drive continued brand growth.

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## Notes

1 The emotional economy refers to a shift in consumer behavior where purchasing decisions are driven not only by price and functionality but also by emotional engagement, personalized experiences, and a connection to brand values and stories.

2 An emotional transaction refers to a consumer's exchange with a brand or product that goes beyond the financial or functional aspects, involving emotional responses such as trust, excitement, or connection, which influence their purchasing decision and long-term loyalty.

3 "Market order" refers to the structured and regulated environment in which market participants engage in fair, transparent, and efficient transactions, and its components include information transparency, fair competition, legal and regulatory enforcement, market supervision, and consumer protection, all of which collectively ensure the smooth functioning and trustworthiness of the market.

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# Appendix

I. Experiment 1 questionnaire:

1) Your gender:
A. Male
B. Female
2) Your age:
A. 18–22 years old
B. 23–34 years old
C. 35 years old and above
3) What is the approximate amount you spend on e-commerce platforms each month?
A. Less than 1000 yuan
B. 1000–5000 yuan
C. 5000–10000 yuan
D. More than 10000 yuan
4) Did you watch live e-commerce in this experiment?
A. Yes
B. No
5) During this watching of live e-commerce, can you perceive the interaction between the anchor and the audience?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
6) Do you perceive trust in the anchor and the product during watching live e-commerce?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
7) This is an attention test question, please fill in “Strongly Disagree”.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
8) Do you think live e-commerce is more attractive than traditional e-commerce shopping (e.g., just browsing product pages)?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
9) Do you think the product display in the live e-commerce broadcast can enhance your interest in purchasing?
1 = Strongly disagree

2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
10) After the e-commerce live broadcast, do you trust the brand you purchased more?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
11) I would like to buy this product.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
12) I would consider buying this product again if it had a promotion in the future.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
13) I would recommend this product to my friends or family.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree

II. Experiment 2 pre-test experimental questionnaire:

1) Your gender
A. Male
B. Female
2) Your age
A. 18–22 years old
B. 23–25 years old
C. 26 years old and above
3) Which of the following four brands do you prefer most?
(Please rate each brand, with 1 being least preferred and 5 being most preferred)
Dove: 1 2 3 4 5
LUX: 1 2 3 4 5
Johnson's Baby: 1 2 3 4 5
Safeguard: 1 2 3 4 5
4) I consider myself a loyal consumer of a particular brand.
Dove

Lux (LUX)
Johnson's Baby (Johnson)
Safeguard (Safeguard)
5) If I had to choose to buy a body wash, I would prefer to buy a brand that I am familiar with and use regularly.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
6) This is an attention test question, please fill in "Strongly Disagree".
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
7) if my current brand was out of stock, I would consider switching to another brand.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
8) my loyalty to a brand is usually demonstrated by long-term sustained buying behavior.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
9) Overall, how loyal are you to the following brands?
Dove: 1 = very low 2 = low 3 = neutral 4 = high 5 = very high
LUX: 1 = very low 2 = low 3 = neutral 4 = high 5 = very high
Johnson: 1 = Very low 2 = Low 3 = Neutral 4 = High 5 = Very high
Safeguard: 1 = Very low 2 = Low 3 = Neutral 4 = High 5 = Very high

III. Experiment 3 questionnaire:

1) Your gender:
A. Male
B. Female
2) Your age:
A. 18–22 years old
B. 23–34 years old
C. 35 years old and above
3) What is the approximate amount you spend on e-commerce platforms each month?
A. Less than 1000 yuan
B. 1000–5000 yuan
C. 5000–10000 yuan

D. More than 10000 yuan
4) Did you watch live e-commerce in this experiment?
A. Yes
B. No
5) During this watching of live e-commerce, can you perceive the interaction between the anchor and the audience?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
6) Do you perceive trust in the anchor and the product during watching live e-commerce?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
7) This is an attention test question, please fill in “Strongly Disagree”.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
8) Do you think live e-commerce is more attractive than traditional e-commerce shopping (e.g., just browsing product pages)?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
9) Do you think the product display in the live e-commerce broadcast can enhance your interest in purchasing?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
10) After the e-commerce live broadcast, do you trust the brand you purchased more?
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
11) I would like to buy this product.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree

5 = Strongly agree
12) I would consider buying this product again if it had a promotion in the future.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
13) I would recommend this product to my friends or family.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
14) Have you ever purchased LUX shower gel?
A. Yes
B. No
15) I think the qualification and entry requirements for sellers are very strict, and sellers who are able to conduct live e-commerce sales are strong.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
16) I think the sellers' information displayed on the marketplace is true and valid, and I can make a correct judgment about the quality of products based on the information displayed on the platform.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
17) I think the platform's after-sales service protection measures for sellers are very perfect, and consumers can get effective after-sales support after shopping.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
18) I believe that the payment security measures on the platform are adequately safeguarded and that I am able to conduct transactions safely and securely.
1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree
19) I believe that platforms regularly monitor and review sellers to ensure that the products and services they sell comply with regulations and standards.

1 = Strongly disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly agree