

# Reframing the Dilemma of Consumer Trust in Food E-commerce Live Streaming: Problems, Reasons and Strategies

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**Abstract.** Food e-commerce live streaming, a new form of food products selling in the internet age, has become increasingly popular. However, due to its natures of direct impact on health, difficulty in checking food quality and emphasis on instant experience, the current food e-commerce live streaming marketing presents consumer trust problem. Given that trust is an important factor affecting consumer purchase, it is critical to investigate consumer trust issues in the context of food e-commerce live streaming. Drawing on the literature on food e-commerce live streaming and consumer trust, this study refines the reasons of consumer trust problems, and proposes effective strategies to enhance consumer trust. Through in-depth analysis and discussion, this study shed new insights into the influence factors of consumer trust. In addition, this study offers practical implication for food e-commerce live streaming managers to solve the consumer trust problems, promoting the sustainable development of food e-commerce live streaming.

**Keywords:** Food e-commerce live streaming, consumer trust, third-party recognition, platform management.

## 1. Introduction

With the development of internet technology, e-commerce live streaming, as a new business model, has attracted widespread attention in the global market (Tan, 2017). It has become a new driving force for the development of e-commerce due to its characteristics such as timeliness, real-time interaction, strong initiative, and rich content forms. As e-commerce live streaming industry develops, its business scope becomes broader, and food e-commerce live streaming is gaining popularity. According to data from iiMedia Research, in 2019, food e-commerce live streaming accounted for 38.7% of the market of e-commerce live streaming in China, ranking first among all e-commerce live streaming categories (iimedia, 2022). This shows that food e-commerce live streaming industry is facing good market prospects.

Compared with e-commerce live streaming in other industries, food e-commerce live streaming possesses unique characteristics. Food safety and food hygiene are important in food e-commerce live streaming which is directly connected with consumers' health. At the same time, it's hard for consumer to check food quality merely through the way of live streaming, which causes consumers' risk perception of purchase rises. In addition, consumers' experience in food e-commerce live streaming is short-term and instant, adding difficulty to apportion blame. Since food e-commerce live streaming is directly connected with health issues while exists difficulty in checking quality and accountability disadvantage, consumers may distrust this kind of e-commerce live streaming and thus be unwillingness to purchase, which restrains the sustainable development of this industry. Therefore, it is very important to study the reasons and countermeasures of consumer trust issues in food e-commerce live streaming. This study as such focuses on consumer trust issues in food e-commerce live streaming.

Among the existing literature, there are mainly two research gaps in the study of consumer trust issues in the food e-commerce live streaming context. First, current research on consumer trust issues in the e-commerce live streaming field mainly focuses on contexts such as cosmetics and clothes, while there is scant research studying the food e-commerce live streaming industry where consumer trust problems are more common. For example, Lu and Chen (2021) studied the influence factors of consumer purchase intention in clothes and cosmetics e-commerce live streaming and proposed strategies to enhance consumer trust. Tao and Zhu (2022) explored how streamers influence female

consumer trust and further improve consumer's purchase intention. Chandruangphen *et al.* (2022) has studied the factors affecting consumer trust in clothes e-commerce live streaming. These studies have explored the causes and influencing mechanisms of consumer trust problems in different e-commerce live streaming fields. However, due to the unique characteristics of food e-commerce live streaming compared with other live streaming fields, the existing literature may not provide appreciate insights into consumer trust problems in such a context.

Second, although there are increasing number of researches focus on consumer trust problems, they lack further comprehensive and in-depth understanding. For example, Shi *et al.* (2022) analyzed the influencing factors of consumer food purchase intentions in the context of e-commerce live streaming. Fei *et al.* (2022) researched attribution and positioning of food safety problems which damage consumer trust in food e-commerce live streaming. Xu. (2021) putted forward suggestions for supervision of food e-commerce live streaming so as to improve consumer trust. These studies note the important role of consumer trust in food e-commerce live streaming. However, the forms, reasons, and strategies of consumer trust problems have not been discussed specifically.

To address above research gaps, this study lists consumer trust problems and proposes strategies to enhance consumer trust by analyzing the reasons of consumer trust problems in food e-commerce live streaming based on its characteristics. This study is an important supplement to the research on consumer trust in the food e-commerce live streaming field. Besides, it has enlightening significance for conducting food marketing planning, and promoting consumer purchase. By proposing relevant strategies, this study provides practical implication for live streaming platforms and government departments to promote the healthy development of the food e-commerce industry in this new format of live streaming.

## 2. Food E-commerce Live Streaming and Consumer Trust Dilemma

According to the classification of product categories, e-commerce live streaming can be divided into several categories, such as food, clothing, cosmetic, furniture, appliances, digital products, and local services (iimedia, 2022). Compared with other types of e-commerce live streaming, food e-commerce live streaming presents several unique characteristics, which makes consumers unwilling to trust food e-commerce live streaming.

First, compared with clothing e-commerce live streaming, food e-commerce live streaming is directly related to consumers' physical health, emphasizing food safety and food hygiene. In particular, in clothing e-commerce live streaming, consumers pay more attention to design, function, or price rather than safety and hygiene because clothing doesn't cause consumer health problem. By contrast, food safety incidents will be caused if consumer eat unsafe and unhygienic food purchased from food e-commerce live streaming. However, food safety and food hygiene aren't guaranteed in food e-commerce live streaming for that consumers cannot ensure food safety and food hygiene through direct inspection. Therefore, there is uncertainty and risk existing in food e-commerce live streaming, as such causing consumer distrust in such a context.

Second, compared with furniture, appliances and digital products e-commerce live streaming, it's difficult for consumer to check food quality in food e-commerce live streaming. In food e-commerce live streaming, consumers form quality assessments of products only through intuitive feelings and subjective judgments based on the appearance of products and streamer's introduction. A single visual sense and simple introduction cannot enable consumers to form a comprehensive evaluation of food quality, hence consumers' perceived value is also reduced, and consumers' trust and purchase willingness is also negatively influenced.

Third, compared with local service e-commerce live streaming, food e-commerce live streaming focuses on short-term and instant experiences. It is different from the local service such as catering, hotel accommodation, and scenic spot tickets that requires consumers to spend a longer time to complete the experience. Under normal circumstances, the entire experience of consumer in food e-commerce live streaming ends when consumer finish eating food, which is immediate and short-term.

In such cases, short-term and instant experience causes the problem that consumer can't use valid evidence to show the connection between food and his health problem if food safety incidents happen. This makes consumers' risk perception increase and causes consumer distrust.

### **3. The Reasons for Consumer trust Dilemma in Food E-commerce Live Streaming**

In the traditional process of food purchase, consumers check the appearance, packaging, smell, touch and other factors of food to identify the quality of products and build trust. However, in the food e-commerce live streaming context, due to separation of consumer and product, consumers' trust is not only related to the food been displayed, but also to the streamer who is responsible for explaining the food condition.

#### **3.1 The Reasons for the Food Aspect**

##### **3.1.1 The Lack of Third-Party Recognition**

The absence of third-party recognition is the main factor that reduces consumer trust in food e-commerce live streaming. Third-party inspection organizations can provide a specialized inspection service covering all aspects of the food supply chain in food e-commerce live streaming. The absence of third-party recognition would significantly affect consumers' risk perception in online shopping, decrease consumer satisfaction, reduce consumer trust, and negatively influence consumer purchasing decisions. In the food e-commerce live streaming industry, third-party recognition of food products is the primary basis for consumers to judge food safety and food hygiene. However, in the current food e-commerce live streaming market, the lack of third-party recognition for food products is a common issue, and cases of selling products without proper certification are frequently seen.

##### **3.1.2 The Incompleteness of Consumer Protection System in Live Streaming Platform**

The imperfect consumer protection system in live streaming platform negatively affects consumer trust in food e-commerce live streaming. Previous research has shown that authoritative information released by professional institutions can significantly affect consumer trust levels (Cui and Yi, 2012). However, the consumer protection system in live streaming platform is still incomplete because of unclear accountability under multi-party participation, even though some targeted adjustments and revisions have been made (Fei and Wang, 2023). In particular, the incompleteness of consumer protection system makes it can't perform its function to reduce consumer distrust in food e-commerce live streaming. For example, an incomplete consumer protection system may result in consumers not getting refunds and compensation if a food safety incident occurs, hence consumers' assessment of the possibility of suffering losses will increase, and trust will decrease accordingly.

##### **3.1.3 The Negative Influence of Public Opinion**

With the development of e-commerce and the popularization of digital devices, the Internet now allows for the existence of two-way reputation feedback systems (Ha, 2004). In addition to consumers' subjective judgments on product quality, social opinions, including other consumers' comments and community members' opinions, also influence consumers' assessments of the credibility of products and suppliers (Utz *et al.*, 2012). Due to the spatial separation between consumer and food product, consumer's perceived value is weak, making the public opinion, as a supplement, more important. When consumers are making purchase decision in food e-commerce live streaming, they not only consider whether the food meets their needs but also worry about whether industry chaos. Particularly in China, the public opinion caused by food safety incidents in food e-commerce live streaming, such as product counterfeiting and selling products without third-party recognition, makes consumer unwillingly trust it.

### **3.1.4 The Conflicts Caused by Cross-cultural Differences**

The conflicts caused by cross-cultural differences will lower consumer trust. Specifically, in food e-commerce live streaming industry, while cross-cultural food has a strong appeal to consumers, it also brings the potential for cultural conflicts and a decline in trust because consumers from different cultural backgrounds have different taste preferences. For example, hurood, a kind of milk product, is the Mongolian traditional dairy products with a long history. However, hurood has a high rate of bad reviews on food e-commerce live streaming platforms because many consumers do not understand the proper way to consume hurood and get a bad eating experience. Hence, food that does not conform to the dietary culture of the consumer's region, can cause cross-cultural conflicts, thereby reducing consumer trust on food e-commerce live streaming.

### **3.2 The Reasons for the Streamer Aspect**

In addition to consumer's trust in the food, consumer's trust in the streamer is another indispensable part of consumer trust in food e-commerce live streaming. First, in food e-commerce live streaming, consumers become interested in products through streamers' explanations during live broadcasts, ultimately leading to purchase (Liu and Shi, 2020). Consumers can only accumulate trust in the product after establishing predictive trust in the streamer, and decide to purchase after building dual trust in both the streamer and product (Wu and Huang, 2023). Second, as advocates for products and opinion leaders, streamers have significant influence on consumer purchase (Luis *et al.*, 2020). Third, streamers also take responsibility for selecting foods, identifying them accurately enough to determine if they're fit for promotion or sale. Therefore, credibility judgment made by consumer on streamers can influence consumer trust in food e-commerce live streaming.

#### **3.2.1 Egoistic Motivations of Streamer**

The different motivations of streamer can be perceived by consumer over a longer period of viewing experience, thus affecting their perceptions of streamer and overall trust in food e-commerce live streaming. On the one hand, based on egoistic motivation, streamer in food e-commerce live streaming promote the sale of product for their own sake. On the other hand, based on altruistic motivation, streamer may want to sincerely recommend some good products to their fans. According to the Rational Choice Theory (RCT), whether consumers will choose to trust the streamer depends on whether the streamer's motivation is in line with the speculation that the streamer is for the interests of consumers. Therefore, when consumers have doubts about the motivation of streamer and think streamer don't have altruistic motivation, consumer trust in food e-commerce live streaming will be reduced. Hence, we conclude that the absence of streamer's altruistic motivation causes consumer's distrust in food e-commerce live streaming.

#### **3.2.2 Humdrum Ways of Broadcasting**

Streamer's way of live broadcasting has an influence on consumer trust in food e-commerce live streaming. Streamers, as emotional transmitters, mark the circle culture of specific groups, which lead to emotional fluctuations and circle identification of consumers, satisfying their emotional perceived value and promoting their trust. For example, show-style live broadcasting can stimulate consumers' pleasure emotion, arousal emotion and admiration emotion, promote consumers' trust, and enhance consumers' purchase intention of the recommended food (Meng *et al.*, 2021). However, in current food e-commerce live streaming, the live broadcasting methods of streamers are seriously homogenized and lack of sensory appeal, resulting in that consumers dislike their live broadcasting methods and thus reduce their trust in food e-commerce live streaming. Therefore, streamer's way of live broadcasting influences consumer trust in food e-commerce live streaming.

## **4. Strategies to Enhance Consumer Trust**

### **4.1 Screening and Tracing Food**

Food e-commerce live streaming platforms should establish a strict food screening and tracing system in accordance with international standards. To be specific, food live streaming platforms should only allow the sale of high-quality, guaranteed foods that comply with international safety standards to ensure consumer purchases are qualified, safe and hygienic. Furthermore, traceability of food, which enhances consumer's perception of authenticity and safety, should be required by food live streaming platforms. For example, food live streaming platforms should require food suppliers to provide food with traceability QR code that consumer can scan and know detailed safety information from. Food live streaming platforms can also require food suppliers to set up live broadcasts along food production lines to make transparent what consumers may be uncertain about. In such cases, strict screening and valid traceability of food ensure food quality before purchase and accountability after purchase in food e-commerce live streaming.

### **4.2 Strengthening Protection and Penalty Measures**

First, government departments should accelerate the establishment of a comprehensive supervision system and improve relevant food safety laws and regulations in food e-commerce live streaming. When food safety accidents happen, government departments need to punish violators in accordance with the law to ensure the trust of consumers in the system.

Second, by cooperating with consumer associations, live streaming industry alliances and logistics companies, food live streaming platforms should establish a complete consumer protection system throughout the food supply chain. Specific rules must be formulated to safeguard consumers' rights through detailed food safety accountability systems. At the same time, live streaming platforms should restrict the right of supplier who violate food safety regulations to continue to sell on the platform. In addition, food e-commerce live streaming platforms should rely on user feedback and rating systems to conduct regular inspection and supervision on suppliers.

### **4.3 Considering Cultural Diversity in After-sales Service**

In food e-commerce live streaming's after-sales service, food live streaming platforms should not only adhere to principles such as effectiveness, promptness and courtesy but also consider cultural diversity factors in after-sales services. First, respecting the principle of culture behind food is essential, hence businesses must find ways to inform consumers promptly and accurately about the characteristics of their purchased food. Food live-streaming platforms can send information to and provide online for consumer technical guidance about usage methods, taste instructions. Second, food live streaming platforms should respect and understand consumer questions about cultural conflicts patiently while providing necessary partial refunds if required.

### **4.4 Enhancing the Livestreaming Ability of Streamers**

Food live streaming platforms need to conduct specialized training for streamers in food e-commerce live streaming to ensure a sufficient pool of broadcasting talent in the industry. Food live streaming platforms could train streamers' on-site adaptability and mobilization ability of live broadcast. By interaction between consumers and streamers, to ensure that consumers get involved in the live streaming and like this way of broadcasting, and live broadcast can achieve good results.

In addition, streamer should introduce the food condition in detail during the live broadcast and let consumers know all the safety information and precautions of the food. For example, streamer should inform production date, nutritional composition, whether there are harmful substances, cultural background, eating method, etc. It can enhance consumers' perception of food safety and perceived value, and ensure consumers' eating experience after purchase.

## 5. Conclusion

Consumer trust is the precondition of consumer purchase. Therefore, attaching importance to and consolidating consumer trust is critical to promoting the long-term and sustainable development of this new business mode. To this end, this paper focuses on the consumer trust problem and analyzes the reasons for trust dilemma in food e-commerce live streaming industry from the perspectives of food and streamer. In addition, we propose valuable improvement strategies to enhance consumer trust. By doing so, this study not only sheds deep insights into consumer trust in food e-commerce live streaming, but also promotes the sustainable development of food e-commerce live streaming industry.

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